<u>CESC - Preliminary Observations on APR for FY16 and Revised ARR for FY18</u>

1. Capital Expenditure:

i. Capital Expenditure of CESC for FY16:

The Commission had approved a capital expenditure of Rs.317 Crores for FY16 against which, the CESC has indicated an actual capital expenditure of Rs.488.52 Crores (in the details furnished on page No. 62 of its APR application for FY16). CESC has shown a capital expenditure of Rs.488.52 Crores and the asset categorized value at Rs.673.74 Crores (Format D17 and D15). CESC has indicated a capex of Rs.522.4 Crores as asset categorized in respect of plant & Machinery and Lines, Cable & Networks. But, the data pertaining to categorized and capitalized works submitted for conducting Prudence check was amounting to Rs.590.47 Crores. CESC shall explain the difference in the amount shown in categorization under D16 and that indicated in the list of works submitted for prudence check of categorized works of FY16.

The details of category wise capital expenditure of CESC for FY16:

Amount in Rs. Crores

Sl. No.	Schemes	FY-16 As approved (in Crores)	FY-16 Actuals (in lakhs)	Difference
1	Extension & improvement	80	75.7588	4.2412
2	NJY	50	247.5256	-197.526
3	HVDS	20	0	20
4	R-APDRP	50	21.2315	28.7685
5	RGGVY(Restructured)+DDG	0	0.6594	-0.6594
6	Replacement of failed Transformers	10	4.9982	5.0018
7	Service Connections	40	25.7564	14.2436
8	**Rural Electrification(General)**			
A	Electrification of Hamlets/HB/JC under RGGVY	10	87.0922	-77.0922
B	Providing infrastructure to Irrigation Pump sets & energisation of IP SETS			
C	Kutir Jyothi (RGGVY)	-	-	-
9	**Tribal Sub Plan**			
A	Electrification of Tribal Colonies (RGGVY)	3	2	1
B	Energisation of IP sets			
C	Kutir Jyothi (RGGVY)			
10	**Special Component Plan**			
A	Electrification of HB/JC/AC(RGGVY)	10	6	4
B	Energisation of IP sets			

C	Kutir Jyothi (RGGVY)			
11	Tools & Plants	4	8.4004	-4.4004
12	Civil Engineering Works	10	9.0984	0.9016
13	Providing Meters to DTC, BJ/KJ, Street Light for replacement of electromechanical meters, providing modems to meters for communication	30	0.0019	29.9981
	Total	**317**	**488.5231**	-171.523

From the above table, it can be noted that, the overall capital expenditure of CESC for FY16 at Rs.488.52 Crores has exceeded the approved capex of Rs.317 Crores by Rs.171.52 Crores. The CESC has exceeded its approved capex limit in NJY program by Rs.197.52 Crores as compared to the approved capex by Rs.50 Crores. CESC needs to explain the reasons for such a huge difference in the capex achieved as against the approved level and should clearly indicate the breakup of the division wise expenditure and also quantify the benefit accrued to CESC from implementation of the NJY program.

In respect of HVDS, CESC has not at all utilized the approved capex of Rs.20 Crores. CESC has replied in the directives on HVDS implementation that, at present, CESC is putting up one DTC for each Ganga Kalyana IP set as well as Water supply installation and is providing one DTC for every three numbers of UNIP installations. DTCs provided for the above works are large in number and are analogous to HVDS concept. That as on 30.09.2016 there are 1495 feeders in CESC area (Agri-372, Rural-413, NJY-266, Urban-444). That bifurcating non-agricultural loads from rural feeders is being undertaken and this addresses all our load needs. That for this reason, the Board of Directors have decided to do away with HVDS in CESC.

Though CESC has taken a decision on installing new transformers to Ganga Kalyana and each transformer for three new IP Sets, it is to be noted that, there is a huge length of LT lines involved in IP Set connections already existing. Hence, CESC should explore the possibility of reducing the LT line length and consequent distribution loss. Keeping this in view, CESC should explain the reasons for not implementing the HVDS programme.

In respect of Rural Electrification(General)- CESC has achieved a capex of Rs.77.09 Crores, in excess of the Commission approved capex of Rs.10 Crores.

CESC shall furnish the breakup of expenditure of each of the sub-scheme and also the reasons for such an excess capex over the approved limit.

In respect of Tools & Plants, CESC has achieved a capex of Rs.8.4 Crores against the approved capex of Rs.4 Crores. CESC shall explain the reasons for excess capex and also submit the list of major tools and plants procured along with explaining their usefulness to the Company.

In respect of Providing Meters to DTC, BJ/KJ, Street Light, Replacement of Electromechanical Meters, Providing Modems to Meters for Communication, CESC has incurred a very negligible capex of Rs.0.0019 Crore against the approved capex of Rs.30 Crores. It is to be noted that, the Commission has been directing CESC to complete DTC metering and conduct energy audit to quantify the distribution loss and take remedial measures. But, CESC has failed to achieve its own set targets in these categories. CESC shall explain the reasons for not achieving the target.

