

BESCOM

Preliminary Observations on the Applications filed by the BESCOM for approval of APR for FY18, ARR & Retail Supply Tariff for FY20 to FY22 under MYT Framework

1. Observations on Sales:

A. Sales- Other than IP sets:

- i. At page-3 of the Tariff Petition, for FY18, the sales to domestic category is indicated as 6849.46 MU, whereas as per D-2 Format the sales to this category [LT-1 +LT-2a) is shown as 6800.18 MU. BESCOM shall reconcile the data.
- ii. At page 5, FY16 sales is indicated as 24538.17 MU, whereas as per APR approved by the Commission, it is 24126.14 MU. Accordingly, FY16 figure shall be modified.
- iii. In D-2 Format, the total number of installations in respect of HT-category, for FY20 should be 17,345 and for FY22 it should be 20,333. The same shall be rectified.

iv. Annual Performance Review for FY-18

The Commission, in its Tariff Order, 2017, dated 11.04.2017, had approved total sales to various consumer categories at 26109.16 MU as against the BESCOM proposal (including additional sales) of 26364.42 MU. The actual sales of BESCOM, as per the current APR filing [D-2 FORMAT] is 25967.27 MU, indicating a shortfall in the sales to the extent of 141.89 MU as compared with the approved sales.

The category-wise sales approved by Commission and the actuals for FY18 is indicated in the table below:

Category	Actual Sales -MU	Approved Sales-MU	Difference - MU
LT1 BJ/KJ <=40 units/month	183.65	58.80	124.85
LT1 BJ/KJ >40 nits/month		71.57	-71.57
LT-2a	6616.53	6966.38	-349.85
LT-2b	49.29	49.07	0.22
LT-3	2005.97	2000.85	5.12
LT-4 (a)	6289.04	6157.95	131.09
LT-4 (b)	0.95	4.60	-3.65
LT-4 (c)	4.52	4.90	-0.38

LT-5	1185.41	1187.24	-1.83
LT-6	813.85	453.97	359.88
LT-6	455.98	391.17	64.81
LT-7	157.12	158.63	-1.51
HT-1	679.43	738.04	-58.61
HT-2 (a)	4470.59	4663.23	-192.64
HT-2 (b)	2562.32	2666.85	-104.53
HT-2(c)	312.39	272.01	40.38
HT-3(a) & (b)	26.76	72.84	-46.08
HT-4	68.85	114.70	-45.85
HT-5	84.62	76.36	8.26
Grand total	25967.27	26109.16	-141.89
Sales to categories other than BJ/KJ <= 40units/month & IP sets	19494.58	19820.85	-326.27
Sales to BJ/KJ <= 40units/month & IP sets	6472.69	6288.31	184.38

From the above table, it is noted that the major categories contributing to the reduction in sales with respect to the estimates are LT 2a-Domestic category (349.85 MU), HT Industries (192.64 MU), HT Commercial (104.53 MU), HT3-Irrigation (46.08 MU) and HT-4 Residential Apartments (45.85 MU). On the other hand, major categories contributing to the increase in sales with respect to the estimates are LT-6 Water supply (359.88 MU), LT-Public Lighting (64.81 MU) and IP Sets (131.09 MU).

BESCOM in its Tariff Petition has stated that:

- a. The sales reduction in LT-2a is due to demand side management initiatives, like installation of LED lights, solar water heaters etc.
- b. The reduction in HT sales is due to consumers opting for Open access/group captive.
- c. The increase in IP set is attributed to good monsoon.

In the light of the above, BESCOM shall:

- a) Henceforth, analyze the DSM programmes implemented and quantify the energy and cost savings, to justify the decrease in sales to a particular category.

- b) Furnish the data of sales to each of the HT category namely, HT2(a), HT2(b) and HT 2(c) categories along with the consumption from open access / wheeling for the year 2016-17 and 2017-18 in the following format:

Energy in MU				
Year	Category	Energy procured by the Consumer from BESCO	Energy procured by the Consumer under open access / wheeling	Total
		(a)	(b)	(a+b)
2016-17				
2017-18				

- c) Analyze the reasons for decrease in sales to HT-3 & HT-4 categories and explain the same to the Commission.
- d) Analyze the reasons for increase in sales to LT-6 water supply and LT-6 Public lighting and explain the same to the Commission.
- e) Confirm as to whether the category-wise sales indicated in D-2 Format, is excluding unbilled sales. If unbilled sales are included, category-wise break up of unbilled sales shall be furnished.

v. Category-wise sales for FY20-22:

1. BESCO in its tariff application has stated that, as power sector has evolved in the recent years, due to introduction of competition and increased renewable energy availability, it has considered the actual data from FY09 to FY19 and that, the actuals with respect to estimates under different scenarios were verified and necessary corrections have been proposed to the estimates for the control period FY20-22.

