

# **BEFORE THE ANDHRA PRADESH ELECTRICITY REGULATORY COMMISSION**

4<sup>th</sup> Floor Singareni Bhavan, Red Hills, Hyderabad – 500 004

**OP No. 28 & 29 of 2016**

**IN THE MATTER OF**

Petition requesting the Commission

1. To review power procurement estimates.
2. To review power purchase cost.
3. To direct DISCOMs to submit power procurement plans
4. To direct DISCOMs to improve safety and avoid deaths due to shocks.
5. 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  
139, Kakatiya Nagar, Hyderabad – 500008

***Represented by***

M. Thimma Reddy

Convenor

People's Monitoring Group on Electricity Regulation  
139, Kakatiya Nagar, Hyderabad – 500008

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,

**BEFORE THE ANDHRA PRADESH ELECTRICITY  
REGULATORY COMMISSION**

4<sup>th</sup> 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, M. Thimma Reddy, son of Late M. Pothi Reddy do hereby solemnly affirm and state as under:

1. I am the Convenor of the People's Monitoring Group on Electricity Regulation (PMGER), the applicant in the above matter and am duly authorised by the said applicant to make this memorandum of objections on its behalf.
2. The statements made in the paragraphs of the accompanying memorandum of objections now shown to me are true to my knowledge, derived from the Filing of ARR and Tariff Proposals for FY 2017-18 of the two DISCOMs and the material gathered by PMGER and made available to me and are based on information and advice received which I believe to be true and correct.

Solemnly affirm

Deponent

09 –02 – 2017

Hyderabad

# **BEFORE THE ANDHRA PRADESH ELECTRICITY REGULATORY COMMISSION**

4<sup>th</sup> Floor Singareni Bhavan, Red Hills, Hyderabad – 500 004

**1.1** The following submission of objections and suggestions on the ARR and tariff proposals of APSPDCL and APEPDCL for the year 2017-18 are with reference to the public notice dated 24-01-2017. These submissions are in continuation of our earlier submissions in response to Public Notice dated 6-12-2016,

**1.2** The APDISCOMs have initially filed only ARR under Section 61 of the Electricity Act, 2003. In the Affidavits the DISCOMs have sworn “Take the accompanying ARR and Tariff application of APSPDCL on record and treat it as complete” and “Consider and approve APSPDCL’s ARR and Tariff application including all requested regulatory treatments in the filing”. But the filings include only ARR and no tariff proposals are submitted.

**1.3** Elsewhere in the Affidavits the DISCOMs in the background of GoI’s Ministry of Power’s exercise towards simplification of tariff structure /reduction of tariff categories of consumers submitted “the licensees have started evaluating various options for simplification of Tariff Structure and assessing the revenue impact for each category/ consumer. The licensee is contemplating to incorporate some of these tariff options as part of the tariff proposals for FY 2017-18. Hence, Licensee humbly requests the Honourable Commission to grant additional time to file tariff proposal and revenue at proposed tariffs.” The Commission also granted permission to DISCOMs additional time to submit tariff proposals.

**1.4** The question is - is there need to delay tariff filings on the above pretext. When the committee appointed by MoP, GoI, itself has not come out with any specific proposals, except making vague and generalised observations on simplification and reduction of categories and is still in the process of eliciting views on the proposed re-categorisation of consumers, and when there is no legally binding order in that direction, attempts to propose new categories of consumers on the basis of such vague proposals seems hasty and whimsical. When the committee itself has not come out with any specific proposals for re-categorisation of consumers, its implications and justification for the same, inviting comments/suggestions/views of all stakeholders on such vague proposals at preliminary stage itself is premature. The proposals of the DISCOMs for re-categorisation of consumer categories submitted for the year 2016-17 were not accepted by the Commission. Therefore, the delay in submission of tariff proposals by the DISCOMs is unwarranted and the reason given for the same seems to be a lame excuse to cover up their failure to submit the same in time. The above reason is only a pretext to delay tariff proposal submissions. It is sad that the Commission has consented to their proposals. The Commission should have rejected the present ARR filings and should have directed them to submit tariff proposals forthwith along with the ARR, without any delay.

**1.5** According to Section 1.3 j) ii) of Tripartite MoU under UDAY Scheme signed on 24<sup>th</sup> June 2016 timely filing of Tariff Proposals is one of the measures to be taken by APDISCOMs under the MoU. APDISCOMs have violated even this MoU.

## **True Up for FY 2015-16**

**2.1** Both the DISCOMs together claimed Rs. 887 crore towards true up for the year 2015-16.

**2.2** For the FY 2015-16 while the Commission approved 54,225 MU of electricity to be procured by the APDISCOMs the allowable power purchase stands at 48,569 MU signifying a reduction of 10.43% in quantum of power procured. At the same time power purchase cost increased from Rs. 19,538 crore to Rs. 20,425 crore signifying an increase of 4.54% in power purchase costs. Power purchase cost per unit increased from Rs. 3.60 to Rs. 4.21 implying 17% increase in average power purchase cost. In the filings in support of true up except for the tables there is no explanation for these variations.

