



महाराष्ट्र विद्युत नियामक आयोग

Maharashtra Electricity Regulatory Commission

Ref. No. MERC/FAC/MSEDCL/WFH/SBR/26

Date: 4 August, 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 October, 2019 to December, 2019.

Reference: MSEDCL's FAC submission vide email dated 24 April, 2020 & 30 May, 2020 for post-facto approval of FAC for the period of October, 2019 to November, 2019.

Sir,

Upon vetting the FAC calculations for the month of October, 2019 to December, 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	October, 2019	November, 2019	December, 2019
FAC allowed (Rs. Crore)	292.56	164.98	582.85

MSEDCL has computed total FAC of Rs.1,227.35 Cr. against which the Commission has approved Rs. 1,040.38 Cr. thus Rs. 186.97 Cr. is disallowed which is explained in detail at Paras 9.2 to 9.8 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 4 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 Q3 of FY 2019-20 is only to carry forward the allowance or disallowance to Q4 of FY 2019-20.

(Dr. Rajendra Ambekar)
Executive Director

Encl: Annexure A: Detailed Vetting Report for the period of October, 2019 to December, 2019.

ANNEXURE
Detailed Vetting Report

Date: 4 August, 2020

**POST FACTO APPROVAL FOR FAC FOR THE MONTH OF
OCTOBER, 2019 TO DECEMBER, 2019**

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

Reference: MSEDCL's FAC submission vide email dated 24 April, 2020 and 30 May, 2020 for post facto approval of FAC for the period of October, 2019 to December, 2019.

1. FAC submission by MSEDCL:

1.1 MSEDCL has made FAC submissions for the month of October, 2019 to December, 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 January, 2020 to March, 2020.

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 On 30 March, 2020, the Commission has issued MYT Tariff Order for MSEDCL (Case No.322 of 2019) for Truing-up of FY 2017-18 and FY 2018-19, provisional Truing-up for FY 2019-20, and Aggregate Revenue Requirement and Tariff for FY 2020-21 to FY 2024-25. Tariff has been made applicable from 1 April, 2020

2.3 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 email dated 24 April, 2020 and 30 May, 2020, MSEDCL has filed FAC submissions for the month of October, 2019 to December, 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 licensee area during the month of October, November, and December, 2019 as submitted by MSEDCL in its FAC submission and as approved by the Commission are shown in the table below:

Consumer Category	Approved by the Commission	Approved for the month	Actual sales (MU)		
			Oct, 2019	Nov, 2019	Dec, 2019
	(I)	(II=I/12)	(III)	(IV)	(V)
I. Metered Category					
HT Category					
Industry General	29,105.86	2,425.49	2,391.70	2,494.55	2,628.02
Industry Seasonal	101.98	8.50	1.91	7.31	18.73
Commercial	1,840.33	153.36	154.20	150.06	144.87
Railway metro monorail	59.25	4.94	6.55	6.13	5.97
Public water works	1,647.46	137.29	163.91	158.89	163.77
Agriculture pumpset	804.12	67.01	38.94	18.45	32.99
Agriculture other	277.03	23.09	19.03	18.68	19.06
Group Housing Society	217.33	18.11	18.38	16.61	16.40
Temp Supply other	4.32	0.36	0.90	0.82	1.09
Public Service Govt	247.72	20.64	21.67	20.46	19.09
Public Service other	769.01	64.08	63.30	61.06	58.65
Electric Vehicle (EV) Charging Stations	0.00	0.00	0.79	0.93	1.12
MSPGCL Aux Consumption	218.25	18.19	9.46	9.69	10.79
Other Adjustment	0.00	0.00	311.86	315.59	352.73
Sub Total	35292.66	2941.06	3,202.60	3,279.25	3,473.27
LT Category					
BPL	54.35	4.53	8.58	8.74	7.56
Residential	20,282.28	1,690.19	1,707.31	1,706.27	1,522.41
Non-residential	6,122.75	510.23	484.24	493.00	480.67
Public water works	780.31	65.03	66.56	65.72	68.21
AG metered pump set	21,090.67	1,757.56	1,296.25	732.89	1,399.87
AG metered other	149.67	12.47	11.01	10.67	13.23
Industry	7,232.08	602.67	710.13	715.46	777.93
Street-light	2,013.76	167.81	157.98	156.88	158.32
Temporary supply	16.13	1.34	3.29	2.95	3.09
Advertisement and hording	5.15	0.43	0.36	0.36	0.36
Crematorium and burial ground	2.18	0.18	0.20	0.19	0.19
Public service	498.95	41.58	43.92	42.03	41.73
Electric Vehicle (EV)	0.00	0.00	0.02	0.02	0.03

Consumer Category	Approved by the Commission	Approved for the month	Actual sales (MU)		
			Oct, 2019	Nov, 2019	Dec, 2019
	(I)	(II=I/12)	(III)	(IV)	(V)
Charging Stations					
Prepaid	0.00	0.00	0.56	0.54	0.51
Sub Total	58,248.28	4,854.02	4,490.44	3,935.72	4,474.09
Energy Sales outside the License Area	0.00	0.00	0.00	0.00	0.00
Sub Total-Metered Sales	93,540.94	7,795.08	7,693.04	7,214.97	7,947.35
Unmetered Sale					
Unmetered Hrs> 7,693.04	3,966.00	330.50	696.75	1,074.51	899.79
Unmetered Hrs<1318	2,487.00	207.25			
Sub Total - Unmetered	6,453.00	537.75	696.75	1,074.51	899.79
Grand Total (Metered+ Unmetered)	99,993.94	8,332.83	8,389.79	8,289.48	8,847.14

3.2 Monthly actual sale for the month of October and December, 2019 was higher than that of the MTR approved sales, i.e., 8,332.83 MUs. However, the actual sales in the month of November, 2019 is marginally lower than the MTR approved sales. The major variation in actual sales was observed in HT Industry General & Seasonal, Public water works, HT & LT Agriculture, LT Residential, LT Industrial and Un-metered agricultural sales as shown in Table above. On response to clarification sought for such a variation in sales for different categories, MSEDCL stated that the approved sales in MTR Order were estimated based on historical sales data. Whereas, the actual sales depend on various aspects such as economic conditions, seasonal variation, etc. Hence, it is difficult to provide exact reasons for variation in sales in different categories of consumer.

4. Cost of Power Purchase

4.1 MSEDCL mainly procures power from following sources;

- a) MSPGCL
- b) MSPGCL Hydro (Ghatghar)
- c) NTPC
- d) JSW (Ratnagiri) Energy Ltd.
- e) Adani Power Limited
- f) Mundra UMPP
- g) Rattan India Power Limited

- h) EMCO Power
- i) NPCIL
- j) Renewable Energy Sources
- k) 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 short term 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 oftaken fully to cater the peak demand, generally during day time and for the rest of the period the unit is backed down. 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 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 October-2019 to December-2019.

4.5 Further, in line with previous post facto FAC approval, Commission has considered the revised monthly MoD stack values for this present FAC approval. The following table shows the variation in average power purchase cost (Rs/kWh) for the month of October-2019 to December-2019 as compared to average power purchase cost approved as per Tariff Order dated 12 September, 2018:

Source	MTR Approved for October, 2019			Actual for October, 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	3,560.05	1,516.88	4.26	3,219.72	1,407.90	4.37	(340.33)	(108.98)	0.11
MSPCGL Hydro	334.54	18.89	0.56	231.86	58.71	2.53	(102.68)	39.82	1.97
NTPC	2,371.72	772.01	3.26	2,264.78	859.63	3.80	(106.93)	87.62	0.54

Source	MTR Approved for October, 2019			Actual for October, 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)
1. CGPL	465.45	115.85	2.49	431.81	127.67	2.96	(33.64)	11.82	0.47
2. Adani	1,760.99	595.01	3.38	1,303.63	601.83	4.62	(457.36)	6.83	1.24
3. EMCO	116.36	41.53	3.57	120.88	54.84	4.54	4.52	13.32	0.97
4. JSW	174.54	55.70	3.19	175.88	58.32	3.32	1.34	2.62	0.12
5. Rattan India	-	81.91	-	474.57	241.60	5.09	474.57	159.70	5.09
IPPs Total	2,517.34	889.99	3.54	2,506.77	1,084.27	4.33	(10.57)	194.28	0.79
Solar	386.81	160.79	4.16	184.92	95.77	5.18	(201.89)	(65.01)	1.02
Non- Solar	1,270.95	666.09	5.24	376.45	192.04	5.10	(894.50)	(474.05)	(0.14)
Other Must Run	588.78	149.70	2.54	682.46	176.63	2.59	93.68	26.93	0.05
STTP	-	-	-	183.93	62.40	3.39	183.93	62.40	3.39
Interstate	-	-	-	4.50	2.34	5.20	4.50	2.34	5.20
Total	11,030.18	4,174.35	3.78	9,655.41	3,939.70	4.08	(1,374.78)	(234.64)	0.30

4.6 For the month of October, 2019, total variation in power purchase cost is Rs. (234.64) Crore out of which Rs. (520.28) Crore was on account of reduction in quantum of power purchase (1,374.78) MU and Rs. 285.64 Crore was on account of increase in rate of power purchase by Rs. 0.30/kWh. As variation in cost of power purchase on account of variation in power procurement quantum is being recovered through variation in sales to consumers, FAC mechanism only allows impact of increase in power purchase rate to be passed through as FAC rate over and above approved tariff.