It is submitted that the number of installations for the control period FY20-22 has been worked out by,

- a. Estimating the number of consumers for FY19, by adding the difference of consumers between September, 2018 and March, 2018, to the total consumers upto September-2018;

- b. Applying three-year growth rate on revised estimates of FY19, with a deviation in HT-4 category. For HT-4 category, BESCO has considered one-year CAGR, as three-year CAGR is negative;
- c. For, BJ/KJ, the number of installations as on September-2018, are retained for FY19 to FY-22.
- d. For IP sets i.e., LT4a, 25,000 installations are added each year of the control period, considering the estimated additions in FY19;

2. Further, BESCO has stated that, for the control period FY20-22, energy sales estimate is computed as under:

- a. The estimation for FY19 is computed, by doubling the half-yearly sales of FY-19;
- b. Applying growth rate as per empirical formula with following modifications to certain categories:
 - *For LT4b, sales are retained at FY-19 level, as the growth rate is negative;
 - *For HT-2b & HT-4, sales are retained at FY-19 level, as the growth rate is zero/negative, as per empirical formula;
 - * HT-3b –one-year growth rate is considered
 - *For BJ/KJ the sales are retained at FY19 level, as no new schemes are announced by GoK.
 - * For IP sets, specific consumption of 7200 units/IP/annum is considered

3. The observations of the Commission on sales forecast for the control period are as follows:

- i) BESCO has stated that it has computed the sales based on empirical formula. BESCO shall furnish the formula considered for sales estimate.
- ii) LT(1) – BJ/KJ category:
 - a. BESCO has not considered any additions to the number of installations in this category, stating that there is no new scheme announced by GoK. However, in the absence of such scheme,

BESCOM has estimated addition of 30,373 installations in FY19, the reasons for the same shall be furnished. Further, considering the additions in FY19, BESCOM may consider revising the number of installations for the Control period FY20-FY22.

- b. BESCOM shall compute the BJ/KJ sales for FY19 to FY22, based on the specific consumption of FY18, instead of doubling the FY19 half-year consumption.
- c. BESCOM has not indicated the breakup of installations consuming upto 40 units/month and more than 40 units/month under this category. Hence, BESCOM shall furnish, the breakup of installations consuming less than or equal 40 units/month and above 40 units/month for the 2017-18 and estimates for FY-19 to FY22, in the following format:

Particulars	No. of Installations	Consumption in MU
Installations Consuming upto 40 Units		
Installations consuming more than 40 units and build under LT 2a		

- iii) In the case of LT-4b category, even though the number of installations is retained at FY18 level, for FY19-FY22, the sales is increased to 1.93 MU from 0.95 MU, the reasons for the same shall be furnished.
- iv) In the case of HT-1, HT-2(a)(i) and HT-3(b) categories, even though the number of installations for FY19 is retained at FY18 level, the sales for FY19, is not retained at FY18 level. Reasons for the same shall be furnished.
- v) In the case of HT-2(b)(i) and 2(b)(ii) and HT-4, in spite of increase in number of installations during the control period, sales is retained at FY-19 level. Reasons shall be furnished.

vi) The table indicating the growth rates for the no. of installations is furnished below:

Category	Percentage Growth Rates			
	2012-13 to 2017-18 CAGR	2014-15 to 2017-18 CAGR	FY18 growth over FY17	Growth rate proposed by BESCO for control period
LT-2a	5.58	5.51	4.75	5.0
LT-2b	4.81	5.85	3.67	2.2
LT-3	6.22	6.57	5.38	5.00
LT-5	4.87	4.84	3.81	3.40
LT-6 WS	9.50	8.48	11.00	8.80
LT-6 SL	4.01	3.64	3.77	2.60
HT-1	10.23	8.65	16.26	6.20
HT-2 (a)	7.66	7.05	5.39	3.90
HT-2 (b)	6.64	7.94	7.78	4.80
HT-2 (c)	-	20.96	11.55	12.30
HT-3(a)& (b)	12.89	14.91	15.79	17.31
HT-4	0.18	0.31	-1.79	2.70

It is noted that the growth rate considered by BESCO for LT-2b, LT-3, LT-5, LT-6 SL, HT-1, HT-2a and HT-2b, is lower as compared with the normal growth rates and is higher for HT-3 and HT-4 categories. BESCO shall consider revising the above growth rates.

vii) The table indicating the growth rates for the energy sales is furnished below:

Category	Percentage Growth Rates			
	2012-13 to 2017-18 CAGR	2014-15 to 2017-18 CAGR	FY18 growth over FY17	Growth rate proposed by BESCO for control period
LT-2a	6.08	5.54	3.88	6.00
LT-2b	7.43	6.49	6.46	7.00
LT-3	6.37	6.75	6.74	7.00
LT-5	1.07	1.62	1.91	2.0
LT-6 WS	11.88	23.16	39.87	20.00
LT-6 SL	2.40	5.32	17.68	7.00
HT-1	5.36	1.17	-0.31	3.00
HT-2 (a)	-1.35	-1.05	0.32	1.00
HT-2 (b)	-2.50	-2.18	-2.19	0.00

HT-2(c)	-	19.29	15.68	12.00
HT-3(a)& (b)	18.03	18.55	77.57	31.37
HT-4	-10.55	-18.17	-35.30	0.00

It is noted that the growth rate considered for HT-2a & HT-3, is higher as compared with the normal growth rates and is lower for HT-2c. Hence, BESCO shall consider revising the above growth rates.

- viii) For HT2(a) category, the sales estimate based on the analysis of open access impact shall be considered. BESCO should have computed the growth rates considering the total energy sold to this category including OA/wheeling and should have estimated the sales considering the ratio of energy sold by BESCO in FY18 to the total sales of FY18 including OA/wheeling sales. BESCO may compute HT-2a sales on the above method and furnish the data.