**2.3** While power procured from GENCO plants declined by 23.52% power purchase cost from these plants declined by 15.48%. Even more interestingly, while fixed costs paid for these plants declined by 54% variable costs declined by less than 6%. Given the nature of costs there should have been a little or no change in fixed payments and decline in variable costs in proportion to decline in power purchased from these plants.

**2.4** Unit variable cost of GENCO thermal units is higher than that allowed by the Commission. For example, in the case of VTPS units variable cost increased from Rs. 2.56 per unit to Rs. 3.21 and in the case of DSTPP it increased from Rs. 2.35 per unit to Rs. 3.52 in the case of first unit and Rs. 3.79 in the case of second unit. There is no explanation for this higher variable cost. It is not clear whether changes in fuel prices or calorific value of fuel or station heat rate have led to the higher variable cost and whether they are justified.

**2.5** It appears merit order dispatch was also not followed in the case of GENCO thermal plants. While power generation in II, III, and IV<sup>th</sup> units of VTPS plant was lower by more than 2,000 MU compared to the quantity allowed by the Commission in the case of RTPP units power generation increased by 560 MU. Variable cost of RTPP units was higher than VTPS units and according to merit order dispatch VTPS units should have been preferred to RTPP units.

**2.6** Power generation from DSTPP units was lower by nearly 6,000 MU compared to the quantity approved by the Commission. According to APDISCOMs' tariff filings for the year 2016-17 about 5,229 MU would be available during the second half of FY 2015-16. True up filings show that power procured from these units was less than even this quantity. There is no explanation for such wide variation in power availability from this plant.

**2.7** A good part of this deficiency in power availability from DSTPP could have been made good by operating other APGENCO plants like VTPS which had also under performed.

**2.8** True up filings also have shown higher fixed costs of lower and upper Sileru plants and Srisailam Right Bank Power House compared to the ones allowed by the Commission. There is no explanation for this deviation.

**2.9** While the Commission estimated availability of 5,881.07 MU from Hinduja National Power Corporation Ltd., it has supplied only 454.06 MU. There is no explanation for such drastic reduction in electricity available from HNPCL.

**2.10** While the Commission had allowed procurement of 757 MU from the market APDISCOMs procured 6,426 MU from the market. Power procurement cost from the market increased from Rs. 431 crore to Rs. 3,969 crore. While the Commission had placed a ceiling of Rs. 5.70 per unit on the power to be procured from the market APDISCOMs, as the true up filings show, procured it at an average cost of Rs. 6.13 per unit. This higher power purchase cost shall not be allowed.

**2.11** Had the thermal power plants of both GENCO and IPPs worked as expected there would have been no need to procure power from the open market. Instead of true up there would have been true down. Conditions leading to lower power generation from these plants shall be critically examined.

### **Power consumption estimates:**

#### **Power consumption during 2017-18(MU)**

Particulars	EPDCL	SPDCL	Total
Domestic	5,381	8,460	13,841
Commercial	1,030	1,863	2,893
Industrial	938	1641	2,579
Agriculture	(10.6%) 2090	(23.44%) 8,742	(19%) 10,832
Others	283	787	1,070
Total LT	9,722	21,492	31,214
Industries	6,429	9,606	16,035
Lift Irrigation	475	627	1,102
Railway traction	638	591	1,229
Others	431	576	1,007
Total HT	7,973	11,400	19,373
T&D losses	(10.27%) 2,026	(11.8%) 4,404	(11.28%) 6,431
Total	19,721	37,297	57,018

### Power consumption during three years

DISCOM	2015-16	2016-17		2017-18
	Actuals	APERC	Projection	Estimate
EPDCL	16,088	18,575	17,215	19,721
SPDCL	31,370	35,881	32,940	37,297
Total	47,458	54,456	50,155	57,018

**3.1** Consumption in the case of SPDCL in 2016-17 increased by 5% compared to 2015-16 consumption level. This is 8% less than that allowed by the Commission. Similarly, in the case of EPDCL electricity consumption in 2016-17 increased by 7% compared to 2015-16. During 2016-17 consumption is less than 7.32% than that allowed by the Commission. Compared to this while EPDCL projected 14.56% increase in consumption during 2017-18 SPDCL projected 13.23% increase. These growth rates are twice that of the previous year. Given the past experience the projections made by both the DISCOMs has to be revised downwards.

**3.2** Besides the past experience there are other factors that help to bring down electricity consumption. Energy efficiency measures and DSM measures taken up by the DISCOMs are bound to influence the electricity consumption in the coming year. Rooftop solar units – net metering and without net metering – coming up in the state will also have its impact on consumption of electricity supplied by DISCOMs. There is also scope for increase in open access consumers.

**3.3** As the Railways has been recognised as deemed licensee its impact on ARR and Tariff needs to be studied. The Railways is also attempting to procure power from open market and other sources including own plants being planned in collaboration with NTPC. Besides this, it is also taking up solar power plants. These issues also need to be taken in to consideration while estimating electricity consumption during the ensuing year.

