

HESCOM- Preliminary Observations on APR for FY16 and Revised ARR for FY18

1. Capital Expenditure:

I. Capital Expenditure for FY16

The Commission while recognizing the Capex approved in MYT application for FY16 at Rs.683.50 Crores based on the statement of HESCOM on its capability to incur only Rs.500 Crores as expenditure for FY16 had approved a capital expenditure of Rs.500 Crores for tariff computation for FY16 against which, the HESCOM has indicated an actual capital expenditure of Rs.704.21 Crores (as per the details furnished on page No.35 of its tariff application). HESCOM has shown a capital expenditure of Rs.704.21 Crores and the asset categorized value at Rs.637.91 Crores (Format D17), but in format D15, the asset categorized value is shown as Rs.688.71 Crores. HESCOM shall explain the difference of asset categorized shown in D17 and D15. HESCOM has indicated a capex of Rs.574.43 Crores as asset categorized in respect of plant & Machinery and Lines, Cable & Networks. This data pertaining to categorized and capitalized works submitted for conducting Prudence check was amounting to Rs.690.29 Crores. HESCOM 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 HESCOM for FY16:

Amount in Rs. Crores				
SI No	Scheme	Approved Capex for FY16	Actual Expenditure	Difference
1	Mandatory works, Social obligation and other works			
a	Gangakalyan IP sets	50	69.46	-19.46
b	Special Development Plan for backward talukas under Nanjundappa scheme(SDP)	0	13.69	-13.69
c	Electrification of Hamlets(Not covered under RGGVY)	1	4.29	-3.29
d	Electrification of HB/DB/JC/AC (Habitations) under SCP (Not covered under RGGVY)	0.5	4.23	-3.73

e	Electrification of TC(Habitations) under TSP (Not covered under RGGVY)	0.5	0.4	0.1
f	Electrification of BPL Households (Not covered under RGGVY)	1	0.01	0.99
g	Water works	30	0.37	29.63
h	RGGVY	-	-	-
i	DDG (Phase-1 & Phase-2)	-	-	0
j	Rehabilitation of flood affected villages (special programme).	10	0.21	9.79
2	Expansion of network and system improvement works.	-	-	0
a	E & I works.	40	42.89	-2.89
b	Energisation of IP sets under general.	45	13.18	31.82
c	Service connections other than IP/BJ/KJ/Water works.	35	20.08	14.92
d	Construction of new 33 KV stations and lines.	0	2.61	-2.61
e	Augmentation of 33 KV stations.	5	5.58	-0.58
f	Construction of 11 KV lines for 33 KV / 110 KV sub-stations.	30	17.23	12.77
g	Nirantar Jyoti Yojana.	0	73.88	-73.88
h	R- APDRP.	0	27.22	-27.22
i	R-APDRP exclusively for Modem and meters	-	-	0
3	Reduction of T & D and ATC loss	0	-	0
a	Providing meters to un-metered IP sets.	7.5	-	7.5
b	Providing meters to un-metered BJ/KJ installations.	0	1.5	-1.5
c	Replacement of faulty / MNR energy meters by static meters.	10		
d	Replacement of more than 10 year old electromechanical energy meters by static meters.	15	4.40	20.60
e	DTC's metering (Other than APDRP)	10	56.29	-46.29
f	Replacement of 33 KV lines Rabbit conductor by Coyote conductor.		10.94	-10.94
g	Replacement of 11 KV lines Weasel conductor by Rabbit conductor.	5	15.94	-10.94
h	Replacement of age old LT conductor by Rabbit conductor.	20	9.08	10.92
i	HVDS (Pilot project for 1 district/year)	200	83.16	116.84

j	NEF (REC) for replacing 11 KV OH feeders by UG Cables in Hubli and Belgaum cities.	-	-	0
4	New initiatives works		-	0
a	IT initiatives, automation and call centre	10	-	10
b	Installation of energy efficient motors	1	-	1
c	Smart grid/sprinkler/drip irrigation system	1	-	1
d	Providing solar roof tops to HESCOM office buildings	-	-	-
e	Establishing ALDC & SCADA.	-	0.64	-0.64
f	Thermal Imaging and GIS Mapping of DTCs	-	-	-
g	Special pilot project for Strategic Business Centre at Shiggaon sub-Division	-	-	-
5	Replacement and other miscellaneous works	-	-	-
a	Replacement of failed distribution transformers.	70	125.38	-55.38
b	Replacement of Power Transformers.	5	7.42	-2.42
c	Replacement of old and failed equipments and other works of existing 33 KV stations and lines.	3	4	-1
d	Preventive measures to reduce the accidents. (Providing intermediate poles replacement of deteriorated conductor, DTC earthing etc.)	10	9.04	0.96
e	T&P materials.	3	1.92	1.08
f	Creating infrastructure to UAIP Sets	45	55.14	-10.14
g	Civil Engineering works.	20	2.53	17.47
	Others		21.5	-21.5
	Total	683.5	704.21	-20.71

From the above table, it is noted that, the overall capital expenditure of HESCOM for FY16 is at Rs.704.21 Crores exceeding the approved capex of Rs.683.50 Crores by Rs.20.71 Crores. In many of the categories, HESCOM has surpassed its approved capex limits as observed below:

- a) In respect of the Gangakalyan works, the HESCOM has incurred a capex of Rs.69.46 Crores as against the approved capex of Rs.50 Crores. The HESCOM

needs to explain the reason for the difference in the capex achieved as against the approved level and explain as to why HESCOM did not plan for the capex in advance for this work.