B. Observations on Sales to IP sets:

1. Sales for FY18:

- a. Overall sales to IP Sets for the FY18 has increased by 131.09 MU (2.12%) amounting to 6,289.04 MU as against the approved sales of 6,157.95 MU as per the Tariff Order dated 11.04.2017. The Commission had approved specific consumption of IP-sets at 7,324 units / installation / annum for the FY18. As per the consumption reported in D2 Format of the filing, the specific consumption works out to 7,210 units / installation / annum for the FY18, whereas, the BESCO has indicated the actual specific consumption for FY18 as 7,341 units / installation / annum (page No 9, Chapter-3 – truing up for FY18). The reasons for this increase in the specific consumption needs to be furnished.
- b. During the KPTCL and the ESCOMs' Review Meeting held on 16.11.2018, the BESCO submitted that the total number of IP sets existing is 8,68,461 [Check is this the FY-19 second quarter figure, which can't be compared with FY18 data]. Of the total 8,04,006 IP-sets [confirm for which year], 32,197 no. of IP-Sets have been declared as not-in-use / dried-up, installations, as per the completed GPS survey. As per the details furnished in D2 Format, the number of IP installations is 8,72,229 showing a difference of 3768 number of IP sets. Also 32,197 number of installations (dried up and not in

use)[does this number pertain to FY18 or FY19 to be ascertained] have to be deducted from the total number of installations indicated in D2, Format for the FY18 (from April 2017 to March 2018).

Accordingly, month-wise and the total IP-set consumption needs to revised. Therefore, the BESCO shall submit the revised consumption based on the revised number of installations for the FY18, taking into account the GPS survey data.

- c. The Commission in its Tariff Order dated 11.04.2017, while approving the IP sets energy sales for the FY18, had directed the BESCO to furnish feeder-wise IP-set-consumption based on feeder-energy meter data, by deducting the actual energy losses prevailing in 11kV line, distribution transformers and LT line, every month in respect of agriculture feeders segregated under the NJY. The BESCO is therefore, required to revise the IP consumption for the FY18, as per the energy recorded on the segregated feeders clearly indicating the energy input to the feeders on the basis of energy-meter reading data and **shall furnish month-wise data in support of its claims of IP-consumption for the FY18 and upto September 2018, duly considering the above reduced number of IP sets and the distribution losses, as per the format given in the Tariff Order.**

2. Projected sales to IP Sets for the FY19:

- a. The Commission, in its Tariff Order dated 14.05.2018, while approving IP sets energy sales for FY19, had directed the BESCO to furnish the monthly energy consumption of IP-sets, based on the readings from the energy Meters provided to 11kV agricultural feeders at the substations, duly allowing the distribution losses in 11 kV line, transformers and LT distribution system. But, the BESCO has not furnished the month-wise IP-set consumption, giving details of consumption relating to other installation as directed. But, the BESCO, in its tariff filing for FY20 has submitted the total IP consumption as, 2894.09 MU for the period April – September 2018 without furnishing the month-wise details as per the prescribed formats, in support of its claim.

- b. As per Format- D2, the BESCOM has considered a specific consumption of IP sets for the FY19 as 6,600 units / installation / annum, and has projected the specific consumption of IP sets for the entire period of FY20 to FY22 as 7200 units / installation / annum. BESCOM shall explain as to why it has increased the specific consumption by 600 units while proposing the sales for FY20 onwards.

4. To validate the sales, category-wise information in the following format shall be furnished:

a. No. of Installations:

Category	2016-17 Actuals		2017-18 Actuals		2018-19	
	As on 30 th Nov 2016	As on 31 st March 2017	As on 30 th Nov 2017	As on 31 st March 2018	As on 30 th Nov 2018	As on 31 st March 2019 (Estimate)
LT-2a						
LT-2b						
LT-3						
LT-4 (b)						
LT-4 (c)						
LT-5						
LT-6						
LT-6						
LT-7						
HT-1						
HT-2 (a)						
HT-2 (b)						
HT2C						
HT-3(a)& (b)						
HT-4						
HT-5						
Sub Total (Other than BJ/KJ and IP)						
BJ/KJ<=40units/month						
BJ/kJ > 40 units/month.						
IP sets-LT-4a						
Sub Total (BJ/KJ and IP)						
Grand Total						

b. Energy Sales

Category	2016-17 Actuals		2017-18 Actuals		2018-19	
	1st April 2016 to 30th Nov 2016 (cumulative)	1st Dec 2016 to 31st March 2017 (cumulative)	1st April 2017 to 30th Nov 2017 (cumulative)	1st Dec 2017 to 31st March 2018 (cumulative)	1st April 2017 to 30th Nov 2018 (cumulative actuals)	1st Dec 2018 to 31st March 2019 (cumulative Estimate)
LT-2a						
LT-2b						
LT-3						
LT-4 (b)						
LT-4 (c)						
LT-5						
LT-6						
LT-6						
LT-7						
HT-1						
HT-2 (a)						
HT-2 (b)						
HT2C						
HT-3(a)& (b)						
HT-4						
HT-5						
Sub Total (Other than BJ/KJ and IP sets)						
BJ/KJ<=40units/month						
BJ/kJ > 40 units/month.						
IP sets LT 4a						
Sub Total (BJ/KJ and IP)						
Grand Total						

2. RPO Compliance:

- i. BESCO has furnished the details of RPO compliance of solar and non-solar RPO for 2017-18. As per D-1 Format Non-solar energy purchased is 3489.26 MU, whereas for RPO it is indicated as 3489.06 MU. Similarly, as per D-1 Format, the Solar energy purchased is shown as 1208.74 MU, whereas for RPO it is indicated as 1207.91. These figures shall be reconciled. Also for Non-solar RPO, the energy procured from Shimsha Hydro Station shall also be added.