Further, CESC shall furnish the details the works which are being funded through grants from the GoI or GoK, along with the details of amount sanctioned, utilized and the balance yet to utilized, in the following format:

Amount in Rs. Crores

Sl No	**Type of work**	**Total Cost of the Project**	**Cost of works award**	**Sanctioned source of Funding**		**Actual amount received/availed**		**Cost of the completed work**	**Cost of works which are in progress (WIP)**
				Loan	Grants	Loan	Grants		
	1	2	3	4	5	6	7	8	9
1	RAPDRP								
2	DDUGJY								
3	IPDS								
4									
	Any other works								

Cost of Balance works	**Scheduled /targeted date of completion**	**Actual date of completion of work**	**Delay if any**	**Whether the grant has been converted to Loan due to delay**	**Amount of loan converted to loan**	**Interest on the converted grant into loan**	**Reason for the Delay**
10	11	12	13	14	15	16	17

CESC shall furnish the stages of progress of implementation of the time bound programs such as DDUGJY and IPDS taken up by it during FY17.

ii. Capital expenditure of CESC for FY18:

CESC has indicated a revised capex of Rs.889 Crores against the MYT approved capex of Rs.552 Crores, mentioning the action plan for each of the category of work for the proposed capex of FY18. CESC has also indicated achieved capex till September, 2016 at Rs.111.53 Crores. The proposed capex and the category wise variations are shown below:

Amount in Rs. Crores

<table>
<tr><th>Sl. No.</th><th>Schemes</th><th>FY-17Actuals Upto Sept-16</th><th>FY-18 KERC Approved under MYT</th><th>FY-18 CESC Proposal</th><th>Difference</th></tr>
<tr><td>1</td><td>Extension & improvement</td><td>4571.44</td><td>230</td><td>320</td><td>-90</td></tr>
<tr><td>2</td><td>NJY</td><td>1722.47</td><td>40</td><td>40</td><td></td></tr>
<tr><td>3</td><td>HVDS</td><td>-</td><td>-</td><td>-</td><td>-</td></tr>
<tr><td>4</td><td>R-APDRP</td><td>26.11</td><td>25</td><td>25</td><td></td></tr>
<tr><td>5</td><td>IPDS</td><td></td><td>50</td><td>100</td><td>-50</td></tr>
<tr><td>6</td><td>DDUGJY</td><td></td><td>100</td><td>150</td><td>-50</td></tr>
<tr><td>7</td><td>RGGVY(Restructured)+DDG</td><td></td><td></td><td>45</td><td>-45</td></tr>
<tr><td>8</td><td>Replacement of failed Transformers</td><td>3021.7</td><td>5</td><td>5</td><td></td></tr>
<tr><td>9</td><td>Service Connections</td><td>1283.97</td><td>40</td><td>50</td><td>-10</td></tr>
<tr><td>10</td><td>Rural Electrification(General)</td><td></td><td></td><td></td><td></td></tr>
<tr><td>A</td><td>Electrification of Hamlets/HB/JC under RGGVY</td><td rowspan="11">146.25</td><td rowspan="3">34</td><td rowspan="3">50</td><td rowspan="3">-16</td></tr>
<tr><td>B</td><td>Providing infrastructure to Irrigation Pump sets &energisation of IP SETS</td></tr>
<tr><td>C</td><td>Kutir Jyothi(RGGVY)</td></tr>
<tr><td>11</td><td>Tribal Sub Plan</td><td></td><td></td><td></td></tr>
<tr><td>A</td><td>Electrification of Tribal Colonies (RGGVY)</td><td rowspan="3">2</td><td rowspan="3">3</td><td rowspan="3">-1</td></tr>
<tr><td>B</td><td>Energisation of IP sets</td></tr>
<tr><td>C</td><td>Kutir Jyothi (RGGVY)</td></tr>
<tr><td>12</td><td>Special Component Plan</td><td></td><td></td><td></td></tr>
<tr><td>A</td><td>Electrification of HB/JC/AC(RGGVY)</td><td rowspan="3">7</td><td rowspan="3">10</td><td rowspan="3">-3</td></tr>
<tr><td>B</td><td>Energisation of IP sets</td></tr>
<tr><td>C</td><td>Kutir Jyothi(RGGVY)</td></tr>
<tr><td>13</td><td>Tools & Plants</td><td>205.83</td><td>4</td><td>4</td><td></td></tr>
<tr><td>14</td><td>Civil Engineering Works</td><td>175.63</td><td>5</td><td>12</td><td>-7</td></tr>
<tr><td>15</td><td>Providing Meters to DTC, BJ/KJ, Street Light for replacement of electromechanical meters, providing modems to meters for communication</td><td></td><td>10</td><td>40</td><td>-30</td></tr>
<tr><td>16</td><td>Software Development and smart grid project</td><td></td><td></td><td>35</td><td>-35</td></tr>
<tr><td></td><td>Total</td><td>11153.4</td><td>552</td><td>889</td><td>-337</td></tr>
</table>

CESC has indicated additional capex in some particular categories of works as shown in the table, but not changed the other category capex for FY18. CESC needs to take into consideration, its own achievements in incurring capex of Rs.111.53 Crores only till September, 2016 which may not increase more than 2 times in the current financial year i.e., FY17. Hence, the CESC should explain the preparedness for such a huge capex of Rs.889 Crores for FY18 along with submitting the status of preparation of DPRs, tendering etc., with proper reasons for not increasing the capex of some of the category of works.