- b) In respect of Special Development Plan for backward talukas under Nanjundappa scheme(SDP)- HESCOM has incurred a capex of Rs.13.69 Crores. HESCOM shall furnish the details of number of taluks covered under this scheme and the number of taluks that are yet to be covered.
- c) In case of Electrification of Hamlets (Not covered under RGGVY) and Electrification of HB/DB/JC/AC (Habitations) under SCP (Not covered under RGGVY) and – HESCOM has incurred a capex of Rs.4.29 Crore and Rs.4.23 Crores respectively as against the approved capex of Rs.0.5 Crores under each category. HESCOM shall explain the reasons for excess expenditure.
- d) In case of NJY scheme, HESCOM has incurred a capex of Rs.73.88 Crores. HESCOM shall furnish the benefits achieved out of feeder segregation vis-à-vis the benefits as per the DPR.
- e) In respect of R-APDRP program, HESCOM has achieved a capex of Rs.27.22 Crores. HESCOM shall furnish the details of expenditure under R-APDRP program.
- f) In respect of DTC metering, HESCOM has achieved a capex of Rs.56.29 Crores against the approved capex of Rs.10 Crores. The Commission has been directing HESCOM to complete DTC metering and energy audit, so as to take necessary action on the reduction of distribution loss. But, HESCOM has not been achieve its own set targets under this category of work. HESCOM shall explain the reasons for not achieving the target.
- g) In respect of NEF (REC) for replacing 11 KV OH feeders by UG Cables in Hubli and Belgaum cities, HESCOM has incurred a capex of Rs.83.16 Crores. HESCOM shall furnish the details of number of UG cables laid and explain as to why it has not sought the approval of the Commission on this Scheme involving substantial amount of capex, which has a direct bearing on the tariff.
- h) In case of Replacement of failed DTCs by new ones, the HESCOM has shown a capex of Rs.125.38 Crores which may not be correct. In the previous year also, the Commission had pointed out the discrepancy in the accounting practice and all ESCOMs had agreed to set right the same. However, HESCOM seems to have not rectified the anomaly pointed out in accounting of repairs and

Replacement of transformers. HESCOM should note that, only the failed burnt/scraped transformers should be replaced by new transformers and can be accounted as capex. Hence, HESCOM needs to set right the accounting system and indicate the actual capex incurred for replacement of failed transformers along with furnishing the details as per the following format:

Particulars	Capacity of Transformers	Total	
		Nos	Amount
Opening Balance of failed Transformers	250		
	100		
	63		
	25		
No. of transformers failed during the year	250		
	100		
	63		
	25		
No. of transformers scrapped during the year	250		
	100		
	63		
	25		
Total No. of Transformers Repaired during the year	250		
	100		
	63		
	25		
Balance failed Transformers to be repaired (including OB)	250		
	100		
	63		
	25		
Total No. of Repaired Transformers used for replacement of failed Transformers	250		
	100		
	63		
	25		
Total No. of new transformers provided for replacement of failed transformer	250		
	100		
	63		
	25		

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

SI 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

II. Capital expenditure of HESCOM for FY18:

HESCOM has indicated a capital expenditure program of Rs.748.55 Crores for FY16 against the Commission approved capex of Rs.743.55 Crores for FY18. HESCOM has increased the capex for Replacement of failed transformers from Rs.5 Crores to Rs.10 Crores for FY18 and all other categories have been retained as per the MYT approved level.

The detailed capex statement for FY18 is as shown below:

SI No	Scheme	Amount in Rs. Crores	
		Capital Budget FY-18	Revised Capex for FY-18
1	Mandatory works, Social obligation and other works		
a	Gangakalyan IP sets	25.00	25.00
b	Special Development Plan for backward talukas under Nanjundappa scheme(SDP)	20.00	20.00
c	Electrification of Hamlets(Not covered under RGGVY)	1.00	1.00
d	Electrification of HB/DB/JC/AC (Habitations) under SCP (Not covered under RGGVY)	0.50	0.50
e	Electrification of TC(Habitations) under TSP (Not covered under RGGVY)	0.50	0.50
f	Electrification of BPL Households (Not covered under RGGVY)	1.00	1.00
g	Water works	5.00	5.00
h	RGGVY	3.00	3.00
	DDUGJY	100.00	100.00
i	DDG (Phase-1 & Phase-2)		
j	Rehabilitation of flood affected villages (special programme).		
2	Expansion of network and system improvement works.		
A	E & I works.	25.00	25.00
b	Energization of IP sets under general.		
	Energization of IP sets as per GOK	125.00	125.00
c	Service connections other than IP/BJ/KJ/Water works.	30.00	30.00
d	Construction of new 33 KV stations and lines.	4.00	4.00
e	Augmentation of 33 KV stations.	3.00	3.00
f	Construction of 11 KV lines for 33 KV / 110 KV sub-stations.	5.00	5.00
g	Nirantar Jyoti Yojana.	40.00	40.00
		40.00	40.00
h	R- APDRP.	20.00	20.00