- ii. For validating the RPO compliance and to work out APPC, BESCOM shall furnish the data as per the format indicated below, duly reconciling the data with audited accounts of FY18:

a. Non-solar RPO:

No.	Particulars	Quantum in MU	Cost- Rs. Crs.
1	Total Power Purchase quantum from all sources excluding Hydro energy		
2	Non-solar Renewable energy purchased under PPA route at Generic tariff including Non-solar RE purchased from KPCL		
3	Non-solar Short-Term purchase from RE sources, excluding sec-11 purchase		
4	Non-solar Short-Term purchase from RE sources under sec-11		
5	Non-solar RE purchased at APPC		
6	Non-solar RE pertaining to green energy sold to consumers under green tariff		
7	Non-solar RE purchased from other ESCOMs		
8	Non-solar RE sold to other ESCOMs		
9	Non-solar RE purchased from any other source like banked energy purchased at 85% of Generic tariff		
10	Total Non-Solar RE Energy Purchased [No 2+ No.3+No.4+No.5 +No.7+No.9]		
11	Non-Solar RE accounted for the purpose of RPO [No.10- No.5-No.6-No.8]		
12	Non-solar RPO complied in % [No11/No1]*100		

b. Solar RPO:

No.	Particulars	Quantum in MU	Cost- Rs. Crs.
1	Total Power Purchase quantum from all sources excluding Hydro energy		
2	Solar energy purchased under PPA route at Generic tariff including solar energy purchased from KPCL		
3	Solar energy purchased under Short-Term, excluding sec-11 purchase		
4	Solar Short-Term purchase from RE under sec-11		
5	Solar energy purchased under APPC		
6	Solar energy pertaining to green energy sold to consumers under green tariff		
7	Solar energy purchased from other ESCOMs		
8	Solar energy sold to other ESCOMs		
9	Solar energy purchased from NTPC (or others) as bundled power		
10	Solar energy purchased from any other source like banked energy purchased at 85% of Generic tariff		
11	Total Solar Energy Purchased [No2+ No.3+No.4+No.5+No.7+No.9+No.10]		
12	Solar energy accounted for the purpose of RPO [No.11- No.5-No.6-No.8]		
13	Solar RPO complied in % [No12/No.1]*100		

- iii. BESCOM shall furnish the estimates for complying with solar and non-solar RPO for FY19-FY22, including any cost implication for purchasing RECs, if any.

3. Wheeling Charges for FY20:

BESCOM has proposed wheeling charges of 17.96 paise/unit and 41.92 paise/unit respectively for HT network and LT network. Further it has stated that the applicable losses at HT & LT shall be 3.86% and 5.48% respectively.

BESCOM has stated that wheeling charges proposed shall be applicable to all OA/wheeling transactions. **BESCOM shall clarify as to whether the above wheeling charges are proposed to RE sources also. If not BESCOM's proposal in the matter may be submitted.**

4. Cross subsidy surcharge:

BESOM has stated that as per Hon'ble APTEL, the Cross Subsidy Surcharge is not only to compensate ESCOMs for loss of cross subsidy, but also to compensate the remaining consumers who have not taken OA. Further, BESCOM has referred to the Consultation paper of MoP dated 24.08.2017 and has stated that SERCs have to implement Para 8.3-2 and first proviso to Para 8.5.1 of tariff policy, simultaneously. Accordingly, BESCOM has submitted that, it has worked out the CSS as per the formula specified in tariff policy,2016.

For FY20, BESCOM has proposed the following CSS:

Voltage level	HT-1	HT-2a(i)	HT-2a(ii)	HT-2b(i)	HT-2b(ii)	HT-2C(i)	HT-2C(ii)	HT 3a(i)	HT 3a(ii)	HT 3b	HT-4	HT-5
66kV & above	-126	181	175	217	201	102	186	-306	-37	-174	10	255
HT-11kV or 33 kV	-174	166	139	217	201	55	186	-353	-84	-221	-38	255

The Commission notes that, the CSS cannot be negative. Hence, wherever it is negative BESCOM shall make it zero.

5. Power Purchases:

a) APR: Power Purchase Cost for FY18:

- 1) The details of quantum & cost of station-wise / Source-wise power purchase in the format as in Annexure-II of Tariff Order 2017 (with the same order and the same contents), shall be furnished.
- 2) A separate statement showing the variable cost in the ascending order from different sources of power shall be attached. Any deviation from the merit order scheduling should be explained fully.
- 3) The Actual consumption through Renewable Energy has increased by 20%, which shows lack of proper forecasting of generation from renewable energy. Reasons for this need to be furnished.
- 4) The PGCIL Charges have increased by around 95%, BESCOM shall explain this with details, the reasons for such a raise in the charges. This has been increasing year after year which is resulting in huge burden on the end consumers. Whether, BESCOM has taken any initiative to address this issue of abnormal increase in the PGCIL POC charges, may be informed to the Commission.
- 5) The BESCOM has considered 29.60 MU and Rs. 11.19 Crores as inter-ESCOMs energy charges, as indicated in D1-Format. The basis for payment of this amount need to be furnished besides submitting a reconciliation statement for the energy balancing among the ESCOMs.
- 6) In respect of BTPS Unit-2, 3 YTPS Unit-1&2, RSTP Stage I&II, Vallur TPS, NLC TPS-II STAGE I, NLC TPS I & II EXP, NTPL, Kudgi and in respect of all Nuclear Power Plants, the tariff indicated in the D-1 Format is higher than the rate reckoned by the Commission. The BESCOM shall furnish the basis thereof.
- 7) The total Capacity Charges/annum (Rs in Crores), Primary energy charges in respect of CGS needs correction, since there is error in the totalling of CGS energy.
- 8) In respect of Generating station viz. Bhadra Project, Varahi Unit-3 & 4, Average Cost of energy shall be furnished.
- 9) In respect of the following Hydro and thermal stations, indicated in the D1 Format, the per unit total cost paid to the generators is on a higher side as compared to the per unit cost paid by the MESCOM/CESC-Mysore. The

