

CHAPTER-6

NEW PROPOSALS

HT – Increase in fixed charges:

- Revenue expenditure can be divided into two parts 1. Fixed expenditure contributing 33% of the total cost and 2. Variable expenditure contributing 67% of the total cost.
- On the contrary under Revenue earned from tariff 1. Fixed cost collected are at the rate of 11% and 2. Variable cost collected are at the rate of 89% of the total receipt.
- In majority of categories recovery of variable charges are not even at the Commission determined first slab rate. This may be due to inbuilt rebate such as voltage class rebate and incentive for Time of the Day tariff.
- Since the contribution of fixed charges is only 10% of the average realization rate the balance i.e., 23% (33%-10%) is camouflaged in the energy charges. Hence, the energy charges seems to be on a higher side. This is foremost reason for tapping HT consumers by generators. If the Demand/Fixed charges which is masked in the energy charges are separated then the variable cost can be reduced. Hence, it is proposed for increasing the fixed charges and reduce variable charges for HT consumers. This proposal does not affect the existing average realization rate of HT consumers.
- Change in the approved sales mix also affects the cross subsidy level.
- If there is any reduction in sales under HT tariff, loss on account of fixed charges is at the larger extent i.e., -23%, and this will further worsen the cross subsidy level.
- Commission while determining the tariff does not consider the inbuilt rebate. Hence the existing D-21 format needs to be corrected suitably to arrive at the exact impact of the tariff revision.

Hence, it is proposed to increase the demand charges and reduce energy charges. By doing this, BESCOM will attain competence in the open access market. Proposal is as under:

By increasing Demand charges to 250/kVA, the EC is worked out as shown in the table below:

Table No: 6.1

Tariff	Existing		Proposed		Reduction in EC
	FC	EC	FC	EC	
HT1	190	450	250	440	10.00
HT2ai	190	625	250	600	25.00
		675		650	25.00
HT2aai	180	620	250	580	40.00
		660		620	40.00
HT2bi	210	805	250	780	25.00
		835		810	25.00
HT2bii	200	785	250	750	35.00
		815		780	35.00
HT2ci	180	600	250	580	20.00
		650		630	20.00
HT2cii	180	700	250	670	30.00
		750		720	30.00
HT4	110	585	250	550	35.00

By increasing Demand charges to 300/kVA, the EC is worked out as shown in the table below:

Table No: 6.2

Tariff	Existing		Proposed		Reduction in EC
	FC	EC	FC	EC	
HT1	190	450	300	430	20
HT2ai	190	625	300	580	45
		675		630	45
HT2aai	180	620	300	550	70
		660		590	70
HT2bi	210	805	300	750	55
		835		780	55
HT2bii	200	785	300	720	65
		815		750	65
HT2ci	180	600	300	560	40
		650		610	40
HT2cii	180	700	300	650	50
		750		700	50
HT4	110	585	300	530	55

The Demand charges are increased and the corresponding Energy charges are decreased to that effect. Hence, above calculations are depicting tariff neutral approach which is comparable with the other States Industrial tariff.

Further, the tariff of HT industrial consumers in various States are illustrated below:

MADHYA PRADESH:

Table No: 6.3

Sub-Category of consumer	Monthly Fixed Charge (Rs./kVA of billing demand per month)	Energy Charge for consumption up to 50% load factor (paise / unit)	Energy Charge for consumption in excess of 50% load factor (paise / unit)
Industrial			
11 kV supply	300	620	555
33 kV supply	470	610	510
132 kV supply	560	570	485

ANDHRA PRADESH:

Table No: 6.4

HT-I(A): General		Fixed/Demand Charges in / Month	Energy Charges /Unit
132 KV and above	kVAh	385.84/kVA/Month of maximum demand recorded or 90% of CMD whichever is higher	5.25
33 KV	kVAh		5.68
11 KV	kVAh		6.14

UTTAR PRADESH:

Table No: 6.5

Particulars	For supply upto and including 11 kV	For supply above 11 kV and up to & including 66kV	For supply above 66 kV and up to & including 132 kV	For supply above 132 kV
Demand Charges	Rs. 250.00 / kVA / month	Rs. 240.00 /kVA / month	Rs. 220.00 / kVA /month	Rs. 220.00 / kVA /month
Energy Charges	Rs. 6.65 /kVAh	Rs. 6.35 / kVAh	Rs. 6.15 / kVAh	Rs. 5.95 / kVAh

TAMIL NADU:**Table No: 6.6**

Particulars	Energy Charges (Rs/unit)	Demand Charges (Rs/kVA/month)
Industries, Registered factories, Textiles, Tea estates, IT services etc.,	6.35	350

BESCOM:**Table No: 6.7**

Demand charges	Rs.190/kVA of billing
Energy charges	
For the first one lakh units	625 paise per unit
For the balance units	675 paise per unit

WHEELING AND BANKING:

Wheeling enables a generator to transfer the generated energy through distribution lines from one Utility service area to another's. The energy output is wheeled to its captive consumer, group captive or non-captive consumer.