Further, CESC shall furnish the details of infrastructure created for un-authorized IP sets shall be furnished in the following format, as to find out whether, CESC is going to achieve 100% creation of infrastructure during FY18 or not:

Sl No	Total Number of Un-IP sets as on 1-4-2015	Total Number of Un-IP sets added during FY16	Total No. of IP Sets provided with infrastructure in FY16	Balance Un-authorized IP sets to be provided with Infrastructure	Target date within which all Un-IP set will be covered	Reasons for not covering all the Un-IP Sets

Further, the CESC shall explain the status of schemes like DDUGJY and IPDS it has proposed to taken up in FY17 and whether these schemes are continued in FY18 or not. If CESC is going to incur the cost for spill-over works / new works during FY18, the same shall be factored in the revised capex proposal.

Though CESC has indicated the action plan for FY18 by giving reasons for additional capex, the CESC has not indicated whether, it has followed the "**Capital Expenditure Guidelines for ESCOMs"** issued by the Commission. If so, CESC needs to project its capex commensurate with:

a) The network strengthening and expansion requirement,
b) Improvement of power supply reliability
c) The target date for each of the project
d) Loss reduction trajectory

Also, CESC should mandatorily follow the **"Capital Expenditure Guidelines for ESCOMs"** in which the capital investment planning process, prioritization and post commissioning analysis is to be adopted by the ESCOMs are elaborated. CESC shall furnish details as to whether it has carried out the works according to the guidelines issued by the Commission.

The Commission has been directing the ESCOMs to conduct energy audit by listing out high loss making 11kV feeders and take up strengthening works to reduce losses. CESC should also move in this direction and list the high loss making feeders based on the input energy to each of the feeders and sale of energy in that feeder. Prioritization of such projects to be taken up for execution shall be based on payback period & benefit to cost ratio. CESC shall furnish the list of 11kV feeders having losses above the targeted percentage of distribution system losses in the descending order.

Further, CESC shall furnish the details of the works which are being funded through grants from the GoI or GoK. along with the details of amount sanctioned, utilized and the balance yet to utilized, in the following format:

Amount in Rs. Crores

Sl No	Type of work	Total Cost of the Project	Cost of works award	Sanctioned source of Funding		Actual amount received/availed		Cost of the completed work	Cost of works which are in progress (WIP)
				Loan	Grants	Loan	Grants		
	1	2	3	4	5	6	7	8	9
1	RAPDRP								
2	DDUGJY								
3	IPDS								
4	NJY								
5	HVDS								
	Any other works								

Cost of Balance works	Scheduled /targeted date of completion	Actual date of completion of work	Delay if any	Whether the grant has been converted to Loan due to delay	Amount of loan converted to loan	Interest on the converted grant into loan	Reason for the Delay
10	11	12	13	14	15	16	17

CESC shall also submit the physical and financial progress as on 31st October, 2016 (or Latest as on 30th November, 2016) as against the approved capex for FY17 in the format approved for FY17, indicating the capex incurred against each category.

CESC shall furnish the details of high value works proposed for FY18, so as to indicate the number of DPRs have been prepared, Tendered /ready to be tendered, cost of each project and what are the timelines within which the works are going to be completed.

Though, CESC has indicated the present status of the implementation of Smart Grid Pilot Project in Mysuru City, it has not mentioned anything about the commissioning or roll out of the SG Pilot project and operationalizing it. CESC shall clearly indicate a realistic target date on which it is going to declare the SG Pilot project as operational.

The CESC shall furnish the sources of funding such as loans, grants from Central/ State Governments, internal sources, borrowings and equity, to meet the capex for FY18.

2. Sales:

I. Annual Performance Review for FY-16

The Commission in its Tariff Order 2015 dated 02.03.2015 had approved total sales to various consumer categories at 5744.83 MU as against the CESC proposal of 5798.94 MU. The Actual sales of CESC as per the current APR filing [d-2 FORMAT] is 5405.24 MU indicating a short fall in sales to the extent of 339.59 MU with respect to the approved sales. The reduction in sales is 288.66 MU in LT-categories and 50.93 MU in HT-categories. It is noted that, as against approved sales of 3084.08 MUs to categories other than BJ/KJ and IP sets, the actual sales achieved by CESC is 3060.24 MU, resulting in the reduction of sales to these categories by 23.84 MU. Further, CESC has sold 2345.00 MU to BJ/KJ and IP category against approved sales of 2660.75 MU resulting in decreased sales to these categories by 315.75 MU.