BESCOM shall examine the same and recover excess payments, if any, from the generators, under intimation to the Commission, while explaining the reasons for the difference:

SL. No.	Source	Avg. P.P cost as per BESCOM (Rs/kWh)	Avg. P.P Cost as per MESCOM (Rs/kWh)	BESCOM's Avg. P.P. Cost is higher by (Rs/kWh)
	<u>KPCL-Thermal</u>			
1	RTPS I to VII	3.91	3.79	0.12
	<u>KPCL-Hydel</u>			
1	Bhadra Hydro Eletric Project	3.52	3.23	0.29
2	MGHE	0.86	0.77	0.09
	<u>CGS</u>			
1	Neyveli Lignite Corporation_NLC TPS-II STAGE I (3X210MW)	4.11	3.56	0.55
2	NTPC - RSTPS (I & II)	3.92	2.65	1.27

SL. No.	Source	Avg. P.P cost as per BESCOM (Rs/kWh)	Avg. P.P Cost as per CESC Mysore (Rs/kWh)	BESCOM's Avg. P.P. Cost is higher by (Rs/kWh)
	<u>KPCL-Hydel</u>			
1	Kalinadi(Nagajari)	0.96	0.85	0.11
2	Varahi	1.29	1.17	0.12

b) ARR for FY20 – FY22:

1. BESCOM has furnished the CAGR projection, to estimate the quantum of energy considered, for the control period FY20 to FY 22. The projection filed for the control period FY20 to FY22 for the quantum of energy is different from projection made in the perspective plan earlier submitted. BESCOM shall furnish the reasons for the changed quantum of energy and also furnish the Generator- wise, Month-wise projections- Generator-wise / Sources-wise in capacity and energy (in terms of MW and in terms of MU). In respect of Renewable Energy (RE), month-wise break up of source-wise capacity and energy shall be furnished. This is essential to analyze the month-wise variations of requirement of energy and availability from different sources.

2. BESCOM shall furnish the reasons for huge difference in quantum of energy considered in respect of KPCL Thermal and CGS, as compared with the quantum of energy projected by the PCKL.
3. BESCOM shall furnish the basis for considering the FC and the VC in respect of BTPS unit-3, YTPS and Yelahanka gas plants.
4. The Average power purchase cost for UPCL indicated in the page 71 is different from D-1 Format.
5. The figures as per D1 format are different as compared with the figures given in the write-up. BESCOM shall confirm the correct figures, which needs to be considered for computation of ARR,
6. BESCOM has considered the same amount in respect of SLDC charges, POSOCO & PCKL charges payable for FY20-22 for each of the years of the control period and also the charges payable indicated in the D-1 Format are different as compared with the write up given in page-74. The BESCOM shall furnish the reasons for considering the same amounts for all the years of the control period, ignoring the likely inflation/ revision of charges during the control period. Also the correct amounts to be considered for the ARR may be furnished.
7. Basis to consider Rs 180 Crores increase in the KPTCL transmission charges for every year and 10 % increase in the PGCIL charges for the control period FY20 to FY22 shall be furnished.
8. BESCOM shall furnish the capacity and quantum of energy to be procured in respect of new RE projects for which it has executed the PPAs.

6. Observations on Capex:

A. Capital Expenditure for the FY18: In the Tariff Order 2017, the Commission had approved capex of Rs.967.30 Crores as proposed by BESCOM for FY18. Subsequently, the BESCOM had approached the Commission for approval of revised capex of Rs.3272.32 Crores, stating that, it is taking up implementation

of model subdivisions in BMAZ. The Commission, after examining the proposal had approved a revised capex of Rs.3272.32 Crores for the FY18.

Now, the BESCO has indicated a capital expenditure of Rs.1979.01 Crores in table on page No.16 & 17, whereas in format D17, the expenditure capitalized is shown as Rs. 1,863.63 Crores. The BESCO shall explain the reasons for the difference in capex figures.

Though, the BESCO had sought a huge capex of Rs. 3272.31 Crores for the FY18, it has incurred a capex of only Rs.1979.01 Crores for the FY18. This shows that, the BESCO is not planning its capex, as per the Capital expenditure guidelines issued by the Commission. The reasons for the same shall to be furnished.

1) It is to be noted here that, the BESCO has not achieved the capex in respect of Extension & Improvement works (E & I), as proposed, which would have helped the BESCO to improve the Distribution system. During the FY16, the BESCO had achieved less than 57% of the capex proposed under E & I works; during the FY17, it has not achieved capex beyond 70%; and during FY18, it has achieved capex of 63.25%. When the BESCO is not able to achieve the level of capex approved by the Commission, the reasons/justification for approval of higher capex targets year on year, should be furnished by the BESCO.