When a generator uses the wheeled energy for captive consumption then no cross subsidy surcharge is collected. The energy is delivered at the output point after deducting the wheeling and banking charges in kind.

The generator can also sell his energy to a consumer after taking permission from the Utility and paying cross subsidy surcharge.

Further, the generator can also supply his energy to the group captive consumers (with 26% stake in the generation) and no cross subsidy surcharge is to be collected.

The Generator can also bank his generated energy with the utility after deducting banking charges in kind.

The banked energy is to be utilized by the generator within the stipulated wind year. The wind year starts from the month of April of each financial year and ends in the month of March of the same financial year.

OPEN ACCESS:

Open access allows large users of power — typically having connected load of 1 megawatt (Mw) and above — to buy cheaper power from the open market. The idea is that the customers should be able to choose among a large number of competing power companies— instead of being forced to buy electricity from their existing electric utility monopoly.

The open access consumer has to approach IEX for purchasing energy. The open access consumer cannot participate in any other scheme such as wheeling.

Inter State Open Access: When buying and selling entity belongs to different states. In this case CERC regulations are followed. It is further categorized as:

Short Term Open Access (STOA): open access allowed for the period of less than one month.

Medium Term Open Access (MTOA): open access allowed for a period of 3 months to 3 years.

Long Term Open Access (LTOA): open access allowed for a period of 12 years to 25 years.

Intra State Open Access: When buying and selling entity belongs to same state. In this case SERC regulations are followed. It is further categorized as STOA, MTOA, and LTOA and the duration of which depends on the respective state open access regulations.

Open Access Charges:

- Connectivity Charges.
- PoC Charges.
- Transmission Charges.
- Transmission Losses.
- Wheeling Charges.
- Wheeling Losses.

- Cross Subsidy Surcharge.
- SLDC Charges.
- RLDC Charges.

Drawbacks to the Utility:

1. As per the provisions of the Electricity Act 2003, the Utility needs to act as standby to the open access consumer.
2. In Wheeling and Banking arrangement, the Wind Generators banks its energy with the Utility during generation period and uses up the banked energy at the end of the wind year that is in the month of March. (Wind year – 1st April to 31st March).
3. 70% of wind generation is during the five months duration from May to September. Due to the induction of this energy into the grid, there is surplus energy available and hence the Utility instructs its State generation to back off. Even if the State generator is instructed to pull back, the Utility is obligated to pay capacity charges to the State generator. This increases the Power Purchase cost of the Utility.
4. Since, the Utility is facing huge energy crisis usually during the fourth quarter of the financial year i.e (Jan, Feb and March). Drawal of banked energy by the generator during the same period is hindering the functioning of the Utility. The Utility then has to resort to high cost energy to supply power to its consumers. This in turn increase the power purchase cost of the Utility.
5. Added to this ordeal, HT consumers are leaving the grid to purchase energy through open access. The HT consumers are(cross subsidizing category) leaving the grid for greener pastures and at the same time the Utility has to comply its social obligation by supplying energy to agriculture, domestic and weaker consumers(cross subsidized category). This has increased the average cost supply of the Utility. The difference between the average cost of supply and the average realization rate is bridged through increase in tariff to its consumers. Further, increase in HT tariff will only facilitate the HT consumers to leave the Utilities grid. The increase in the open access consumers over the years is depicted in the table below:

Table No: 6.8

FINANCIAL YEAR	2011-12	2012-13	2013-14	2014-15	2015-16	2016-2017 upto SEPT-2016
NUMBER OF USERS	11	18	31	42	72	102
TOTAL CONSUMPTION THROUGH OPEN ACCESS in mu	5.30	18.86	76.06	174.65	528.95	522.78

6. When open access consumers draws from the Utility even after opting for open access, the standby arrangements provided for such consumers by the Utility become stranded once they go back to the open access supplier.
7. The Utility is allowing consumers to opt for open access on one hand and forcing the distribution companies to purchase high cost renewable energy under Renewable Power purchase Obligation (RPO). There is no scope for level playing field to ensure a healthy competition.