Source	MTR Approved for November, 2019			Actual for November, 2019			Deviation		
	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	3,665.12	1,549.20	4.23	3,602.74	1,818.35	5.05	(62.38)	269.15	0.82
MSPCGL Hydro	323.75	18.89	0.58	289.90	59.42	2.05	(33.85)	40.53	1.47
NTPC	2,295.21	761.28	3.32	2,103.07	757.60	3.60	(192.14)	(3.68)	0.29
1. CGPL	450.43	113.41	2.52	434.42	123.06	2.83	(16.01)	9.65	0.31
2. Adani	1,736.98	590.62	3.40	2,007.09	721.09	3.59	270.12	130.47	0.19
3. EMCO	112.61	40.84	3.63	135.69	57.86	4.26	23.08	17.02	0.64
4. JSW	168.91	54.39	3.22	180.88	58.24	3.22	11.97	3.84	(0.00)
5. Rattan India	-	81.91	0.00	44.61	95.00	21.30	44.61	13.10	21.30
IPPs Total	2,468.93	881.17	3.57	2,802.70	1,055.25	3.77	333.77	174.09	0.20
Solar	384.90	159.99	4.16	302.89	133.48	4.41	(82.01)	(26.51)	0.25

Source	MTR Approved for November, 2019			Actual for November, 2019			Deviation		
	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)
Non- Solar	1,264.67	662.80	5.24	378.63	219.58	5.80	(886.04)	(443.22)	0.56
Other Must Run	569.79	144.89	2.54	417.32	104.86	2.51	(152.46)	(40.04)	(0.03)
STTP	-	-	-	12.11	4.15	3.43	12.11	4.15	3.43
Interstate	-	-	-	5.25	0.20	0.38	5.25	0.20	0.38
Total	10,972.36	4,178.23	3.81	9,914.61	4,152.89	4.19	(1,057.76)	(25.34)	0.38

4.7 Similarly, for the month of November, 2019 total variation in power purchase cost is Rs. (25.34) Crore, out of which Rs. (402.79) Crore was on account of reduction in power purchase quantum of (1057.76) MU and rest Rs. 377.45 Crore was on account of increase in rate of power purchase by Rs. 0.38/kWh.

Source	MTR Approved for December, 2019			Actual for December, 2019			Deviation		
	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	3,560.05	1,516.88	4.26	4,103.05	1,935.23	4.72	543.00	418.35	0.46
MSPCGL Hydro	334.54	18.89	0.56	428.36	61.47	1.44	93.82	42.58	0.87
NTPC	2,371.72	772.01	3.26	2,505.76	890.22	3.55	134.05	118.20	0.30
1. CGPL	465.45	115.85	2.49	473.71	132.16	2.79	8.26	16.31	0.30
2. Adani	1,566.11	546.22	3.49	2,030.03	704.46	3.47	463.92	158.24	(0.02)
3. EMCO	116.36	41.53	3.57	136.85	86.76	6.34	20.49	45.24	2.77
4. JSW	174.54	55.70	3.19	152.48	51.19	3.36	(22.06)	(4.51)	0.17
5. Rattan India	-	81.91	0.00	-	82.73	0.00	-	0.83	-
IPPs Total	2,322.46	841.20	3.62	2,793.06	1,057.31	3.79	470.61	216.11	0.16
Solar	378.66	157.40	4.16	411.52	160.70	3.91	32.86	3.30	(0.25)
Non- Solar	1,244.17	652.06	5.24	832.21	499.76	6.01	(411.96)	(152.30)	0.76
Other Must Run	588.78	149.70	2.54	451.31	113.17	2.51	(137.47)	(36.53)	(0.03)
STTP	-	-	0.00	143.68	51.69	3.60	143.68	51.69	3.60
Interstate	-	-	0.00	(7.81)	(1.86)	2.38	(7.81)	(1.86)	2.38
Total	10,800.37	4,108.14	3.80	11,661.15	4,767.68	4.09	860.78	659.54	0.28

4.8 On the same line of October and November, 2019, for the month of December 2019, total variation in power purchase cost is Rs. 659.54 Crore, out of which only Rs. 327.41 Crore was on account of increase in quantum of power purchase 860.78 MU and Rs. 332.13 Crore was on account of increase in rate of power purchase by Rs. 0.28/kWh.

4.9 Detailed source wise analysis of above-mentioned power purchase for the month of October, November, and December, 2019, is provided in below paras:

MSPGCL:

4.10 MSEDCL has procured 3,219.72 MUs, 3,602.74 MUs and 4,103.05 MUs of power from MSPGCL's thermal generating stations during the month of October, November and December, 2019, respectively. The quantum of power procurement has shown increasing trend on account of increase in demand during the respective period. The average power purchase cost (APPC) for aforesaid purchase considering the fixed charge, variable charge and other charges (fuel adjustment charges) works out as Rs. 4.37/kWh, Rs. 5.05/kWh and Rs. 4.72/kWh for the month of October, November and December, 2019, as against the monthly MTR approved price of Rs. 4.26/kWh, Rs. 4.23/kWh and Rs. 4.26/kWh, respectively.

4.11 The Table below provides the summary of actual power purchase quantum and cost from MSPGCL's stations vis-à-vis monthly approved power purchase quantum and cost as per MTR approved MoD stack for Q3 of FY 2019-20:

Particular	Approved for October, 2019				Actual for October, 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	3,560.0	2.21	1,241.37	3.49	2,229.94	2.18	852.88	3.82
Stations excluded from MoD Stack in MTR Order	-	-	275.51 [^]	-	989.79	2.91	555.03	5.60
Total MSPGCL	3,560.0	2.21	1,516.88	4.26	3,219.72	2.40	1,407.90	4.37

*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 November, 2019				Actual for November, 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	3,665.12	2.23	1,314.96	3.59	2,616.15	2.68	1,214.49	4.64
Stations excluded from MoD Stack in MTR Order	-	-	234.24 [^]	-	986.58	2.93	603.86	6.12
Total MSPGCL	3,665.12	2.23	1,549.20	4.23	3,602.74	2.41	1,818.35	5.05

*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 December, 2019				Actual for December, 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	3,560.05	2.21	1,241.37	3.49	2,607.28	2.19	1,156.96	4.44
Stations excluded from MoD Stack in MTR Order	-	-	275.51^	-	1,495.78	2.87	778.26	5.20
Total MSPGCL	3560.05	2.21	1,516.88	4.26	4,103.05	2.44	1,935.23	4.72

*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

4.12 As can be seen from the Table above that in the months of October, November, and December, 2019, MSEDCL has procured 989.79 MU, 986.58 MU and 1,495.78 MU of power, respectively, from various stations that were not included in monthly MoD stack approved for MSEDCL in MTR Order. The reason for such purchase is mainly on account of lesser generation from those stations that were included in MoD stack, lesser generation from RE sources and to satisfy the demand during the respective period. This has led MSEDCL to procure the costlier power of aforesaid MSPGCL's stations as per the real time Merit Order Despatch determined by MSLDC. Due to this the power purchase cost has increased.