It is to be noted here that, the BESCO has not achieved the capex in respect of metering, as proposed, which would have helped the BESCO to reprogramme the ToD meters and also metering of substantial number of DTC's which are yet to be metered. During 2nd review meeting for 2nd Quarter of FY-19, it was found that BESCO is yet to reprogram/replace 113 ToD meters and 51,451 No. of DTC's are yet to be metered.

It is to noted here that, the BESCO has not achieved the capex in respect of Service Connection & Drinking Water Supply, Providing infrastructure to Unauthorized IP Sets, Other Works, DAS, R-APDRP Part-B, Civil Engineering Works, DDUGJY and IPDS. It shows that BESCO is not planning its capex as per the Capital Expenditure Guidelines. BESCO should take up works

which are necessary and the same shall be completed in time-bound manner for their effective utilization. The BESCOM is required to furnish the details/ break-up of works under taken under 'local planning and other works'.

- 2) The BESCOM shall submit to the Commission, the works' physical progress as well as the financial progress, in respect of all the works indicated in the above para, along with timelines for completion in the following format:

Sl.no	Name of the Scheme	No. of works	Cost envisaged	No. of works completed	Financial progress achieved on the completed works	Target date for completion of balance works	Reasons for delay in the completion of works, if any
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- 3) The BESCOM shall furnish the details of sources of funding (like grants, debt, equity and internal sources) for the capex incurred during the FY18, against each of the category of works.

B. ARR: Capital Investment Plan for FY20-FY22:

BESCOM shall provide necessary justification on each of the works in terms of its purpose, requirement, physical progress, cost and timelines of completion along with the no. of works proposed to be taken in each of the year of the Control Period.

7. Observations on Distribution Losses, Expenses and Revenue:

- a) **Distribution Losses:** BESCOM, has indicated that the actual distribution losses for FY 18 is 13.17% as against 12.50% approved by the Commission. As against the approved losses of 12.50%, BESCOM in its filing has wrongly reckoned 13% as the approved distribution losses to arrive at the deviation of losses to the extent of 0.17 percentage point for FY18. BESCOM shall furnish the reasons for reckoning the approved distribution loss at 13% and submit the correct figures for FY18. BESCOM shall also furnish the status of distribution loss achieved upto November,2019

Further, the BESCO, in its application for approval of APR for FY18, has indicated actual distribution losses of 13.17% as against the approved losses of 12.50% for FY18 and thus there is a deviation of 0.67 percentage point over the approved losses for FY18. Considering the huge capital expenditure of Rs.1979.01 Crores incurred during FY18, the reduction of distribution losses and the efforts of BESCO in this regard are not found to be satisfactory. BESCO shall furnish the reasons for not achieving the target losses approved by the Commission for FY18, despite incurring huge capex.

- b) **Funding of Capex for FY18:** BESCO has indicated an amount of Rs.1979.10 Crores as capital expenditure incurred during FY18. The BESCO shall furnish the breakup of source of funding for having incurred the said amount for FY18.
- c) **Replacement of faulty Transformers:** BESCO has claimed Rs.144.97 Crores towards replacement of faulty transmission by new transformers during FY18. Any failed transformer shall have to be replaced with a repaired transformer and the expenditure incurred on the repair of transformers need to be charged as revenue expenditure. BESCO shall furnish the details along with reasons for having incurred such a huge amount for replacement of failed transformers during FY18. BESCO shall also furnish the details of capacity-wise transformers failure, repaired, repaired transformers issued to the field and the balance of transformers yet to be repaired during FY18 and also the status thereon up to 30.11.2018 during FY19.
- d) **O & M Expenses:** The BESCO, has computed the O&M expenses by proposing the change in the CPI and WPI ratio's, from the approved ratio of 80:20 to 78:22. The expenditure considered in arriving at the ratio's as shown in Table 3.15 differs from the actual expenditure booked as per the audited accounts for FY18. The same needs to be examined and the correct details shall be submitted to the Commission. Further, the BESCO shall furnish the actual amount of additional employee cost incurred towards payment of pay revision arrears for the period from 01.04.2017 to 31.03.2018. for having claimed Rs.158.04 Crores as additional employee cost for FY18.
- e) **Additional Employee Cost:** The BESCO has claimed additional employees cost of Rs.206.79 Crores towards the Terminal Benefits in format D6. However,

as per the audited accounts, an amount of Rs.191.79 Crores is booked as Terminal Benefit under employee cost. The BESCO shall furnish the correct amount with computation sheet and the relevant Actuarial Valuation Report thereof, duly considering the actual figures as per audited accounts for FY18.