**3.4.1** EPDCL as well as SPDCL shows higher T&D losses during 2017-18 than they have achieved in the previous years. During 2016-17 T&D losses of EPDCL stood at 7.8% and during the ensuing year (2017-18) these losses are estimated to be 10.27%. Similarly, in the case of SPDCL during 2016-17 T&D losses stood at 9% and during the ensuing year (2017-18) these losses are estimated to be 11.8%. Over the period in fact these losses shall come down. When the estimated losses are brought down to the previous or even to lower levels the quantum of power to be procured will also come down. Ideally the total of T&D loss and un-metered sales (largely agriculture consumption) as a % of total sales should come down over the years. AP DISCOMs should provide this trend over the past 3 years.

**3.4.2** For the FY 2017-18 the Tripartite MoU set the AT&C losses of EPDCL at 5.45% and SPDCL at 11.09%. Under EPDCL some of the Divisions – Jaggampeta (15.97%), Paderu

(18.55%) and Narsipatnam (18.12%) – high AT&C losses. In these Divisions while billing efficiency is nearly 100% it is the T&D losses that have kept the AT&C losses in these Divisions high. In EPDCL Visakhapatnam Circle is expected to record 0.78% AT&C losses and within this Circle Anakapalle Division is expected to record 0.01%. Why not bring others Circles/Divisions to this level. Under SPDCL Kalyandurg (31.82%), Kadiri (27.22%), Hindupur (16.79%), Rayachoti (15.68%), Rajampeta (18.7%), Mydukuru (17.63%), Piler (30.73%), Madanapalle (18.3%), Chittoor Rural (16.56%), Markapur (24.75%), Macherla (22.2%), Narsaraopeta (15.55%), and Nuzivid (17.34%) divisions have high AT&C losses. In the case of Divisions under Anantapur, Kadapa and Tirupati Circles low billing efficiency along with high T&D losses are leading to high AT&C losses. Under Ongole Circle through billing efficiency is high, higher T&D losses are leading to high AT&C losses. To achieve lower AT&C losses both T&D losses and billing efficiency need to be targeted.

### **Agriculture:**

#### **Agriculture consumption (MU)**

Year	DISCOM		MU
2015-16	EPDCL	APERC	1,936 (10.85%)
		Actual	2,149 (13.36%)
	SPDCL	APERC	8,020 (23.70%)
		Actual	8,479 (27.03%)
2016-17	EPDCL	APERC	2,280 (12.28%)
		Actual	2,065 (12.00%)
	SPDCL	APERC	8,392 (23.39%)
		Actual	8,485 (25.76%)
2017-18	EPDCL	Estimate	2,090 (10.60%)
	SPDCL	Estimate	8,742 (23.44%)

Figures in parenthesis stands for % in total power procured by the respective DISCOMs

**3.5.1** Estimates of electricity consumption in agriculture sector in the state continue to give raise to doubts. Both the DISCOMs always have shown higher agriculture consumption than allowed by the Commission as shown in the above table. To bring grater clarity to estimates of agriculture consumption the APERC mandated the two DISCOMs in the state to follow the methodology developed by ISI. The filings of both the DISCOMs show that they are not fully following the methodology. While SPDCL in its filing explained that it has almost reached the final step in following the methodology EPDCL wanted some more time to adhere to the methodology (p.55). The extent to which the DISCOMs followed the method also raises doubts. While EPDCL stated that 3,856 sample DTRs are metered SPDCL stated that 4,287 sample DTRs are metered. We are not sure whether this sample is based on the methodology

formulated by ISI. The DISCOMs also did not state what percentage of these sample meters provided useful data. In 2016-17 ARR filings SPDCL stated that only 14% of the meters provided valid data for computation of electricity consumption.

Circle	No. Pumpsets	Connected load (HP)	Projected Consumption (MU)	Per HP Consumption (U)	Per HP Consumption (U) 2016-17*
<b>Vijayawada</b>	1,01,444	5,76,915	618.67	1072	1100
<b>Guntur</b>	1,04,725	5,41,879	475.85	878	1211
<b>Ongole</b>	1,63,627	9,10,363	799.11	877	1007
<b>Nellore</b>	1,64,935	8,12,276	741.85	913	1142
<b>Tirupati</b>	2,80,282	16,04,637	1725.80	1075	877
<b>Kadapa</b>	1,52,931	10,27,397	1364.05	1327	1467
<b>Anantapur</b>	2,64,378	13,85,413	2140.56	1545	1720
<b>Kurnool</b>	1,61,552	7,65,490	875.82	1144	1460
<b>Total</b>	13,93,874	76,24,370	8741.73	1146	1240

\*Based on 2016-17 ARR filings

**3.5.2** SPDCL provided Circle wise agriculture consumption estimate for the year 2017-18. While per HP consumption figures of this year are lower than previous year (2016-17) the variation among Circles gives rise to doubts. Annual power consumption per HP varies from 877units in Ongole circle to 1,545 units in Anantapur circle. This variation in electricity consumption in agriculture sector is difficult to comprehend given the fact that power supply is similar in all circles. DISCOM wise annual agricultural consumption per HP at 1,146 units appears to be higher than possible consumption under the existing situation. SPDCL in its filings mentioned that the above estimate includes paying category consumers. But details related to paying category agriculture services are not provided in the present filings. In the last years filings SPDCL stated that per HP annual consumption was 975.86 units in the case of paying category services consumption. These services are metered. This is near possible normal consumption. There is need to closely scrutinise DISCOMs' claims about agriculture consumption.