4.13 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 Regulations, 2015 also had an impact on average power purchase cost. During Q3 of FY 2019-20, it was observed that even though some of the generating stations of MSPGCL had lower generation or PLF or under RSD, the cumulative availability of these plants was comparatively higher during respective period. Hence, they were entitled to recover monthly fixed cost inspite of lesser or even zero schedule, as per MERC MYT Regulation, 2015. Accordingly, the spread of full monthly fixed cost over lower generation has impacted the average power purchase cost during respective period. The Table below shows the normative availability and cumulative availability at the end of Q3 of FY 2019-20 of various generating station of MSPGCL:

Sr No	Stations	Normative Availability	Cumulative Availability at the end of Q3	Fixed Charge Recovery
1	Nashik U3 to U5	80.00%	79.04%	Fixed charge at pro rata basis
2	Koradi U6 & U7	72.00%	63.62%	Fixed charge at pro rata basis
3	Bhusaval U3	80.00%	95.56%	Full monthly fixed charge allowable
4	Bhusaval U4 & U5	85.00%	79.43%	Fixed charge at pro rata basis
5	Kaperkheda U1 to U4	85.00%	67.99%	Fixed charge at pro rata basis
6	Kaperkheda U5	85.00%	78.90%	Fixed charge at pro rata basis
7	Paras U3 & U4	85.00%	79.89%	Fixed charge at pro rata basis
8	Parli U6 & U7	85.00%	72.06%	Fixed charge at pro rata basis

Sr No	Stations	Normative Availability	Cumulative Availability at the end of Q3	Fixed Charge Recovery
9	Parli U8	85.00%	58.69%	Fixed charge at pro rata basis
10	Chandrapur U3 to U7	80.00%	60.06%	Fixed charge at pro rata basis
11	Chandrapur U8 to U9	85.00%	79.35%	Fixed charge at pro rata basis
12	Koradi U8 to U10	85.00%	49.24%	Fixed charge at pro rata basis
13	Uran Gas TPS	60.84%	45.33%	Fixed charge at pro rata basis

4.14 The Table below shows the summary of MSPGCL's stations those were under Zero Schedule/ RSD during Q3 of FY 2019-20:

S no.	MSPGCL's Station	October, 2019		November, 2019		December, 2019	
		VC as per SLDC MoD (Rs/unit)	No. of Days Under Zero Schedule (Days)	VC as per SLDC MoD (Rs/unit)	No. of Days Under Zero Schedule (Days)	VC as per SLDC MoD (Rs/unit)	No. of Days Under Zero Schedule (Days)
1	Nashik U3	4.10	21	-	-	3.70	31
2	Nashik U4	4.10	21	-	-	-	-
3	Nashik U5	-	-	3.44	19	-	-
4	Koradi U6-U7	4.02	31	3.78	31	3.78	31
5	Bhusawal U3	3.79	31	-	-	3.90	31
6	Bhusawal U4	-	-	-	-	3.34	3
7	Bhusawal U5	-	-	-	-	3.34	6
8	Khaparkheda U1-U2	3.58	19	3.32	30	3.29	9
9	Khaparkheda U3	3.58	18	3.32	14	3.29	9
10	Khaparkheda U4	3.58	16	3.32	13	-	-
11	Paras U3	3.43	8	3.67	31	3.18	11
12	Paras U4	3.43	4	3.67	31	3.18	12
13	Parali U6-U7	3.38	9	3.27	12	-	-
14	Parali U8	3.35	8	3.14	12	-	-
15	Chandrapur U3, U5-U6	3.30	6	3.21	4	-	-

4.15 Further, the Commission has sought for monthly actual PLF of all contracted sources of MSEDCL along with reasoning for lower availability from Contracted Generators and efforts/communications made by MSEDCL seeking increased availability. The Commission also sought reasons for variation in actual quantum of power purchase against the MTR approved MoD stack for Q3 of FY 2019-20. MSEDCL in its reply stated that provisional truing up for the period of FY 2019-20 has been carried out vide the Commission's Order in Case No. 322 of 2020. 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. However, the Commission may seek for the aforesaid data at

the time of final truing up of FY 2019-20. MSEDCL is required to submit the relevant data during final truing up of FY 2019-20.

4.16 In addition to the fixed charges and variable charges, MSPGCL has also claimed other charges which are primarily related to Fuel Surcharge Adjustment (FSA) charges during the respective month. These charges have arrived due to variation in actual energy charge vis-à-vis MTR approved energy charge during Q3 months of FY 2019-20. It was observed that MSEDCL has not considered other charges (Fuel Surcharge Adjustment) in the month of October, while it has considered Rs. 192.08 Crore, and Rs. 222.28 Crore towards other charges in the months of November, 2019 and December, 2019, respectively. Upon query, MSEDCL clarified that due to delay in scrutiny of the invoices with respect to other charges, the other charge pertaining to the month of October, 2019 were considered in FAC computation of November, 2019. Similarly, the other charges pertaining to the month of November, 2019, were considered in FAC computation for the month of December, 2019. Hence, due to absence of other charges mainly in the month of October, 2019 the APPC for the said month is resulted lower as compared to other months, i.e., November and December, 2019.

4.17 The Table below shows the summary of actual energy charges and MTR approved energy charges for various MSPGCL's generating stations based on which MSEDCL has claimed Other charges in FAC submission of Q3 of FY 2019-20:

Sr No	Stations	Approved (Rs./k Wh)	October, 2019			November, 2019		
			Actual for Oct, 2019 (Rs./kWh)	Net Gen. (MUs)	FSA (Rs. Cr)	Actual for Nov, 2019 (Rs./kWh)	Net Gen. (MUs)	FSA (Rs. Cr)
	Basis	a	b	c	$d=(b-a)*c/10$	d	e	$f=(d-a)*e/10$
1	Bhusaval U3	3.097	NIL	0.00	-	NIL	0.00	-
2	Bhusaval U4 & U5	2.774	3.242	418.13	23.75	3.403	511.26	32.16
3	Kaperkheda U1 to U4	2.626	3.295	151.11	10.11	3.109	99.42	4.80
4	Kaperkheda U5	2.240	3.248	277.54	27.98	3.048	256.99	20.76
5	Nashik U3 to U5	3.436	3.702	149.39	3.97	3.756	103.73	3.32
6	Chandrapur U3 to U7	2.113	2.998	538.26	47.63	3.105	585.45	58.08
7	Paras U3 & U4	2.787	3.179	75.42	2.96	NIL	0.00	-
8	Parali U6 & U7	3.106	3.249	134.53	19.24	3.310	174.30	35.56
9	Koradi U6 & U7	2.471	NIL	0.00	-	NIL	0.00	-
10	Koradi U8 to U10	2.364	2.857	623.66	30.74	2.948	889.84	51.97
11	Chandrapur U8 & U9	2.121	2.784	493.48	32.72	2.833	529.15	37.68
12	Parali U8	2.971	3.129	63.85	10.09	3.217	88.89	2.18
13	Uran Gas TPS	1.944	2.254	299.55	9.29	2.246	257.55	7.78
	Total MSPGCL				192.08			222.28

*FSA of October Considered in November, 2019 and FSA of November considered in December, 2019.

4.18 As can be seen from above Table, that during Q3 of FY 2019-20 the actual energy charges for almost all of the generating station of MSPGCL is higher than the energy charge approved in MTR Order. This is primarily attributed to the variation in landed price of fuel and GCV of various MSPGL's generating stations during aforesaid period as

compared to the respective MTR approved values. This has impacted the average power purchase cost during the aforesaid period. The Commission has verified the fuel adjustment charges claimed from the invoices submitted by MSEDCL and found them to be in order.

4.19 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 Q3 of FY 2019-20.