- f) **Term Loans:** The BESCO has reckoned the opening and closing balance of long term loans, new borrowings and repayments thereon. The figures furnished in Table 3.23 does not match with the figures as per the audited accounts for FY18. The D-9 Format furnished by the BESCO is not clearly visible. BESCO shall furnish the D-9 Format for each year from FY18 (actual) to FY22 separately, by considering the amount of current maturities of long term debts duly matching the figures with the audited accounts for FY18. BESCO shall also furnish the actual figures upto November, 2018 and the projection for the remaining period for FY19 and the projections for FY 20-22. The details shall include bank-wise / financial institution-wise opening balance, receipt, repayment, interest rate, term of the loans, purpose of availing the loan, interest amount and the closing balances of the loan.
- g) **Short-term Loans:** The BESCO shall furnish the details of both short-term loans and overdraft balance in line with the long term loans as required above duly tallying with the figures with the audited accounts for FY18, furnish the actuals up to November, 2018 and furnish the projections for the remaining period during FY19 and also the projections for FY20 to FY22.
- h) **Consumer Security Deposit:** The BESCO, in its filing vide Table 3.26, has furnished the details of the security deposit held by the Company and payment of interest thereon. The figure indicated in the Table does not match with the figures indicated in the pre-audited accounts for FY18. The claims made towards interest on consumer security deposit amount of Rs.231 Crores as brought out in the relevant para in page 30 and 31 of the filings, does not match with the figure as per the audited accounts for FY 18. BESCO shall recast the same and submit it to the Commission.
- i) **Consumer Security Deposits:** As per Table 3.26 BESCO has furnished the details of the security deposit held by the Company and payment of interest thereon. The figure indicated in the Table does not match with the figures

indicated as per audited accounts for FY18. The claims made towards interest on consumer security deposit amount of Rs.231 Crores as indicated in the relevant para under page 30 and 31 of the written submissions, does not match with the figures as per the audited accounts for FY 18. BESCO shall recast the same and submit it to the Commission.

- j) **Tax Paid by during FY18:** BESCO in its APR filings, has claimed Rs.25.59 Crores as current tax and Rs.68.44 Crores as deferred tax liability for FY18. BESCO shall submit the copies of the documents for having paid the Income tax amount to the Income Tax Authority.
- k) **New Proposals:** The BESCO, in its application for approval of ARR for FY 20-22, in the Chapter new proposals, has requested certain modifications to the special incentives scheme approved by the Commission. BESCO shall furnish the actual financial impact of those installations covered under the scheme by considering the actual billing up to 30.11.2018, after the implementation of the SIC Scheme (including demand charges) and the normal billing without application of SIC benefits.
- l) **Subsidy Claims:** BESCO shall furnish the details of subsidy claims submitted to the GoK including the revised subsidy for the year FY18 in inspect of IP and BJ/KJ installations along with the energy sales. BESCO shall also furnish the details of subsidy received for FY18 and also for the past period received from the GoK during FY18 separately.
- m) **Consumers Education Fund:** BESCO shall furnish break up details for utilization of fund towards consumer's relation/education during FY18 and also up to November,2018 during FY19.
- n) **Provision for Terminal Benefit Fund:** BESCO has projected Rs.231.75 Crores, Rs.259.74 Crores and Rs.288.57 Crores for FY 20-22 towards terminal benefits under O&M expenses. The basis and calculation sheet for arriving the figures with the relevant Actuarial Valuation Report shall be furnished.
- o) **Revenue Projections for FY20:** In D-21 Format, BESCO has considered the abnormal average sanctioned load per installation in respect of the following

tariff categories. This needs to be examined and the correct sanctioned load details shall be submitted to the Commission.

Tariff Category	Average load per installation
a) LT2 (b)(1) private educational institutions	Less than 2kW - 5kW
b) LT6 (a) Water supply	38.58 kW
c)LT6 (b) street light	12.74 kW
d)HT3 (a)(i) Government lift irrigation	2897 HP
e) HT3 (a)(ii) Private lift irrigation	2927 HP
f) HT 3(b) Agriculture Farms	494 HP

- p) **Submission of AG Audited Accounts:** The BESCO shall furnish the A.G.s audited accounts for FY 18 and the half year accounts for FY 19.
- q) BESCO shall furnish along with copy of the Orders, the equity amount infused by the GoK during FY19.

8. Additional Surcharge:

The Commission, in its Order dated 14th May, 2018 had approved recovery of additional surcharge from the OA consumers for FY19 based on the actuals for FY17. In the order to continue the recovery of additional surcharge, the BESCO shall furnish the details of computation of Additional Surcharge as per Annexure enclosed to these observations in Table- 1 to Table-3, with reference to the actuals power purchase costs and Revenue realized for FY18 and also as per the estimates for FY20 separately. These details are required to establish the under-recovery of stranded cost in the generation, transmission and distribution activities. The computation of additional surcharge with reference to estimates in the ARR for FY20 is required to demonstrate that the costs continue to be stranded even during the year 2020.

9. Observations on Directives:

Sl. No	Directives Issued by the Commission	Observation made
1	Consumer interaction meeting at Subdivision level.	BESCO was directed to conduct consumer interaction meetings at Subdivision level chaired by the SEE once in a quarter to redress the consumer complaints. BESCO has submitted the details of consumer interaction meetings conducted in all the subdivisions in 2 nd quarter of the FY19 in its filing. If such meetings are conducted on only one day of a month in its entire area covering all