i	R-APDRP exclusively for Modem and meters	1.00	1.00
	IPDS	50.00	50.00
3	Reduction of T & D and ATC loss		
a	Providing meters to un-metered IP sets.	0.05	0.05
b	Providing meters to un-metered BJ/KJ installations.	0	0
c	Replacement of faulty / MNR energy meters by static meters.	5	5
d	Replacement of more than 10 year old electromechanical energy meters by static meters.	50	50
e	DTC's metering (Other than APDRP)	25.00	25.00
f	Replacement of 33 KV lines Rabbit conductor by Coyote conductor	5.00	5.00
g	Replacement of 11 KV lines Weasel conductor by Rabbit conductor.	10.00	10.00
h	Replacement of age old LT conductor by Rabbit conductor.	6.00	6.00
i	HVDS (Pilot project for 1 district/year)	1	1
j	NEF (REC) for replacing 11 KV OH feeders by UG Cables in Hubli and Belgaum cities.	100	100
4	New initiatives works		
a	IT initiatives, automation and call centre	1.00	1.00
b	Installation of energy efficient motors		
c	Smart grid/sprinkler/drip irrigation system	0.5	0.5
d	Providing solar roof tops to HESCOM office buildings	3	3
e	Establishing ALDC & SCADA.	1.00	1.00
f	Thermal Imaging and GIS Mapping of DTCs	5	5
g	Special pilot project for Strategic Business Centre at Shiggaon sub-Division	1	1
5	Replacement and other miscellaneous works		
a	Replacement of failed distribution transformers.	5.00	10.00
b	Replacement of Power Transformers.	2.00	2.00
c	Replacement of old and failed equipment and other works of existing 33 KV stations and lines.	3.00	3.00
d	Preventive measures to reduce the accidents. (Providing intermediate poles replacement of deteriorated conductor, DTC earthing etc.)	5.00	5.00
e	T&P materials.	1.00	1.00
f	Creating infrastructure to UAIP Sets	10.00	10.00
g	Civil Engineering works.	5.00	5.00
Total		743.55	748.55

In respect of creation of Infrastructure to Un-authorized IP sets, HESCOM having achieved a capex of Rs.55.14 Crores during FY16 as against Rs.45 Crores of approved capex, is proposing only Rs.10 crores for FY18. HESCOM needs to explain the reasons for reduced capex and state whether it is going to complete

all the infrastructure work by FY18. The details of infrastructure created for un-authorized IP sets shall be furnished in the following format:

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

In respect of Thermal Imaging and GIS Mapping of DTCs, HESCOM has indicated a capex of Rs.5 Crores for FY18. HESCOM had earlier planned to carry out this work through inviting division-wise tenders and has not submitted the details thereon to the Commission despite specific directions in the matter. HESCOM shall furnish the status of its earlier tenders on this scheme.

HESCOM to explain the status of schemes like DDUGJY and IPDS it has taken up in FY17 and the extent of continuation of the said projects in FY18.

HESCOM has stated that, capex provision is made for commissioned works, on-going works and new works of HESCOM and has mentioned the long term projects and priorities of taking works during FY18. But, HESCOM has not indicated whether, it has followed the “**Capital Expenditure Guidelines for ESCOMs**” issued by the Commission. If so, HESCOM 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

Further, HESCOM should strictly follow the “**Capital Expenditure Guidelines for ESCOMs**” in which the capital investment planning process, prioritization and post commissioning analysis to be adopted by the ESCOMs are elaborated. HESCOM shall furnish details as to whether it has carried out the works according to the above 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. Prioritizing of such projects to be taken up for execution are to be based on payback period & benefit to cost ratio, HESCOM should also move in this direction and list the high loss making feeders based on the input energy to the feeders and sale of energy in that feeder. HESCOM shall furnish the list of 11kV feeders having losses above target figure in descending order.

Further, HESCOM shall furnish the details of the works which are being funded through grants and loans from the GoI, GoK and other financial institutions 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/avail ed		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

HESCOM shall also submit the physical and financial progress as on 31st October, 2016 (or latest by 30th November, 2016) as against the approved capex for FY17

in the format approved for FY17, indicating the capex incurred against each category.