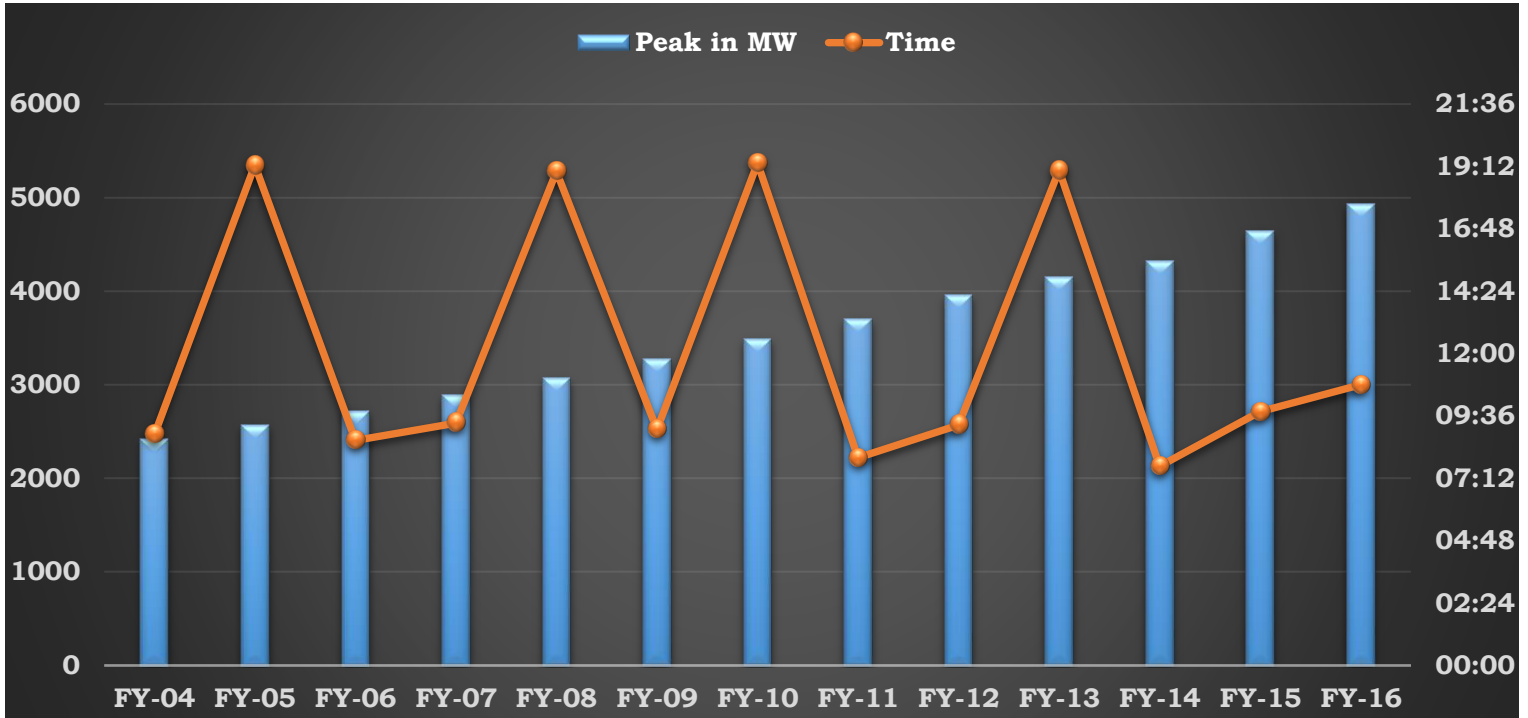
In lieu of the above difficulties faced by Utility, the following proposals are placed before the Commission:

1. The banking facility shall be allowed for a period of 3 months from the date of generation.
2. Withdrawal of banked power should not be allowed during peak and Time of Day (TOD) hours.
3. If the banked energy is not utilized within a period of three Months from the date of power banked with the concerned power utilities/Licensee, it will automatically lapse and no charges shall be paid in lieu of such Power.

