महाराष्ट्र विद्युत नियामक आयोग
Maharashtra Electricity Regulatory Commission

Ref. No. MERC/FAC/MSEDCL/ WFH/SBR/ 20 **Date: 20 July, 2020**

To,
The Managing Director,
Maharashtra State Electricity Distribution Company Ltd.,
5th Floor, Prakashgad, Plot No. G-9
Bandra (East), Mumbai 400 051

Subject: Post facto approval of MSEDCL's Fuel Adjustment Charges (FAC) for the period of April, 2019 to June, 2019.

Reference: MSEDCL's FAC submission vide Letter dated 21 November, 2019 for post-facto approval of FAC for the period of April, 2019 to June, 2019.

Sir,

Upon vetting the FAC calculations for the month of April, 2019 to June, 2019 as mentioned in the above reference, the Commission has accorded post facto approval to MSEDCL for levying FAC to its consumers as shown in the table below:

ZFAC	April, 2019	May, 2019	June, 2019
FAC allowed (Rs. Crore)	212.13	(27.15)	425.31

MSEDCL has computed total FAC of Rs. 789.63 Crores against which the Commission has approved Rs. 610.39 Crores, thus Rs. 179.24 Crore is disallowed which is explained in detail at Paras 9.2 to 9.9 of the enclosed Report. Since the recovery of this amount is already done, the above adjustment will be rolled over in next FAC approvals (i.e. FAC of Q 2 of FY 2019-20) till Q4 of FY 2019-20.

As FY 2019-20 is already over and provisional True-up of FY 2019-20 has also been done in recent MYT Order dated 30 March, 2020, the rationale for post facto approval of Q1 of FY 2019-20 is only to carry forward the allowance or disallowance to next quarter and subsequently to Q4 of FY 2019-20.

Yours faithfully,

(Dr. Rajendra Ambekar)
Executive Director

१३वा मजला, केंद्र क्र. १, जागतिक व्यापार केंद्र, कफ परेड, कुलाबा, मुंबई - ४०० ००५.
13th Floor, Centre No. 1, World Trade Centre, Cuffe Parade, Colaba, Mumbai - 400 005.
Tel.: 022-2216 3964 / 2216 3965 / 2216 3969 Fax : 022-2216 3976
E-mail : mercindia@merc.gov.in / mercindia@mercindia.org.in Website : www.merc.gov.in / www.mercindia.org.in

ANNEXURE
Detailed Vetting Report
Date: 18 July, 2020

POST FACTO APPROVAL FOR FAC FOR THE MONTH OF APRIL, 2019 TO JUNE, 2019

Subject: Post facto approval of MSEDCL's Fuel Adjustment Charges (FAC) for the period of April, 2019 to June, 2019.

Reference: MSEDCL's FAC submission vide Letter dated 21 November, 2019 for post facto approval of FAC for the period of April, 2019 to June, 2019.

1. FAC submission by MSEDCL:

1.1 MSEDCL has made FAC submissions for the month of April, 2019 to June, 2019 as referred above. Upon vetting the FAC calculations, taking cognizance of all the submissions furnished by MSEDCL, the Commission has accorded post facto approval for the FAC amount to be charged in the billing month of July, 2019 to September, 2019.

2. Background

2.1 On 12 September, 2018, the Commission has issued Tariff Order for MSEDCL (Case No.195 of 2017) for Mid-Term Review, including Truing-up of FY 2015-16 and FY 2016-17, provisional Truing-up for FY 2017-18, and revised Aggregate Revenue Requirement and Tariff for FY 2018-19 to FY 2019-20. Revised Tariff has been made applicable from 1 September, 2018

2.2 In accordance with MERC (MYT) Regulations, 2015 a Distribution Licensee is required to obtain post facto approval of the Commission on a quarterly basis for FAC charges. Accordingly, vide its letter dated 21 November, 2019. MSEDCL has filed FAC submissions for the month of April, 2019 to June, 2019 for post facto approval. The Commission has scrutinized the submissions provided by MSEDCL and has also verified the fuel and power purchase bills provided along with its submissions.

3. Energy Sales of the Licensee

3.1 The net energy sales within licence area as submitted by MSEDCL in the FAC submission and as approved by the Commission are as shown in the table below.

Consumer Category	Approved by the Commission	Approved for the month	Actual sales (MU)		
			April-19	May-19	June-19
	(I)	(II=I/12)	(III)	(IV)	(V)
I. Metered Category					
HT Category					
Industry General	29,105.86	2,425.49	2,650.38	2,756.96	2,615.98
Industry Seasonal	101.98	8.50	7.52	3.50	1.87
Commercial	1,840.33	153.36	170.23	185.32	170.25
Railway metro monorail	59.25	4.94	6.75	7.49	7.10
Public water works	1,647.46	137.29	158.94	163.25	155.30
Agriculture pumpset	804.12	67.01	162.33	166.49	119.47
Agriculture other	277.03	23.09	24.05	24.59	21.82
Group Housing Society	217.33	18.11	21.98	23.21	22.96
Temp Supply other	4.32	0.36	0.66	0.62	0.71
Public Service Govt	247.72	20.64	23.81	25.06	22.94
Public Service other	769.01	64.08	71.48	71.27	67.24
MSPGCL Aux Consumption	218.25	18.19	17.16	15.81	15.45
Electric Vehicle (EV) Charging Stations	0.00	0.00	0.22	0.22	0.20
Other Adjustment	0.00	0.00	400.70	375.60	330.26
Sub Total	**35292.66**	**2941.06**	**3716.21**	**3819.39**	**3551.55**
LT Category					
BPL	54.35	4.53	7.66	7.47	8.03
Residential	20,282.28	1,690.19	1,906.04	2,153.37	2,345.33
Non-residential	6,122.75	510.23	551.28	599.55	613.46
Public water works	780.31	65.03	70.19	71.33	68.14
AG metered pump set	21,090.67	1,757.56	1892	1892	1,821.30
AG metered other	149.67	12.47	13.79	14.17	15.92
Industry	7,232.08	602.67	773.62	782.93	734.34
Street-light	2,013.76	167.81	161.63	160.62	158.44
Temporary supply	16.13	1.34	2.46	2.71	2.74
Advertisement and hording	5.15	0.43	0.40	0.36	0.36
Crematorium and burial ground	2.18	0.18	0.20	0.19	0.31
Public service	498.95	41.58	46.46	47.39	47.54
Prepaid	0.00	0.00	0.81	0.82	0.76
Electric Vehicle (EV) Charging Stations	0.00	0.00	0.02	0.02	0.01
Sub Total	**58,248.28**	**4,854.02**	**5,427.05**	**5,733.41**	**5,816.68**
Energy Sales outside the License Area	0.00	0.00	0.00	0.00	0.00
Sub Total-	**93,540.94**	**7,795.08**	**9,143.25**	**9,552.81**	**9,368.24**

Consumer Category	Approved by the Commission	Approved for the month	Actual sales (MU)		
			April-19	May-19	June-19
	(I)	(II=I/12)	(III)	(IV)	(V)
Metered Sales					
Unmetered Sale					
Unmetered Hrs>1318	3,966.00	330.50	1,051.04	1,051.04	440.09
Unmetered Hrs<1318	2,487.00	207.25			
Sub Total - Unmetered	**6,453.00**	**537.75**	**1,051.04**	**1,051.04**	**440.09**
Grand Total (Metered+Unmetered)	**99,993.94**	**8,332.83**	**10,194.29**	**10,603.8**	**9808.33**

3.2 Monthly sales for April to June, 2019 was higher than that of the MTR approved sales, i.e., 8,332.83 MUs. This variation in actual sales is majorly on account of higher sales in HT Industrial General, Public water works, HT Agriculture, LT Residential and LT Industrial as shown in Table above. Further, the un-metred sale in April and May, 2019 is significantly higher than the approved un-metered sales resulted higher sales in respective month. On response to clarification sought for such a variation in sales, MSEDCL stated that the approved sales in MTR Order were estimated based historical data. Whereas the actual sales depend on various aspects such as economic conditions, rain fall etc. Hence, it is difficult to provide exact reasons for variation in sales.

4. Cost of Power Purchase

4.1 MSEDCL mainly procures power from following sources;

a) MSPGCL
b) NTPC
c) JSW (Ratnagiri) Energy Ltd.
d) Adani Power Limited
e) Mundra UMPP
f) Rattan India Power Limited
g) EMCO Power
h) Bilateral Procurement (Power Exchange, Traders, etc.)
i) Renewable Energy Sources
j) Infirm Power (MSPGCL units under commissioning, other infirm sources)

4.2 MSEDCL also buys power from other sources such as Sardar Sarovar and Pench Hydro project, renewable sources including co-generation, Wind power and Solar. In addition to the above sources, in case of any shortfall from approved sources, when demand exceeds availability or for cost optimization, MSEDCL sources power from exchange/Traders or other sources at the market price through competitive bidding in accordance with the Guidelines of MoP.

4.3 For present quarter MSEDCL was asked to provide the details of action taken for optimization of its power purchase cost. In its reply MSEDCL stated that it follows MoD principles and power scheduling is done in real time as per MoD given by SLDC. The demand of MSEDCL is generally catered by scheduling the power from its long term contracted generating sources. The power from long term thermal generators i.e stations under MoD, is scheduled as per the MoD stack according to the requirement. The high cost generating units as per MoD, are full picked up to caters the peak demand, generally during day period and for the rest of period the unit is backed down which leads the injection of high cost power in the system and further leads to back down of low variable cost units during off peak period. In order to utilize the least cost generation fully, MSEDCL has exercised the option of giving zero schedule to high cost generating units by optimally scheduling the Koyna Hydro generation during peak period and purchase of power from power exchanges during peak demand period.

4.4 Furthermore, being summer season and expected high demand, for the months of April-19 & May-19, Koyna water was kept balanced for generation to meet out the summer demand, but the actual demand during these month was lower than the expected. Hence, MSEDCL had optimally utilized balance Koyna Hydro Generation to cater the peak demand and given additional zero schedule to the high cost generating unit, thereby reduced the power purchase cost. Also, whenever the energy rates in exchanges were feasible, MSEDCL purchased power from power exchanges for some blocks to cater the demand and thereby kept the generating units under zero schedule.

4.5 Thus, by implementing above strategies MSEDCL optimized the generation cost by giving higher schedule to least cost generator and giving zero schedule to high cost generator instead of running multiple units on technical minimum. MSEDCL also submitted the details of units that were under zero schedule/RSD during April-2019 to June-2019.

4.6 The Commission in line with its previous post facto FAC approval has considered the revised monthly MoD stack values for this present FAC approval. Further, the recovery of differential amount due to re-calculation of FAC as claimed by MSEDCL in its FAC submission has not been considered, as the Commission has already settled the matter in its previous FAC approval.

4.7 The following table shows the variation in average power purchase cost (Rs/kWh) for the month of April, 2019 to June, 2019 as compared to average power purchase cost approved as per Tariff Order dated 12 September, 2018:

Source	MTR Approved for April, 2019			Actual for April, 2019			Variation		
	Quantum (MUs)	PP Cost (Rs. Cr)	Rate (Rs. / kWh)	Quantum (MUs)	PP Cost (Rs. Cr)	Rate (Rs. / kWh)	Quantum (Mus)	PP Cost (Rs. Cr)	Rate (Rs. / kWh)
MSPCGL Thermal	3,877.54	1,604.98	4.14	4,266.29	1,844.91	4.32	388.74	239.92	0.19
MSPCGL Hydro	323.75	18.89	0.58	637.37	64.99	1.02	313.62	46.10	0.44
NTPC	2,166.98	750.30	3.46	2,696.18	969.07	3.59	529.21	218.77	0.13
1. Mundra UMPP	*450.43*	*113.41*	*2.52*	*449.92*	*126.33*	*2.81*	*(0.51)*	*12.92*	*0.29*
2. Adani	*1,736.98*	*590.62*	*3.40*	*2,003.37*	*881.56*	*4.40*	*266.39*	*290.94*	*1.00*
3. EMCO	*112.61*	*40.84*	*3.63*	*126.32*	*76.12*	*6.03*	*13.71*	*35.28*	*2.40*
4. JSW	*168.91*	*54.39*	*3.22*	*185.82*	*65.18*	*3.51*	*16.91*	*10.79*	*0.29*
5. Rattan India	-	*81.91*	-	*290.65*	*179.94*	*6.19*	*290.65*	*98.03*	*6.19*
IPPs Total	2,468.93	881.17	3.57	3,056.08	1,329.12	4.35	587.15	447.95	0.78
Solar	388.61	161.53	4.16	213.28	122.89	5.76	(175.33)	(38.65)	1.61
Non- Solar	1,276.85	669.18	5.24	673.06	407.86	6.06	(603.79)	(261.32)	0.82
Other Must Run	569.79	144.90	2.54	435.49	121.05	2.78	(134.29)	(23.84)	0.24
STTP	-	-	-	195.56	86.47	4.42	195.56	86.47	4.42
Total	**11,072.44**	**4,230.95**	**3.82**	**12,173.32**	**4,946.37**	**4.06**	**1,100.88**	**715.41**	**0.24**

4.8 Thus, for the month of April 2019, total variation in power purchase cost is Rs. 715.41 crore, out of which Rs. 420.66 crore was on account of increased quantum of power purchase (1100.88 MU) and Rs. 294.75 crore was on account of increase in rate of power purchase (Rs. 0.24/kWh). As increased cost on account of increased power procurement quantum is being recovered through increased sales to consumers, FAC mechanism allows only impact of increases in power purchase rate to be pass through as FAC rate over and above approved tariff.