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

The HESCOM 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 9219.66 MU as against the HESCOM's proposal of 9449.73 MU. The actual sales of HESCOM as per the current APR filing [Table at Pg. 30] is 10092.01 MU indicating an increase in sales to the extent of 872.35 MU with respect to the approved sales. The increase in sales is 894.63 MU in LT-categories and there is a reduction of 22.28 MU in HT-categories. It is noted that, as against approved sales [excluding HRECS sales and supply to SEZ] of 4190.39 MU to categories other than BJ/KJ and IP sets, the actual sales achieved by HESCOM is 4073.82 MU, resulting in the reduction of sales to these categories by 116.57 MU. Further, HESCOM has sold 6018.19 MU to BJ/KJ and IP set categories against approved sales of 5029.27 MU resulting in increased sales to these categories by 988.92 MU.

The category wise sales approved by Commission and the actuals for FY 15 are indicated in the table below:

Sales in MU

Category	Approved	Actuals	Actuals -Approved
LT-2a*	1476.70	1432.07	-44.63
LT-2b	15.48	14.60	-.88
LT-3	406.23	413.68	7.45
LT-4b	18.30	16.47	-1.83
LT-4c	1.60	0.77	-0.83

LT-5	338.97	313.34	-25.63
LT-6	226.61	216.19	-10.42
LT-6	145.64	128.84	-16.80
LT-7	25.00	24.28	-0.72
HT-1	205.30	210.62	5.32
HT-2a	938.26	930.32	-7.94
HT-2b	110.11	119.56	9.45
HT-2c	30.00	57.97	27.97
HT-3a & b	196.84	163.90	-32.94
HT-4	14.35	14.63	0.28
HT-5	41.00	16.58	-24.42
Sub total	4190.39	4073.82	-116.57
BJ/KJ	87.28	90.41	3.13
IP	4941.99	5927.78	985.79
Sub total	5029.27	6018.19	988.92
Grand total**	9219.66	10092.01	872.35

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

**Excludes sale to HRECS and SEZ.

From the above table it is noted that the major category contributing to the increase in sales with respect to the approved figure is IP sets (985.79 MU) and HT-2c (27.97 MU). The reasons for increased sales to IP sets shall be explained. Further, the reduction in sales is mainly due to HT-3(32.94 MU), HT-5(24.42 MU), LT-2a (44.63 MU) and LT-5(25.63 MU). The reasons for decreased sales to these categories shall be analyzed.

Further to validate the sales, HESCOM shall furnish the following information:

- a) In order to analyze reduction in HT sales, HESCOM 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 2014-16 in the following format:

Units in MU

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

- b) The number of installations shifted from HT2a, HT2b and HT-4 categories to HT-2c category and the corresponding sales figures for FY14, FY15 and FY16, in order to estimate the impact of shifting of these installations

c) Break up of sales under LT-2 category [LT-2a and LT-2b break up]-for FY16 furnished at Pg. 30 of the filing adds to 1359.98 MU, whereas in D-2 format it is indicated as 1345.37 MU. Further, the total sales indicated in Pg.30 for FY-16 is 10092.02 MU, while the same is indicated as 10077.41 MU in D-2 format. HESCOM shall reconcile the data category-wise as well as the total between D-2 format and the table indicated at Pg.30.

II. Category wise sales for the FY18:

HESCOM in its filing has stated that the number of installations for FY18 is estimated considering CAGR for the period FY13 to FY17 except in case of LT-4c, HT-2c, HT-3a for which four-year CAGR is considered. For HT-4 and HT-3b, HESCOM has adopted the present trend. Further, it is stated that the number of installations for FY17 is estimated considering the growth during September 15 to March 16 over September -15 data.

Further, it is stated that for energy sales estimate, five-year CAGR is considered for LT –category and HT category excluding HT-2c and HT-3a categories. For HT-2c and HT-3a categories, HESCOM has adopted four-year CAGR and for HT-3b three-year CAGR.

The observations of the Commission on sales forecast for FY18 are as follows:

The Commission notes that HESCOM has reckoned FY-17 data, which is an estimated figure, for working of the CAGR which is not correct. **Therefore, only actual data available up to FY-16 should have been considered for estimating the CAGR.**

1. LT(1) – BJ/KJ category:

HESCOM has estimated the sales for installations consuming below 18 units and for installations consuming above 18 units, based on the CAGR for the period FY13 to FY17. However, for computing the energy sales for BJ/KJ, HESCOM shall work out the same based on specific consumption of FY-16.