Particular	Approved for October, 2019						Actual for October, 2019							Variation						
	Quantum (MUs)	Variable cost		Fixed cost		APPC (Rs./ kWh)	Quantum (MUs)	Variable cost			Fixed cost		APPC (Rs./ kWh)	Quantum (MUs)	Variable charge			Fixed charge		APPC (Rs./ kWh)
		(Rs. Cr)	(Rs./ kWh)	(Rs. Cr)	(Rs./ kWh)			Variable Charge (Rs. Cr)	Other Charge	Total* (Rs./ kWh)	(Rs. Cr)	(Rs./ kWh)			Variable Charge (Rs. Cr)	Other Charge	Total (Rs./ kWh)	(Rs. Cr)	(Rs./ kWh)	
a	b	c	d	e	f=c+e	a			c	d	e	f=c+e	a			c	d	e=c+d		
Stations included in MoD Stack in MTR Order	3,560.05	788.30	2.21	453.07	1.27	3.49	2,229.94	485.60	-	2.18	367.27	1.65	3.82	(1,330.12)	(302.70)	-	(0.04)	(85.80)	0.37	0.33
Stations excluded from MoD Stack in MTR Order	-	-	-	275.51	-	-	989.79	287.93	-	2.91	267.09	2.70	5.61	989.79	287.93	-	2.91	(8.42)	2.70	5.61
Total MSPGCL	3,560.05	788.30	2.21	728.58	2.05	4.26	3,219.72	773.54	-	2.40	634.36	1.97	4.37	(340.33)	(14.76)	-	0.19	(94.21)	(0.08)	0.11

The fixed charge per unit for both category of stations, i.e., included in MoD and excluded in MoD are higher. However, weighted avg. per unit fixed cost for combined MSPGCL stations is lower as compared to MTR approved charge. This is mainly because in MTR Order no generation was envisaged from certain stations and only fixed cost were considered which resulted in higher per unit fixed charge. However, in actual MSEDCL has purchased power from those stations, hence, spread of fixed cost over additional generation has resulted in lowering of per unit fixed cost.

Particular	Approved for November, 2019						Actual for November, 2019							Variation						
	Quantum (MUs)	Variable cost		Fixed cost		APPC (Rs./kWh)	Quantum (MUs)	Variable cost			Fixed cost		APPC (Rs./kWh)	Quantum (MUs)	Variable charge			Fixed charge		APPC (Rs./kWh)
		(Rs. Cr)	(Rs./kWh)	(Rs. Cr)	(Rs./kWh)			Variable Charge	Other Charge	Total*	(Rs. Cr)	(Rs./kWh)			Variable Charge	Other Charge	Total	(Rs. Cr)	(Rs./kWh)	
a	b	c	d	e	f=c+e	a	b	c	d	e	f	g=f+d	a	b	c	d	e	f		
Stations included in MoD Stack in MTR Order	3,665.12	820.62	2.24	494.33	1.35	3.59	2,616.15	579.48	158.47	2.82	476.53	1.82	4.64	(1,048.97)	(241.14)	158.47	0.58	(17.80)	0.47	1.05
Stations excluded from MoD Stack in MTR Order	-	-	-	234.24	-	-	986.58	289.26	33.61	3.27	280.98	2.85	6.12	986.58	289.26	33.61	3.27	46.74	2.85	6.12
Total MSPGCL	3,665.12	820.62	2.24	728.58	1.99	4.23	3,602.74	868.75	192.08	2.94	757.51	2.10	5.05	(62.38)	48.13	192.08	0.71	28.94	0.11	0.82

**Total Variable cost Inclusive of actual fuel adjustment charges (i.e., other charges) for the month of November, 2019.*

The fixed charge per unit for both category of stations, i.e., included in MoD and excluded in MoD are higher and weighted avg. per unit fixed cost for combined MSPGCL stations is also higher as compared to MTR approved price. The Commission in its MYT Order dated 12 September, 2018 has approved the fixed charges on the reduced availability based on the past experience. However, the Commission has allowed to claim the full fixed charges on achievement towards the normative availability. During aforesaid period, the availability of some of the generating stations such as Bhusawal U3, Chandrapur U8 & 9, Paras U3 & 4 etc., were comparatively higher. Hence, MSPGCL has recovered the disallowed AFC though its monthly energy bill, resulting in higher fixed cost.

Particular	Approved for December, 2019						Actual for December, 2019							Variation						
	Quantum (MUs)	Variable cost		Fixed cost		APPC (Rs./ kWh)	Quantum (MUs)	Variable cost			Fixed cost		APPC (Rs./ kWh)	Quantum (MUs)	Variable charge			Fixed cost (Rs. Cr)	Fixed charge (Rs./ kWh)	APPC (Rs./ kWh)
		(Rs. Cr)	(Rs./ kWh)	(Rs. Cr)	(Rs./ kWh)			Variable Charge	Other Charge	Total*	Variable Charge	Other Charge			Total					
	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+d
Stations included in MoD Stack in MTR Order	3,560.05	788.30	2.21	453.07	1.27	3.49	2,607.28	571.77	176.26	2.87	408.93	1.57	4.44	(952.78)	(216.53)	176.26	0.65	(44.13)	0.30	0.95
Stations excluded from MoD Stack in MTR Order	-	-	0.00	275.51	-	-	1,495.78	430.00	46.02	3.18	302.24	2.02	5.20	1,495.78	430.00	46.02	3.18	26.73	2.02	5.20
Total MSPGCL	3,560.05	788.30	2.21	728.58	2.05	4.26	4,103.05	1,001.77	222.28	2.98	711.18	1.73	4.72	543.00	213.47	222.28	0.77	(17.40)	(0.31)	0.46

**Variable cost Inclusive of actual fuel adjustment charges (i.e., other charges) for the month of December, 2019*

The fixed charge per unit for both category of stations, i.e., included in MoD and excluded in MoD are higher. However, weighted avg. per unit fixed cost for combined MSPGCL stations is lower as compared to MTR approved charge. This is mainly because in MTR Order no generation was envisaged from certain stations and only fixed cost were considered which resulted in higher per unit fixed charge. However, in actual MSEDCL has purchased power from those stations, hence, spread of fixed cost over additional generation has resulted in lowering of per unit fixed cost.

4.20 Variation in power purchase expenses from MSPGCL during Q3 of FY 2019-20 can be divided into two part, i.e., variation in power purchase expense on account of variation in quantum purchase and variation in power purchase expense on account of increased per unit rate as follows:

Month	Variation in Expenses for power purchase from MSPGCL (Rs. Crore)		
	On Account of Variation in Quantum of Power Purchase	On Account of Variation in Per Unit rate of Power Purchase	Total
October, 2019	(145.01)	36.03	(108.98)
November, 2019	(26.37)	295.52	269.15
December, 2019	231.36	186.99	418.35

4.21 As variation in cost on account of variation in power procurement quantum is being offset through variation in sales to consumers, FAC mechanism allows only impact of increase in power purchase rate to be passed through as FAC rate over and above approved tariff. Hence, out of above total variation as mentioned in Table above, variation in power purchase expense on account of increased per unit rate is only considered for FAC computation.

NTPC

4.22 MSEDCL has purchased total 2,264.78 MUs, 2,103.07 MUs and 2,505.76 MUs of power from NTPC's stations (including NTPC NVVNL bundled power) as compared to MTR approved monthly MoD stack of 2,371.72 MUs, 2,295.21 MUs and 2,371.72 MUs during the months of October, November, and December 2019, respectively.

4.23 The above power from the NTPC's stations has been procured at an average power purchase cost of Rs. 3.80/ kWh, Rs. 3.60/ kWh and Rs. 3.55 /kWh as compared to monthly approved cost of Rs. 3.26/kWh, Rs. 3.32/kWh and Rs. 3.26/kWh derived considering the approved MTR MoD stack value for the month of October, November, and December, 2019, respectively.