The category wise sales approved by the Commission and the actuals for FY 16 are indicated in the table below:

Energy in MU

Category	Approved	Actuals	Actuals- Approved
LT-2a*	959.03	954.37	-5.18
LT-2b	7.37	7.85	0.48
LT-3	262.46	259.57	-2.89
LT-4b	1.17	1.12	-0.05
LT-4c	11.57	11.59	0.02
LT-5	137.80	136.56	-1.24
LT-6	135.53	162.96	27.43
LT-6	90.66	99.90	9.24
LT-7	13.66	12.95	-0.71
HT-1	438.07	420.40	-17.67
HT-2a	794.17	750.08	-44.09
HT-2b	127.18	107.17	-19.99
HT-2c	31.09	45.15	14.06
HT-3a & b	65.14	82.46	17.32
HT-4	7.75	5.27	-2.48
HT-5	0.92	2.84	1.92
Sub total	**3084.08**	**3060.24**	**-23.84**
BJ/KJ	36.28	38.13	1.85
IP	2624.47	2306.87	-317.60
Sub total	**2660.75**	**2345.00**	**-315.75**
Grand total	**5744.83**	**5405.24**	**-339.59**

***Including BJ/KJ installations consuming more than 18 units/month**

From the above table it is noted that the major categories contributing to the reduction in sales are HT Industries (44.09 MU), HT Commercial (19.99 MU) and IP sets (317.60 MU).

CESC has attributed the above reduction in sales to the following:

i. Reduction in IP set sales is due to reduction in the specific consumption to 7384units/year/IP-set as against the approved figure of 8195 units/yr/IP-set, consequent to segregation of Agri-feeder under NJY scheme.

ii. Reduction in HT-2a sales is due to twelve industries consuming 180.82 MU under Open Access.

iii. Further, CESC has stated that the increase in sales to LT-water supply is due to servicing of 1252 new installations.

Iv. The Commission has noted the replies of CESC. Further, to validate the sales estimate, CESC shall furnish the following information:

a) In order to analyze reduction in HT sales, CESC shall furnish the data of sales to HT2(a) and HT2(b) categories along with the consumption from open access / wheeling for the period 2011-12 to 2015-16 in the following format:

Energy in MU

Year	Energy procured from CESC	Energy procured under open access / wheeling	Total
2011-12			
2012-13			
2013-14			
2014-15			
2015-16			

b) To estimate the impact of shifting of installations from HT2a, HT2b and HT-4 to HT-2c category, the number of installations shifted from these categories and the corresponding sales figures shall be furnished for FY14, FY15 and FY16.

II. Category wise sales for the FY18:

CESC in its filing has stated that for estimating sales for FY-17 and FY18, three years or five year CAGR is considered. It is observed that the CAGR which is annual growth rate has been applied for the half-year data of FY-17 for estimating the sales for second half of FY17, which is not appropriate, as CAGR stands for compounded annual growth rate and is to be applied for annual data and not on half-year data. For the current year, where the half-year data is available, the estimate could be done on pro-rata basis or considering the actual sales up to 30.09.2016 and estimating the sales for remaining period based on the growth rate of the previous year for the corresponding period.

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

i) LT(1) – BJ/KJ category:

It is noted that while the number of installations in this category has been reduced from 497094 installations in FY16 to 496020 in FY18, the sales has been increased from102.75 MU to 118.52 MU. Further, it is noted that, though the number of installations for FY18 is retained at FY17 level, the allocation between less than 18 units and above 18 units has been altered in FY18. CESC shall explain the reasons for the same. Further the number of installations is indicated as 496020 at pg.12 and as 496780 at pg. 22. The figures shall be reconciled.

2. The table indicating the growth rates for the no. of installations is furnished as below:

Category	Percentage Growth Rates			
	2010-11 to 2015-16 CAGR	2012-13 to 2015-16 CAGR	FY16 growth over FY15	Overall Growth rate proposed by CESC
LT-2a	3.77	4.28	4.64	4.28
LT-2b	6.27	6.12	8.50	3.73
LT-3	5.63	6.76	8.83	5.48
LT-5	4.86	5.71	7.99	4.86
LT-6 WS	7.41	9.96	5.87	7.41
LT-6 SL	2.73	2.59	3.43	2.59
LT-7	8.06	6.32	-5.04	6.32
HT-1	12.22	14.31	5.22	11.76
HT-2 (a)	5.13	4.01	6.69	5.18
HT-2 (b)	5.77	3.93	9.31	5.78
HT-3(a)& (b)	4.69	3.90	5.06	9.89
HT-4	-17.55	-28.07	-5.88	5.88

It is noted that:

a) The growth rate considered for HT3 and HT4 categories is on the higher side when compared to the normal growth rate indicated above.

b) The growth rate considered for LT-2b and HT-1 categories is on the lower side when compared to the normal growth rate indicated above.

3. The table indicating the growth rates for the energy sales is furnished as below:

Category	Percentage Growth Rates			
	2010-11 to 2015-16 CAGR	2012-13 to 2015-16 CAGR	FY16 growth over FY15	Growth rate proposed by CESC
LT-2a	6.62	7.08	4.97	6.62
LT-2b	8.80	10.74	8.88	8.79
LT-3	7.55	7.38	5.56	7.38
LT-5	1.64	1.30	-1.57	1.30
LT-6 WS	4.39	3.97	15.59	4.39
LT-6 SL	7.07	9.10	10.51	9.10
LT-7	10.73	7.79	11.73	10.78
HT-1	6.52	9.54	1.55	6.52
HT-2 (a)	4.71	-0.46	0.78	4.71

HT-2 (b)	6.39	-0.57	-1.19	6.39
HT-3(a)& (b)	27.14	49.20	63.35	27.15
HT-4	-5.63	-14.26	-9.45	2.06

a) Considering the negative growth rate in the previous year as also negative growth in the 3-year CAGR [which represent the latest trend], the estimated growth rates for HT-2b and HT-4 categories is higher. Similarly, the estimates for HT-2a is also higher.