**3.5.3** According to GeoTagging programme of agriculture services there are 15,04,565 agriculture services in the state. Out of these information related to 14,73,797 services is updated. Out of them 1,50,816 agriculture services are found to be non-functional. That is to say, more than 10% of these connections are out of service. Following this there is a need to bring down estimate of electricity consumption in agriculture sector by 10%.

**3.5.4** SPDCL in its filings mentioned unauthorized additional loads and pilferage as some of the reasons for increased agriculture consumption. (p.66) SPDCL in its filings also mentioned that most of agriculture services in its area are covered under HVDS transformers. An important reason for introduction of HVDS is to end unauthorized additional loads as well as pilferage.

Hundreds of crores of rupees were spent on this scheme. The Commission is requested to scrutinise the implementation of the HVDS scheme.

**3.5.5** Both the DISCOMs have taken up installation of solar pumpsets in the agriculture sector. According to SPDCL's filings until now 4,741 solar pumpsets are installed in its area. From their filings it is not clear whether existing pumpsets are replaced with solar pumpsets or solar pumpsets are issued to new connections only. From their filings it is also not clear how the installation of solar pumpsets impacted conventional electricity consumption in the agriculture sector.

**3.5.6** Both the DISCOMs have also taken up replacement of existing pumpsets with energy efficient pumpsets. EPDCL has already implemented a pilot in Rajanagaram mandal. No information is provided on experiences with this pilot and how this is going to influence electricity consumption. SPDCL in its filing mentioned that a pilot on energy efficient pumpsets is being planned in Hindupur mandal in Anantapur circle. Is there a need for another pilot in the state? Can not SPDCL learn from EPDCL's pilot?

**3.5.6** One of the initiatives taken by SPDCL to control agricultural sales in line with Tariff Order, according to its filing is: "APSPDCL has taken Demand side management measures with publicity through handouts, electronic media etc., to the farmers to install energy efficient pump sets, required rating of capacitors, HDPE pipe lines at suction and delivery and frictionless foot-valves to save energy and to avail subsidized tariff." (p.66) According to this filing "So far, 89.35% of the existing pump sets as on 30.09.2016 are provided with Capacitors by the consumers. The licensee is taking all necessary steps to provide Capacitors for the balance pump sets also." (p.64) SPDCL in its 2016-17 submission (p.64) claimed that capacitors were installed at 89.63% agricultural services. Field experiences show that not even in 10% of the cases capacitors were installed. There are definite benefits from installing capacitors. It is high time DISCOMs take this issue seriously. In some cases farmers bought capacitors but did not install them as they do not know how to go about and there was no assistance from DISCOMs. Apart from this, the DISCOMs did not mention about other DSM measures.

**3.5.7** Importance of affordable and quality supply to agriculture services in securing food security and farmer livelihood cannot be denied. At the same time electricity supply to agriculture has impact on finances of DISCOMs as well as state government. The present practices in estimation of agriculture consumption have many gaps. There is need for better apportioning of electricity between T&D losses and Agriculture consumption. This will help to clarify whether agricultural consumption is being subsidised or technical losses and theft are being subsidized. To achieve this sampling, data collection and analysis norms need to be revisited periodically involving independent, third party agencies. Segregated feeders and all DTRs serving agriculture services need to be metered. **According to Section 1.3 h) iv) of Tripartite MoU under UDAY APDISCOMs have to achieve 100% Distribution Transformer (DT) metering by 30<sup>th</sup> September, 2017. We request the Commission to direct**

**the DISCOMs first meter all DTs serving agriculture services under this initiative.** This measure will help to put together as complete information as possible, without involving the cumbersome process of metering all agriculture services. This will also help to do away with problems faced in implementing sampling method prescribed by ISI. At the same time care should be taken that meter reading/billing efficiency is 100%. Data from these meters also need to be made public.

### **Power procurement:**

<b>Power procurement during 2017-18</b>	
Electricity availability	67,948 MU
Electricity requirement	57,018 MU
Surplus	10,930 MU
Electricity to be sold in the market	2,208 MU
Electricity back down	8,722 MU

### **GENCO:**

**4.1.1** APERC issued an Order dated 26.03.2016 in O.P. No. 3 of 2006 deciding the tariff for power generated from APGENCO units for the period 2014-19. RTPP IV is not included in the list of units for which tariff is fixed. According to the present filings net availability from RTPP IV unit will be 1288.62 MU and dispatch will be 244.34 MU. Dispatch will be less than 20% of the available power. For 20% power consumers will be forced bear 100% fixed cost burden. Given the surplus power situation RTPP IV shall not be included in the list of power plants for procurement of power during the ensuing year. Cost of power from this unit also gives rise to doubts. Per unit fixed cost at Rs. 2.82 per unit is less than older units at RTPP. Its variable cost (Rs. 8.12 per unit) is exorbitantly high and is there need to dispatch such high cost plant?