4.24 The Table below shows 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 Q3 of FY 2019-20:

Particular	Approved for October, 2019						Actual for October, 2019						Variation					
	Quantum (MUs)	Variable cost*		Fixed cost		APPC (Rs./ kWh)	Quantum (MUs)	Variable cost		Fixed cost		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)
		(Rs. Cr)	(Rs./ kWh)	(Rs. Cr)	(Rs./ kWh)			(Rs. Cr)	(Rs./ kWh)	(Rs. Cr)	(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	2371.72	354.57	1.49	261.79	1.10	2.60	1886.31	323.54	1.72	254.90	1.35	3.07	(485.41)	(31.03)	(6.89)	0.22	0.25	0.47
Stations not included in MoD stack in MTR Order:																		
Mauda II	-	0.72	-	13.18 [^]	-	-	175.13	39.22	2.24	68.37	3.90	6.14	175.13	38.50	55.19	2.24	3.90	6.14
NTPC Solapur 2	-	-	-	44.34 [^]	-	-	-	-	-	-	-	-	-	-	(44.34)	-	-	-
Mauda I	-	0.72	-	47.38 [^]	-	-	139.99	40.90	2.92	58.04	4.15	7.07	139.99	40.18	10.66	2.92	4.15	7.07
NTPC Solapur	-	-	-	49.30 [^]	-	-	53.60	17.92	3.34	67.31	12.56	15.90	53.60	17.92	18.01	3.34	12.56	15.90
NTPC NVVN	-	-	-	-	-	-	9.75	3.85	3.95	-	-	3.95	9.75	3.85	-	3.95	-	3.95
RRAS-Thermal	-	-	-	-	-	-	-	(12.98)	-	-	-	-	-	(12.98)	-	-	-	-
RRAS-Gas	-	-	-	-	-	-	-	(1.43)	-	-	-	-	-	(1.43)	-	-	-	-
Total NTPC	2,371.72	356.01	1.50	416.00	1.75	3.26	2,264.78	411.01	1.81	448.62	1.98	3.80	(106.93)	55.00	32.62	0.31	0.23	0.54

*Variable Cost= (Variable Cost+ Other Cost)

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

Particular	Approved for November, 2019						Actual for November, 2019						Variation					
	Quantum (MUs)	Variable cost*		Fixed cost		APPC (Rs./k Wh)	Quantum (MUs)	Variable cost		Fixed cost		APPC (Rs./k Wh)	Quantum (MUs)	Variable cost (Rs. Cr) (ΔQ)	Fixed cost (Rs. Cr) (ΔP)	Variable charge (Rs./ kWh)	Fixed charge (Rs./ kWh)	APPC (Rs./ kWh)
		(Rs. Cr)	(Rs./k Wh)	(Rs. Cr)	(Rs./k Wh)			(Rs. Cr)	(Rs./k Wh)									
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	2295.21	343.84	1.50	261.79	1.14	2.64	2092.53	363.51	1.74	257.69	1.23	2.97	(202.67)	19.67	(4.10)	0.24	0.09	0.33
Stations not included in MoD stack in MTR Order:																		
Mauda II	-	0.72	-	13.18 [^]	-	-	-	0.73	-	46.63	-	-	-	0.01	33.45	-	-	-
NTPC Solapur 2	-	-	-	44.34 [^]	-	-	-	-	-	-	-	-	-	(44.34)	-	-	-	-
Mauda I	-	0.72	-	47.38 [^]	-	-	-	0.72	-	46.67	-	-	-	0.00	(0.71)	-	-	-
NTPC Solapur	-	-	-	49.30 [^]	-	-	-	-6.82	-	66.02	-	-	-	(6.82)	16.72	-	-	-
NTPC NVVN	-	-	-	-	-	-	10.53	3.65	3.47	-	-	3.47	10.53	3.65	-	3.47	-	3.47
RRAS Thermal	-	-	-	-	-	-	-	(18.47)	-	-	-	-	-	(18.47)	-	-	-	-
RRAS Gas	-	-	-	-	-	-	-	(2.76)	-	-	-	-	-	(2.76)	-	-	-	-
Total NTPC	2,295.21	345.28	1.50	416.00	1.81	3.32	2,103.07	340.57	1.62	417.03	1.98	3.60	(192.14)	(4.71)	1.03	0.12	0.17	0.29

*Variable Cost= (Variable Cost+ Other Cost)

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

Particular	Approved for December, 2019						Actual for December, 2019						Variation					
	Quantum (MUs)	Variable cost*		Fixed cost		APPC (Rs./kWh)	Quantum (MUs)	Variable cost		Fixed cost		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)
		(Rs. Cr)	(Rs./k Wh)	(Rs. Cr)	(Rs./k Wh)			(Rs. Cr)	(Rs./k Wh)									
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	2371.72	354.57	1.49	261.79	1.10	2.60	2122.53	358.93	1.69	242.90	1.14	2.84	(249.19)	4.36	(18.89)	0.20	0.04	0.24
Stations not included in MoD stack in MTR Order:																		
Mauda II	-	0.72	-	13.18 [^]	-	-	163.80	50.28	3.07	46.68	2.85	5.92	163.80	49.56	33.50	3.07	2.85	5.92
NTPC Solapur 2	-	-	-	44.34 [^]	-	-	-	-	-	-	-	-	-	-	(44.34)	-	-	-
Mauda I	-	0.72	-	47.38 [^]	-	-	161.35	50.17	3.11	44.59	2.76	5.87	161.35	49.45	(2.79)	3.11	2.76	5.87
NTPC Solapur	-	-	-	49.30 [^]	-	-	47.36	15.56	3.28	66.14	13.97	17.25	47.36	15.56	16.84	3.28	13.97	17.25
NTPC NVVN	-	-	-	-	-	-	10.73	3.85	3.59	-	-	3.59	10.73	3.85	-	3.59	-	3.59
RRAS Thermal	-	-	-	-	-	-	-	9.82	-	-	-	-	-	9.82	-	-	-	-
RRAS Gas	-	-	-	-	-	-	-	1.29	-	-	-	-	-	1.29	-	-	-	-
Total NTPC	2,371.72	356.01	1.50	416.00	1.75	3.26	2,505.76	489.90	1.96	400.32	1.60	3.55	134.05	133.89	(15.68)	0.45	(0.16)	0.30

*Variable Cost= (Variable Cost+ Other Cost)

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

4.25 As can be seen from above Table, MSEDCL has procured around 378.48 MUs, 10.53 MUs and 383.24 MUs of power from certain generating stations of NTPC (including NTPC NVVN bundled power) during the month of October, November and December, 2019 respectively, that were not included in monthly MoD stack in MTR Order (owing to high energy price). Thus, the above power purchase has resulted in additional variable cost of Rs. 101.89 Crore, Rs. 3.65 Crore and Rs. 119.86 Crore. This has led to increase in actual power purchase cost during the respective period. The Commission has verified the actual quantum of power purchase and cost from NTPC stations from the detailed summary bills/invoices submitted by MSEDCL and found them to be in order.

4.26 Further, the variation in power purchase expenses from NTPC during Q3 of FY 2019-20 can be divided into two part, i.e., variation in power purchase expense on account of variation in quantum purchase and variation in power purchase expense on account of increased per unit rate as follows:

Month	Variation in Expenses for power purchase from NTPC (Rs. Crore)		
	On Account of Variation in Quantum of Power Purchase	On Account of Variation in Per Unit rate of Power Purchase	Total
October, 2019	(34.81)	122.43	87.62
November, 2019	(63.73)	60.05	(3.68)
December, 2019	43.63	74.57	118.20

4.27 Out of the total variation in expense as mentioned in Table above, variation in power purchase expense on account of increased per unit rate is only considered for FAC computation.

IPPs

4.28 The sources of IPPs for MSEDCL include Mundra CGPL UMPP and IPPs such as 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 Q3 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.

4.29 MSEDCL has procured 2,506.77 MUs, 2,802.70 MUs and 2,793.06 MUs of power from above mentioned IPPs, as against the monthly approved MoD stack of 2,517.34 MUs, 2,468.93 MUs and 2,322.46 MUs respectively during the months of October, November, and December 2019. The average power purchase cost from these stations stands at Rs.4.33/kWh, Rs.3.77/kWh, and Rs.3.79/kWh respectively as compared to monthly approved rate of Rs. 3.54/kWh, Rs.3.57/kWh, and Rs.3.62/kWh for the respective months of Q3 FY 2019-20 as shown below:

Particular	Approved for October, 2019				Actual for October, 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	2,517.34	2.10	808.08	3.21	2,032.20	2.22	842.66	4.15
Stations not included in MoD stack in MTR Order:								
i. RIPL 450	-	3.14	81.91 [^]	-	177.97	3.35	90.60	5.09
ii. RIPL 750	-	3.14		-	296.61	3.35	151.00	5.09
Total Stations excluded in MoD Stack in MTR Order	-	-	81.91	-	474.57	3.35	241.60	5.09
Total IPPs	2,517.34	2.01	889.99	3.54	2,506.77	2.43	1,084.27	4.33

*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 November, 2019				Actual for November, 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	2,468.93	2.10	799.26	3.24	2,758.09	2.25	960.25	3.48
Stations not included in MoD stack in MTR Order:								
i. RIPL 450	-	3.14	81.91 [^]	-	16.73	3.36	35.63	21.30
ii. RIPL 750	-	3.14		-	27.88	3.34	59.38	21.30
Total Stations excluded in MoD Stack in MTR Order	-	-	81.91	-	44.61	3.09	277.60	5.53
Total IPPs	2,468.93	2.10	881.17	3.57	2,802.70	2.27	1,055.25	3.77

*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 December, 2019				Actual for December, 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	2,322.46	2.06	759.30	3.29	2,793.06	2.31	974.58	3.49
Stations not included in MoD stack in MTR Order:								
i. RIPL 450	-	3.14	81.91 [^]	-	-	-	31.03	-
ii. RIPL 750	-	3.14		-	-	-	51.71	-
Total Stations excluded in MoD Stack in MTR Order	-	-	81.91	-	-	-	82.73	-
Total IPPs	2,322.46	2.06	841.20	3.62	2,793.06	2.31	1,057.31	3.79

*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.