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

i. No. of Installations

	2014-15 Actuals		2015-16 Actuals		2016-17	
Category	**As on 30th Nov 2014**	**As on 31st March 2015**	**As on 30th Nov 2015**	**As on 31st March 2016**	**As on 30th Nov 2016**	**As on 31st March 2017 (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)&						
HT-4						
HT-5						
Sub Total (Other than BJ/KJ						
BJ/KJ						
IP						
Sub Total (BJ/KJ and IP)						
Grand						

ii. Energy Sales

	2014-15 Actuals		2015-16 Actuals		2016-17	
Category	**1st April 2014 to 30th Nov 2014 (cumulative)**	**1st Dec 2014 to 31st March 2015 (cumulative)**	**1st April 2015 to 30th Nov 2015 (cumulative)**	**1st Dec 2015 to 31st March 2016 (cumulative)**	**1st April 2016 to 30th Nov 2016 (cumulative actuals)**	**1st Dec 2016 to 31st March 2017 (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)						
BJ/KJ						
IP						
Sub Total (BJ/KJ and IP)						
Grand Total						

III. **Wheeling charges**:

CESC at page -65 of the petition has considered distribution ARR as Rs. 566.46 Crs for computing wheeling charges for FY18. However, at Pg.95, the distribution ARR is indicated as Rs. 790.74 Crs. for FY18. CESC shall reconcile the figures.

IV. **RPO Compliance**:

i. For validating the RPO compliance and to work out APPC, CESC shall furnish the data as per the format indicated below, duly reconciling the data with audited accounts:

a. Non-solar RPO:

No.	Particulars	Quantum in MU	Cost- Rs. Crs.
1	Total Power Purchase quantum from all sources		
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		
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		

ii. CESC shall furnish the estimates for complying with solar and non-solar RPO for 2017-18, including any cost implication for purchasing RECs, if any. In this regard CESC shall furnish the following details pertaining to CESC duly tallying with the renewable energy purchase estimates made for FY18:

Source	Capacity under PPA in MW as on 30.11.2016	Anticipated MW capacity addition under PPA during the remaining period of FY17	Anticipated capacity addition under PPA during FY18
Wind			
Mini-hydel			
Co-generation			
Biomass			
Waste to Energy			
Solar			

iii. The contribution of Solar Power shall be computed duly considering the present status of the Solar projects for which CESC has entered into PPA. The following data shall be furnished:

Type of Solar Plant	Capacity in MWp	Estimated Energy contribution and cost for FY17		Estimated Energy contribution and cost for FY18	
		Qnty (MU)	Cost(Rs Crs)	Qnty(MU)	Cost(Rs.Crs)
Solar Rooftop plants of < 500KW					
Solar Rooftop plants of >500KW					
1-3 MW Projects allotted to Farmers by KREDL.					
20 MW Projects Taluk wise issued by KREDL.					
Other MW scale projects					

Considering the RPO targets for FY18, CESC shall confirm as to whether it will furnish its readiness to meet the targets of both Solar and Non- Solar RPO for FY18.

iv. **Cross Subsidy Surcharge:**

At page 66, CESC has worked out the CSS. CESC shall clarify as to whether the above CSS is computed as per the Tariff Policy-2006 or Tariff Policy-2016.

v. CESC in its petition shall indicate that the wheeling charges worked out is not applicable to NCE sources and that the prevailing wheeling and banking charges would continue for such sources. Further, CESC shall include in its Prayer, approval for wheeling charges, cross-subsidy surcharge and RPO compliance.

3. Observations on projected IP Set consumption for FY18:

<u>Sales to IP Set: CESC</u>

<u>APR 2016</u>

As regards sales to IP-sets, the Commission notes that, the overall sales have decreased by 317.6 MU as against the approved sales of 2,624.47 as per the Tariff Order dated 2nd March 2015 for FY16. Further, the Commission had approved a specific consumption of IP-sets as 8,195 units / installation / annum for FY16. As per the consumption reported in format D2 of the filing by the CESC, the specific consumption works out to 7,469 units / installation/annum for FY16. This indicates a decrease of 726 units / installation/annum in specific consumption for FY16. Also, the actual number of installations for FY16 has decreased by 14,955 to the approved number of installations of 3,32,629. However, the CESC in its Tariff application has mentioned the specific consumption for FY16 as 7,384 units/installation/annum and the same needs to be clarified by CESC as the specific consumption worked out for FY16 is 7,469 units/installation/annum.