**4.1.2** Given the power surplus situation in the state RTPP IV unit shall be treated on the same lines of NTPC's Kudigi plant. APDISCOMs have requested the Government of India (GOI) either to cancel the allocation to AP or to defer the scheduled COD for 2 more years.

**4.1.3** The units of Thermal Power Tech Corporation (TPTCIL) and APGENCO's DSTPS are located in the same area. While variable cost of TPTCIL is Rs. 1.90/U that of DSTPS is Rs. 2.17/U. Variable cost of DSTPS needs to be brought down.

**4.1.4** The present ARR filings for the ensuing year shows Other costs in the range of Rs. 0.46 to Rs. 1.81 per unit being levied on APGENCO units of VTPS and RTPP. There is no explanation for this in the filings.

## CGS:

**4.2** While the variable cost of NTPC's Simhadri thermal power plant is Rs. 2.60 per unit variable cost of NTPC's Vallur thermal power plant is Rs. 2.14 per unit. As Simhadri thermal power plant is located nearer to the coal mines compared to Vallur thermal power plant its variable cost should have been lower. But the filings show that it is other way. This demands a re-examination of variable cost of Simhadri thermal power plant.

## Private Plants (IPPs)

**4.3.1** PPA with Lanco Kondapalli expired on 1-1-2016. Similarly PPA with Spectrum expired on 18-04-2016. In the case of Lanco APDISCOMs submitted that the negotiations for renewal of PPA are under progress. In the case of Spectrum APDISCOMs submitted that they would opt for either Renewal of PPA or Buyout of the project as per the terms of PPA. In respect of both these plants buy out option by DISCOMs shall be exercised as was done in the case of GVK Phase I. The whole exercise of buy out should have been completed by the time of expiry of PPAs. Delay in taking up this process raises doubts on the way DISCOMs are handling power purchase issues.

**4.3.2** In the case of GVK, Spectrum and Lanco as fixed costs are already recovered under the expired PPAs no more fixed costs shall be paid. But the DISCOMs' filings for 2017-18 show that the fixed costs for these plants in fact will be increasing compared to the previous year.

Power Plants	Total Fixed costs (Rs/Cr)		Unit Fixed costs (Rs/U)	
	2016-17	2017-18	2016-17	2017-18
GVK	4.69	81.42	0.14	3.52
Spectrum	33.74	74.66	0.62	1.96
Lanco	98.62	118.37	1.57	1.95

While fixed costs of GVK increased by nearly 20 times compared to previous year that of Spectrum more than doubled. Lanco also experienced higher fixed costs. In the background of recovery of fixed costs under the earlier PPA it is difficult to comprehend such increase in fixed of these gas based power plants. We request the Commission not to allow these fixed costs.

**4.3.3** As the terms of expired PPAs of the above two gas based power plants no more applicable deemed generation payments and incentives for the above plants shall not be at the threshold PLF of 68.5% but at PLF of 85% only.

**4.3.4** In the past variable cost of GVK Phase I was lower than other gas based power plants like Spectrum and Lanco as it is nearer to fuel/gas source. This years filings show that variable cost of GVK (Rs.2.95/U) is higher than variable cost of Spectrum (Rs.2.55/U) and Lanco (Rs.2.30/U). This has to be examined.

**4.3.5** Payment to Thermal Power Tech Corporation (TPTCIL) included PGCIL charges of Rs. 107.34 Cr. in FY 2017-18. As the TPTCIL is located within AP there shall be no need to depend on PGCIL's network.

**4.3.6** According to APDISCOMs filings due to congestion in the railway linkage and consequent transportation of coal through road network and resulting coal shortage HNPCL is able to operate at an average PLF of around 50% . Because of fuel shortage the DISCOMs have considered the availability of only one unit of HNPCL in FY 2017-18. As only one unit of HNPCL will be operated during the ensuing financial year fixed cost payments shall be limited to one unit of HNPCL only. HNPCL has declared commercial operation dates (COD) of the 1<sup>st</sup> and 2<sup>nd</sup> units of its project at Visakhapatnam (520 MW each) on 11.1.2016 and 3.7.2016 respectively. It has adopted 3.7.2016 as the project COD. By the time of COD all facilities must be in place for continuous power generation at the rated capacity. The fact that fuel transport, fuel supply facilities are not in place shows that the plant in fact is not in a position to operate to its full capacity. As such the CODs declared by the developer shall not be taken in to account and it shall be treated as an incomplete plant. The fixed costs shall be treated accordingly. Liquidated damages shall also be collected from the developer for its failure to operate the plant to its full capacity.