Source	MTR Approved for May, 2019			Actual for May, 2019			Variation		
	Quantum (MUs)	PP Cost (Rs. Cr)	Rate (Rs./ kWh)	Quantum (MUs)	PP Cost (Rs. Cr)	Rate (Rs./ kWh)	Quantum (Mus)	PP Cost (Rs. Cr)	Rate (Rs./ kWh)
MSPCGL Thermal	3,925.06	1,612.73	4.11	4,644.40	2,049.04	4.41	719.33	436.30	0.30
MSPCGL Hydro	334.54	18.89	0.56	933.66	69.61	0.75	599.12	50.72	0.18
NTPC	2,224.52	756.84	3.40	2,436.72	844.87	3.47	212.2	88.03	0.07
1. Mundra UMPP	465.45	115.85	2.49	517.98	140.84	2.72	52.53	24.99	0.23
2. Adani	1,794.88	603.49	3.36	2,060.64	709.96	3.45	265.76	106.47	0.09
3. EMCO	116.36	41.53	3.57	132.22	53.92	4.08	15.86	12.39	0.51
4. JSW	174.54	55.70	3.19	194.48	65.93	3.39	19.94	10.23	0.2

Source	MTR Approved for May, 2019			Actual for May, 2019			Variation		
	Quantum (MUs)	PP Cost (Rs. Cr)	Rate (Rs./ kWh)	Quantum (MUs)	PP Cost (Rs. Cr)	Rate (Rs./ kWh)	Quantum (Mus)	PP Cost (Rs. Cr)	Rate (Rs./ kWh)
5. Rattan India	-	81.91	-	253.68	167.68	6.61	253.68	85.77	6.61
IPPs Total	2,551.23	898.47	3.52	3,159.01	1,138.33	3.60	607.78	239.86	0.08
Solar	397.55	165.25	4.16	214.48	124.71	5.81	(183.07)	(40.540	1.65
Non- Solar	1,306.23	684.58	5.24	963.70	535.97	5.56	(342.53)	(148.61)	0.32
Other Must Run	588.78	149.70	2.54	468.28	143.90	3.07	(120.5)	(5.8)	0.53
STTP	-	-	-	118.71	53.08	4.47	118.71	53.08	4.47
Total	**11,327.91**	**4,286.47**	**3.78**	**12,938.96**	**4,999.14**	**3.86**	**1,611.05**	**712.67**	**0.08**

4.9 Similarly, for the month of May 2019, total variation in power purchase cost is Rs. 712.67 crore, out of which Rs. 609.62 crore was on account of increased quantum of power purchase (1611.05 MU) and Rs. 103.05 crore on account of increase in rate of power purchase (Rs. 0.08/kWh).

Source	MTR Approved for June, 2019			Actual for June, 2019			Variation		
	Quantum (MUs)	PP Cost (Rs. Cr)	Rate (Rs./ kWh)	Quantum (MUs)	PP Cost (Rs. Cr)	Rate (Rs./ kWh)	Quantum (Mus)	PP Cost (Rs. Cr)	Rate (Rs./ kWh)
MSPCGL Thermal	3,699.27	1,558.17	4.21	4,332.07	1,984.83	4.58	632.80	426.66	0.37
MSPCGL Hydro	323.75	18.89	0.58	103.13	56.43	5.47	(220.62)	37.54	4.89
NTPC	2,152.76	746.60	3.47	2,320.69	830.88	3.58	167.93	84.28	0.11
1. Mundra UMPP	450.43	113.41	2.52	336.98	104.94	3.11	(113.45)	(8.47)	0.60
2. Adani	1,736.98	590.62	3.40	1,802.15	843.16	4.68	65.17	252.54	1.28
3. EMCO	112.61	40.84	3.63	124.38	56.03	4.50	11.77	15.19	0.88
4. JSW	168.91	54.39	3.22	167.91	57.81	3.44	(1.00)	3.42	0.22
5. Rattan India	-	81.91	-	529.37	263.30	4.97	529.37	181.39	4.97
IPPs Total	2,468.93	881.17	3.57	2,960.79	1,325.24	4.48	491.86	444.07	0.91
Solar	380.58	158.20	4.16	211.94	116.08	5.48	(168.63)	(42.12)	1.32
Non- Solar	1,250.47	655.36	5.24	592.76	299.76	5.06	(657.70)	(355.60)	(0.18)
Other Must Run	569.79	144.90	2.54	463.00	127.40	2.75	(106.79)	(17.50)	0.21
STTP	-	-	-	24.96	8.58	3.44	24.96	8.58	3.44
Total	**10,845.54**	**4,163.27**	**3.84**	**11,009.35**	**4,749.19**	**4.31**	**163.80**	**585.92**	**0.48**

4.10 On the same line of April and May, 2019, for the month of June 2019, total variation in power purchase cost is Rs. 585.92 crore, out of which only Rs. 62.88 crore was on account of increased quantum of power purchase (163.80 MU) and Rs. 523.04 crore on account of increase in rate of power purchase (Rs. 0.48/kWh) which clearly shows that relatively costly power was procured during May 2019.

4.11 The Paras below provides the detailed analysis of sources wise power purchase variation during Q1 of FY 2019-20.

MSPGCL:

4.12 The Table below shows the breakup of actual power purchase quantum and cost from MSPGCL's stations vis-à-vis monthly approved power purchase quantum and cost as per approved MoD stack for Q1 of FY 2019-20:

Particular	Approved for April, 2019				Actual for April, 2019			
	Quantum (MUs)	Variable charge (Rs./kWh)	PP Cost* (Rs. Cr)	APPC (Rs./kWh)	Quantum (MUs)	Variable charge (Rs./kWh)	PP Cost* (Rs. Cr)	APPC (Rs./kWh)
Stations included in MoD Stack in MTR Order	3,877.55	2.26	1,370.74	3.54	2,989.81	2.24	1,198.43	4.01
Stations excluded from MoD Stack in MTR Order	-	-	234.24^	-	1,276.48	2.92	646.47	5.06
Total MSPGCL	**3,877.55**	**2.26**	**1,604.98**	**4.14**	**4,266.29**	**2.44**	**1,844.91**	**4.32**

**PP Cost=(Variable Cost+Fixed Cost+Other Charges)*

^Fixed cost payable as per the terms and conditions of the PPAs irrespective of utilisation of generation capacity

Particular	Approved for May, 2019				Actual for May, 2019			
	Quantum (MUs)	Variable charge (Rs./kWh)	PP Cost* (Rs. Cr)	APPC (Rs./kWh)	Quantum (MUs)	Variable charge (Rs./kWh)	PP Cost* (Rs. Cr)	APPC (Rs./kWh)
Stations included in MoD Stack in MTR Order	3,925.06	2.25	1,378.49	3.51	3,448.32	2.24	1,439.03	4.17
Stations excluded from MoD Stack in MTR Order	-	-	234.24^	-	1,196.08	2.94	610.01	5.10
Total MSPGCL	**3,925.06**	**2.25**	**1,612.73**	**4.11**	**4,644.40**	**2.42**	**2,049.04**	**4.41**

**PP Cost=(Variable Cost+Fixed Cost+Other Charges)*

^Fixed cost payable as per the terms and conditions of the PPAs irrespective of utilisation of generation capacity

Particular	Approved for June, 2019				Actual for June, 2019			
	Quantum (MUs)	Variable charge (Rs./kWh)	PP Cost* (Rs. Cr)	APPC (Rs./kWh)	Quantum (MUs)	Variable charge (Rs./kWh)	PP Cost* (Rs. Cr)	APPC (Rs./kWh)
Stations included in MoD Stack in MTR Order	3,699.27	2.24	1,323.92	3.58	3,158.83	2.24	1,348.47	4.27
Stations excluded from MoD Stack in MTR Order	-	-	234.24^	-	1,173.24	2.97	636.36	5.42
Total MSPGCL	**3,699.27**	**2.24**	**1,558.17**	**4.21**	**4,332.07**	**2.44**	**1,984.83**	**4.58**

**PP Cost=(Variable Cost+Fixed Cost+Other Charges)*

^Fixed cost payable as per the terms and conditions of the PPAs irrespective of utilisation of generation capacity

4.13 As can be seen from the Table above that MSEDCL has procured 1,276.48 MUs, 1,196.08 MUs and 1,173.24 MUs of power from various stations that were not included in monthly MoD stack approved for MSEDCL in MTR Order. The reason for such a purchase is mainly on account of lesser generation from those stations that were included in MoD stack, higher demand and also due to lesser availability of the RE Sources during the respective period of Q1 of FY 2019-20. This has led MSEDCL to procure the costlier power of aforesaid MSPGCL's stations as per the Merit Order Despatch determined by MSLDC. Therefore, there is an increase in Power Purchase and quantum and average cost for Q1 of FY 2019-20.

4.14 Apart from above, the payment of monthly fixed cost during aforesaid period which is based on cumulative availability during the respective period as per Regulation 48.3 of MERC MYT Regulation, 2015 also had an impact on average power purchase cost. During Q1 of FY 2019-20, it was observed that, even though some of the generating station of MSPGCL's had lower generation or PLF mainly due to fuel shortage, the cumulative availability of these plants were above normative level during respective period. Hence, they were entitled for recovery of full monthly fixed cost as per MERC MYT Regulation, 2015. The Table below shows the normative availability and cumulative availability for Q1 of FY 2019-20 of various generating station of MSPGCL:

Sr No	Stations	Normative Availability	Actual Cumulative Availability at the end of Q1	Fixed Charge Recovery
1	Bhusaval U3	**80.00%**	92.77%	Full monthly fixed charge allowable
2	Bhusaval U4 & U5	**85.00%**	92.67%	Full monthly fixed charge allowable
3	Kaperkheda U1 to U4	**85.00%**	66.58%	Fixed charge at pro rata basis
4	Kaperkheda U5	**85.00%**	88.93%	Full monthly fixed charge allowable
5	Nashik U3 to U5	**80.00%**	93.34%	Full monthly fixed charge allowable
6	Chandrapur U3 to U7	**80.00%**	75.99%	Fixed charge at pro rata basis

Sr No	Stations	Normative Availability	Actual Cumulative Availability at the end of Q1	Fixed Charge Recovery
7	Chandrapur U8 to U9	**85.00%**	91.59%	Full monthly fixed charge allowable
8	Paras U3 & U4	**85.00%**	98.05%	Full monthly fixed charge allowable
9	Parli U6 & U7	**85.00%**	93.65%	Full monthly fixed charge allowable
10	Parli U8	**85.00%**	92.19%	Full monthly fixed charge allowable
11	Koradi U6 & U7	**72.00%**	48.53%	Fixed charge at pro rata basis
12	Koradi U8 to U10	**85.00%**	57.77%	Fixed charge at pro rata basis
13	Uran Gas TPS	**60.84%**	41.49%	Fixed charge at pro rata basis

4.15 Further, in addition fixed charges and variable charges, MSPGCL has also claimed other charges which are primarily related to fuel adjustment charges during the respective month. MSPGCL has claimed Rs. 143.61 Crore, Rs. 206.89 Crore, and Rs. 235.92 Crore of other charges during the month of April, May and June, 2019, respectively. These charges have resulted on account of variation between actual energy charge and MTR approved energy charge for Q1 months of FY 2019-20.

4.16 The Table below shows the summary of actual energy charges vis-à-vis MTR approved energy charges for various MSPGCL's generating stations during Q1 months of FY 2019-20:

Rs./kWh

Sr No	Stations	Approved	Actual for April	Actual for May	Actual for June
1	Bhusaval U3	**3.097**	NA	3.771	3.575
2	Bhusaval U4 & U5	**2.774**	2.901	2.924	3.187
3	Kaperkheda U1 to U4	**2.626**	2.369	2.523	2.589
4	Kaperkheda U5	**2.240**	2.243	2.390	2.407
5	Nashik U3 to U5	**3.436**	3.213	3.124	3.358
6	Chandrapur U3 to U7	**2.113**	2.884	2.965	3.106
7	Chandrapur U8 to U9	**2.121**	2.600	2.800	2.822
8	Paras U3 & U4	**2.787**	2.666	2.633	2.887
9	Parli U6 & U7	**3.106**	3.435	NA	3.347
10	Parli U8	**2.971**	3.804	NA	3.358
11	Koradi U6 & U7	**2.471**	2.955	3.255	3.527
12	Koradi U8 to U10	**2.364**	2.928	3.136	3.081
13	Uran Gas TPS	**1.944**	2.501	2.499	2.512

4.17 As can be seen from above Table, that during Q1 of FY 2019-20 the actual energy charges for almost all of the generating station of MSPGCL except Nasik Unit 3 to 5, is higher than the energy charge approved in MTR Order. The above variation in actual energy charge is mainly due to variation in landed price of fuel and GCV with respect to various MSPGL's generating stations during aforesaid period. This has impacted the average power purchase cost during the respective period. The Commission has verified

the fuel adjustment charges claimed from the invoices submitted by MSEDCL and found to be in order.

4.18 The Table below shows the variation in power purchase in terms of per unit variable charge, per unit fixed charge and average power purchase cost for MSPGCL's generating stations during Q1 of FY 2019-20.

Particular	Approved for April, 2019						Actual for April, 2019							Variation						
	Quantum (MUs)	Variable cost (Rs. Cr)	Variable charge (Rs./kWh)	Fixed cost (Rs. Cr)	Fixed charge(Rs./kWh)	APPC (Rs./kWh)	Quantum (MUs)	Variable cost (Rs. Cr)*		Variable charge (Rs./kWh)*	Fixed cost (Rs. Cr)	Fixed charge(Rs./kWh)	APPC (Rs./kWh)	Quantum (MUs)	Variable cost (Rs. Cr) (ΔQ)		Fixed cost (Rs. Cr) (ΔP)	Variable charge (Rs./kWh)	Fixed charge(Rs./kWh)	APPC (Rs./kWh)
								V.C.	Other Charge						VC	Other Charge				
	a	b	c	D	e	f=c+e	a	b	c	d	e	f	g=f+d	a	b	C	d	e	f	g=f+e
Stations included in MoD Stack in MTR Order	3,877.5	876.4	2.26	494.3	1.27	3.54	2,990	671	133	2.69	394.7	1.32	4.01	(888)	(206)	133	(99.6)	0.43	0.05	0.47
Stations excluded from MoD Stack in MTR Order	-	-	-	234.2	-	-	1,276	372	10.6	3.00	263.8	2.07	5.06	1,276	372	10.6	29.6	3.00	2.07	5.06
Total MSPGCL	**3,877.5**	**876.4**	**2.26**	**728.6**	**1.88**	**4.14**	**4,266**	**1,043**	**143.6**	**2.78**	**658.4**	**1.54**	**4.32**	**389**	**166**	**143.6**	**(70)**	**0.52**	**(0.34)**	**0.19**

**Variable charge per unit inclusive of other charges (i.e., actual fuel adjustment charges) for the month of April, 2019*

The fixed charge per unit for both category of stations, i.e., included in MTR MoD and excluded in MTR MoD are higher, however, weighted avg. per unit fixed cost for combined MSPGCL stations is lower mainly because of spread of generation from MSPGCL Stations. In MTR Order, no generation envisaged from certain stations resulting in higher per unit fixed charge.