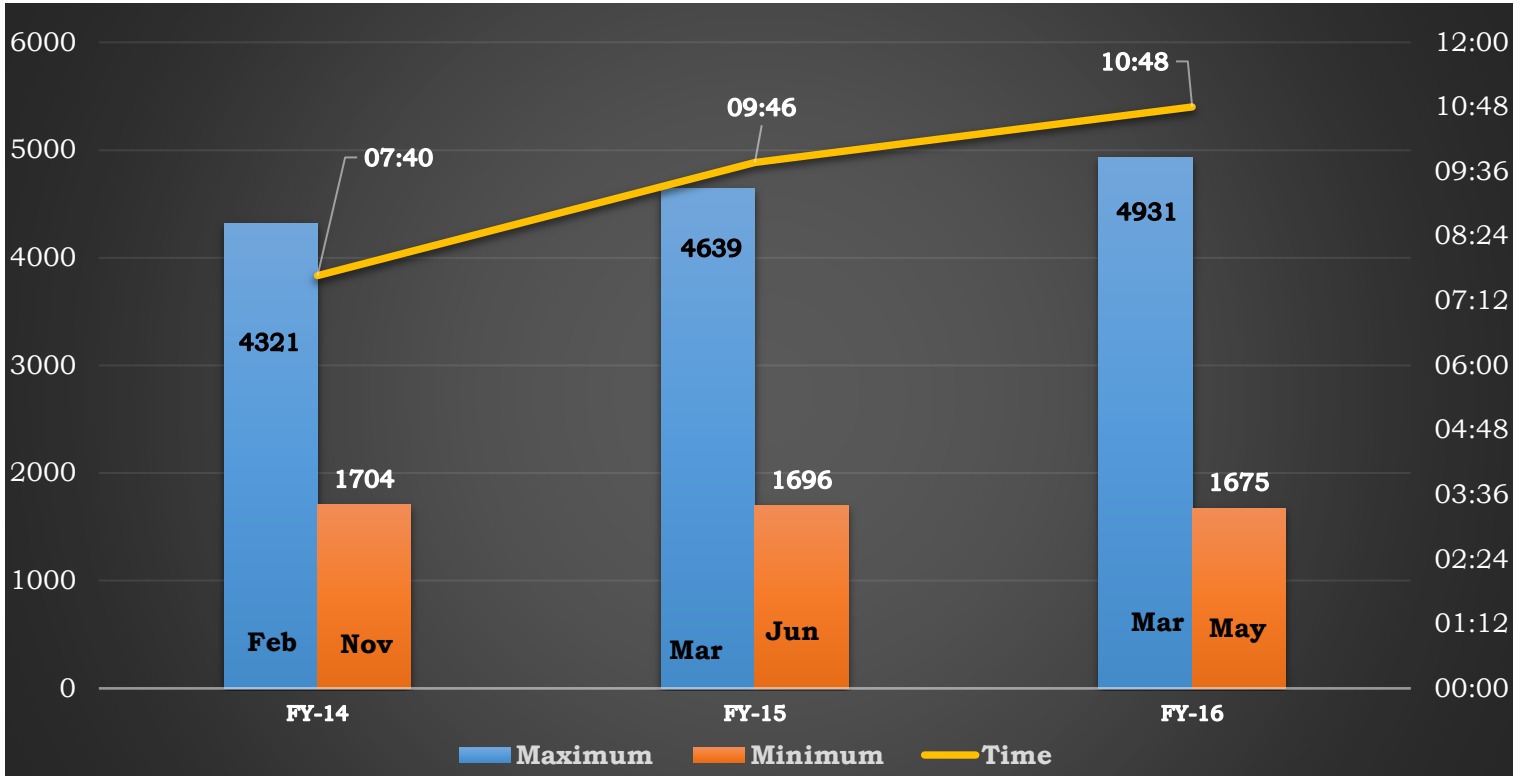
Additional surcharge to open access consumers who draw from the Utility even after opting for open access.

TIME OF DAY TARIFF:

The latest available trend for peak demand is depicted in the graph below:



The last three years data from FY14 onwards with the time are depicted in the graph below:



The objective of ToD billing is to encourage the consumers to shift their load from peak hours to non –peak hours by incentivizing them and also to levy penalty to discourage the consumers to use energy at peak hours. The idea of introducing differential pricing method was to clip of the load curve during peak hours which has not happened.