Further, CESC, under sales analysis in page 48 of the APR application has stated that actual sales in respect of LT4(a) for FY15 is less by 317.6202 MU and the number of installations have gone up by 17,604. This amounts to inconsistency in data furnished for FY16 as indicated in page 47 to that of the data mentioned in page 48 and the same needs to be clarified whether the data furnished is for FY 15 or FY16.

Also, CESC in its letter dated 7.9.206 has submitted the data of IP-sets for FY16. As observed from the data, there is inconsistency in the number of installations as well as total consumption between the data submitted to the Commission and the data as reported in D2 format of the Tariff application. Total number of installations for FY 16 as submitted to the Commission are 3,20,937 whereas the number of installations reported in D2 are 3,17,674 indicating a difference of 3,263 numbers. Similarly, the consumption for FY16 as submitted to the Commission was 2,024.25 MU (under one column) & 2319.576 MU (under another column), whereas the consumption reported in D2 format is 2,306.97 MU, indicating a large variation in the data. CESC shall clarify as to which data is correct with its justification for the same.

The Commission in its Tariff Order dated 2nd March, 2015 had directed CESC to furnish feeder wise IP-set consumption based on feeder energy meter data to the Commission, every month in respect of agriculture feeders segregated under NJY. CESC has submitted the consumption data deducting energy losses at uniform level of 15% in 11 kV, distribution transformers & LT system from the gross consumption to arrive at the net consumption. However, CESC should have computed IP-set consumption duly deducting actual losses prevailing in the distribution system. Hence, CESC shall justify the rationale for considering energy loss of 15% in its distribution system.

ARR 2018

The Commission in its Tariff Order dated 30th March, 2016 had directed CESC to furnish the consumption of IP-sets based on the readings from the meters provided to 11 kV feeders at the sub-station level duly allowing for 11 kV and LT distribution system losses (as per the formats prescribed by the Commission). CESC was also directed to furnish feeder wise IP-set consumption based on the feeder energy meters' data to the Commission, every month in respect of agriculture feeders segregated under NJY. CESC has furnished the IP-set consumption data to the Commission. CESC has submitted the consumption data deducting energy losses at uniform level of 15% in 11 kV, distribution transformers & LT system from the gross consumption to arrive at the net consumption. However, CESC should have computed IP-set consumption duly deducting actual losses prevailing in the distribution system. Therefore, CESC is required to justify its projection of IP-consumption for FY18 based on the energy recorded on the segregated agricultural feeders.

Therefore, CESC shall submit the month wise consumption of all the agricultural feeders segregated under NJY Scheme for FY16 (from April,2015 to March, 2016) and also for FY 17 (from April to October 2016) in the following format.

Month	Name of Sub-dvision	No. Segregate d Agricultur al Feeders in the subdiv	Monthly Consumptio n in MU as recorded in all the agricultural feeders at the substations pertaining to the division	Distribution loss(11kV line, DTCs,& LT line) Plus sales to other consumers if any, in MU (losses in all the agri feeders only to be considered)	Net consumption duly deducting the Distribution loss (11kV & LT) & any other loads if any	No. of IP sets connected to the agri feeders in the subdivision	Average consumption of IP / month (specific cons in units /IP/month)	Total no of IP sets in the subdivision (as per DCB)	Total sales of IP sets in MU
1	**2**	**3**	**4**	**5**	**6=(4-5)**	**7**	**8**	**9**	**10=8*9**
April 2015	Subdiv-1 Subdiv-2 Subdiv-3 Subdiv….								
March 2016	Subdiv-1 Subdiv-2 Subdiv-3 Subdiv….								
Total									
April 2016	Subdiv-1 Subdiv-2 Subdiv-3 Subdiv….								
October 2016	Subdiv-1 Subdiv-2 Subdiv-3 Subdiv….								
Total									

As per format D2, CESC has projected a specific consumption of IP-sets for FY18 as 8,368 units/installation /annum respectively, whereas the approved specific consumption for FY18 in the Tariff Order dated 30th March 2016 was 7,843 units/installation /annum and the actual specific consumption reported for FY16 was 7,469 units/installation /annum. CESC shall justify the basis for projecting IP set consumption considering the higher specific consumption of 8,368 units/installation /annum for FY18 as against the specific consumption of 7,469 units/installation/annum achieved for FY 16.

Further, CESC was directed to take up enumeration of IP-sets to identify defunct/dried up wells in the field & complete it by October, 2016 and take further necessary action to arrive at correct number of IP-sets in its account on the basis of enumeration report. CESC has not complied with this direction. CESC shall furnish compliance on this in order to arrive at correct number of IP-set installations/consumption and also for projecting correct number of installations/consumption for FY18. **In the absence of submission of GPS based survey report of actual number of live IP sets, the Commission will not consider the revised IP set consumption for FY18 as proposed by CESC.**

4. Distribution Losses:

The actual distribution losses reported by CESC for FY16 is 13.60% as against 14.50% approved by the Commission in its Order dated 2nd March, 2015. Considering the actual losses of 13.88% reported by CESC for FY15, the reduction in distribution losses is 0.28% in FY16.