4.30 The power purchase cost from IPPs were observed higher than that of MTR approved MoD stack, 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.

4.31 It is to be noted that the Commission in its MTR Order has not approved any quantum from RIPL 450MW and RIPL 750 MW plant in MoD stack during Q3 of FY 2019-20 owing to its high energy price (Rs. 3.14/kWh). However, due to lower availability of RE sources and reduced generation from those stations that were included in MTR MoD stack, MSEDCL has purchased 474.57 MUs and 44.61 MUs from above mentioned station during the month of October, 2019 and November, 2019 respectively. This transaction has resulted in additional variable cost of Rs. 158.91 Crore and Rs. 14.97 Crore during the month of October, and November, 2019 respectively. Apart from this, variation has also been 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.

4.32 Further, apart from above, 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.

4.33 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 a difference in CIL amount claimed by generator and that worked out by MSEDCL.

4.34 The Table below shows the reconciliation of CIL submitted by the MSEDCL during Q3 period:

Month	Sr. No	IPP	MU	As per Vendor bills (Rs. Cr) (Regular CIL)	As per MSEDCL (Regular CIL)		NCDP/Coal shortfall/Shakti		Total CIL	
					Rs. Cr	Rs/ kWh	Rs. Cr	Rs/ kWh	Rs. Cr	Rs/ kWh
Oct-19	1	Adani Power	1,303.63	43.16	42.26	0.32	100 [^]	0.77	142.26	1.09
	2	RIPL	474.57	19.72	16.50	0.35	-	-	16.50	0.35
	3	CGPL	431.81	7.42	7.19	0.17	-	-	7.19	0.17
	4	GMR	120.88	8.00	3.23	0.27	-	-	3.23	0.27
	5	JSW	175.88	4.49	4.05	0.23	-	-	4.05	0.23
	6	Total	2,506.77	82.79	73.24	0.29	100.00	0.40	173.24	0.69

[^]Rs. 100 Cr paid to APMIL for shortfall in domestic coal under SHAKTI Policy as per MERC Order in Case No. 290 of 2018 dated 7 February, 2019.

Month	Sr. No	IPP	MU	As per CIL bills (Rs. Cr)	Regular CIL		NCDP/Coal shortfall/Shakti		Total CIL	
					Rs. Cr	Rs/ kWh	Rs. Cr	Rs/ kWh	Rs. Cr	Rs/ kWh
Nov-19	1	Adani Power	2,007.09	69.68	59.43	0.30	-	-	59.43	0.30
	2	RIPL	44.61	40.05	1.55	0.35	-	-	1.55	0.35
	3	CGPL	434.42	8.19	7.51	0.17	-	-	7.51	0.17
	4	GMR	135.69	5.96	4.85	0.36	-	-	4.85	0.36
	5	JSW	180.88	4.62	4.16	0.23	-	-	4.16	0.23
	6	Total	2,802.70	128.50	77.60	0.28	0.00	0.00	77.60	0.28

Month	Sr. No	IPP	MU	As per CIL bills (Rs. Cr)	Regular CIL		NCDP/Coal shortfall/Shakti		Total CIL	
					Rs. Cr	Rs/kWh	Rs. Cr	Rs/kWh	Rs. Cr	Rs/kWh
Dec-19	1	Adani Power	2,030.03	70.38	57.33	0.28	-	-	57.33	0.28
	2	RIPL	-	20.35	-	-	-	-	-	-
	3	CGPL	473.71	8.31	7.90	0.17	-	-	7.90	0.17
	4	GMR	136.85	5.85	5.54	0.40	20.87*	1.53	26.41	1.93
	5	JSW	152.48	3.90	3.51	0.23	-	-	3.51	0.23
	6	Total	2,793.06	108.79	74.28	0.34	20.87	1.53	95.15	0.34

*Rs. 20.87 Cr paid towards NCDP and carrying cost as per CERC Order in Case No. 284/MP/2018, 8/MP/2014 and 284/MP/2018

4.35 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 towards NCDP during Q3 of FY 2019-20. The payment of these CIL are as per Commission's Order or APTEL Judgement as the case may be. As can be seen from above Table that due to CIL claim, there is an impact of Rs. 0.69/kWh, Rs. 0.28/kWh and Rs.0.34/kWh during the month of October, November, and December 2019 respectively. This has led to increase in actual power purchase cost from IPPs as compared to monthly approved cost.

4.36 Variation in power purchase expenses from IPPs during Q3 of FY 2019-20 can be divided into two parts, i.e., variation in power purchase expense on account of variation in quantum purchase and variation in power purchase expense on account of increased per unit rate as follows:

Month	Variation in Expenses for power purchase from IPPs (Rs. Crore)		
	On Account of Variation in Quantum of Power Purchase	On Account of Variation in Per Unit rate of Power Purchase	Total
October, 2019	(3.74)	198.02	194.28
November, 2019	119.12	54.96	174.09
December, 2019	170.46	45.65	216.11

4.37 Out of Total variation in expense as mentioned in Table above, variation in power purchase expense on account of increased per unit rate is only considered for FAC computation.

Traders/STPP:

4.38 MSEDCL has purchased 183.93 MUs, 12.11 MUs and 143.68 MUs of short-term power in the month October, November, and December, 2019, respectively. the above Short-term power has been procured at an average cost of Rs. 3.39/kWh, Rs. 3.43/kWh, and Rs.

3.60/kWh during the respective month. Source wise break-up of the above mentioned STPP is as shown in Table below:

Month	Bilateral		Exchange		Total	
	MUs	Avg. Rate (Rs./kWh)	MUs	Avg. Rate (Rs./kWh)	MUs	Avg. Rate (Rs./kWh)
October-19	87.62	3.44	96.31	3.35	183.93	3.39
November-19	-	-	12.11	3.43	12.11	3.43
December-19	-	-	143.68	3.60	143.68	3.60

- 4.39 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 be met 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.
- 4.40 Further, the Commission in present quarter has asked MSEDCL to justify the procurement of short-term power inspite of having enough tied up contracted capacity. In response to above query MSEDCL stated that in last week of September, 2019 month, Coal India Limited workers had called strike and it was anticipated that the strike might affect the generation availability of contracted long term generators. Further, considering post monsoon period and looking at the historical trends, increase in demand was expected in the month of October, 2019. MSEDCL further stated that in the previous year during the same period, i.e., in the month of September 2018 and October 2018, it had experienced such a situation due to coal shortage wherein, MSEDCL had to procure costly power through exchange. Hence, based on past experience in order to avoid situation of procurement of costly power, MSEDCL had issued LOI to the successful bidders for the month of October, 2019 as per the tender (ET-18) floated on DEEP e-bidding portal for 160 MW @ Rs. 3.60 per unit for period from 01 October, 2019 to 15 October 2019 and 160 MW @ Rs 3.33 per unit for the period from 16 October, 2019 to 31 October, 2019. Thus, MSEDCL procured 87.62 MUs (around 74% as compared to LOI quantum) in the month of October, 2019 through the short term tender.
- 4.41 MSEDCL further stated that during some 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 October, 2019 to December, 2019. MSEDCL also submitted the daily obligation report of above short-term purchase issues by IEX showing the daily short-

term power purchase quantum details. Further, as the power from short-term sources has been procured by MSEDCL through competitive bidding and through exchange and the same is also below the ceiling rate of Rs. 5.00/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

4.42 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.