The number of BJ/KJ installations (consuming upto 18 units) indicated as mid-year figure [605946] for FY18 at D-21 is higher than the number of year end installations

[560959] indicated in D-2 format. HESCOM shall reconcile the data. Similarly sales figures for LT-2b, LT-3 & LT-4b shall be reconciled between d-2 & d-21

2. The table indicating the growth rates for the number of installations is furnished 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 HESCOM
LT-2a	4.00	2.45	4.10	4.21
LT-2b	8.12	7.96	8.83	8.35
LT-3	4.60	5.16	5.19	5.12
LT-5	5.80	6.13	5.39	5.96
LT-6 WS	8.80	9.61	5.41	9.98
LT-6 SL	2.99	3.04	2.75	3.50
LT-7	19.17	14.42	12.96	13.71
HT-1	10.02	11.03	9.38	10.19
HT-2 (a)	9.41	7.53	8.42	7.46
HT-2 (b)	4.50	0.55	4.74	1.94
HT-3(a)& (b)	13.41	16.52	12.77	13.62
HT-4	-9.83	-20.20	-6.06	0.00

It is noted that:

- a. The growth rate considered for LT-6 is slightly higher compared to the normal growth rate indicated above.
 - b. The growth rate considered for HT-2a and HT-2b is slightly lower when compared to the normal growth rate indicated above.
3. The table indicating the growth rates for the energy sales is furnished 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 HESCOM
LT-2a	7.01	4.32	8.21	6.36
LT-2b	7.76	27.40	6.73	27.05
LT-3	8.05	7.06	11.47	6.65
LT-5	2.07	2.09	-0.78	2.15
LT-6 WS	6.91	8.19	6.35	11.91
LT-6 SL	2.97	1.69	-3.22	4.11
LT-7	10.04	14.61	7.39	1.00
HT-1	7.53	5.56	7.48	3.61
HT-2 (a)	3.98	-2.09	0.46	-5.07

HT-2 (b)	6.05	4.22	4.37	4.34
HT-3(a)& (b)	14.83	6.77	19.30	3.89
HT-4	-5.84	-9.78	-6.82	1.04

It is noted that:

- i. The growth rate considered for LT- 2(b), LT-5, LT-6 Water supply & Street Lighting and HT-4 categories is higher, when compared to the past year growth and the CAGR during the period 2010-11 to 2015-16.
 - ii. The growth rate considered for LT-3, LT-7, HT-1, HT-2a, HT-3 is lower when previous year growth rate and the CAGR is considered.
 - iii. In the case of HT-2a and HT-3(a)(i), even though HESCOM has proposed increase in the number of installations, negative growth in sales is considered. Similarly, in the case of HT-3a(iii), even though the number of installations is retained at FY17 level, sales are reduced. HESCOM shall explain the reasons for the same.
4. To validate the sales, category wise information in the following format shall be furnished:

i. No. of Installations

Category	2014-15 Actuals		2015-16 Actuals		2016-17	
	As on 30 th Nov' 2014	As on 31 st March, 2015	As on 30 th Nov' 2015	As on 31 st March, 2016	As on 30 th Nov' 2016	As on 31 st 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)& (b)						
HT-4						
HT-5						

Sub Total (Other than BJ/KJ and IP)						
BJ/KJ						
IP						
Sub Total (BJ/KJ and IP)						
Grand Total						

ii. Energy Sales

Category	2014-15 Actuals		2015-16 Actuals		2016-17	
	1 st April 2014 to 30 th Nov 2014 (cumulative)	1 st Dec 2014 to 31 st March 2015 (cumulative)	1 st April 2015 to 30 th Nov 2015 (cumulative)	1 st Dec 2015 to 31 st March 2016 (cumulative)	1 st April 2016 to 30 th Nov 2016 (cumulative actuals)	1 st Dec 2016 to 31 st 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. RPO Compliance:

- For validating the RPO compliance for FY16, HESCOM 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		

- HESCOM 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 HESCOM shall furnish the following details pertaining to HESCOM 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			

IV. Wheeling and Banking

- I. HESCOM has worked out the wheeling charges in its petition and has stated that the same is applicable to all open access/wheeling transactions except for energy wheeled from NCE sources to the consumers in the State. However, HESCOM has not indicated in its petition that for NCE sources the prevailing charges would continue. Therefore, the same shall be included in the Petition. Further, HESCOM shall include in its Prayer, a prayer for approval of wheeling charges and cross-subsidy surcharge.
- II. The contribution of Solar Power shall be computed duly considering the present status of the Solar projects for which HESCOM 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	
		Qty (MU)	Cost(Rs Crs)	Qty(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, HESCOM shall confirm as to whether it will furnish its readiness to meet the targets of both Solar and Non- Solar RPO for FY18.

V. Cross subsidy surcharge:

HESCOM has considered 80% of cross-subsidy for FY18 while computing CSS. In Tariff Order 2016, the Commission has considered 75% as CSS has to be gradually reduced. Further, HESCOM shall clarify as to whether the above CSS is computed as per the Tariff Policy-2006 or Tariff Policy-2016.

Further, HESCOM shall include in its Prayer, a prayer for approval of wheeling charges, cross-subsidy surcharge and RPO compliance.

3. Observations on projected IP Set consumption for FY18:

APR 2016

As regards sales to IP-sets, the Commission notes that, the overall sales have increased by 985.79 MU (19.94%) as against the approved sales of 4,941.99 MU as per the Tariff Order dated 2nd March 2015 for FY16. Further, the Commission had approved a specific consumption of IP-sets as 8,244 units / installation / annum for FY16. As per the consumption reported in format D2 of the filing by the HESCOM, the specific consumption works out to 9,562 units / installation/annum for FY16. This indicates a huge increase of 1,318 units / installation/annum in specific consumption. Further, the actual number of installations for FY16 has also increased by 26,832 numbers to the approved number of installations of 6,11,075. HESCOM shall furnish the detailed reasons for increase in specific consumption as well as total IP-consumption for FY16.