The Commission, in its Order dated 30th March, 2016 has fixed distribution losses at 13.00% for FY18 after considering the status of distribution losses in FY15. The distribution losses projected for FY17 is at 13.25% (as approved in MYT Order dated 30th March, 2016) which shows a reduction of 0.35% from the loss levels reported for FY16. CESC is required to furnish the distribution losses for FY17 based on actuals as at the end of November, 2016 and projections for the balance period.

Considering the capital investment being incurred and also proposed, CESC is required to reassess the distribution losses for FY18 based on the losses projected for FY17.

5. Power Purchase:

I. Annual Performance Review for FY-16

1. CESC shall confirm whether it has finalized the power purchase quantum and cost as per the finalized reconciliation among the ESCOMs for FY16 and if so, shall furnish the basis for the same.

2. The details of Energy balancing and charges indicated in D1 format for FY16 shall be furnished.

II. Annual Revenue Requirement for FY-18:

1. The quantum and cost of source wise energy for FY17 in Format D1 shall be furnished duly considering the actual data upto November, 2016 and projected data for the balance period.

2. CESC shall furnish the basis for projecting the energy procurement for FY18. Further, BTPS Unit III has not been considered for power purchase in FY18. Also, the new Yeramarus Thermal Power Station is scheduled to be commissioned in FY18. Hence, CESC is required to furnish reasons for not considering BTPS Unit III, YTPS and Kudgi Unit-1 & 2 of CGS, in its power purchase computation for FY18 under Format-D1.

3. The computation sheets for considering the variable charges of the Central Generating Stations shall be furnished.

6. Issues pertaining to items of Revenue and Expenditure:

CESC in its application for ARR for FY18, under format D6 has indicated an amount of Rs.282.63 Crores as contribution to P&G Trust. The Commission notes that, the above issue has already been decided in its Tariff Order dated 30th March,2016 wherein, it was noted that, as per GO dated 31.05.2002 and 19.12.2002, GoK is liable to meet the P&G requirement of the existing pensioners and such liability cannot be passed on to the consumers. However, it is now reported by CESC that, as per the present directions of the Government of Karnataka, it has included an amount of Rs.282.63 Crores towards contribution to be claimed for FY18. CESC shall furnish the reasons /justifications along with Government Orders, if any for inclusion of this amount as an item of expenditure in ARR of FY18 to be recovered from consumers in contravention of the Commission's decision in Tariff Order 2016. Further, it may be noted that, inclusion of this amount will have substantial tariff implications which cannot be passed to the consumers.

i. Subsidy claim submitted to GoK and subsidy received for the year FY16 in respect of IP and BJ/KJ installations needs to be furnished along with the details of energy sales. Whether CESC has received subsidy pertaining to past period during FY16 and if so, details of the amount received may be furnished separately.

ii. The bank / Financial Institution wise amount of long term and short term loans inclusive of overdraft availed during FY17 (upto November, 2016) along with rate of interest and amount of interest, term of loan and the purpose of loan availed shall be furnished.

iii. CESC has proposed a revised capex of Rs. 889 Crs as against the approved capex of Rs.552 Crores. CESC is required to furnish justification for such revision along with clarification on the present status of proposed capex and whether CESC will incur such expenses in FY18 itself.

iv. CESC shall furnish the details in respect of the following items indicated under A&G expenses for FY16:

i) Conveyance & Travel expenses	- Rs.9.66Crores
ii) Professional charges	- Rs.20.27 Crores

v. In the D7 Format, CESC has claimed an amount of Rs.2.93 Crores towards expenditure as related to EESL for energy savings for FY16. CESC shall furnish the month wise energy savings achieved on account of the schemes implemented through EESL.

vi. The category wise connected loads indicated in Form D21shall be justified with duly certified Distribution Circle wise data.

vii. The category wise slab wise consumption indicated in Form D-21 shall be justified with Division wise details of computation.

viii. The breakup of number of consumers indicated in Form D-21 based on sanctioned load under LT2, LT3 and LT5 categories shall be shall be justified with Division wise details.

ix. CESC, under Format D6 has projected an amount of Rs.77.47 Crores as expenditure towards terminal benefits for FY18. CESC is required to furnish the basis and computations for claiming this amount along with relevant actuarial valuation report. Also, an amount of Rs.63.87 Crores is indicated as revision of pay scale impact for FY18. CESC shall furnish the basis for inclusion of this amount without being backed by any Orders.

x. CESC, under Format D8 has considered an amount of Rs.25.57 Crores as depreciation on assets created out of consumer contribution/grants for FY16 and has projected Rs.53.26 Crores for FY18. CESC is required to furnish the computation for claiming this amount.

xi. As per the balance sheet of the Audited Accounts for FY16, an additional equity of Rs.127.73 Crores is received during FY16. CESC shall furnish the date of receipt of this additional equity along with the copy of the relevant Government Order.

7. New Proposals:

i) Proposal to increase fixed Charges for HT Consumers:

CESC has proposed to increase the Fixed/ demand charges by Rs.10 / Rs.30 for all consumers except LT4(c), HT1, HT3 and BJ/KJ Consumers. However, CESC under D21(b), has not proposed any increase in Fixed/ demand charges but has proposed uniform increase of Rs.1.48 per unit for all consumers.