Of late, it is noticed that the ToD consumers who neither shift the load to the off peak hours nor reduce the consumption during the peak hour are getting incentive (benefit) due to inherent error in the existing provision. As per the existing ToD tariff structure, penalty at Rs.1.00 per unit is being levied for the consumption during peak hours i.e., 6PM to 10PM (4 hours) and incentive at the rate of Rs.1.25 per unit is being extended to the half peak hour i.e., 10PM to 6 AM.

Maximum peak recorded in BESCO in each month for the years FY14, FY-15 and FY-16 are tabulated below:

Table No: 6.9

FY-16	Maximum	Time	Minimum	Time
Apr'15	4606	9:37	2370	2:35
May'15	4370	9:56	1675	0:25
June'15	4350	8:00	1976	4:21
July'15	4493	9:32	2033	17:21
Aug'15	4181	7:53	2273	3:27
Sep'15	3818	9:37	2038	2:04
Oct'15	3740	11:14	2090	3:37
Nov'15	3676	18:44	1948	2:02
Dec'15	4100	7:49	2112	3:30
Jan'16	4340	9:12	2707	17:15
Feb'16	4764	8:39	2993	5:29
Mar'16	4931	10:48	3090	17:14

Table No: 6.10

FY-15	BESCO Load in MW			
	Maximum	Time	Minimum	Time
Apr-14	4344	19:24	2751	3:03
May-14	4148	19:24	2069	15:50
Jun-14	4081	18:52	1696	3:02
Jul-14	4093	8:08	1733	2:51
Aug-14	4175	9:23	1973	3:16
Sep-14	4177	9:21	1961	2:04
Oct-14	3763	7:27	1830	2:04
Nov-14	3957	7:48	2012	2:03
Dec-14	4318	7:48	2446	2:05
Jan-15	4592	8:21	2202	0:30
Feb-15	4608	7:58	2607	14:15
Mar-15	4639	9:46	2799	2:06

Table No: 6.11

FY-14	Maximum	Time	Minimum	Time
April-13	4034	19:21	2330	0:01
May'13	3895	8:41	1767	23:20
June'13	3777	8:16	1806	4:37
July'13	3732	8:32	1895	23:52
Aug'13	3829	8:40	1786	3:08
Sep'13	3808	10:24	1950	23:05
Oct'13	3934	8:45	1827	2:04
Nov'13	4001	7:58	1704	23:59
Dec'13	4221	7:15	2104	0:43
Jan'14	4297	7:49	2293	23:56
Feb'14	4321	7:40	2300	4:40
Mar'14	4275	7:42	2291	23:03

It can be seen from the above table, the maximum peak records in the morning. Hence, it is necessary to consider morning period from 6AM to 10AM as peak hours.

Consumers who neither reduce the load during the peak hour nor shift the load to the off peak hours get only 4 hours penalty and are rewarded with 8 hours of incentive, net incentive of 37.5%.

The ToD tariff was introduced as a DSM measure to clip off the peak but the peak has shifted from evening to morning. Hence to rectify the error, the Hon'ble Commission is requested to levy penalty for the morning peak from 6AM upto 10AM and to do away with Re1.25/- incentive during off peak hours.

A comparison of the ToD tariffs of BESCO with other States are detailed below:

TIME OF DAY TARIFF- BESCO:

Table No: 6.12

Time of Day	Increase + / reduction (-) in energy charges over the normal tariff applicable
22.00 Hrs to 06.00 Hrs	(-) 125 paise per unit
06.00 Hrs to 18.00 Hrs	0
18.00 Hrs to 22.00 Hrs	+ 100 paise per unit

TIME OF USE CHARGES – UGVCL:**Table No: 6.13**

For energy consumption during the two peak periods, viz., 0700 Hrs. to 1100 Hrs. and 1800 Hrs. to 2200 Hrs.
(a) For Billing Demand up to 500 kVA - 45 Paise per Unit
(b) For Billing Demand above 500 kVA - 85 Paise per Unit

TIME OF DAY – BEST MUMBAI**Table No: 6.14**

TOD Tariffs (Optional – in addition to above base Tariffs)	Energy Charge (Rs. /kWh)
0600 to 0900 hours	0.00
0900 to 1200 hours	0.50
1200 to 1800 hours	0.00
1800 to 2200 hours	1.00
2200 to 0600 hours	-0.75

TIME OF DAY – TATA - DELHI**Table No: 6.15**

Months	Peak Hours	Surcharge on Energy Charges	Off-Peak Hours	Rebate on Energy Charges
May to September	1300-1700 hrs and 2100-2400 hrs	20%	0300-0900 hrs	20%

From the above, other States are considering two peak periods unlike Karnataka. Hence, it is proposed to consider two peak periods for the following reasons:

- The aim of ToD tariff is to shift load from peak to off-peak hours with a view to optimize the generation capacity and minimize power procurement cost.
- No incentives for off-peak consumption as is being in vogue in other States are proposed.
- The off-peak incentive helps to shift load curve to night hours which is helpful for optimum power generation.