The Commission in its Tariff Order dated 2nd March 2015 had directed HESCOM 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. HESCOM has not submitted in its application the consumption data of agricultural feeders indicating the loss in 11 kV, distribution transformers & LT system that has been deducted from the gross consumption to arrive at the net consumption and also the methodology adopted to arrive at the loss figures for FY16.

HESCOM shall also furnish necessary data to justify the IP-consumption claimed for FY16 as per the format given in the subsequent paragraph.

ARR 2018

The Commission in its Tariff Order dated 30th March, 2016 had directed HESCOM to furnish the consumption of IP-sets based on the readings from the meters provided to 11 kV agricultural feeders at the Sub-stations duly deducting the 11 kV and LT distribution system losses (as per the formats prescribed by the Commission) instead of assessing the IP-set consumption based on the readings obtained from energy meters fixed to DTCs feeding predominantly IP-set loads. HESCOM 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. But, HESCOM has not submitted the monthly IP-set consumption regularly to the Commission. HESCOM is required to justify its projection of IP-consumption for FY18 as per the energy recorded on the segregated agricultural feeders.

Therefore, HESCOM shall submit the month wise feeder wise consumption of all the agricultural feeders segregated under NJY Scheme from April to October, 2016 in the following format indicating(calculating) the percentage loss in 11 kV, distribution transformers & LT system that has been deducted from the gross consumption to arrive at the net consumption and the methodology adopted to arrive at the loss figures.

Month	Name of Sub-division	No. Segregated Agricultural Feeders in the subdiv	Monthly Consumption 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									

Further, HESCOM was directed to take up enumeration of IP-sets to identify defunct/dried up wells in the field & complete the same by October, 2016 and take further necessary action to arrive at the correct number of IP-sets in its jurisdiction on the basis of enumeration report. HESCOM has not complied with this direction. HESCOM shall furnish compliance on this issue in order to arrive at the correct number of IP Set installations/consumption and for projecting the correct number of installations/consumption for FY18 also. **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 HESCOM.**

4. Distribution Losses:

The actual distribution losses reported by HESCOM for FY16 is 16.89% as against 17.50% approved by the Commission in its Order dated 2nd March, 2015. Considering the actual losses of 16.74 % reported by HESCOM for FY15, the distribution losses has increased by 0.15% in FY16. As discussed in the observations on sales to IP Set categories, the Commission notes that while there is increase in IP Set consumption, there is a decrease in metered category sales. Since the IP Set sales is not backed by justified data of consumption based on separated feeder wise data, the Commission cannot accept the distribution loss figures claimed by HESCOM.

Hence, HESCOM shall furnish the feeder wise number of IP sets along with consumption based on separated feeders besides Division wise data of numbers and consumption of IP sets as per DCB.

The Commission, in its Order dated 30th March, 2016 has fixed distribution losses at 15.50% for FY18 after considering the status of distribution losses in FY15. The distribution losses projected for FY17 is at 16.00% (as approved in MYT Order dated 30th March, 2016) which shows a reduction of 0.74% from the loss levels

reported for FY16. HESCOM 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 proposed, HESCOM is required to reassess the distribution losses for FY18 based on the losses projected for FY17.

Further, HESCOM shall furnish the data of Energy Audit for Town and Cities in the following format:

Name of the Town/City	FY16			FY17 (Cumulative as at the end of Nov, 2016)		
	Energy Input in MU	Energy Sold in MU	% Distribution Losses	Energy Input in MU	Energy Sold in MU	% Distribution Losses
TOTAL						

5. Power Purchase:

I. Annual Performance Review for FY-16

1. HESCOM 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. HESCOM shall furnish D1 format for the year FY16.
3. HESCOM shall furnish the basis of claiming Rs.128.52 Crores for supply of 311.46 MU to HRECS in FY16.

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

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

Generator wise short term power purchase details for 3610.27 MU at a cost of Rs.1835.32 Crores for FY16 shall also be furnished.

6. Issues pertaining to items of Revenue and Expenditure:

i. Format D1 for FY16 is to be furnished with data of actual energy and cost. Further, Format D1 for FY17 is to be furnished with data of actual energy and cost up to November, 2016 and projections thereon for the balance period.

ii. HESCOM in its application for ARR for FY18, under format A1 has indicated an amount of Rs.448.27 Crores as 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 decided that, as per GO dated 31.05.2002 and 19.12.2002, GoK is liable to meet the P&G requirement of existing pensioners and such liability cannot be passed on to the consumers. However, it is now reported by HESCOM that, as per the present directions of the Government of Karnataka, it has included an amount of Rs.5448.27 Crores towards arrears of P&G Trust for FY18.

iii. HESCOM shall furnish the reasons /justifications along with relevant Government Orders if any for inclusion of this amount in the ARR of FY18 to be recovered from consumers in contravention to the Commission's decision in Tariff Order 2016. **Further, it is to be noted that, inclusion of this amount will have substantial tariff implications which cannot be passed to the consumers.**

iv. 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 HESCOM has received subsidy pertaining to past period during FY16 and if so, details of the amount received shall be furnished separately.