Particular	Approved for May, 2019						Actual for May, 2019							Variation						
	Quantum (MUs)	Variable cost (Rs. Cr)	Variable charge (Rs./kWh)	Fixed cost (Rs. Cr)	Fixed charge(Rs./kWh)	APPC (Rs./kWh)	Quantum (MUs)	Variable cost (Rs. Cr)*		Variable charge (Rs./kWh)*	Fixed cost (Rs. Cr)	Fixed charge(Rs./kWh)	APPC (Rs./kWh)	Quantum (MUs)	Variable cost (Rs. Cr) (ΔQ)		Fixed cost (Rs. Cr) (ΔP)	Variable charge (Rs./kWh)	Fixed charge(Rs./kWh)	APPC (Rs./kWh)
								V.C.	Other Charge						VC	Other Charge				
	a	b	c	D	e	f=c+e	a	b	c	d	e	f	g=f+d	a	b	C	d	e	f	g=f+e
Stations included in MoD Stack in MTR Order	3,925.0	884.16	2.25	494.3	1.26	3.51	3,448	773	212.5	2.86	453.7	1.32	4.17	(477)	(111)	212.5	(40.6)	0.60	0.06	0.66
Stations excluded from MoD Stack in MTR Order	-	-	-	234.2	-	-	1,196	352	(5.6)	2.89	263.8	2.21	5.10	1,196	352	(5.6)	29.6	2.89	2.21	5.10
Total MSPGCL	**3,925.1**	**884.16**	**2.25**	**728.6**	**1.86**	**4.11**	**4,644**	**1125**	**206.9**	**2.87**	**717.5**	**1.54**	**4.41**	**719**	**240.5**	**206.9**	**(11.1)**	**0.61**	**(0.31)**	**0.30**

**Variable charge per unit inclusive of other charges (i.e., actual fuel adjustment charges) for the month of May, 2019*

The fixed charge per unit for both category of stations, i.e., included in MTR MoD and excluded in MTR MoD are higher, however, weighted avg. per unit fixed cost for combined MSPGCL stations is lower mainly because of spread of generation from MSPGCL Stations. In MTR Order, no generation envisaged from certain stations resulting in higher per unit fixed charge.

Particular	Approved for June, 2019						Actual for June, 2019							Variation						
	Quantum (MUs)	Variable cost (Rs. Cr)	Variable charge (Rs./kWh)	Fixed cost (Rs. Cr)	Fixed charge(Rs./kWh)	APPC (Rs./kWh)	Quantum (MUs)	Variable cost (Rs. Cr)*		Variable charge (Rs./kWh)*	Fixed cost (Rs. Cr)	Fixed charge(Rs./kWh)	APPC (Rs./kWh)	Quantum (MUs)	Variable cost (Rs. Cr) (ΔQ)		Fixed cost (Rs. Cr) (ΔP)	Variable charge (Rs./kWh)	Fixed charge(Rs./kWh)	APPC (Rs./kWh)
								V.C.	Other Charge						VC	Other Charge				
	a	b	c	D	e	f=c+e	a	b	c	d	e	f	g=f+d	a	b	C	d	e	f	g=f+e
Stations included in MoD Stack in MTR Order	3,699.2	829.6	2.24	494.3	1.34	3.58	3,159	709	212	2.92	427.4	1.35	4.27	(540)	(121)	212	(66.9)	0.67	0.02	0.69
Stations excluded from MoD Stack in MTR Order	-	-	-	234.2	-	-	1,173	349	24	3.18	263.8	2.25	5.42	1,173	349	24	29.5	3.18	2.25	5.42
Total MSPGCL	**3,699.2**	**829.6**	**2.24**	**728.6**	**1.97**	**4.21**	**4,332**	**1,058**	**236**	**2.99**	**691.2**	**1.60**	**4.58**	**633**	**228**	**236**	**(37.5)**	**0.74**	**(0.37)**	**0.37**

** Variable charge per unit inclusive of other charges (i.e., actual fuel adjustment charges) for the month of June, 2019*

The fixed charge per unit for both category of stations, i.e., included in MTR MoD and excluded in MTR MoD are higher, however, weighted avg. per unit fixed cost for combined MSPGCL stations is lower mainly because of spread of generation from MSPGCL Stations. In MTR Order, no generation envisaged from certain stations resulting in higher per unit fixed charge.

The Commission in its MYT Order dated 12 September, 2018 has approved the fixed charges on the reduced availability seeing experience, however allowed to claim the full fixed charges on achievement for the normative availability. During Q1 of the FY 2019-20, the availability of Bhusawal Unit 03, Parli Unit 6,7 &8, Koradi Unit 06 and 07 were up to its normative availability. Hence, MSPGCL has recovered the disallowed AFC though its monthly energy bill. Therefore, the amount of fixed charges in the Stations which were excluded from MoD Stack in MTR Order is increased by Rs. 29 .6 crores in these months.

4.19 Variation in power purchase expenses from MSPGCL can be divided into increased on account of increased quantum and increased per unit rate as follows:

Month	Increase in Expenses for power purchase from MSPGCL (Rs. Crore)		
	On Account of increased Quantum of Power Purchase	On Account of increased Per Unit rate of Power Purchase	Total
April 2019	161	79	240
May 2019	295	141	437
June 2019	267	160	427

Out of above, variation on account of increased per unit rate is only considered for FAC computation.

NTPC

4.20 MSEDCL has purchased total 2,696.18 MUs, 2,436.72 MUs and 2,320.69 MUs of power from NTPC's stations (including NTPC NVVNL bundled power) as compared to MTR approved monthly MoD stack of 2,166.98 MUs, 2,224.52 MUs and 2,152.76 MUs during the months of April, May, June, 2019 respectively. This power from NTPC's stations has been procured at an average power purchase cost of Rs. 3.59/kWh, Rs. 3.47/kWh and Rs. 3.58 /kWh as compared to monthly approved cost of Rs. 3.46/kWh, Rs. 3.40/kWh and Rs. 3.47/kWh derived considering the approved MoD stack value for the month of April, May and June, 2019, respectively.

4.21 The Commission in its MTR Order had projected the lesser quantum of Energy Purchase from NTPC's stations based on the Merit Order Despatch principles for FY 2019-20. The quantum from some of the NTPC's generating stations such as Mauda I, II and Solapur were also not included in MoD stack for FY 2019-20 owing to its high energy price. However, in actual due to high power demand and lesser availability of RE sources, MSEDCL had to procure the costlier power of these NTPC stations as per the Merit Order Despatch determined by MSLDC. Further, MSEDCL has also considered the NVVNL bundled power from NTPC during the respective period. Due to this there is a variation in actual power purchase quantum and cost vis-à-vis MTR approved quantum and cost.

4.22 The Table below shows the variation in power purchase in terms of per unit variable charge, per unit fixed charge and average power purchase cost for NTPC's generating stations during Q1 of FY 2019-20.

Particular	Approved for April, 2019						Actual for April, 2019						Variation					
	Quantum (MUs)	Variable cost (Rs. Cr)	Variable charge (Rs./kWh)	Fixed cost (Rs. Cr)	Fixed charge(Rs./kWh)	APPC (Rs./kWh)	Quantum (MUs)	Variable cost (Rs. Cr)*	Variable charge (Rs./kWh)*	Fixed cost (Rs. Cr)	Fixed charge(Rs./ kWh)	APPC (Rs./kWh)	Quantum (MUs)	Variable cost (Rs. Cr) (ΔQ)	Fixed cost (Rs. Cr) (ΔP)	Variable charge (Rs./kWh)	Fixed charge(Rs./ kWh)	APPC (Rs./kWh)
	a	b	c	D	e	f=c+e	a	b	d	e	f	g=f+d	a	B	d	e	f	g=f+e
Stations included in MoD Stack in MTR Order	2,167	333.6	1.54	275	1.27	2.81	2,454	512.0	2.09	269.8	1.10	3.19	287.4	178.5	(5.2)	0.55	(0.17)	0.38
Stations not included in MoD stack in MTR Order:																		
NTPC Solapur 2	-	-	-	44.3^	-	-	-	-	-	-	-	-	-	-	(44.3)	-	-	-
Mauda I	-	-	-	48.1^	-	-	229.63	74.9	3.26	43.3	1.89	5.15	229.6	74.9	(4.8)	3.26	1.89	5.15
NTPC Solapur	-	-	-	49.3^	-	-	-	-		65.2	-		-	-	15.9	-	-	-
NTPC NVVN	-	-	-	-	-	-	12.12	3.85	3.18	-	-	3.18	12.1	3.85	-	3.18	-	3.18
Total NTPC	**2,167**	**333.6**	**1.54**	**416.7**	**1.92**	**3.46**	**2,696**	**591**	**2.19**	**378.3**	**1.40**	**3.59**	**529.2**	**257.2**	**(38.4)**	**0.65**	**(0.52)**	**0.13**

**PP Cost=(Variable Cost+Fixed Cost+Other Charges)*

^Fixed cost payable as per the terms and conditions of the PPAs irrespective of utilisation of generation capacity

Particular	Approved for May, 2019						Actual for May, 2019						Variation					
	Quantum (MUs)	Variable cost (Rs. Cr)	Variable charge (Rs./kWh)	Fixed cost (Rs. Cr)	Fixed charge(Rs./kWh)	APPC (Rs./kWh)	Quantum (MUs)	Variable cost (Rs. Cr)*	Variable charge (Rs./kWh)*	Fixed cost (Rs. Cr)	Fixed charge(Rs./ kWh)	APPC (Rs./kWh)	Quantum (MUs)	Variable cost (Rs. Cr) (ΔQ)	Fixed cost (Rs. Cr) (ΔP)	Variable charge (Rs./kWh)	Fixed charge(Rs./ kWh)	APPC (Rs./kWh)
	a	b	c	D	e	f=c+e	a	b	d	e	f	g=f+d	a	B	d	e	f	g=f+e
Stations included in MoD Stack in MTR Order	2,224.5	339.4	1.53	261.8	1.18	2.70	1,997	329.13	1.65	222.7	1.12	2.76	(227.4)	(10.3)	(39.1)	0.12	(0.06)	0.06
Stations not included in MoD stack in MTR Order:																		

Particular	Approved for May, 2019						Actual for May, 2019						Variation					
	Quantum (MUs)	Variable cost (Rs. Cr)	Variable charge (Rs./kWh)	Fixed cost (Rs. Cr)	Fixed charge(Rs./kWh)	APPC (Rs./kWh)	Quantum (MUs)	Variable cost (Rs. Cr)*	Variable charge (Rs./kWh)*	Fixed cost (Rs. Cr)	Fixed charge(Rs./ kWh)	APPC (Rs./kWh)	Quantum (MUs)	Variable cost (Rs. Cr) (ΔQ)	Fixed cost (Rs. Cr) (ΔP)	Variable charge (Rs./kWh)	Fixed charge(Rs./ kWh)	APPC (Rs./kWh)
	a	b	c	D	e	f=c+e	a	b	d	e	f	g=f+d	a	B	d	e	f	g=f+e
Mauda II	-	-	-	13.9^	-	-	231	73.50	-	45.9	-	-	-	-	-	-	-	-
NTPC Solapur 2	-	-	-	44.3^	-	-	-	-	-	-	-	-	-	-	(13.9)	-	-	-
Mauda I	-	-	-	48.1^	-	-	197	61.52	3.12	43.0	2.18	5.30	197.15	61.5	(5.08)	3.12	2.18	5.30
NTPC Solapur	-	-	-	49.3^	-	-	-	-	-	65.1	-	-	-	-	(15.8)	-	-	-
NTPC NVVN	-	-	-	-	-	-	11.56	3.99	3.45	-	-	3.45	11.56	3.99	-	3.45	-	3.45
Total NTPC	**2,224.5**	**339.4**	**1.53**	**417.4**	**1.88**	**3.40**	**2,437**	**468.1**	**1.92**	**376.7**	**1.55**	**3.47**	**212.20**	**128.74**	**(40.7)**	**0.40**	**(0.33)**	**0.07**

**PP Cost=(Variable Cost+Fixed Cost+Other Charges)*

^Fixed cost payable as per the terms and conditions of the PPAs irrespective of utilisation of generation capacity

Particular	Approved for June, 2019						Actual for June, 2019						Variation					
	Quantum (MUs)	Variable cost (Rs. Cr)	Variable charge (Rs./kWh)	Fixed cost (Rs. Cr)	Fixed charge(Rs./kWh)	APPC (Rs./kWh)	Quantum (MUs)	Variable cost (Rs. Cr)*	Variable charge (Rs./kWh)*	Fixed cost (Rs. Cr)	Fixed charge(Rs./ kWh)	APPC (Rs./kWh)	Quantum (MUs)	Variable cost (Rs. Cr) (ΔQ)	Fixed cost (Rs. Cr) (ΔP)	Variable charge (Rs./kWh)	Fixed charge(Rs./ kWh)	APPC (Rs./kWh)
	a	b	c	D	e	f=c+e	a	b	d	e	f	g=f+d	a	B c	d	e	f	g=f+e
Stations included in MoD Stack in MTR Order	2,152.8	329.2	1.53	261.8	1.22	2.75	1,874.5	313.0	1.67	222.6	1.19	2.86	(278.2)	(16.1)	(39.2)	0.14	(0.03)	0.11
Stations not included in MoD stack in MTR Order:																		
Mauda II	-	-	-	13.9^	-	-	243.4	79.52		44.92								
NTPC Solapur 2	-	-	-	44.3^	-	-	-	-	-	-	-	-	-	-	(13.9)	-	-	-
Mauda I	-	-	-	48.1^	-	-	191.9	60.04	3.13	41.06	2.14	5.27	191.93	60.0	(7.05)	3.13	2.14	5.27

Particular	Approved for June, 2019						Actual for June, 2019						Variation					
	Quantum (MUs)	Variable cost (Rs. Cr)	Variable charge (Rs./kWh)	Fixed cost (Rs. Cr)	Fixed charge(Rs./kWh)	APPC (Rs./kWh)	Quantum (MUs)	Variable cost (Rs. Cr)*	Variable charge (Rs./kWh)*	Fixed cost (Rs. Cr)	Fixed charge(Rs./ kWh)	APPC (Rs./kWh)	Quantum (MUs)	Variable cost (Rs. Cr) (ΔQ)	Fixed cost (Rs. Cr) (ΔP)	Variable charge (Rs./kWh)	Fixed charge(Rs./ kWh)	APPC (Rs./kWh)
	a	b	c	D	e	f=c+e	a	b	d	e	f	g=f+d	a	B c	d	e	f	g=f+e
NTPC Solapur	-	-	-	49.3^	-	-	-	-	-	65.94	-	-	-	-	(16.6)	-	-	-
NTPC NVVN	-	-	-	-	-	-	10.87	3.79	3.49	-	-	3.49	10.87	3.79	-	3.49	-	3.49
Total NTPC	**2,152.8**	**329.2**	**1.53**	**417.4**	**1.94**	**3.47**	**2,320.7**	**456.4**	**1.97**	**374.5**	**1.61**	**3.58**	**167.93**	**127.2**	**(42.9)**	**0.44**	**(0.33)**	**0.11**

**PP Cost=(Variable Cost+Fixed Cost+Other Charges)*

^Fixed cost payable as per the terms and conditions of the PPAs irrespective of utilisation of generation capacity

4.23 As can be seen from above Table, MSEDCL has procured around 229.63 MUs, 428.03 and 435.30 MUs (excluding NTPC NVVN bundled power) of power from NTPC's costlier sources that were not included in monthly MoD stack in MTR Order. This has led to increase in power purchase quantum and average cost during the respective period. The Commission has verified that actual quantum of power purchase and cost from the detailed summary bills/invoices submitted by MSEDCL and found to be in order.