4.43 MSEDCL has purchased 1,475.69 MUs, 1,388.75 MUs and 2,123.40 MUs from these sources during the month of October, November, December, 2019, respectively as compared to the monthly approved MoD energy stack of 2,581.07 MUs, 2,543.10 MUs and 2,546.15 MUs. The actual quantum of power purchase from Must Run sources is lower than that of quantum approved in MoD stack for Q3 of FY 2019-20 as per MTR Order. The average power purchase cost from these stations during the aforesaid period is Rs. 3.55 /kWh, 3.73 /kWh and Rs. 3.93 /kWh as compared to monthly approved rate (derived based on monthly approved MoD stack) of Rs. 3.86 /kWh, Rs. 3.88 /kWh and Rs. 3.84 /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 October, 2019			Actual for October, 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	93.42	23.20	2.48	0.43	(1.16)	(0.14)
TAPP 1&2	97.14	11.51	1.19	105.87	21.83	2.06	8.73	10.32	0.87
TAPP 3&4	274.46	89.02	3.24	300.92	92.42	3.07	26.46	3.4	(0.17)
SSP	102.76	21.07	2.05	160.35	32.87	2.05	57.59	11.8	0
Pench	11.59	2.38	2.05	19.23	3.94	2.05	7.64	1.56	0
Dodson I	4.37	0.62	1.42	1.94	0.31	1.60	(2.43)	(0.31)	0.18
Dodson II	5.45	0.75	1.38	0.74	2.06	27.99	(4.71)	1.31	26.61
Renewable Energy Non- Solar	1,270.95	666.09	5.24	376.45	192.04	5.10	(894.50)	(474.05)	(0.14)
Renewable Energy Solar	386.81	160.79	4.16	184.92	95.77	5.18	(201.89)	(65.02)	1.02
MSPGCL Hydro	334.54	18.89	0.56	231.86	17.7	0.76	(102.68)	(1.19)	0.2
MSPGCL Lease Rent*	-	-	-	-	41.01	-	-	41.01	-
Total	2,581.07	995.47	3.86	1,475.69	523.15	3.55	(1,105.36)	(472.32)	(0.31)

Source	MTR Approved for November, 2019			Actual for November, 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	79.22	19.88	2.51	(10.78)	(3.69)	(0.11)
TAPP 1&2	94.00	11.14	1.19	96.62	19.88	2.06	2.62	8.74	0.87
TAPP 3&4	265.61	86.15	3.24	144.84	44.53	3.07	(120.77)	(41.62)	(0.17)
SSP	99.45	20.39	2.05	89.35	18.32	2.05	(10.10)	(2.07)	-
Pench	11.22	2.30	2.05	7.10	1.46	2.05	(4.12)	(0.84)	0.00
Dodson I	4.23	0.60	1.42	0.19	0.04	2.25	(4.04)	(0.56)	0.84
Dodson II	5.28	0.75	1.42	-	0.75	-	(5.28)	(0.00)	(1.42)
Renewable Energy Non- Solar	1,264.67	662.80	5.24	378.63	219.58	5.80	(886.04)	(443.22)	0.56
Renewable Energy Solar	384.90	159.99	4.16	302.89	133.48	4.41	(82.01)	(26.51)	0.25
MSPGCL Hydro	323.75	18.89	0.58	289.90	18.41	0.64	(33.85)	(0.48)	0.05
MSPGCL Lease Rent*	-	-	-	-	41.01	-	-	41.01	-
Total	2,543.10	986.58	3.88	1,388.75	517.34	3.73	(1,154.35)	(469.24)	(0.15)

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

Source	MTR Approved for December, 2019			Actual for December, 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	93.95	23.36	2.49	0.96	(1.00)	(0.13)
TAPP 1&2	97.14	11.51	1.19	96.33	19.85	2.06	(0.81)	8.34	0.88
TAPP 3&4	274.46	89.02	3.24	150.95	46.46	3.08	(123.51)	(42.56)	(0.17)
SSP	102.76	21.07	2.05	107.53	22.04	2.05	4.77	0.98	-
Pench	11.59	2.38	2.05	2.55	0.52	2.05	(9.05)	(1.85)	-
Dodson I	4.37	0.62	1.42	-	0.18	-	(4.37)	(0.44)	(1.42)
Dodson II	5.45	0.75	1.38	-	0.75	-	(5.45)	(0.00)	(1.38)
Renewable Energy Non- Solar	1,244.17	652.06	5.24	832.21	499.76	6.01	(411.96)	(152.30)	0.76
Renewable Energy Solar	378.66	157.40	4.16	411.52	160.70	3.91	32.86	3.30	(0.25)
MSPGCL Hydro	334.54	18.89	0.56	428.36	20.46	0.48	93.82	1.57	(0.09)
MSPGCL Lease Rent*	-	-	-	-	41.01	-	-	41.01	-
Total	2,546.15	978.04	3.84	2,123.40	835.10	3.93	(422.75)	(142.94)	0.09

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

4.44 As can be seen from above Table that average power purchase cost (Rs./kWh) in the month of October and November, 2019 is lower than MTR approved price. Whereas, in the month of December, 2019 the average power purchase cost (Rs./kWh) is higher as compared to MTR approved price. It is to be noted that the above must run power has been procured at a price approved by the respective Commission and as per PPA terms. However, due to variation in the actual energy drawl from various must run sources as

compared to MTR approved quantum, the weighted average power purchase cost has got impacted.

4.45 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. Therefore, when the quantum and 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. The Table below shows the percentage share of Must sources during Q3 of FY 2019-20:

Particular	October, 2019			November, 2019			December, 2019		
	MUs	Avg Rate (Rs./kWh)	% Share	MUs	Avg Rate (Rs./kWh)	% Share	MUs	Avg Rate (Rs./kWh)	% Share
Renewable Energy Non-Solar	376.45	5.10	26%	378.63	5.80	27%	832.21	6.01	39%
Renewable Energy Solar	184.92	5.18	13%	302.89	4.41	22%	411.52	3.91	19%
MSPGCL Hydro*	231.86	2.53	16%	289.90	2.05	21%	428.36	1.44	20%
Others Must Run	682.47	2.59	46%	417.32	2.51	30%	451.31	2.51	21%
Total	1,475.70	3.55	100%	1,388.75	3.73	100%	2,123.40	3.93	100%

**Inclusive of rent lease*

4.46 It can be seen from the above Table that, during the month of October and November, 2019 the % share of costlier approved Non-Solar sources is 26% and 27% respectively. Whereas, during the month of December, 2019 it increased to 39%. Also, the % share of the Other Must Sources (i.e., KAPP, TAPP 1&2, TAPP 3&4, SSP, Pench, Dodson I, Dodson II) having comparatively lower approved rate, was 46% and 30% in the month of October and November, 2019 respectively. Whereas, during the month of December, 2019 it dropped to 21%. Due to this the weighted average power purchase cost from must run sources mainly in the month of December has resulted into higher price as compared to MTR approved price.

4.47 Also, in case of MSPGCL's Hydro stations the approved power purchase rate was lowest in the total must run portfolio, i.e., Rs. 0.56/kWh. However, in addition to power purchase cost and annual fixed charges, MSEDCL also needs to pay monthly lease rent (Rs. 41.01 Cr per month) to MSPGCL's hydro stations as per PPA terms. This lease rent was not part of power purchase cost approved in MTR Order. Hence, the actual landed power purchase cost has resulted higher for MSPGCL's hydro power during aforesaid period as compared to MTR approved price.

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

Interstate

4.49 MSEDCL has considered 4.50 MUs, 5.25 MUs and (7.81) MUs of Inter-state Power purchase from MPEB in the FAC computation for the month of October, November and December, 2019. The cost associated to the above mentioned transaction was Rs. 2.34 Crore, Rs. 0.20 Crore and Rs. (1.86) Crore, respectively as shown in Table below:

Month	Quantum Purchased (MUs)	Cost of Power Purchase (Rs. in Crores)
October-2019	4.50	2.34
November-2019	5.25	0.20
December-2019	(7.81)	(1.86)

4.50 MSEDCL was asked to provide the details of above-mentioned interstate transaction from MPEB. In response, MSEDCL has stated that, aforesaid power is being supplied from neighbouring state (i.e. Madhya Pradesh) to some consumers of border villages of Amravati and Nagpur in Maharashtra. Similarly, MSEDCL is also supplying power to some consumers in areas bordering Maharashtra but outside the state. These arrangements between MSEDCL and MPEB, were made due to technical constraints in releasing power supply from their own distribution system. MSEDCL has considered the net quantum and cost associated to above mentioned transaction in the FAC computation. MSEDCL further stated that power purchase from MPEB is UI/DSM transaction and clarified that cost towards such a transaction has also been approved by the Commission in recent MYT Order during final truing up of FY 2018-19 (Table 4-33 MERC Order on Case No. 322 of 2019). MSEDCL has also provided the details of the quantum of power supplied to the MPEB's consumer and power supplied to the villages in Maharashtra from April, 2019 to December, 2019.