- v. The bank / Financial Institution wise amount of long-term and short-term loans inclusive of over draft 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.
- vi. The Commission in its Tariff Order dated 2nd March, 2015 has directed HESCOM to furnish detailed plan of action for utilisation of funds towards consumer relation / education and to maintain separate accounts of these funds and furnish the same at the time of APR. HESCOM under A1 format has reported that, it has spent an amount of Rs.0.13 Crores towards consumer relation / education. HESCOM is required to furnish the break-up of expenditure incurred under separate head of account towards consumer relation / education during FY16.
- vii. HESCOM shall furnish the details in respect of the following items indicated under A&G expenses for FY16:
- | | |
|--------------------------------------|-------------------|
| i) Remuneration to contract agencies | - Rs.8.82 Crores |
| ii) Travel expenses | - Rs.21.75 Crores |
| iii) Professional charges | - Rs.28.76 Crores |
| iv) Freight | - Rs.2.91 Crores |
- viii. In form D17, the expenditure capitalised for FY18 is Rs.730.02 Crores with total capital expenditure of Rs.1423.42 Crores inclusive of opening work in progress of Rs.674.87 Crores. Hence, the amount of expenditure proposed to be capitalised for FY18 is only 51.29%. HESCOM is required to furnish the reasons for indicating such a low capitalisation amount besides considering revision of the same.
- ix. In the case of LT4 (a)(i) category, HESCOM shall furnish the Division wise breakup of IP sets, connected load and estimated consumption for FY 17 (as on 31.10.2016) and FY 18.

- x. The category wise connected loads indicated in Form D21 shall be justified with duly certified Distribution Circle wise data.
- xi. The category wise slab wise consumption indicated in Form D21 shall be justified with Division wise details of computation.
- xii. The Format D20 on page 294 indicates the existing fixed/demand charges as per Tariff Order 2015. HESCOM is required to furnish the correct D20 Statement with existing rates as per Tariff Order 2016.
- xiii. The breakup of number of consumers indicated in Form D21 based on sanctioned load under LT2, LT3 and LT5 categories shall be justified with Division wise details.
- xiv. HESCOM, under Format D6 has projected an amount of Rs.111.35 Crores as expenditure towards terminal benefits for FY18. HESCOM is required to furnish the basis and computations for claiming this amount along with relevant actuarial valuation report.
- xv. HESCOM, under Format D8 has considered an amount of Rs.138.37 Crores as net depreciation on assets created. The HESCOM, shall furnish the amount of depreciation on the assets created out of consumer contribution/grants for FY16 and projection for FY18.
- xvi. As per the audited Balance sheet of HESCOM for FY16, it is noticed that an additional equity of Rs.70.88 Crores has been received during FY16. HESCOM shall furnish the date of receipt of this additional equity along with the copy of the corresponding Government Order.
- xvii. HESCOM has proposed a capex of Rs. 748.55 Crores for FY 18. It is also proposed to carry out the proposed Capex by availing capital loan of Rs. 743.55. It is observed that the program of Capex for FY18 includes certain works which is being financed by Grants/Consumer contributions. Hence HESCOM is required to furnish the breakup of the financing of proposed capex through loans, grants and consumer contribution besides recasting its proposed loans for FY18.
- xviii. HESCOM 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).
- xix. HESCOM is required to furnish the details of monthly Minimum and Maximum load recorded during January, 2016 to November, 2016 for the morning (6.00AM to 10.00 AM)/evening (6.00PM to 10.00 PM) peak periods and off-peak periods

(10.00PM to 6.00 AM). Further, for the same period, HESCOM shall furnish the amount of penalty levied and incentives given under the existing ToD scheme.