Specific Consumption of IP sets:

Government of Karnataka in its circular No.EN 41 VSC 2014 P1, dated 14.07.2014 has stated that an approximate 50,000 unauthorized IP applications per year are registered in the State. Further, it is also stated that the occurrence of unauthorized pump set is a continuous phenomenon as a major rural population of Karnataka depends on agriculture for employment. In order to end the menace of unauthorized IP sets, the said IP sets are treated in par with new IP connections. Guidelines to service irrigation pump sets irrespective of its area i.e. dark/grey area are issued in this circular.

In the light of the above, the agricultural consumers for FY-16 are 809170 and Sept-16 DCB figures are 819984. This shows that 10806 installations are added for a period of six months. For the second half of FY17 10,806 consumers are added to Sept16 consumers to arrive at the final figure for FY17 as 830790.

Table No: 6.16

Details	FY-16	FY-17
No. of Consumers	809170	830790

Consumption:

The IP set consumer's installations are not 100% metered. Considering the monthly actual NJY feeder reading the consumption is tabulated below:

Table No: 6.17

Month	Installations	Consumption in kWh	Average Consumption MU	Approved Consumption MU
Apr-16	371148	426040006.2	1147.90	669.75
May-16	371897	416289414	1119.37	669.75
Jun-16	372941	316440658.5	848.50	669.75
Jul-16	376483	174187702.1	462.67	669.75
Aug-16	376325	193782587.9	514.93	669.75
Sept-16	379693	307200572.2	809.08	669.75
Oct-16	382305	310641768.5	812.55	669.75
Total			5715.00	4688.25
Average/Specific Consumption per month			816.43	669.75
Average/Specific Consumption per annum			9797.14	8037

Based on the above computation, specific consumption of 9797 units/ installation/ annum is arrived for FY-17(Upto Oct-16).

The above data is computed based on the NJY feeder details reading. The details are enclosed.

Seeking determination of Tariff for Auxiliary Consumption utilized by KPTCL Sub Stations.

1. KPTCL is separated from power purchase activities w.e.f. 10.06.2005 as per Electricity Act-2003 and the same was allocated/assigned to ESCOMs. ESCOMs are procuring power directly from Generators at share of allocation ordered by GOK from time to time.
2. KPTCL vide Letter No. FA(A&R)/AO(A/C)/AAO(A/C)/2/13323-24 dated 15.12.2005 had directed SLDC that the ESCOMs are directly purchasing power from 10.06.2005 and average power purchase cost differs from one ESCOM to other ESCOM and hence, the Auxiliary Consumption of KPTCL Stations in that particular geographical area of ESCOM shall be billed at **“Average Power Purchase Cost”** of that particular ESCOM along with applicable Electricity Tax and is to be payable to that particular ESCOM. Accordingly BESCO is being billing the Auxiliary Consumption Charges of KPTCL at average power purchase cost of BESCO from June-2005 to till date.
3. As per clause 3.3 of KERC (Terms and Conditions of Transmission Tariff) Regulation 2006 under MYT frame work the charges for Auxiliary Consumption in the substations/offices for the purpose of air conditioning, lighting technical consumption etc. shall be borne by Transmission Licensee as part of normative O & M expenses.
4. KPTCL vide Letter No. KPTCL/KCO-33/12772/2015-16 dated 11.05.2015 had stated that Auxiliary Consumption of KPTCL Substations is integral part of Transmission Activity of KPTCL and accountable for reduction in transmission loss of KPTCL. BESCO vide Letter No. BESCO/DF/GM (Elec)/PP/BC-39/2015-16/34 dated 29.05.2015 had sought clarification from the Hon'ble Commission on KPTCL's contention about accounting of Auxiliary Consumption as transmission loss or sales by ESCOMs.
5. The Hon'ble Commission vide Letter No. B/07/05/451 date 23.06.2015 had clarified that the Auxiliary Consumption Charges are to be borne by KPTCL as per Regulation 3.3 of KERC (Terms and Conditions for determination of Transmission Tariff) Regulation 2006. In furtherance, the Hon'ble Commission had directed that as there is no specific category in the present Tariff schedules of ESCOMs, action has to be taken by BESCO

in accordance with the provision of clause 3.05 of Conditions of Supply of Electricity of Distribution Licensee in the State of Karnataka, and seek determination of Tariff in respect of sale of power to KPTCL as provided in that clause.