Sl. No	Directives Issued by the Commission	Observation made
		<p>subdivisions, it is not clear as to how SEE or EE could attend and chair such meetings. The dates of such meetings in subdivisions should have been spread over in a quarter so that SEE or EE can attend and chair the meetings. The BESCOM shall clarify this. The BESCOM has to furnish the details for the 1st quarter of FY19 and for FY18 indicating the dates on which the meetings were conducted.</p> <p>The BESCOM shall furnish compliance thereon.</p>
2	Directive on preparation of energy bills on monthly basis by considering 15 minute's time block period	BESCOM shall furnish the month-wise details of number of open access consumers sourcing power from power exchange, open access, units scheduled / consumed in MU and illegally banked energy, if any, for FY18 along with the details of revenue gain.
3	Directive on Energy Conservation	It is stated that BESCOM has issued internal circulars for use of energy efficient equipment (EE) in the offices of BESCOM. But it has not informed on the action taken for promoting energy conservation by use of EE appliances among the general public and action taken while servicing the installations with EE appliances, especially street lights. BESCOM has not indicated in its compliance, the measures taken to ensure use of five star rated equipments by all the domestic, commercial and industrial consumers. The BESCOM shall submit the compliance thereon.
4	Directive on implementation of Standards of Performance (SoP)	The BESCOM was directed to display the SoP parameters in all its O&M Subdivisions and O&M Sections and submit the quarterly progress. But the BESCOM is not submitting the compliance periodically. BESCOM shall submit the compliance regularly.
5	Directive on use of safety gear by linemen	BESCOM is not submitting the quarterly compliance report to the Commission. From the statistics furnished in tariff filing, 38.54% of the linemen staff are not provided with the safety gear. BESCOM shall submit the compliance and the definite timeline for providing complete set of safety gear to all the lineman. Details of the action taken on erring staff also be furnished.
6	Directive on providing Timer Switches to Street lights by ESCOMs	As per the statistics furnished in the tariff filing, 42,979 Street Light installations are required to be provided with timer switches. BESCOM has also not submitted the compliance as to whether LED / energy efficient lamps are being used and timer switches are provided while servicing of new streetlight installations. BESCOM shall submit the compliance thereon.

Sl. No	Directives Issued by the Commission	Observation made
7	Directive on Load shedding	<p>BESCOM is not submitting to the Commission, its projections of availability and demand for power and any unavoidable load shedding for every succeeding month in the last week of the preceding month for approval, regularly.</p> <p>BESCOM shall submit compliance on the same.</p> <p>The BESCOM has been submitting from the last two years that a system of informing the consumers / public through SMS in case of load shedding due to any reason, is under process. BESCOM shall submit the reasons for delay in designing and implementation of this system and the definite timeline by which it will be implementing the said system.</p>
8	Directive on establishing a 24 X 7 fully equipped centralized consumer service centers	<p>BESCOM was directed to reduce the consumer downtime to address complaints. BESCOM is directed to report average time taken to attend to a complaint as at present and the efforts made to further, reduce the downtime in future. Comparison of the downtime analysis for FY17 and FY18 shall be furnished.</p>
9	Directives on Energy Audit	<p><u>Energy Audit of cities / towns</u></p> <p>BESCOM shall furnish details of feeder-wise energy audit as per the formats Annex - A & B prescribed by the Commission vide letter No. KERC/D/137/14/91 dated 20.04.2105 along with the details of measures initiated to reduce loss levels wherever the same are above 15% up to September 2018.</p> <p>The BESCOM has also been reporting, from the last 3 years, the same reason that consumer indexing is not completed to take up feeder-wise energy auditing. The BESCOM shall indicate the definite timeline by which it will complete the consumer indexing for taking up energy auditing effectively.</p> <p>BESCOM shall furnish the comparative statement of losses recorded in Towns & Cities for the FY18 as against the FY17.</p> <p><u>DTCs Energy Audit:</u></p> <p>BESCOM was directed to furnish the details of energy audit conducted in respect of DTCs for which meters have been fixed and the remedial measures initiated to reduce losses in those DTCs which are showing abnormally high losses, every month to the Commission regularly.</p> <p>BESCOM has not submitted the details of energy audit conducted in respect of 1,15,693 DTCs for which meters have been said to be</p>

Sl. No	Directives Issued by the Commission	Observation made
		fixed. BESCOM shall submit the details of energy audit conducted for the metered DTCs and the timeline by which all the remaining DTCs will be metered.
10	Implementation of HVDS	BESCOM has not submitted any analysis report indicating the benefits derived to the system after implementation of the HVDS in Tumakuru and Chikkaballapura divisions. BESCOM shall submit the same.
11	Implementation of NJY	BESCOM has to furnish the timeline for completing and commissioning of remaining 7 feeders remaining in Phase – 3 of NJY.
12	Directive on Lifeline Supply to (Electrification of) un - electrified Households	BESCOM shall furnish the action plan to electrify un-electrified houses, so as ensure that all the houses are electrified within a definite timeframe.
13	Directive on Implementation of Financial Management Framework	BESCOM has to submit the compliance in respect of implementation of Financial Management Framework, on quarterly basis regularly to the Commission. BESCOM shall submit the detailed analysis and the result of Financial Management Framework Model introduced in its divisions / subdivisions and the remedial action taken to improve the performances of the divisions which are not achieving the desired realization rates.
14	Prevention of Electrical Accidents	BESCOM is required to furnish the details of number of hazardous locations / installations identified in its distribution network and the number of such installations rectified in the FY 18 and in the FY19 up to September 2018, besides giving an action plan to rectify them. BESCOM has reported that it has taken up maintenance of one feeder in each division every month. Details of the numbers of feeders completed during April - September 2018 and whether electrical accidents have come down due to such maintenance works, have not been furnished. BESCOM is required to furnish the same. BESCOM has to furnish the summary of the analysis made on the reports submitted by Electrical Inspectorate for FY19 upto September 2018, action taken to prevent such accidents in future.