7. Compliance to directives issued by the Commission

Sl. No	Directives issued by the Commission	Observations made
1	Directive on Energy Conservation	<p>The HESCOM 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.</p> <p>The HESCOM has not submitted compliance on the above directive. The HESCOM shall submit the compliance on the same.</p>
2.	Directive on implementation of Standards of Performance (SoP)	<p>HESCOM was directed to display the SoP parameters in all its O&M subdivisions and O&M Sections. But, HESCOM has not submitted monthly compliance reports regularly to the Commission. HESCOM, in its tariff application also has not submitted the same. HESCOM shall clarify, duly furnishing the details as to whether it has complied with the directive on implementation of SoP (displaying the SoP parameters in all its Subdivisions/Sections).</p>
3.	Directive on use of safety gear by linemen:	<p>HESCOM has not submitted the quarterly compliance report to the Commission regularly. The Commission had directed HESCOM to sensitize the linemen about the need for adoption of safety aspects in their work through suitably designed training and awareness programmes and devising suitable reporting system on the use of safety gear and mandate supervisory/higher officers to regularly cross check the compliance by linemen and take disciplinary action on the concerned if violations are noticed. HESCOM has not submitted the compliance on this. HESCOM is required to submit the compliance on the above and also furnish the details of number of linemen presently provided with full set of safety gear and the lineman remaining to be provided with the safety gear.</p>
4	Directive on providing Timer Switches to Streetlights by ESCOMs	<p>HESCOM has not submitted the quarterly compliance report in respect of installation of timer switches, to the Commission. HESCOM shall furnish the reasons for delay in taking up this work by itself (and later collect the cost from the local bodies) as directed and also the timeline by which it would complete the programme.</p>
5	Directive on Load shedding	<p>HESCOMs 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</p>

		<p>approval regularly. HESCOM shall submit compliance in this regard.</p> <p>Further, HESCOM 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 since in its reply submitted is the same as the last year's reply.</p>
6	Directive on establishing a 24X 7 fully equipped centralized consumer service centers	<p>HESCOM shall furnish number of consumer interaction meetings have been held at the subdivisions during the period from April to November 2016 and the response of consumer participation in such meetings. HESCOM shall also furnish the details such as the total service stations established in the subdivisions/Sections, balance service stations required to be established and the likely time for establishing the remaining service stations for addressing consumer complaints effectively.</p>
7	ENERGY AUDIT	<p><u>Energy Audit of cities / towns</u></p> <p>HESCOM is not furnishing the energy audit reports regularly to the Commission. HESCOM shall furnish the same up to October, 2016 along with the details of specific measures initiated to reduce loss levels wherever the same are above 15%. Further, HESCOM shall furnish the comparative statement of losses recorded in Towns & Cities for FY16 as against FY15.</p> <p><u>DTCs Energy Audit:</u></p> <p>HESCOM has not submitted in its application the details as to number of DTCs existing at present, number of DTCs provided with meters and the balance DTCs to be provided with meters. HESCOM shall submit the details of the same. Further, HESCOM was required to furnish the details of energy audit conducted in respect of DTCs for which meters have already been fixed and details of remedial measures initiated to reduce losses in those DTCs wherever the loss levels are at higher levels and the timeline by which all the remaining DTCs will be metered.</p> <p>However, HESCOM has not submitted the details of energy audit conducted in respect of around 33,000 DTCs for which meters have already been fixed as reported by it. HESCOM shall submit the same and the timeline by which all the remaining unmetered DTCs will be metered.</p> <p>Further, HESCOM has not furnished the consolidated energy audit report for the FY16 and FY17(up to October 2016) and it shall furnish the same as per the formats Annex-A & B prescribed by the Commission vide letter No. KERC/D/137/14/91 dated 20.04.2015.</p>
8	Implementation of HVDS	<p>HESCOM has reported that implementation of HVDS in Kummur feeder of Badagi subdivision is completed, but it has not furnished the details of benefits accrued to the system after implementation of HVDS in that feeder.</p> <p>HESCOM is required to furnish the details of benefits accrued to the</p>

		system post implementation of HVDS Kummur feeder.
9	Implementation of NJY	HESCOM shall furnish the reasons for delay in commissioning the feeders under phase 1, 2 and 3. HESCOM shall also furnish the analysis report indicating the benefit accrued to the system in respect of completed feeders.
10	DSM in Agriculture	HESCOM shall furnish the details of the envisaged Agri. DSM project in its jurisdiction and the latest progress of replacing the inefficient pump sets by efficient pump sets undertaken by it. HESCOM shall also furnish the timeline by which all the targeted IP sets would be replaced with energy efficient IP sets.
11	Electrification of un-electrified Households	HESCOM was directed to cover 5% of the total identified un-electrified households every month beginning from April 2015 and submit compliance thereon. HESCOM has not complied with this directive. HESCOM shall furnish the details of the compliance. HESCOM shall also furnish the details such as total number of households identified under various schemes, which are not electrified in its jurisdiction, number of households taken up for electrification under various schemes and the timeline for completion of all such works.
12	Subdivision as Strategic Business Units (SBU)	HESCOM has not implemented the directive on Financial Management Framework in its jurisdiction on the basis of M/s PWC's report, instead it has reported that it will entrust the pilot study again to M/s PWC. In this regard, HESCOM shall submit the reasons for not implementing so far the directive on Financial Management Framework to assess the performance of the divisions/subdivisions in its jurisdiction, to the Commission.
13	Prevention of Electrical Accidents	HESCOM has not submitted the Division wise action plan to minimize accidents. It has also not submitted the details of number of hazardous installations identified, rectified and the remaining installations to be rectified in the distribution system for FY17. HESCOM is required to furnish the details of number of hazardous locations/installations identified in its distribution network in FY17 up to November, 2016.