**4.3.7** In the case of HNPCL as well as SDSTPS threshold PLF for incentives is kept at 80% arguing that Regulation of 2008 allowed only 80% PLF. Here it needs to be mentioned that threshold PLF of 80% is used when sub-critical plants are in vogue and when super critical plants are the norm threshold PLF for incentives has to be shifted from 80% to 85%. As the PPAs will be in operation for 25 years consumers have to unnecessarily bear additional burden if threshold PLF is kept at lower level. APERC has all the powers to adopt higher threshold PLF for payment of incentives.

**4.3.8** APDISCOMs have signed PPA with KSK Mahanadi for supply of power through medium term basis starting from June 2013 for a period of 3 years. Following this the PPA with KSK Mahanadi should have expired by June 2016. But, the DISCOMs filings show that 2,593 MU of electricity is going to be sourced from this plant during the ensuing year 2017-18 at the rate of Rs. 4.32 per unit. Given the power surplus situation in the state we fail understand inclusion of this plant in the list of power plants energy is going to be sourced during the ensuing year, even when the PPA has expired. The cost of power from this plant is higher than variable costs of GENCO units. By stopping power from this plant and increasing generation from GENCO units per unit fixed cost as well as total cost of power from these units can be brought down leading to saving of nearly Rs. 350 crore.

### **Renewable energy:**

**4.4.1** According to APDISCOMs' ARR submissions for the year 2017-18 out of power requirement of 57,018 mu power from renewable energy sources would be 10,317 mu constituting 18% total power to be procured for the state. While extant RPPO mandates only 5% of power from renewable sources according to draft RPPO proposal during 2017-18 renewable power has to constitute 14.25% of the total power to be procured for the state. On both counts

renewable power going to be procured is high. Out of total projected purchase cost of Rs.23,790.49 crore, purchase of renewable power would cost Rs.4905.87 crore, comprising 20.62% of the total power purchase cost. That is to say 18% of power would account for 20.62% of power purchase cost. While addition of renewable energy capacity has to be welcomed in the context of climate change it has to be seen that this capacity addition does not unduly burden electricity consumers in the state.

**4.4.2** In the coming year most of the additional RE capacity addition is coming from wind and solar sources. The cost as well as the way this RE capacity is being added raises disturbing questions. The new wind energy capacity should have been added through transparent, open competitive bidding. Against this the Government of AP mandated the DISCOMs to enter in to PPAs with two developers to add 5,000 MW wind energy capacity through MoU route. We request the Commission to direct APDISCOMs not to enter in to PPAs for this wind energy capacity and select developers through transparent, open competitive bidding. **Section 1.3 m) of the Tripartite MoU under UDAY Scheme has stipulated that the DISCOMs shall procure power through transparent process of competitive bidding.** In the case of solar power while developers are selected through competitive bidding there is inordinate delay in executing the plants for ulterior motives. DISCOMs, instead of encashing the bid amount and cancelling these PPAs, are going on giving extensions violating bidding and agreement norms. As cheaper solar power is available, giving extensions to earlier bids at higher tariff burdens consumers in the state unnecessarily.

**4.4.3** According to DISCOMs filings 1 MW Solar project on canal top implemented by NREDCAP was commissioned on 10.8.2016 and 5 MW solar power project on canal bund implemented by APGENCO in West Godavari District as a pilot project was commissioned on 19.11.2016. The tariff at which power from these two plants is going to be procured is not mentioned.

**4.4.4** As solar parks are being developed by SECI/NTPC why not treat them as CGS and share the capacity with other states in the region?

**4.5** According to ARR submissions 2,208 MU of surplus power has to be sold in the market. In the tariff order for the current year (2016-17) also The Commission has directed APDISCOMs to sell a portion of surplus power in the market. We would like to know the experience of DISCOMs in selling this surplus power in the market.

**4.6** Even when the state is experiencing surplus power situation the state government is forcing the DISCOMs to sign PPAs with wind energy developers to the tune of 5,000 MW without examining their need and its implications on tariff to be borne by the consumers in the state. Meanwhile the Commission also brought before the public draft RPPO proposals to increase procurement of renewable power by five times by 2022. Such an exercise cannot be meaningfully taken without long-term load forecast plan, resources plan and power procurement plan from the DISCOMs for the ensuing, third and fourth control periods for the consideration of the Commission. We request the Commission to direct the APDISCOMs to submit long-term

load forecast plan, resources plan and power procurement plan from the DISCOMs for the ensuing control periods in accordance with relevant Regulations of the Commission. No new PPAs shall be allowed until the load forecast and resource plan is submitted and discussed in public hearing

### **Tariff Proposals:**

**5.1** In the name of rationalization of tariff APDISCOMs propose to introduce demand charges for domestic consumers. According to APSPDCL filing “The fixed cost obligation to the generating stations was projected to be around Rs.13,893 Crore for FY 2017-18 whereas as per the current tariff structure only around Rs.2,752 Crore was projected to be recovered by the licensees. Due to this difference between current tariff structure and actual cost structure for the licensee, the licensee incurs a loss if there is deviation in the projected sales due to open access, change in energy availability from must run stations like Hydel stations, Solar, Wind and other NCE stations etc. Hence, in order to overcome these shortfalls, the licensees proposes to rationalize the Demand Charge and Energy Charge to reflect the DISCOM’s PPA structure”, and “The licensees have proposed to increase the demand charge and reduce the energy charge to get an nominal tariff increase of around 3.5% to 4% on average for each category.”