Considering the new proposal, in order to assess the financial implications and impact on each category consumers besides its effect on the cross subsidy, on account of this proposed increase in fixed/ demand charges, CESC shall furnish revised D-21(a) and (b) format indicating revised fixed / demand charges and energy charges required to meet the proposed gap in revenue for FY18. Also, CESC shall furnish the Division wise actual data of demand/fixed charges and energy charges demanded from LT and HT Consumers during FY16 and FY17 (Upto October,2016).

ii) Inclusion of Morning peak hours under ToD tariff:

CESC has proposed increase in ToD incentives/ charges for off-peak and peak hours of power supply. CESC is required to furnish the details of monthly Minimum and Maximum load recorded during January, 2016 to November, 2016 for the morning/evening peak periods and off-peak periods. Also, for the same period, CESC shall furnish the amount of penalty levied and incentives given under the existing ToD scheme.

8. Compliance to directives issued by the Commission

CESC		
Sl. No	**Directives issued by the Commission**	**Observations made**
1.	**Directive on Energy Conservation**	The CESC was directed to service all the new installations only after ensuring that the BEE ***** (Bureau of Energy Efficiency five-star rating) rated Air Conditioners, Fans, Refrigerators, etc., are being installed in the applicant consumers' premises and also to service all streetlight installations with LED/energy efficient lamps. The CESC has not submitted the details on the above except indicating that a circular has been issued to all its officers in the matter. The CESC shall submit compliance on the same.
2.	**Directive on use of safety gear by linemen**	CESC was directed to put in place suitable reporting system on the use of safety gear and also mandate supervisory/higher officers to regularly cross check the compliance by linemen and take disciplinary action on the concerned if violations are noticed. CESC is required to submit compliance on this. Further, of the 2,750 linemen working, only 2,290 linemen are provided with the safety gear, CESC shall submit the details along with timeline within which remaining linemen will be provided with safety gear.
3	**Directive on providing Timer Switches to Street lights by ESCOMs**	The progress achieved reported in respect of installation of timer switches is the same as last year and also CESC has not submitted the quarterly compliance report to the Commission in this regard. It is stated that installation of timer switches in Mysuru city and other places will be taken up in 2016-17. CESC shall furnish details regarding the number of timer switches to be installed in 2016-17 and the latest progress/status.
4	**Directive on Load shedding**	CESC is not submitting to KERC 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. CESC shall submit compliance on the same. Also, CESC shall submit the reasons for delay in initiating a system of informing the consumers/public through SMS in case of load shedding due to any reasons.

5	**Directive on establishing a 24X 7 fully equipped centralized consumer service centers**	CESC has reported that it has established 29 numbers of service stations by providing all the infrastructural requirements along with required men. In this regard, CESC shall furnish the details such as the remaining service stations required to be established in the subdivisions/Sections and the likely time required for establishing such service stations for addressing consumer complaints effectively. Also, CESC shall furnish the number of consumer interaction meetings held at the subdivision levels chaired by the SEEs to redress the consumer complaints during the period April – November, 2016 and the response of consumer participation in such meetings- Zone wise details shall be submitted.
6	**ENERGY AUDIT**	**<u>Energy Audit of cities / towns</u>** CESC has not furnished the energy audit details to the Commission. CESC shall furnish the same from April 2016 and up to Nov 2106 along with the details of measures initiated to reduce loss levels wherever the same are at higher levels. Also. CESC shall furnish the comparative statement of losses recorded in Towns & Cities for FY16 as against FY15. **<u>DTCs Energy Audit</u>**: Out **of 27,485 total DTCs metered, only 6,695 metered DTCs are being audited leaving 20,790 metered DTCs unaudited, CESC shall submit the reasons for not taking up the energy audit of 20,790 DTCs where metering has been completed.** CESC shall also furnish the remedial measures initiated to reduce losses in those DTCs wherever the losses are at higher level (1,305 DTCs) and the timeline by which all the remaining DTCs will be metered. Further, CESC shall submit the targeted date of providing meters to remaining DTCs.
7	**Implementation of HVDS**	The concept of HVDS and NJY is totally different, the CESC was directed to submit a detailed report to the Commission for taking a decision in the matter of implementation of HVDS but CESC has not submitted the same yet. CESC shall furnish the same.
8	**Implementation of NJY**	CESC is required to submit the targeted date of commissioning of remaining 20 feeders under phase 2 and also submit the reasons for delay in completion of the NJY works in its jurisdiction.
9	**DSM in Agriculture**	CESC shall briefly indicate the project details and expected benefits of proposed DSM projects covering one lakh IP-sets including 1,753 IP sets in TN Pura and Varuna as reported by it and the timeline by which these projects would be completed.
10	**Electrification of un-electrified Households**	CESC shall furnish details such as total number of households identified which are not electrified in its jurisdiction, the total number of households electrified up to November, 2016 under various schemes and the timeline for completion of all such works.
11	**Prevention of Electrical Accidents**	CESC has not submitted details of number of hazardous installations identified in FY17. CESC is required to furnish details of number of hazardous locations/installations identified in its distribution network and the number of such installations rectified in FY17 up to November 2016.

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