4.24 Variation in power purchase expenses from NTPC can be divided into increased on account of increased quantum and increased per unit rate as follows:

Month	Increase in Expenses for power purchase from NTPC (Rs. Crore)		
	On Account of increased Quantum of Power Purchase	On Account of increased Per Unit rate of Power Purchase	Total
April 2019	183	36	219
May 2019	72	16	88
June 2019	58	26	84

Out of above, variation on account of increased per unit rate is only considered for FAC computation.

IPPs

4.25 The sources of IPPs for MSEDCL include Mundra CGPL UMPP and IPPs, JSW, EMCO Power, India Bulls Power (RattanIndia) and Adani Power. During scrutiny it was observed that, while the power purchase quantum (MUs) and capacity charges with respect to IPPs were matching with the bills, there were differences in the energy charges and other charges as considered in FAC computations. The Commission sought clarifications on the same along with reconciliation and additional bills, if any, for all the three months of Q1 of FY 2019-20. MSEDCL submitted the reconciliation and clarified that the aforesaid differences are mainly on account of Change in Law (CIL) claim by IPPs in addition to monthly energy bills during the respective period. MSEDCL has added the respective CIL claim in the energy charges amount while computing FAC, therefore the same is not matching with the energy charges amount as shown in bills. The Commission has verified the reconciliation submitted by MSEDCL has found to be in order.

4.26 MSEDCL has procured 3,056.08 MUs, 3,159.01 MUs and 2960.79 MUs of power from above mentioned IPPs as against the monthly approved MoD stack of 2,468.93 MUs, 2,551.23 MUs and 2,468.93 MUs respectively during the months of April, May, and June, 2019. The average power purchase cost from these stations stands at Rs. 4.35/kWh, Rs. 3.60/kWh and Rs. 4.48/kWh respectively as compared to monthly approved rate of Rs. 3.57/kWh, Rs. 3.52/kWh and Rs. 3.57/kWh for the month of April,

May and June, 2019, respectively. The power purchase quantum and cost from IPPs is observed higher than that of MTR approved mainly due to following reasons:

a. Change in actual quantum of power from various IPPs as against the quantum approved in MTR MoD stack.

b. Revision in quoted Tariff.

c. Inclusion of Change in Law amount during the respective period.

4.27 It is to be noted that the Commission in its MTR Order has not approved any quantum from RattanIndia. However, due to lower availability of RE sources and increase in demand, MSEDCL has purchased 290.65 MUs, 253.68 Mus and 529.37 MUs during the month of April, May and June, 2019 respectively. This has an impact of Rs. 356.60 Crore as additional variable cost on account of above purchase from RattanIndia. Apart from this, there is also variation in actual power purchase from other IPPs during respective months as compared to monthly quantum approved in MTR MoD stack. Due to this, the average power purchase cost has impacted during the aforesaid period.

4.28 Further, the variation in the power purchase cost is also due to revision/change in quoted tariff as the quoted tariff are linked to various factors such as variation in monthly exchange rates, CERC index for inland handling of imported fuel and for inland transportation of fuel. CERC has published new escalation indices in June 2018 & July 2018 and revised the escalation index applicable to Domestic coal and transportation from April 2013. This has resulted in increase in Energy Charges. Due to the above, the average power purchase cost has increased significantly during the respective period.

4.29 Also, as stated above MSEDCL has also considered Change in Law (CIL) claim by IPPs in power purchase cost which is in addition to monthly energy bills during the respective period. These Change in Law (CIL) events are related to imposition of GST compensation cess, change in royalty, custom duty, change in NCDP, shortfall in domestic coal under SHAKTI Policy and carrying cost on CIL, etc. during the aforesaid period. These Change in Law events have been approved by the respective Commission's Order, as the case may be, under the provisions of respective PPAs. MSEDCL has submitted the CIL invoices for the concerned period. Further, while scrutinizing the CIL bills it was observed that the amount shown in CIL bills/invoices were not matching against the respective amount considered in FAC computation. In fact, the amounts considered in FAC calculations were observed to be lesser than that of CIL bills/invoices. In response to query sought, MSEDCL clarified the Change in Law claims raised by the generators are according to their technical parameters, whereas MSEDCL works out the CIL claim amount based on normative / bid parameters. These parameters include SHR of power plant, GCV of coal, etc. which have impact of coal consumption. Therefore, there is difference in CIL amount claimed by generator and

that worked out by MSEDCL. MSEDCL has submitted the detailed reconciliation of CIL, as summarised in Table below:

IPPs	April, 2019			May, 2019		June, 2019		
	As per bills (Rs. Cr) (Regular CIL)	As per MSEDCL		As per bills (Rs. Cr) (Regular CIL)	As per MSEDCL (Rs. Cr) (Regular CIL)	As per bills (Rs. Cr) (Regular CIL)	As per MSEDCL	
		Against Bill (Rs. Cr) (Regular CIL)	CC Cost (Rs. Cr)				Against Bill (Rs. Cr) (Regular CIL)	Ad-hoc Payment as per SHAKTI
Adani Power	66.86	63.91	189.75*	67.91	65.93	60.02	55.73	200^
RattanIndia	17.61	10.12	-	19.55	8.80	7.26	9.63	-
GMR	5.60	4.49	23.92#	5.53	4.71	5.19	4.43	-
JSW	3.81	3.44	-	4.94	4.45	4.26	3.84	-
CGPL	7.38	7.31	-	8.83	8.75	6.84	6.32	-
Total	**101.26**	**89.27**	**213.67**	**106.76**	**92.63**	**83.58**	**79.95**	**200**

**Rs. 189.75 Cr paid as carrying cost towards change in NCDP and other CIL*

#Rs. 23.92 paid as carrying cost towards evacuation facility charges, Busy season and development surcharge etc.as per CERC Order in Case No. 284/MP/2018, 8/MP/2014 and 284/MP/2018.

^Rs. 200 Cr paid to APML for shortfall in domestic coal under SHAKTI Policy as per MERC Order in Case No. 290 of 2018 dated 7 February, 2019.

4.30 From the Table above, the regular CIL pertains to change in royalty, GST compensation cess etc., which are claimed by IPPs on monthly basis. Apart from this MSEDCL has also paid other CIL amount inclusive of carrying cost on other CIL events such as NCDP, SHAKTI Policy etc. during Q1 of FY 2019-20. The payment of these CIL are as per Commission's Order or APTEL Judgement as the case may be. The Table below shows the periodicity of other CIL claims of IPPs, relevant Orders during Q1 of FY 2019-20.

IPPs	Subject Matter	The period of Impact	Case No.	Date of Order
Adani Power	NCDP policy as Change in law	June 2013 to 31.03.2017 i.e. 4 years	189 of 2013 and 140 of 2014	07.03.2018
	SHAKTI policy as Change in Law	Since 01.04.2017 to till date i.e. 2.5 years	290 of 2018	07.02.2019
	Carrying Cost	June 2013 to 31.03.2017 i.e. 4 years	295 of 2018	18.12.2018
GMR	Busy Season Surcharge, Development Surcharge, MOEF Notification on coal quality, change in NCDP and Carrying Cost	Since 01.03.2014 to till date, i.e., May, 2019	8/MP/2014 and 284/MP/2018	16.05.2019

4.31 Due to CIL claim of NCDP, SHAKTI Policy, GST compensation cess, change in royalty etc., there is an impact of Rs. 302.94 Crore (Rs. 89.27 Cr + Rs 213.67 Cr), Rs. 92.63 Crore and Rs. 279.95 Crore (Rs. 79.95 Cr + Rs. 200 Cr) during the month of

April, May and June, 2019 respectively. This has led to increase in actual power purchase cost from IPPs as compared to monthly approved cost.

4.32 Further, during the month of April, 2019, MSEDCL has paid Rs. 189.75 Crore and Rs. 23.92 Crore as carrying cost on CIL amount to Adani Power and GMR, respectively. The Commission has sought clarification of above carrying cost and also asked MSEDCL to confirm if the above claim of carrying cost is not adjusted in final Truing up of FY 2018-19. In response to clarification sought, MSEDCL stated that above carrying cost is computed based on various order of the Commission. MSEDCL submitted the computation of above carrying cost and also clarified that MSEDCL has not claimed above carrying cost in final Truing up of FY 2018-19. Further, during provisional truing up of FY 2019-20, the Commission has considered the revenue of FAC (inclusive above CC) for FY 2019-20, hence, there is no double claim of such carrying cost in books of accounts of MSEDCL. The Table below shows the computation of carrying cost with respect to Adani Power:

Case Reference		**343 (2/163 & 38)**		**102 (800 MW)**		**124 (GST)**		**189 (NCDP) With Rs. 1400 Crs**	
Rate of Interest	**FY**	**Principle**	**Simple CC**	**Principle**	**Simple CC**	**Principle**	**Simple CC**	**Principle**	**Simple CC**
14.58%	2013-14	22.86	3.13	18.71	1.36			5.05	0.37
14.75%	2014-15	163.74	21.94	28.30	4.85			268.48	20.55
14.29%	2015-16	28.07	4.47	81.36	12.53			806.51	96.71
10.79%	2016-17	43.27	5.74	155.11	22.22			319.96	133.80
10.22%	2017-18	24.97	4.33	139.32	36.09	219.25	6.99		133.90
9.65%	2018-19			-	2.12				
Total		282.89	39.61	422.79	79.17	219.25	6.99	1,400.0	385.32
Already paid			**59.12**		**72.57**				**152.94**
Total Gross Payable									**511.10**
Total Already Paid and claimed in FAC up to March 2019									**321.35**
Total Balance Payable and to be claimed in FAC of April 2019									**189.75**

4.33 Also, in the month of June, it was observed that MSEDCL has paid Rs. 200 Crore to Adani Power. In response to clarification sought, MSEDCL stated that the aforesaid payment is on account of shortfall in domestic coal from April 2017 under SHAKTI Policy in line with the Commission's Order in Case No. 290 of 2018 dated 7 February, 2019. As per the said Order, Adani Power has raised claims of Rs. 2700 Crore. (Approx. up to Oct 2019). Further, as per Supreme court's Judgment in the similar matter, MSEDCL has been making payment to the tune of 50% of the generator's claim. Accordingly, MSEDCL has paid and claimed Rs. 200 Crore (within 50% of payment of total claim) on ad hoc basis in FAC month of June 2019. Due to above the average power purchase cost mainly during the month of April and June, i.e., Rs. 4.35/kWh and Rs. 4.48/kWh is substantially higher than that of other month, i.e., May

(Rs. 3.60/kWh). The Table below shows the impact of above CIL payment in Rs./kWh during Q1 period:

Month	Sr. No	IPP	MU	Regular CIL		NCDP/Coal shortfall/Shakti		Total CIL	
				Rs. Cr	Rs./Kwh	Rs. Cr	Rs./Kwh	Rs. Cr	Rs./Kwh
Apr-19	1	Adani Power	2,003.37	63.91	0.32	189.79	0.95	253.70	1.27
	2	RIPL	290.65	10.12	0.35	-	-	10.12	0.35
	3	CGPL	449.92	7.31	0.16	-	-	7.31	0.16
	4	GMR	126.32	4.49	0.36	23.92	1.89	28.41	2.25
	5	JSW	185.82	3.44	0.18	-	-	3.44	0.18
	6	**Total**	**3,056.08**	**89.27**	**0.29**	**213.71**	**0.70**	**302.98**	**0.99**

Month	Sr. No	IPP	MU	Regular CIL		NCDP/Coal shortfall/Shakti		Total CIL	
				Rs. Cr	Rs./Kwh	Rs. Cr	Rs./Kwh	Rs. Cr	Rs./Kwh
May-19	1	Adani Power	2,060.64	65.93	0.32	-	-	65.93	0.32
	2	RIPL	253.68	8.80	0.35	-	-	8.80	0.35
	3	CGPL	517.98	8.75	0.17	-	-	8.75	0.17
	4	GMR	132.22	4.71	0.36	-	-	4.71	0.36
	5	JSW	194.48	4.45	0.23	-	-	4.45	0.23
	6	**Total**	**3,159.01**	**92.63**	**0.29**	**-**	**-**	**92.63**	**0.29**

Month	Sr. No	IPP	MU	Regular CIL		NCDP/Coal shortfall/Shakti		Total CIL	
				Rs. Cr	Rs./Kwh	Rs. Cr	Rs./Kwh	Rs. Cr	Rs./Kwh
May-19	1	Adani Power	1,802.15	55.72	0.31	200.00	1.11	255.72	1.42
	2	RIPL	529.37	9.63	0.18	-	-	9.63	0.18
	3	CGPL	336.98	6.32	0.19	-	-	6.32	0.19
	4	GMR	124.38	4.43	0.36	-	-	4.43	0.36
	5	JSW	167.91	3.84	0.23	-	-	3.84	0.23
	6	**Total**	**2,960.79**	**79.95**	**0.27**	**200.00**	**0.68**	**279.95**	**0.95**

4.34 Thus, on an overall basis considering the above impact the average power purchase cost from IPPs stands at Rs. 4.35/kWh, Rs. 3.60/kWh and Rs. 4.48/kWh respectively as compared to monthly approved rate of Rs. 3.57/kWh, Rs. 3.52/kWh and Rs. 3.57/kWh for the month of April, May and June, 2019, respectively.