**5.2** APDISCOMs are attributing losses to under recovery of fixed costs. Until now the Commission is setting tariffs in such a way that the DISCOMs recover all their costs including fixed costs. The losses that they are incurring are because of their failure to achieve efficiency targets – including reduction on T&D losses – set by the Commission, failure to submit tariff, including FSA/true up, proposals in time, and the state government not fulfilling its assurances in taking over high cost power purchases from the market.

**5.3** Introduction of demand charges in the case of domestic consumers will impose additional burden on these consumers. These demand charges will be based on the contracted load. Usually no verification is done while recording the contracted load of domestic consumers and petty traders. 1kW is the minimum contracted load in the case of domestic and small commercial consumers. Usually these days all domestic consumers are given 1 kW contracted capacity. The consumers with actual connected load of less than 1kW will be forced to pay minimum demand charges leading to additional tariff burden.

**5.4** Demand charges for domestic consumers will be misleading. Contracted capacity mentioned in their bills will be higher than the actual capacity being utilized by them. Because of this contracted capacity of these consumers will be higher than the fixed capacity allocated to them by the DISCOMs. As the bill will be raised on the basis of the contracted capacity they will be asked to pay more than really due from them. From this mechanism while small consumers will suffer and big consumers will benefit. While those who consume less than the contracted capacity have to pay higher charges, those who consume more than their contracted capacity will be paying less. These days because of use of new and energy guzzling appliances middle, upper middle and upper households will be consuming more, even when their contracted capacity will be 1 KW. For this system of billing to be meaningful and successful the contracted capacity has to be reassessed transparently.

**5.5** According to DISCOMs' tariff proposals introduction of demand charges will lead to nominal tariff increase of around 3.5% to 4% on average for each category. Actually introduction of demand charges in the domestic category will lead to increase in tariff burden on households consuming less (100 to 200 units per month – Group B) to the extent of nearly 20%. This will be nothing but tariff shock to these households.

**5.6** Domestic consumers in the Group A shall be exempted from paying minimum charges/demand charges irrespective of the contracted load.

**5.7** Under the proposed tariff rationalization village Panchayats and city Municipal Corporations under LT VI category are proposed to be treated similarly. It is not correct to treat village Panchayats and city Municipal Corporations similarly. While resource base of city Corporations is wide in the case of Panchayats it is narrow and most of the time they do not have resources to meet basic needs. Panchayats need to be supplied electricity at lower tariff. Under new description of electrification of villages public institutions in the village like Panchayat office shall have electricity connection. If the proposed tariff for Panchayats is upheld a good number of villages may joint the list of deelectrified villages.

**5.8** Proposed electricity tariff for religious places (VII (B) Category) sought to remove distinction between small and big religious places. This category was introduced to help small religious places located in villages which do not have income sources. Because of the proposed tariff while tariff burden on small religious places (<2kW) will increase by nearly 15% that of big religious places (>2kW) may in fact come down. There is need to distinguish small and big religious places on the basis of contacted/connected capacity.

### **Subsidy:**

#### Subsidy Requirement according to DISCOMs' Proposals

Particulars	EPDCL (Rs in Cr)	SPDCL (Rs in Cr)	Total (Rs in Cr)
ARR	10,481	19,588	30,069
Revenue at current tariffs including NTI	8,894	13,998	22,892
Revenue Gap	1,587	5,590	7,177
True up for FY 2015-16	298	589	887
Total Revenue Gap	1,886	6,179	8,065
Increase in revenue form tariff proposals	454	406	859
Increase in revenue form Additional & Other charges	101	167	268
Total increase in revenue	555	573	1127
Subsidy requirement	1,331	5,607	6,938

### Subsidy available according to UDAY Tripartite MoU

Particulars	EPDCL (Rs in Cr)	SPDCL (Rs in Cr)	Total (Rs in Cr)
Total costs	11,698.77	20,812.24	32,511.01
Total Income	10,779.82	18,211.15	28,990.97
Revenue gap	918.95	2,601.09	3,520.04
Govt Subsidy	983.79	2,729.28	3,713.07
Electricity duty	83.42	133.41	216.83
Total subsidy available	900.37	2,595.87	3,496.24
Remaining gap	18.58	5.22	23.80

**6.1** Tripartite MoU on UDAY is included as Annexure 1 of APDISCOMs' ARR and tariff proposals for FY 2017-18. The financial picture for FY 18 presented in this MoU is at variance with the one presented in ARR and tariff proposals. Compared to ARR total costs of both the DISCOMs mentioned in MoU are higher by Rs. 2,500 crore. Total income mentioned in MoU is higher by nearly Rs. 5,000 crore compared to revenue at current tariffs and increased revenue from proposed tariff and other charges as mentioned in ARRs. According to DISCOMs' filings tariff hike will be 3.79%. UDAY MoU suggested tariff hike of 5%. This difference in tariff hike alone cannot explain such a big difference between the two official, legal documents. Besides this, while MoU mentioned the amount of subsidy available from GoAP to be Rs. 3,496.24 crore ARRs of DISCOMs mentioned the subsidy requirement to be Rs. 6,938 crore. The question is which of these two documents presents true picture? As APDISCOMs have signed both the documents they have an obligation to clarify.