6. Clause 3.05 of conditions of Supply of Electricity of Distribution Licensee in the State of Karnataka states as under.

“The Licensee may having regard to the nature of supply and purpose for which supply is requires may fix special Tariff and conditions of supply for the consumers not covered by the classification enumerated in these conditions. For such proposes, Licensee may enter into special Agreement with the approval of the Commission with suitable modification in the standard Agreement Form. The Tariff in such cases shall be separately approved by the Commission”.

7. Accordingly BESCOM vide Letter No. 103-106 dated 27.08.2015 had requested KPTCL to accept the Commercial Tariff of LT category since stations of Doordarshan, BSNL and AIR are billed under LT3 category. KPTCL vide Letter No. 30872 dated 05.09.2015 had not accepted BESCOM’s proposal. BESCOM vide Letter No. 95-99 dated 22.09.2015 had again requested to mutually agree for either Commercial Tariff of LT Category or a rate not less than the average Power Purchase Cost approved by the Hon’ble Commission in the Tariff orders issued from time to time since this tariff was proposed by KPTCL itself vide Letter No. FA/AO/AAO (A/C)-2/13323-24 dated 15.12.2005. **But KPTCL had denied the tariff proposal of BESCOM and informed to seek the tariff determination towards Station Auxiliary Consumption in the Tariff Application of ESCOMs before KERC.**

8.

9. BESCOM is billing and collecting the Auxiliary Consumption Charges of KPTCL at average power purchase cost from June-2005 and onwards as per KPTCL letter dated 15.12.2005. From June-2005 to October-2016, 151 Mu has been supplied and an amount of Rs. 53 Crore is collected.

10. In view of the above, separate tariff needs to be determined on the following grounds.

Grounds:

1. The transmission network of 66 Kv and above pertains to KPTCL and 33 Kv and below pertains to ESCOMs as per clause 7.6.4 of Grid Code, Distribution Code and Standards and CEA Regulations. The power utilized by KPTCL Substations for Auxiliary Consumption purpose is supplied by ESCOMs through separate feeders or local feeders as the case may be. The power so supplied by ESCOMs is from pooled purchase of power from various sources at different rates. Hence, KPTCL needs to pay the charges incurred by ESCOM.
2. The Auxiliary Consumption utilized by PGCIL beings Central Transmission Utility (CTU) is being billed under Commercial Tariff of HT Category (HT2B). The power supply to Telephone Exchange, Service Station, All India Radio, Microwave Stations, Dish Antenna, Public Telephone Booths etc. are billed under Commercial tariff of LT Category.
3. KPTCL vide letter dated 15.12.2005, itself had fixed a rate of average power purchase cost of ESCOMs where sub stations of KPTCL are geographically located. Accordingly BESCO is being billed the Auxiliary Consumption Chagres at average Power Purchase Cost, collected an amount of Rs. 53 Crore for 151 Mu supplied to KPTCL and accounted the same in BESCO for the period June-2005 to October-2016. Further, KPTCL is frequently directing BESCO to seek Tariff determination towards Auxiliary Consumption in the Tariff Application of ESCOMs before KERC.

Prayer:

Wherefore, it is prayed that this Hon'ble Commission may be pleased to issue appropriate order and,

1. Approve the Commercial Tariff of LT Category in Tariff orders issued by this Hon'ble Commission from time to time, for Auxiliary Consumption utilized by KPTCL Substations.
2. **Or** Approve the tariff of not less than average power purchase cost approved by this Hon'ble Commission in Tariff orders issued from time to time, for Auxiliary Consumption of KPTCL Substations.

- 3.** Direct KPTCL to account the Auxiliary Consumption Charges at average Power Purchase Cost amounting to Rs. 53 Crore for the period June-2005 to October-2016.

- 4.** Pass such other orders as this Hon'ble Commission deems fit in the facts and circumstances stated above.