4.35 Variation in power purchase expenses from IPPs can be divided into increased on account of increased quantum and increased per unit rate as follows:

Month	Increase in Expenses for power purchase from IPPs (Rs. Crore)		
	On Account of increased Quantum of Power Purchase	On Account of increased Per Unit rate of Power Purchase	Total
April 2019	210	238	448
May 2019	214	26	240
June 2019	176	269	444

4.36 In month of April and June 2019, CIL relating to coal shortage (NCDP and Shakti Policy) was paid, hence impact of increased per unit rate is higher. In May 2019, impact is related to other CIL i.e. taxation related, hence impact is low. Out of above, variation on account of increased per unit rate is only considered for FAC computation.

Traders/STPP:

4.37 During Q1 of FY 2019-20, MSEDCL has purchased short term power from PTC, JSW, DIL (Dhariwal Infra. Ltd) and Power Exchange, etc. The Commission has verified the purchase from aforementioned traders and observed that MSEDCL has purchased 195.56 MUs, 118.71 MUs and 24.96 MUs of short-term power in the month of April, May and June, 2019, respectively. The above STPP power has been procured at an average power purchase cost of Rs. 4.42/kWh, Rs. 4.47/kWh, and Rs. 3.44/kWh during the aforesaid period as shown in Table below:

Month	**Bilateral**		**Exchange**		**Total**		
	MUs	**Avg. Rate (Rs./kWh)**	**MUs**	**Avg. Rate (Rs./kWh)**	**MUs**	**Avg. Rate (Rs./kWh)**	**Cost Rs. Cr**
Apr-19	195.06	4.42	0.50	3.15	**195.56**	**4.42**	**86.47**
May-19	115.24	4.50	3.48	3.52	**118.72**	**4.47**	**53.08**
Jun-19	-	-	24.96	3.44	**24.96**	**3.44**	**8.58**

4.38 It is to be noted that the Commission in its MTR Order has not considered any quantum and amount with regards to short term power purchase, as the entire demand would have been considered to meet through projected sources of power. Hence, the same is not considered in the energy balance for each year of the 3rd Control Period by the Commission. However, the Commission had allowed MSEDCL to procure short-term power in case of any shortfall from approved sources or when demand exceeds availability. The Commission directed MSEDCL to procure short term power in line with MoP guidelines vide Resolution dated 15 May, 2012 through competitive bidding route, except in case of power procured from the Power Exchanges or under the Banking mechanism. Accordingly, the Commission had approved a ceiling rate of Rs. 5.00 per kWh for power procurement from short-term sources over the 3rd Control Period.

4.39 Further, the Commission has asked MSEDCL to justify the procurement of short term power even having sufficient tied up contracted capacity. In response to above query

MSEDCL stated that it planned its short term power planning in advance by considering the historical demand trends and various factors such as coal availability, variations in RE generation, etc. Accordingly, based on the historical data, for a summer season, the demand in the month of April-19 & May -19 was expected in the range of 20000 to 20500 MW. In last two years i.e. in year 2017 & 2018, the generation availability from contracted coal based plants was less due to coal shortage. Hence, by considering the partial improvement in the coal availability, the expected generation availability from long term contracted generators and RE generators in these months was expected in the tune of 18000 MW to 18500 MW.

4.40 MSEDCL further stated that based on the expected demand and generation availability in April-19 & May-19, it was expected that there may be shortfall in generation availability to cater the expected demand. Furthermore, Loksabha elections were also scheduled during these months. Thus in order to provide the reliable 24 x7 power supply to the consumers during these high demand months, a short term power purchase tender (ET-121) was floated, in advance, on 14 January, 2019 with the standard bidding condition of issuing of LOI within period of 15 days from the date of e-reverse auction. Further, in order to avoid situation of procurement of high cost power on exchange; which was experienced in the month of Sept-2018 and Oct-2018 under coal shortage, MSEDCL had taken decision for procurement of short term power as per the result/rate discovered in tender ET-121 for the month of April-2019 and May-2019. Accordingly, MSEDCL issued LOI's, for procurement of power under short term, on 14 February, 2019 for 405 MW for the month of April-2019 and @ 250 MW for the month of May-2019.

4.41 However, in the month of April-2019 and May-2019, due to improvement in the coal availability, the generation availability from coal based power plant was improved and further the actual demand was also less than the expected demand. Due to improvement of generation availability and less demand, the power requirement during these months was reduced. Hence, due to reduction in actual power requirement during April-19 & May-19, as per tender terms and conditions, power was rescheduled upto 85% from the sellers. Further some of the sellers being intrastate generators, power was backed down in real time as per MoD. MSEDCL procured 195.07 MUs and 115.24 MUs i.e. around 67% and 77% power as compared to LOI in the month of April-2019 and May-2019 respectively.

4.42 Further, during peak demand period of a day, instead of taking zero schedule units on bar for RTC period, MSEDCL procured power for some blocks in a day from power exchanges as and when required and feasible to MSEDCL in the months of April-2019 to June-2019. As the power from traders has been procured by MSEDCL through competitive bidding and Power exchange and the same is also below the ceiling rate of Rs.5/kWh, the Commission has considered the respective actual quantum and the cost as submitted by MSEDCL. However, MSEDCL is directed to submit detailed cost

benefit analysis justifying the purchase of short term power instead of taking zero schedule units on bar for RTC period during final truing up of FY 2019-20.

Must Run Sources

4.43 The sources of Must Run Stations include KAPP, TAPP 1&2, TAPP 3&4, SSP, Pench, Dodson I and Dodson II, Non-Conventional Energy and MSPGCL Hydro (including Ghatghar) etc. During scrutiny it was observed that MSEDCL has not considered 0.74 MUs of power purchase form Dodson II during April, 2019, same has been considered by the Commission as per the submitted invoice.

4.44 MSEDCL has purchased 1,959.21 MUs, 2,580.14 MUs and 1,370.83 MUs from these sources during the month of April, May, June, 2019, respectively as compared to the monthly approved MoD energy stack of 2,558.99 MUs, 2,627.08 MUs and 2,524.58 MUs respectively. The actual quantum of power purchase from Must Run sources mainly in the month of June, 2019 is significantly lesser that that of quantum approved in MoD stack as per MTR Order. This has impacted the average power purchase cost of aforesaid month. The average power purchase cost from these stations during the month of April, May, June, 2019 is Rs. 3.66 /kWh, 3.39 /kWh and Rs. 4.37 /kWh as compared to monthly approved rate (derived based on monthly approved MoD stack) of Rs. 3.89 /kWh, Rs. 3.88 /kWh and Rs. 3.87 /kWh, respectively. A detailed comparison of approved MoD stack against actual purchase from Must Run Stations is shown in Table below:

Source	MTR Approved for April, 2019			Actual for April, 2019			Variation		
	Quantum (Mus)	PP Cost (Rs. Cr)	Rate (Rs./kWh)	Quantum (Mus)	PP Cost (Rs. Cr)	Rate (Rs./kWh)	Quantum (Mus)	PP Cost (Rs. Cr)	Rate (Rs./kWh)
KAPP	89.99	23.57	2.62	48.56	12.03	2.48	(41.44)	(11.55)	(0.14)
TAPP 1&2	94.00	11.14	1.19	91.54	18.86	2.06	(2.46)	7.72	0.88
TAPP 3&4	265.61	86.15	3.24	285.50	87.52	3.07	19.89	1.38	(0.18)
SSP	99.45	20.39	2.05	6.76	1.38	2.05	(92.69)	(19.00)	(0.00)
Pench	11.22	2.30	2.05	2.40	0.49	2.05	(8.82)	(1.81)	(0.00)
Dodson I	4.23	0.60	1.42	-	0.02	0.00	(4.23)	(0.58)	(1.42)
Dodson II	5.28	0.75	1.42	0.74	0.75	10.19	(4.54)	(0.00)	8.77
Renewable Energy Non- Solar	1,276.85	669.18	5.24	673.06	407.86	6.06	(603.79)	(261.32)	0.82
Renewable Energy Solar	388.61	161.53	4.16	213.28	122.89	5.76	(175.33)	(38.65)	1.61
MSPGCL Hydro	323.75	18.89	0.58	637.37	23.98	0.38	313.62	5.09	(0.20)
MSPGCL Lease Rent	-	-	-	-	41.01	-	-	41.01	-
Total	**2,558.99**	**994.50**	**3.89**	**1,959.21**	**716.79**	**3.66**	**(599.78)**	**(277.71)**	**(0.23)**

**Lease rent was not included in power purchase cost under MTR Order*

Source	MTR Approved for May, 2019			Actual for May, 2019			Variation		
	Quantum (Mus)	PP Cost (Rs. Cr)	Rate (Rs./kWh)	Quantum (Mus)	PP Cost (Rs. Cr)	Rate (Rs./kWh)	Quantum (Mus)	PP Cost (Rs. Cr)	Rate (Rs./kWh)
KAPP	92.99	24.36	2.62	52.38	13.86	2.65	(40.62)	(10.49)	0.03
TAPP 1&2	97.14	11.51	1.19	110.17	24.53	2.23	13.03	13.02	1.04
TAPP 3&4	274.46	89.02	3.24	296.01	103.33	3.49	21.54	14.32	0.25
SSP	102.76	21.07	2.05	5.66	1.16	2.05	(97.11)	(19.91)	0.00
Pench	11.59	2.38	2.05	1.19	0.24	2.05	(10.41)	(2.13)	0.00
Dodson I	4.37	0.62	1.42	-	0.02	0.00	(4.37)	(0.60)	(1.42)
Dodson II	5.45	0.75	1.38	2.89	0.75	2.60	(2.57)	0.00	1.22
Renewable Energy Non- Solar	1,306.23	684.58	5.24	963.70	535.97	5.56	(342.53)	(148.61)	0.32
Renewable Energy Solar	397.55	165.25	4.16	214.48	124.71	5.81	(183.07)	(40.54)	1.66
MSPGCL Hydro	334.54	18.89	0.56	933.66	28.60	0.31	599.12	9.71	(0.25)
MSPGCL Lease Rent	-	-	-	-	41.01	-	-	41.01	-
Total	**2,627.08**	**1,018.43**	**3.88**	**2,580.14**	**874.18**	**3.39**	**(46.94)**	**(144.25)**	**(0.49)**

Source	MTR Approved for June, 2019			Actual for June, 2019			Variation		
	Quantum (Mus)	PP Cost (Rs. Cr)	Rate (Rs./kWh)	Quantum (Mus)	PP Cost (Rs. Cr)	Rate (Rs./kWh)	Quantum (Mus)	PP Cost (Rs. Cr)	Rate (Rs./kWh)
KAPP	89.99	23.57	2.62	97.36	24.72	2.54	7.37	1.15	(0.08)
TAPP 1&2	94.00	11.14	1.19	103.02	21.23	2.06	9.02	10.09	0.88
TAPP 3&4	265.61	86.15	3.24	254.77	79.35	3.11	(10.84)	(6.80)	(0.13)
SSP	99.45	20.39	2.05	6.23	1.28	2.05	(93.22)	(19.11)	(0.00)
Pench	11.22	2.30	2.05	-	-	0.00	(11.22)	(2.30)	(2.05)
Dodson I	4.23	0.60	1.42	-	0.07	0.00	(4.23)	(0.53)	(1.42)
Dodson II	5.28	0.75	1.42	1.62	0.75	4.64	(3.66)	(0.00)	3.22
Renewable Energy Non- Solar	1,250.47	655.36	5.24	592.76	299.76	5.06	(657.70)	(355.60)	(0.18)
Renewable Energy Solar	380.58	158.20	4.16	211.94	116.08	5.48	(168.63)	(42.12)	1.32
MSPGCL Hydro	323.75	18.89	0.58	103.13	15.42	1.50	(220.62)	(3.47)	0.92
MSPGCL Lease Rent	-	-	-	-	41.01	-	-	41.01	-

Source	MTR Approved for June, 2019			Actual for June, 2019			Variation		
	Quantum (Mus)	PP Cost (Rs. Cr)	Rate (Rs./kWh)	Quantum (Mus)	PP Cost (Rs. Cr)	Rate (Rs./kWh)	Quantum (Mus)	PP Cost (Rs. Cr)	Rate (Rs./kWh)
Total	**2,524.58**	**977.35**	**3.87**	**1,370.83**	**599.67**	**4.37**	**(1,153.75)**	**(377.68)**	**0.50**

4.45 As can be seen from above Table that weighted average power purchase cost (Rs,/kWh) in the month of April and May is lower as compared to MTR approved price. Whereas in the month of June it is higher than that of MTR approved price. Although, the above power has been procured at a price approved by the respective order of the Commission and as per PPA terms however, due to variation in the actual energy drawl from various must run sources as compared to MTR approve quantum, the weighted average power purchase cost has impacted.

4.46 It is to be noted that the approved energy charges of various sources in the total must-run portfolio ranges from Rs. 0.56/kWh to Rs.5.24/kWh. The weighted average power purchase cost (Rs,/kWh) is arrived by multiplying the weights associated with each source by the approved energy charges. Therefore, when the quantum and hence, weight of costlier approved sources in the overall must run portfolio is higher, the weighted average power purchase cost (Rs,/kWh) driven towards approved price of costlier sources and vice-versa.