### **Electrical accidents**

DISCOM	2015-16		2016-17 (Up to September '16)	
	No. of fatal accidents	No. of Ex gratia paid	No. of fatal accidents	No. of Ex gratia paid
EPDCL	151	66	114	22
SPDCL	320	70	125	13
Total	471	136	239	35

**7.1** EPDCL in its filings stated that out of 151 human fatal accidents in 2015-16 fatal accidents numbering 102 are not due to department faults. Similarly, up to September 2016 out of 114 fatal accidents 82 accidents are not due to department faults.

**7.2** Only small proportion of fatal accident victims families are being paid ex gratia. The DISCOMs have to expedite payment of ex gratia by simplifying and streamlining procedures.

**7.3** The compensation paid to the electrocution victims shall not be recovered by the DISCOMs from ARR. This compensation shall be paid by the DISCOMs from their internal resources. Accident is a result of failure of the DISCOMs to maintain the electrical network in a proper condition. Financial burden arising from failure of DISCOMs cannot be placed on the electricity consumers in the state.

**7.4** Following Section 53 (d) of the Electricity Act, 2003 the State Electricity Regulatory Commission shall be informed regularly about all electrical accidents occurring in the state along with the action taken reports.

**7.5** More than compensation to the electrocution accident victims what is important is prevention of such incidents. Any amount of compensation cannot provide relief to the victims' families. Andhra Pradesh is one of the states with highest number of electrical accidents. All necessary, preventive measures shall be taken to avoid the electrical accidents.

**7.6** One of the important reasons for the electrical accidents in the state is lack of proper maintenance of electrical network that is resulting in snapping of conductors and distribution transformer blow outs. Age old electrical poles and conductors are not being replaced as required. This is resulting in sagging and snapping of conductors which have become death traps.

**7.7** Another important reason for the electrical accidents in the state, particularly in rural areas, is absence of technical support at the field level when rural folk, particularly farmers, need it. Most of the linemen and assistant lineman posts in rural areas are vacant and when they are there in limited number most of their time goes in billing and bill collection. In the absence of the required technical support in the form of lineman/assistant lineman villagers/farmers themselves try to attend to the repairs and in the course of it meet with fatal accidents. The most the DISCOM employees at the ground level do is issuing LC so that farmers can attend to the problems on their own. In other words villagers/farmers are being forced to walk in to death traps.

**7.8** In the past the ERC had allowed the individual DISCOMs to spend Rs. 5 crore from ARR each year on safety measures. But the DISCOMs did not care to spend this amount. This in a way reflects the callous attitude of utility bosses to safety issues. It has to be seen that DISCOMs follow grid code scrupulously in maintaining the electrical network in the state that automatically goes towards bringing down electrical accidents. Providing designated safety officer in DISCOMs will also help to reduce electrical accidents. It is important to make some efforts to reduce deaths even when accidents happen. This calls for first aid training to DISCOM field staff, police etc.

**7.9** At the same time it is not to deny the importance of creating awareness among electrical consumers, particularly farmers in the state about precautions to be taken. They have to keep the electrical appliances in their premises in order. This can be effectively done when DISCOMs keep their house in order. Those who preach have to practice it first. Is not it?

**7.10** In the context of electrical accidents the role of Chief Electrical Inspectorate's Office is not clear. There is also no clarity on relation between the ERC and the Chief Electrical Inspectorate. This brings in to picture the role of state government also. The state government has to prepare necessary rules to mandate the Chief Electrical Inspectorate to inquire in to all electrical accidents taking place in the state and suggest remedial measures.

**7.11** The Commission shall institute a study to understand the electrical accidents taking place in the state and formulate action plan to eliminate such incidents. Safety audit, especially of rural distribution by DISCOM or by third party will help to understand the source of the problem and plan measures to reduce accidents. Detailed reports on accidents (location, cause etc), analysis and discussion on them will help to understand where accidents happen (which geographical areas and what part of electrical network) and also possible root causes. Study of construction and operational issues like quality of material, earthing, platforms for DTs, fault clearing etc., which lead to accidents is also important.

### **Prayer to the Commission**

1. To review power procurement estimates.
2. To review power purchase cost.
3. To direct DISCOMs to submit power procurement plans
4. To direct DISCOMs to improve safety and avoid deaths due to shocks.
5. To allow the objector to be heard in person before the Commission takes any decision on this application of the DISCOMs.