4.47 In case of MSEDCL the approved variable charge from Non-solar/Solar sources is highest whereas for MSPGCL Hydro the approved variable charges are lowest. During the month of April and May, the weightage (% share) of MSPGCL's power (cheapest) in the total must run portfolio was around 33% to 36%. However, in the month of June, it significantly dropped to 8%. Whereas no such significant reduction was observed in the weightages of Non-solar/Solar sources. Further, even though the generation from MSPGCL's station was lower, the lease rent was payable as per PPA terms which has resulted in increase in landed cost of MSPGCL's hydro power during aforesaid period. The Table below shows the percentage share of Must sources during Q1 of FY 2019-20:

Particular	April, 2019			May, 2019			June, 2019		
	MUs	Avg Rate (Rs./kWh)	% Share	MUs	Avg Rate (Rs./kWh)	% Share	MUs	Avg Rate (Rs./kWh)	% Share
Renewable Energy Non- Solar	673.06	6.06	**34%**	963.70	5.56	**37%**	592.76	5.06	**43%**
Renewable Energy Solar	213.28	5.76	**11%**	214.48	5.81	**8%**	211.94	5.48	**15%**
MSPGCL Hydro*	637.37	1.02	**33%**	933.66	0.75	**36%**	103.13	5.47	**8%**
Others	435.5	2.78	**22%**	468.3	3.07	**18%**	463	2.75	**34%**
Total	**1959.21**	**3.66**	**100%**	**2580.1**	**3.39**	**100%**	**1370.83**	**4.37**	**100%**

**Inclusive of rent lease*

4.48 The Commission has verified the aforesaid purchase from must run sources from the invoices submitted and found to be in order.

4.49 The Table below shows the variation in power purchase from various sources in terms of per unit variable charge, per unit fixed charge and average power purchase cost for MSEDCL during Q1 of FY 2019-20.

Particular	Approved for April, 2019						Actual for April, 2019						Variations			
	Quantum (MUs)	Variable cost (Rs. Cr)*	Variable charge (Rs./kWh)	Fixed cost (Rs. Cr)	Fixed charge(Rs./kWh)	APPC (Rs./kWh)	Quantum (MUs)	Variable cost (Rs. Cr)*	Variable charge (Rs./kWh)*	Fixed cost (Rs. Cr)	Fixed charge(Rs./kWh)	APPC (Rs./kWh)	Quantum (MUs)	Variable charge (Rs./kWh)	Fixed charge (Rs./kWh)	APPC (Rs./kWh)
	a	b	c	d	e	f=c+e	a	b	c	d	e	f=c+e	a	c	d	e=c+d
MSPGCL	3,877.5	876.41	2.26	728.58	1.88	4.14	4,266.2	1,186	2.78	658.48	1.54	4.32	389.7	0.52	(0.34)	0.19
NTPC	2,166.9	334.30	1.54	416.00	1.92	3.46	2,696.1	590.64	2.19	378.43	1.40	3.59	529.2	0.65	(0.52)	0.13
IPPs	2,468.9	527.25	2.14	353.92	1.43	3.57	3,056.1	951.96	3.11	377.16	1.23	4.35	587.2	0.98	(0.20)	0.78
Solar	388.61	161.53	4.16	-	-	4.16	213.28	122.89	5.76	-	-	5.76	(175)	1.61	-	1.61
Non- Solar	1,276.8	669.18	5.24	-	-	5.24	673.06	407.86	6.06	-	-	6.06	(604)	0.82	-	0.82
Other Must Run	569.79	144.14	2.53	0.75	0.01	2.54	435.49	120.18	2.76	0.75	0.02	2.78	(134)	0.23	0.00	0.23
MSPGCL Hydro	323.75	0.00	-	18.89	0.58	0.58	637.37	9.47	0.15	55.52	0.87	1.02	313.6	0.15	0.29	0.44
STTP	-	-	-	-	-	-	195.56	86.47	4.42	-	-	4.42	195.6	4.42	-	4.42
Total MSEDCL	**11,072**	**2,712.8**	**2.45**	**1,518.1**	**1.37**	**3.82**	**12,173**	**3,476**	**2.86**	**1,470.3**	**1.21**	**4.06**	**1,101**	**0.41**	**(0.16)**	**0.24**

**Variable charge inclusive of other charges (Fuel adjustment charges, CIL etc.) for the month of April, 2019.*

Particular	Approved for May, 2019						Actual for May, 2019						Variations			
	Quantum (MUs)	Variable cost (Rs. Cr)*	Variable charge (Rs./kWh)	Fixed cost (Rs. Cr)	Fixed charge(Rs./kWh)	APPC (Rs./kWh)	Quantum (MUs)	Variable cost (Rs. Cr)*	Variable charge (Rs./kWh)*	Fixed cost (Rs. Cr)	Fixed charge(Rs./kWh)	APPC (Rs./kWh)	Quantum (MUs)	Variable charge (Rs./kWh)	Fixed charge (Rs./kWh)	APPC (Rs./kWh)
	a	b	c	d	e	f=c+e	a	b	c	d	e	f=c+e	a	c	d	e=c+d
MSPGCL	3,925.0	884.16	2.25	728.58	1.86	4.11	4,644.4	1,331	2.87	717.52	1.54	4.41	719	0.61	(0.31)	0.30

Particular	Approved for May, 2019						Actual for May, 2019						Variations			
	Quantum (MUs)	Variable cost (Rs. Cr)*	Variable charge (Rs./kWh)	Fixed cost (Rs. Cr)	Fixed charge(Rs./kWh)	APPC (Rs./kWh)	Quantum (MUs)	Variable cost (Rs. Cr)*	Variable charge (Rs./kWh)*	Fixed cost (Rs. Cr)	Fixed charge(Rs./kWh)	APPC (Rs./kWh)	Quantum (MUs)	Variable charge (Rs./kWh)	Fixed charge (Rs./kWh)	APPC (Rs./kWh)
	a	b	c	d	e	f=c+e	a	b	c	d	e	f=c+e	a	c	d	e=c+d
NTPC	2,224.5	340.84	1.53	416.00	1.87	3.40	2,436.7	468.14	1.92	376.73	1.55	3.47	212.2	0.39	(0.32)	0.07
IPPs	2,551.2	544.56	2.13	353.92	1.39	3.52	3,159.0	788.76	2.50	389.19	1.23	3.73	607.8	0.36	(0.16)	0.21
Solar	397.55	165.25	4.16	-	-	4.16	214.48	124.71	5.81	-	-	5.81	(183)	1.66	-	1.65
Non- Solar	1,306.2	684.58	5.24	-	-	5.24	963.70	535.97	5.56	-	-	5.56	(342)	0.32	-	0.32
Other Must Run	588.78	148.95	2.53	0.75	0.01	2.54	468.28	143.13	3.06	0.77	0.02	3.07	(120)	0.53	0.00	0.53
MSPGCL Hydro	334.54	0.00	-	18.89	0.56	0.56	933.66	14.08	0.15	55.53	0.59	0.75	599.1	0.15	0.03	0.18
STTP	-	-	-	-	-	-	118.71	53.08	4.47	-	-	4.47	118.7	4.47	-	4.47
Total MSEDCL	**11,328**	**2,768.3**	**2.44**	**1,518.1**	**1.34**	**3.78**	**12,939**	**3,459**	**2.67**	**1,539.7**	**1.19**	**3.86**	**1,611**	**0.23**	**(0.15)**	**0.08**

**Variable charge inclusive of other charges (Fuel adjustment charges, CIL etc.) for the month of May, 2019.*

Particular	Approved for June, 2019						Actual for June, 2019						Variations			
	Quantum (MUs)	Variable cost (Rs. Cr)*	Variable charge (Rs./kWh)	Fixed cost (Rs. Cr)	Fixed charge(Rs./kWh)	APPC (Rs./kWh)	Quantum (MUs)	Variable cost (Rs. Cr)*	Variable charge (Rs./kWh)*	Fixed cost (Rs. Cr)	Fixed charge(Rs./kWh)	APPC (Rs./kWh)	Quantum (MUs)	Variable charge Rs./kWh)	Fixed charge (Rs./kWh)	APPC (Rs./kWh)
	a	b	c	d	e	f=c+e	a	b	c	d	e	f=c+e	a	c	d	e=c+d
MSPGCL	3,699.2	829.59	2.24	728.58	1.97	4.21	4,332.0	1,294	2.99	691.23	1.60	4.58	633	0.74	(0.37)	0.37
NTPC	2,152.8	330.60	1.54	416.00	1.93	3.47	2,320.7	457.31	1.97	373.56	1.61	3.58	167.9	0.43	(0.32)	0.11
IPPs	2,468.9	527.25	2.14	353.92	1.43	3.57	2,960.8	948.54	3.20	376.70	1.27	4.48	491.9	1.07	(0.16)	0.91

Particular	Approved for June, 2019						Actual for June, 2019						Variations			
	Quantum (MUs)	Variable cost (Rs. Cr)*	Variable charge (Rs./kWh)	Fixed cost (Rs. Cr)	Fixed charge(Rs./kWh)	APPC (Rs./kWh)	Quantum (MUs)	Variable cost (Rs. Cr)*	Variable charge (Rs./kWh)*	Fixed cost (Rs. Cr)	Fixed charge(Rs./kWh)	APPC (Rs./kWh)	Quantum (MUs)	Variable charge Rs./kWh)	Fixed charge (Rs./kWh)	APPC (Rs./kWh)
	a	b	c	d	e	f=c+e	a	b	c	d	e	f=c+e	a	c	d	e=c+d
Solar	380.58	158.20	4.16	-	-	4.16	211.94	116.08	5.48	-	-	5.48	(168)	1.32	-	1.32
Non- Solar	1,250.4	655.36	5.24	-	-	5.24	592.76	299.76	5.06	-	-	5.06	(657)	(0.18)	-	(0.18)
Other Must Run	569.79	144.14	2.53	0.75	0.01	2.54	463.00	126.63	2.73	0.77	0.02	2.75	(106)	0.21	0.00	0.21
MSPGCL Hydro	323.75	0.00	-	18.89	0.58	0.58	103.13	1.22	0.12	55.21	5.35	5.47	(221)	0.12	4.77	4.89
STTP	-	-	-	-	-	-	24.96	8.58	3.44	-	-	3.44	25.0	3.44	-	3.44
Total MSEDCL	**10,845**	**2,645.1**	**2.44**	**1,518.1**	**1.40**	**3.84**	**11,009**	**3,252**	**2.95**	**1,497.5**	**1.36**	**4.31**	**163.8**	**0.51**	**(0.04)**	**0.48**

**Variable charge inclusive of other charges (Fuel adjustment charges, CIL etc.) for the month of June, 2019*

4.50 The Table below shows in summary of Quarterly power purchase approved vis-à-vis actual for Q1 of FY 2019-20:

	Approved for Q1 of FY 2019-20				Actual for Q1 of FY 2019-20				Variation in Q1 of FY 2019-20			
Particular	**Quantum (MUs)**	**Variable Cost (Rs. Crore)**	**Fixed Cost (Rs. Crore)**	**APPC (Rs./kWh)**	**Quantum (MUs)**	**Variable Cost (Rs. Crore)**	**Fixed Cost (Rs. Crore)**	**APPC (Rs./kWh)**	**Quantum**	**Variable cost (Rs. Cr) (ΔQ)**	**Fixed cost (Rs. Cr) (ΔP)**	**APPC (Rs./kWh)**
MSPGCL	11,501.70	2,590.16	2,185.74	4.15	13,242.60	3,811.40	2067.23	4.44	1,740.90	1,221.24	(118.51)	0.29
NTPC	6,544.20	1,005.74	1,248.00	3.44	7,453.50	1,516.09	1128.72	3.55	909.30	510.35	(119.28)	0.10
IPPs	7,489.00	1,599.06	1,061.76	3.55	9,175.90	2,689.26	1143.05	4.18	1,686.90	1,090.20	81.29	0.62
Solar	1,166.74	484.98	-	4.16	639.70	363.68	-	5.69	(527.04)	(121.30)	-	1.53
Non- Solar	3,833.40	2,009.12	-	5.24	2,229.52	1,243.59	-	5.58	(1,603.88)	(765.53)	-	0.34

	Approved for Q1 of FY 2019-20				Actual for Q1 of FY 2019-20				Variation in Q1 of FY 2019-20			
Particular	**Quantum (MUs)**	**Variable Cost (Rs. Crore)**	**Fixed Cost (Rs. Crore)**	**APPC (Rs./kWh)**	**Quantum (MUs)**	**Variable Cost (Rs. Crore)**	**Fixed Cost (Rs. Crore)**	**APPC (Rs./kWh)**	**Quantum**	**Variable cost (Rs. Cr) (ΔQ)**	**Fixed cost (Rs. Cr) (ΔP)**	**APPC (Rs./kWh)**
Other Must Run	1,728.36	437.23	2.25	2.54	1,366.77	389.94	2.29	2.87	(361.59)	(47.29)	0.04	0.33
MSPGCL Hydro	982.04	-	56.67	0.58	1,674.16	24.77	166.26	1.14	692.12	24.77	109.59	0.56
STTP	-	-	-	-	339.23	148.13	-	4.37	339.23	148.13	-	4.37
Total MSEDCL	**33,245.00**	**8,126.20**	**4,554.30**	**3.81**	**36,121.00**	**10,187.0**	**4507.5**	**4.07**	**2,876.00**	**2,060.80**	**(46.80)**	**0.25**

4.51 The Commission has asked MSEDCL to confirm that all its contracted sources during Q1 were available up to their normative availability levels. The Commission has also sought MSEDCL to provide reasons for lower availability from Contracted Generators and efforts / communications made by Distribution Licensee seeking increased availability. MSEDCL was also asked to submit monthly actual availability and PLF of contracted generators during respective month of Q1. In addition MSEDCL was also sought to submit actual Availability Vs actual Utilisation of Contracted Generators as per MoD principles along with reasons for Variation in actual quantum of power purchase from various sources vis-à-vis approved monthly MoD stack as per MTR Order. In its reply to above query MSEDCL stated that during the financial year the procurement decisions were taken based on the real time situation and the data available from the generators. MSEDCL has taken the procurement decisions based on available technical parameters to optimise the power purchase cost. However, extraction of detailed data mentioned in the query will take reasonable time. The Commission has noted the submission of MSEDCL. The Commission hereby direct MSEDCL to submit the various details as sought above during final truing up of FY 2019-20.

4.52 Based on above, on an overall basis the APPC for the month of April, May and June, 2019 is higher mainly due increase in variable cost on account of additional purchase of power from MSPGCL and NTPC's costlier approved sources, revision in quoted tariff from IPPs, due to incorporation of change in law amount in the total power purchase cost in line with the Commission's Order and also due to the variation in power purchase quantum from must run sources as explained in para above. Accordingly, after complete scrutiny of relevant document submitted, the Commission allows the average power purchase cost of **Rs. 4.06/kWh** for the month of April, 2019, **Rs. 3.86/kWh** for the month of May, 2019 and **Rs. 4.31/kWh** for the month of June, 2019 as compared to MTR approved cost of **Rs. 3.82/kWh**, **Rs. 3.78/kWh** and **Rs. 3.84/kWh** for the months of April, May and June, 2019, respectively, as shown in the table above.

5 FAC on account of fuel and power purchase cost (F)

5.1 The Commission has worked out the average power purchase cost for the month as shown in above table. The same has been compared with the average power purchase cost derived considering the revised MoD stack values.

5.2 The following table shows the ZFAC worked out by the Commission on account of difference in fuel and power purchase cost for the month of April to June, 2019.

S. No.	Particulars	Units	Apr, 2019	May, 2019	June, 2019
1	Average power purchase cost approved by the Commission	Rs./kWh	3.82	3.78	3.84

S. No.	Particulars	Units	Apr, 2019	May, 2019	June, 2019
2	Actual average power purchase cost	Rs./kWh	4.06	3.86	4.31
3	Change in average power purchase cost (=2 -1)	Rs./kWh	0.24	0.08	0.48
4	Net Power Purchase	MU	12,173.32	12,938.96	11,009.35
5	**Change in fuel and power purchase cost (=3 x 4/10)**	**Rs. Crore**	**294.75**	**103.04**	**523.04**

5.3 The Commission, since its previous vetting report dated 01 November, 2018 had adopted the methodology of bifurcating the over-recovery/under-recovery amounts into Agriculture (AG) and non-Agriculture (non-AG) categories for computation of adjustment factor. Based on the same methodology, the Commission has bifurcated the stand-alone monthly change in power purchase cost as computed above into the Agriculture and non-Agriculture categories. The Commission has considered the ratio of actual AG and non-AG sale for the respective months for which FAC is computed to bifurcate the change in power purchase cost. The power purchase cost variation for AG and non-AG consumers is shown in the Table below.

Particulars	Unit	April, 2019			May, 2019		
		Total	Ag	Non-Ag	Total	Ag	Non-Ag
Category wise sales during the month	MUs	10,139.8	2,943.52	7,196.32	10,536.7	2,943.52	7,593.16
Change in Fuel cost and power purchase cost attributable to Sales within the License Area (F)	Rs. Crore	294.75	85.57	209.19	103.04	28.79	74.26

Particulars	Units	June, 2019		
		Total	Ag	Non-Ag
Category wise sales during the month	MUs	9,768.81	2,261.40	7,507.41
Change in Fuel cost and power purchase cost attributable to Sales within the License Area (F)	Rs. Crore	523.04	121.08	401.96

6 Adjustment for over recovery/under recovery (B)

6.1 Adjustment factor pertains to any under-recovery or over-recovery of FAC amount associated with previous months. In case of MSEDCL adjustment factor for the Q1 months from April to June 2019 pertains to under-recovery or over-recovery of FAC amount associated with January to March, 2019, i.e., Q4 of FY 2018-19. It is to be noted that the Commission has already done True up of FY 2018-19, wherein power purchase cost along with other ARR cost has been trued up and the treatment for any variation in ARR cost and revenue has already been given. Upon query of consideration of adjustment factor MSEDCL clarified that while calculating the FAC of January to

March, 2019, i.e., Q4 of FY 2018-19, True up of FY 2018-19 was not completed. Therefore, it has rolled over the under-recovery or over-recovery of FAC Q4 of FY 2018-19 in Q1 of FY 2019-20 as per normal condition. MSEDCL further clarified that such under-recovery or over-recovery of FAC pertaining to the period of Q4 of FY 2018-19 was not considered in the final True up of FY 2018-19. Although, it has considered the same in provisional truing up of FY 2019-20. In view of the above, the Commission has considered the adjustment factor as submitted by MSEDCL as the same has also been considered under revenue in provisional truing up of FY 2019-20 in MTR Order dated 30 March, 2020.

6.2 MSEDCL has bifurcated the over-recovery/under-recovery amounts into Agriculture and non-Agriculture categories for computation of adjustment factor. The bifurcation has been done based on the FAC and actual sales of N-2 month.

6.3 Accordingly, the adjustment factor for over recovery/under recovery (B**)** for the period of April, 2019 to June 2019 as submitted by MSEDCL is as below.

S. No.	**Particulars**	**Units**	**April, 2019**		**May, 2019**		**June, 2019**	
	Category		**Ag**	**Non-Ag**	**Ag**	**Non-Ag**	**Ag**	**Non-Ag**
1	**Adjustment factor for (over-recovery)/under-recovery**	**Rs. Crore**	(0.92)	(74.17)	0.05	(127.41)	127.62	(223.24)

7 Carrying Cost for over recovery/under recovery (C)

7.1 Carrying/Holding cost for under/over recovery has been computed at applicable interest rate during the respective period for the eligible amount. The Commission has computed the carrying cost separately on the adjustment factor as computed above for both Agriculture and Non-Agriculture categories.

7.2 The following Table shows the month wise interest rate and amount worked out as Carrying/Holding cost for under/over recovery for the month of April to June, 2019.

S. No.	**Particulars**	**Units**	**April, 2019**		**May, 2019**		**June, 2019**	
			Ag Category	**Non-Ag Category**	**Ag Category**	**Non-Ag Category**	**Ag Category**	**Non-Ag Category**
1	Adjustment factor for over-recovery/under-recovery	Rs. Crore	(0.92)	(74.17)	0.05	(127.41)	127.62	(223.24)
2	Applicable Interest rate	%	10.00	10.00	10.00	10.00	9.95	9.95
3	**Carrying cost for over-recovery/under-recovery**	**Rs. Crore**	(0.02)	(1.24)	0.00	(2.12)	2.12	(3.70)

8 Disallowance due to excess Distribution Loss

8.1 Regulation 10.8 of MYT Regulations, 2015 provides for FAC amount to be reduced in case the actual distribution loss for the month exceeds the approved distribution loss. The relevant extract is reproduced as follows.

"10.8 The total ZFAC recoverable as per the formula specified above shall be recovered from the actual sales in terms of "Rupees per kilowatt-hour":

Provided that, in case of unmetered consumers, the ZFAC shall be recoverable based on estimated sales to such consumers, computed in accordance with such methodology as may be stipulated by the Commission:

Provided further that, where the actual distribution losses of the Distribution Licensee exceed the level approved by the Commission, the amount of ZFAC corresponding to the excess distribution losses (in kWh terms) shall be deducted from the total ZFAC recoverable"

8.2 The following table provides the comparison of approved and actual distribution loss and disallowance due to excess distribution loss if any.

Sr. No	Particular	Calculation	Unit	Approved in Tariff Order	Cumulative up to		
					April	May	June
1	Net Energy requirement at T<>D Periphery	a	MU	1,29,507	11,838	24,146	34,922
2	EHV Sales	b	MU	8,549	872	1,783	2,611
3	Net Energy Available for Sale at 33kV	c=a-b	MU	1,20,957	10,965	22,362	32,312
4	Energy injected and drawn at 33kV	d	MU	488	42	85	120
5	Total Energy Available for Sale at 33kV	e=c+d	MU	1,21,445	11,007	22,447	32,432
6	LT Agriculture Sales (Including D.F)	f	MU	31,149	2,716	5,432	8,148
7	LT Sales excluding Agriculture Sales (Including D.F)	g	MU	41,016	3,743	7,809	11,462
8	HT Sales excluding EHV level sales (Including D.F)	h	MU	27,654	2,447	4,984	7,430
9	HT/LTIP Credit Sales and HT/LT Offset Export Solar units	i	MU	-	54	122	161
10	Total Sales including D.F (Excluding EHV Sales)	j=f+g+h+i	MU	99,820	8,960	18,347	27,201
11	OA sales	k	MU	5,523	292	600	891
17	Retail Energy Sale to Consumers (Excluding EHV Sales and Including OA Sales)	l=j+k	MU	1,05,342	9,252	18,947	28,093

Sr. No	Particular	Calculation	Unit	Approved in Tariff Order	Cumulative up to		
					April	May	June
18	Distribution Loss (Excl. EHV Sales)	m=e-l	MU	16,103	1,755	3,500	4,339
19	**% Distribution Loss (Excl. EHV Sales)**	**n=m/e**	**%**	**13.26%**	**15.94%**	**15.6%**	**13.38%**
20	**Excess Distribution loss = [Actual Distribution loss - Distribution loss approved] x Net Energy Input**		**MU**	**-**	**295**	**267**	**12**

8.3 The cumulative distribution losses for the month of April, May and June is 15.94%, 15.60% and 13.38%, respectively, as compared to MTR approved losses of 13.26%. As, the cumulative distribution losses of MSEDCL for the all the months of Q1 period was higher than the approved losses hence, excess distribution losses (MUs) has been worked out as 295 MUs, 267 MUs and 12 MUs for the month of April, May and June, respectively. MSEDCL in its computation has not reduced any FAC amount due to higher distribution losses, however, the Commission in line with Regulations 10.8 of MYT Regulations, 2015, has reduced FAC amount to the tuned of excess distribution losses. This is post facto approval based on the earlier MTR Order. However, the Commission has restated the Distribution Losses for FY 2019-20 in the MYT Order dated 30 March, 2020 and the same has been considered in the provisional truing up in the same Order.

9 Summary of Allowable ZFAC

9.1 The summary of the FAC amount as approved by the Commission for the month of April to June, 2019 is as shown in the Table below.

S. No.	Particulars	Units	April, 2019		May, 2019		June, 2019	
	Category		**Ag**	**Non-Ag**	**Ag**	**Non-Ag**	**Ag**	**Non-Ag**
1.0	**Calculation of ZFAC**							
1.1	Change in cost of generation and power purchase attributable to Sales within the License Area (F)	Rs. Crore	85.57	209.19	28.79	74.26	121.08	401.96
1.2	Carrying cost for over-recovery/under-recovery (C)	Rs. Crore	(0.02)	(1.24)	0.00	(2.12)	2.12	(3.70)
1.3	Adjustment factor for over-recovery/under-recovery (B)	Rs. Crore	(0.92)	(74.17)	0.05	(127.41)	127.62	(223.24)
1.4	**ZFAC = F+C+B**	**Rs. Crore**	**84.63**	**133.78**	**28.84**	**(55.28)**	**250.82**	**175.02**
1.5	ZFAC = F+C+B	Rs.					82.23	

S. No.	Particulars	Units	April, 2019		May, 2019		June, 2019	
	Category		**Ag**	**Non-Ag**	**Ag**	**Non-Ag**	**Ag**	**Non-Ag**
	April'19 for AG Category	Crore						
1.6	ZFAC = F+C+B May'19 for AG Category	Rs. Crore					28.13	
1.7	**Total ZFAC (Quarterly) for AG Category**	Rs. Crore					361.09	
1.8	**FAC charged for the billing month of July**	Rs. Crore	**-**	**133.78**	**-**	**(55.28)**	**361.18**	**175.02**
2.0	**Calculation of FAC Charge**							
2.1	Energy Sales within the License Area	MU	2,943.52	7,196.32	2,943.52	7,593.16	2,261.40	7,507.41
2.2	Energy Sales within the License Area to AG consumers during last quarter	MU					8,148.44	
2.3	Excess Distribution Loss	MU	85.66	209.42	74.54	192.29	2.78	9.22
2.4	ZFAC per kWh	Rs./kWh	0.28	0.18	0.10	(0.07)	1.11	0.23
2.5	ZFAC per kWh Quarterly for Ag	Rs./kWh					0.44	
2.6	FAC Charge allowable in billing month	Rs./kWh	0.28	0.18	0.10	(0.07)	0.44	0.23
3.0	**Recovery of FAC**							
3.1	Allowable FAC	Rs. Crore	84.63	133.78	28.84	(55.28)	250.82	175.02
3.2	FAC disallowed corresponding to excess Distribution Loss	Rs. Crore	2.39	3.78	0.71	-	0.31	0.21
4.0	**Total FAC based on category wise and slab wise allowed to be recovered**	**Rs. Crore**	**82.23**	**130.00**	**28.13**	**(55.28)**	**250.51**	**174.80**
5.0	Carried forward FAC for recovery during future period (1.4-3.2-4)	Rs. Crore	-	-	-	-	-	-

9.2 As stated above, the Commission has not considered any amount towards re-calculation of FAC due to revision of MoD of FY 2018-19, as the matter has already been dealt in previous FAC approval. Further, it can be seen from the above Table that standalone FAC for Non-Agriculture category during the months of April, May and June, 2019 is Rs.

130.00 Crore, Rs (**55.28)** Crore and Rs. **174.80** Crore respectively. As the billing of the Non-Agriculture category has been done on monthly basis, hence, based on total monthly energy sales & excess distribution losses, FAC per unit for Non-Agriculture category has been work out as Rs **0.18**/kWh, Rs (**0.07)**/kWh and Rs **0.23**/kWh for the months of April, May and June, 2019 respectively.

9.3 The following Table shows the difference in FAC as claimed by MSEDCL and as approved by the Commission for Non-Ag category:

Month	Units	MSEDCL's claim	Approved by the Commission
		Non-Ag	Non-Ag
April, 2019	Rs. Crore	195.11	130.00
May, 2019	Rs. Crore	6.28	(55.28)
June, 2019	Rs. Crore	175.02	174.80
Total	**Rs. Crore**	**376.41**	**249.52**

9.4 From the Table above MSEDCL was eligible to recover Rs. **249.52** Crore cumulatively in the Q1 of FY 2019-20, however, it has actually recovered Rs. **376.41** Crore. Hence, MSEDCL is required to refund the differential amount Rs. **(126.88)** Crore along with the interest to consumers

9.5 The total FAC for Agriculture category for the months of April, May and June, 2019 is Rs. **82.23** Crore, Rs. **28.13** Crore and Rs. **250.51** Crore respectively. Based on total monthly energy sales for Agriculture category including un-metered sales and excess distribution losses, FAC per unit for Agriculture category has been work out as Rs **0.28**/kWh, Rs **0.10**/kWh and Rs **1.11**/kWh for the months of April, May and June, 2019 respectively. Further, as the billing for Agriculture consumers are done on a quarterly basis and the corresponding FAC for all the three months are levied in a last month for each quarter. Therefore, the Commission has considered the cumulative FAC and the cumulative sales during the respective quarter and accordingly computed the FAC per unit for Agriculture category as Rs. **0.44**/kWh.

9.6 The following the Table shows the FAC for Agriculture category during the months of April, May and June, 2019:

Month	Units	MSEDCL's claim	Approved by the Commission
		Ag	Ag
April, 2019	Rs. Crore	109.71	82.23
May, 2019	Rs. Crore	52.70	28.13
June, 2019	Rs. Crore	250.82	250.51
Total	**Rs. Crore**	**413.23**	**360.87**

9.7 From the Table above, MSEDCL has to recover total FAC of Rs. **360.87** Crore to Agriculture consumers. However, MSEDCL has computed a recovery of Rs. **413.23**

Crore. Therefore, MSEDCL is required to refund the differential of Rs. **(52.36)** Crore (Rs.360.87 Cr- 413.23 Cr) to consumers.

9.8 Considering the refund of Rs. (126.88) Crore with regards to Non-Agriculture category and refund of Rs. (52.36) Crore with regards to Agriculture category, the net refund of FAC stands at Rs. (179.24) Crore for Q1 of FY 2019-20.

9.9 Further, FY 2019-20 is already over and provisional True-up of FY 2019-20 has also been done in recent MYT Order dated 30 March, 2020. The rationale for post facto approval of Q1 of FY 2019-20 is only to carry forward the allowance or disallowance to next quarter and subsequently to Q4 of FY 2019-20.

10 Recovery from Consumers:

10.1 Regulation 10.9 of MERC MYT Regulations, 2015 provides for methodology of recovery of FAC charge from each category of consumers. The relevant extract is reproduced as below.

"10.9 The ZFAC per kWh for a particular Tariff category/sub-category/consumption slab shall be computed as per the following formula: —
*ZFAC Cat (Rs/kWh) = [ZFAC / (Metered sales + Unmetered consumption estimates + Excess distribution losses)] * k * 10,*
Where:
ZFAC Cat = ZFAC component for a particular Tariff category/sub-category/consumption slab in 'Rupees per kWh' terms;
k = Average Billing Rate / ACOS;
Average Billing Rate = Average Billing Rate for a particular Tariff category/sub-category/consumption slab under consideration in 'Rupees per kWh' as approved by the Commission in the Tariff Order:

Provided that the Average Billing Rate for the unmetered consumers shall be based on the estimated sales to such consumers, computed in accordance with such methodology as may be stipulated by the Commission:
ACOS = Average Cost of Supply in 'Rupees per kWh' as approved for recovery by the Commission in the Tariff Order:

Provided that the monthly ZFAC shall not exceed 20% of the variable component of Tariff or such other ceiling as may be stipulated by the Commission from time to time:

Provided further that any under-recovery in the ZFAC on account of such ceiling shall be carried forward and shall be recovered by the Distribution Licensee over such future period as may be directed by the Commission…."

10.2 The Commission has worked out FAC per unit for each category of consumer based on the formula provided in the above Regulations. The Commission observed that there is an under recovery of ZFAC in absolute terms on considering category wise per unit FAC worked out and category wise actual sales for the month of April 2019 to June 2019.

10.3 The following table shows per unit ZFAC to be charged to the consumers of MSEDCL in the billing month i.e., July 2019 to September 2019.

Table A- Fuel Adjustment Charges for the Month of April 2019 to June 2019 to be levied in July 2019 to September 2019 respectively

Sr. No.	Categories	ZFAC to be levied in billing month of July (Rs./kWh)	ZFAC to be levied in billing month of Aug (Rs./kWh)	ZFAC to be levied in billing month of Sept (Rs./kWh)
	LT Category			
1	**Domestic (LT-I)**			
A	BPL (0-30 Units)	0.0721	0.0022	0.0601
B	Consumption > 30 Units per month			
I	1-100 Units	0.1899	0.0057	0.1584
Ii	101-300 Units	0.3208	0.0096	0.2677
Iii	301-500 Units	0.4071	0.0122	0.3396
Iv	500-1000 Units	0.4528	0.0135	0.3778
V	Above 1000 Units	0.4802	0.0144	0.4006
2	**Non Domestic (LT-2)**			
A	0-20 KW			
A	0-200 Units	0.3201	0.0096	0.2671
B	Above 200 units	0.4293	0.0128	0.3581
B	>20-50 KW	0.4778	0.0143	0.3986
C	>50 KW	0.5817	0.0174	0.4853
3	**Public Water Works (LT-III)**			
A	0-20 KW	0.1310	0.0039	0.1093
B	20-40 KW	0.1788	0.0053	0.1492
C	above 40 kw	0.2294	0.0069	0.1914
4	**Agriculture (LT-IV)**			
A	Unmetered Tariff			
1	AG unmetered Pump set			
	Zone 1			
	A) 0-5 HP	0.0000	0.0000	34.7221
	B) HP -7.5 HP	0.0000	0.0000	36.7176

Sr. No.	Categories	ZFAC to be levied in billing month of July (Rs./kWh)	ZFAC to be levied in billing month of Aug (Rs./kWh)	ZFAC to be levied in billing month of Sept (Rs./kWh)
	C) Above 7.5 HP	0.0000	0.0000	40.0701
2	Zone 2			
	A) 0-5 HP	0.0000	0.0000	16.2373
	B) HP -7.5 HP	0.0000	0.0000	17.3198
	C) Above 7.5 HP	0.0000	0.0000	19.3043
B	Metered Tariff (Pumpsets)	0.0000	0.0000	0.6722
C	Metered Tariff (Other)	0.1978	0.0059	0.1651
5	**LT Industries (LT-V)**			
A	**Power Loom**			
I	0-20 KW	0.2131	0.0064	0.1778
Ii	Above 20 KW	0.2692	0.0081	0.2246
B	**General**			
I	0-20 KW	0.2356	0.0070	0.1966
Ii	Above 20 KW	0.3302	0.0099	0.2755
6	**Street Light (LT-VI)**			
A	Grampanchayat A, B & C Class Municipal Council	0.2162	0.0065	0.1804
B	Municipal corporation Area	0.2692	0.0081	0.2246
7	**Temporary Connection (LT-VII)**			
A	Temporary Connection (Religious)	0.1930	0.0058	0.1610
B	Temporary Connection (Other Purposes)	0.5346	0.0160	0.4460
8	**Advertising and Hording (LT-VIII)**	0.6254	0.0187	0.5218
9	**Crematorium & Burial (LT-IX)**	0.1746	0.0052	0.1457
10	**Public Services (LT X)**			
A	**Government**			
A	0-20 kw			
I	0-200 units	0.2217	0.0066	0.1850
Ii	> 200 units	0.2633	0.0079	0.2197
B	>20 -50 kw	0.2942	0.0088	0.2454
C	>50 kw	0.3194	0.0096	0.2665
B	**Others**			
A	0-20 KW			
I	0-200 Units	0.2297	-	0.1916
Ii	Above 200 units	0.3215	-	0.2682

Sr. No.	Categories	ZFAC to be levied in billing month of July (Rs./kWh)	ZFAC to be levied in billing month of Aug (Rs./kWh)	ZFAC to be levied in billing month of Sept (Rs./kWh)
B	>20-50 KW	0.3444	0.0103	0.2873
C	>50 KW	0.3551	0.0106	0.2963

Table B- Fuel Adjustment Charges for the Month of April 2019 to June 2019 to be levied in July 2019 to September 2019 respectively

Sr. No.	Categories	ZFAC to be levied in billing month of July (Rs./kWh)	ZFAC to be levied in billing month of Aug (Rs./kWh)	ZFAC to be levied in billing month of Sept (Rs./kWh)
	HT Category			
1	**HT Category – EHV (66 kV & Above)**			
A	HT I(A): HT - Industry (General)	0.2730	0.0082	0.2278
B	HT I(B): HT - Industry (Seasonal)	0.2921	0.0087	0.2437
C	HT II: HT – Commercial	0.4494	0.0134	0.3749
D	HT III: HT - Railways/Metro/Monorail	0.0000	0.0086	0.2411
E	HT IV: HT - Public Water Works (PWW)	0.2301	0.0069	0.1919
F	HT V(A): HT - Agricultural – Pumpsets	0.1421	0.0042	0.1185
G	HT V(B): Agricultural – Others	0.0000	0.0000	0.0000
H	HT VI: HT - Group Housing Society (Residential)	0.0000	0.0000	0.0000
I	HT VIII (A): HT - Temporary Supply Religious (TSR)	0.0000	0.0000	0.0000
J	HT VIII(B): HT - Temporary Supply Others (TSO)	0.0000	0.0000	0.0000
K	HT IX(A): HT - Public Services-Government	0.0000	0.0000	0.0000
L	HT IX(B): HT - Public Services-Others	0.0000	0.0000	0.0000
2	**HT Category –33 kV**			
A	HT I(A): HT - Industry (General)	0.2754	0.0082	0.2298
B	HT I(B): HT - Industry (Seasonal)	0.2973	0.0089	0.2480
C	HT II: HT – Commercial	0.4525	0.0135	0.3775
D	HT III: HT - Railways/Metro/Monorail	0.2900	0.0087	0.2419
E	HT IV: HT - Public Water Works (PWW)	0.2439	0.0073	0.2035
F	HT V(A): HT - Agricultural – Pumpsets	0.1448	0.0043	0.1208
G	HT V(B): Agricultural – Others	0.1895	0.0057	0.1581
H	HT VI: HT - Group Housing Society (Residential)	0.2408	0.0072	0.2009
I	HT VIII (A): HT - Temporary Supply	0.0000	-	-

Sr. No.	Categories	ZFAC to be levied in billing month of July (Rs./kWh)	ZFAC to be levied in billing month of Aug (Rs./kWh)	ZFAC to be levied in billing month of Sept (Rs./kWh)
	Religious (TSR)			
J	HT VIII(B): HT - Temporary Supply Others (TSO)	0.4629	0.0138	0.3862
K	HT IX(A): HT - Public Services-Government	0.3160	0.0094	0.2636
L	HT IX(B): HT - Public Services-Others	0.3808	0.0114	0.3177
3	**HT Category –22 kV**			
A	HT I(A): HT - Industry (General)	0.2883	0.0086	0.2405
B	HT I(B): HT - Industry (Seasonal)	0.0000	-	-
C	HT II: HT – Commercial	0.4494	0.0134	0.3749
D	HT III: HT - Railways/Metro/Monorail	0.2914	0.0087	0.2431
E	HT IV: HT - Public Water Works (PWW)	0.2609	0.0078	0.2177
F	HT V(A): HT - Agricultural – Pumpsets	0.1497	0.0045	0.1249
G	HT V(B): Agricultural – Others	0.1992	0.0060	0.1662
H	HT VI: HT - Group Housing Society (Residential)	0.2432	0.0073	0.2029
I	HT VIII (A): HT - Temporary Supply Religious (TSR)	0.0000	-	-
J	HT VIII(B): HT - Temporary Supply Others (TSO)	0.4646	0.0139	0.3876
K	HT IX(A): HT - Public Services-Government	0.3188	0.0095	0.2659
L	HT IX(B): HT - Public Services-Others	0.3818	0.0114	0.3185
4	**HT Category – 11 kV**			
A	HT I(A): HT - Industry (General)	0.3492	0.0104	0.2914
B	HT I(B): HT - Industry (Seasonal)	0.3912	0.0117	0.3263
C	HT II: HT - Commercial	0.5523	0.0165	0.4608
D	HT III: HT - Railways/Metro/Monorail	0.3610	0.0108	0.3012
E	HT IV: HT - Public Water Works (PWW)	0.2758	0.0082	0.2301
F	HT V(A): HT - Agricultural - Pumpsets	0.1816	0.0054	0.1515
G	HT V(B): Agricultural - Others	0.2155	0.0064	0.1798
H	HT VI: HT - Group Housing Society (Residential)	0.3070	0.0092	0.2561
J	HT VIII(B): HT - Temporary Supply Others (TSO)	0.6150	0.0184	0.5131
K	HT IX(A): HT - Public Services-Government	0.3579	0.0107	0.2986
L	HT IX(B): HT - Public Services-Others	0.4618	0.0138	0.3853

11 Summary

11.1 The Table below shows the summary of FAC claimed by MSEDCL vis-à-vis approved by the Commission for Q1 of FY 2019-20:

Particular	Month	Claimed	Approved	Remarks
FAC (Rs. Cr.) For AG categories	April	109.71	82.23	MSEDCL claimed Rs. 789.63 Crores, however approved Rs. 610.39. Hence, Rs. 179.24 Crores refundable
	May	52.70	28.13	
	June	250.82	250.51	
FAC (Rs. Cr.) For Non-AG categories	April	195.11	130.00	
	May	6.28	(55.28)	
	June	175.02	174.80	
Total FAC (Rs Cr.)	April	304.82	212.23	
	May	58.98	(27.15)	
	June	425.83	425.31	
Q1 FAC	Total	789.63	610.39	
FAC per Unit For AG categories	April	0.507	0.44	
	May			
	June			
FAC per Unit For Non-AG categories	April	0.271	0.181	
	May	0.008	(0.073)	
	June	0.233	0.233	

11.2 MSEDCL has levied total FAC of Rs.789.63 Cr. against which the Commission has approved Rs. 610.39 Cr. thus Rs. 179.24 Cr. is disallowed. Since the recovery of this amount is already done, the above adjustment will be rolled over in next FAC approvals (i.e., FAC of Q2 of FY 2019-20) till Q4 of FY 2019-20.