Summary of Power Purchase:

4.51 The Table below shows the monthly variation in power purchase from various sources in terms of quantum of purchase, per unit variable charge, per unit fixed charge and average power purchase cost for MSEDCL during Q3 of FY 2019-20.

Particular	Approved for October, 2019						Actual for October, 2019						Variations			
	Quantum (MUs)	Variable Cost (Rs. Cr)*	Variable Cost (Rs. /kWh)	Fixed Cost (Rs. Cr)	Fixed charge (Rs. /kWh)	APPC (Rs. /kWh)	Quantum (MUs)	Variable Cost (Rs. Cr)*	Variable Cost (Rs. /kWh)*	Fixed cost (Rs. Cr)	Fixed charge (Rs. /kWh)	APPC (Rs. /kWh)	Quantum (MUs)	Variable Cost (Rs. /kWh)	Fixed Cost (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	3,560.05	788.30	2.21	728.58	2.05	4.26	3,219.72	773.54	2.40	634.36	1.97	4.37	(340.33)	0.19	(0.08)	0.11
MSPGCL Hydro	334.54	-	-	18.89	0.56	0.56	231.86	3.65	0.16	55.06	2.37	2.53	(102.68)	0.16	1.81	1.97
NTPC	2,371.72	356.01	1.40	416.00	1.75	3.26	2,264.78	411.01	1.81	448.62	1.98	3.80	(106.93)	0.41	0.23	0.54
IPPs	2,517.34	536.07	2.10	353.92	1.41	3.54	2,506.77	720.40	2.87	363.87	1.45	4.33	(10.57)	0.78	0.05	0.79
Solar	386.81	160.79	4.16	-	-	4.16	184.92	95.77	5.18	-	-	5.18	(201.89)	1.02	-	1.02
Non- Solar	1,270.95	666.09	5.24	-	-	5.24	376.45	192.04	5.10	-	-	5.10	(894.50)	(0.14)	-	(0.14)
Other Must Run	588.78	148.95	2.53	0.75	0.01	2.54	682.46	175.88	2.58	0.75	0.01	2.59	93.68	0.05	(0.00)	0.05
STTP	-	-	-	-	-	-	183.93	62.40	3.39	-	-	3.39	183.93	3.39	-	3.39
Inter-state	-	-	-	-	-	-	4.50	2.34	5.20	-	-	5.20	4.50	5.20	-	5.20
Total MSEDCL	11,030.18	2,656.21	2.41	1,518.14	1.38	3.78	9,655.41	2,437.04	2.52	1,502.67	1.56	4.08	(1,374.78)	0.12	0.18	0.30

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

Particular	Approved for November, 2019						Actual for November, 2019						Variations			
	Quantum (MUs)	Variable Cost (Rs. Cr)*	Variable Cost (Rs. /kWh)	Fixed Cost (Rs. Cr)	Fixed charge (Rs. /kWh)	APPC (Rs. /kWh)	Quantum (MUs)	Variable Cost (Rs. Cr)*	Variable Cost (Rs. /kWh)*	Fixed cost (Rs. Cr)	Fixed charge (Rs. /kWh)	APPC (Rs. /kWh)	Quantum (MUs)	Variable Cost (Rs. /kWh)	Fixed Cost (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	3,665.12	820.62	2.24	728.58	1.99	4.23	3,602.74	1,060.83	2.94	757.51	2.10	5.05	(62.38)	0.71	0.11	0.82
MSPGCL Hydro	323.75	-	-	18.89	0.58	0.58	289.90	13.40	0.46	46.02	1.59	2.05	(33.85)	0.46	1.00	1.47
NTPC	2,295.21	345.28	1.40	416.00	1.81	3.32	2,103.07	340.57	1.62	417.03	1.98	3.60	(192.14)	0.22	0.17	0.29
IPPs	2,468.93	527.25	2.10	353.92	1.43	3.57	2,802.70	646.59	2.31	408.66	1.46	3.77	333.77	0.20	0.02	0.20

Particular	Approved for November, 2019						Actual for November, 2019						Variations			
	Quantum (MUs)	Variable Cost (Rs. Cr)*	Variable Cost (Rs. /kWh)	Fixed Cost (Rs. Cr)	Fixed charge (Rs. /kWh)	APPC (Rs. /kWh)	Quantum (MUs)	Variable Cost (Rs. Cr)*	Variable Cost (Rs. /kWh)*	Fixed cost (Rs. Cr)	Fixed charge (Rs. /kWh)	APPC (Rs. /kWh)	Quantum (MUs)	Variable Cost (Rs. /kWh)	Fixed Cost (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	384.90	159.99	4.16	-	-	4.16	302.89	133.48	4.41	-	-	4.41	(82.01)	0.25	-	0.25
Non- Solar	1,264.67	662.80	5.24	-	-	5.24	378.63	219.58	5.80	-	-	5.80	(886.04)	0.56	-	0.56
Other Must Run	569.79	144.14	2.53	0.75	0.01	2.54	417.32	104.10	2.49	0.75	0.02	2.51	(152.46)	(0.04)	-	(0.03)
STTP	-	-	-	-	-	-	12.11	4.15	3.43	-	-	3.43	12.11	3.43	-	3.43
Inter-state	-	-	-	-	-	-	5.25	0.20	0.38	-	-	0.38	5.25	0.38	-	0.38
Total MSEDCL	10,972.36	2,660.09	2.42	1,518.14	1.38	3.81	9,914.61	2,522.92	2.54	1,629.97	1.64	4.19	(1,057.76)	0.12	0.26	0.38

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

Particular	Approved for December, 2019						Actual for December, 2019						Variations			
	Quantum (MUs)	Variable Cost (Rs. Cr)*	Variable Cost (Rs. /kWh)	Fixed Cost (Rs. Cr)	Fixed charge (Rs. /kWh)	APPC (Rs. /kWh)	Quantum (MUs)	Variable Cost (Rs. Cr)*	Variable Cost (Rs. /kWh)*	Fixed cost (Rs. Cr)	Fixed charge (Rs. /kWh)	APPC (Rs. /kWh)	Quantum (MUs)	Variable Cost (Rs. /kWh)	Fixed Cost (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	3,560.05	788.30	2.21	728.58	2.05	4.26	4,103.05	1,224.05	2.98	711.18	1.73	4.72	543.00	0.77	(0.31)	0.46
MSPGCL Hydro	334.54	-	-	18.89	0.56	0.56	428.36	6.49	0.15	54.99	1.28	1.44	93.82	0.15	0.72	0.87
NTPC	2,371.72	356.01	1.40	416.00	1.75	3.26	2,505.76	489.90	1.96	400.32	1.60	3.55	134.05	0.55	(0.16)	0.30
IPPs	2,322.46	487.29	2.06	353.92	1.52	3.62	2,793.06	662.84	2.37	394.47	1.41	3.79	470.61	0.31	(0.11)	0.16
Solar	378.66	157.40	4.16	-	-	4.16	411.52	160.70	3.91	-	-	3.91	32.86	(0.25)	-	(0.25)
Non- Solar	1,244.17	652.06	5.24	-	-	5.24	832.21	499.76	6.01	-	-	6.01	(411.96)	0.76	-	0.76
Other Must Run	588.78	148.95	2.53	0.75	0.01	2.54	451.31	112.42	2.49	0.75	0.02	2.51	(137.47)	(0.04)	-	(0.03)
STTP	-	-	-	-	-	-	143.68	51.69	3.60	-	-	3.60	143.68	3.60	-	3.60
Inter-state	-	-	-	-	-	-	(7.81)	(1.86)	2.38	-	-	2.38	(7.81)	2.38	-	2.38

Particular	Approved for December, 2019						Actual for December, 2019						Variations			
	Quantum (MUs)	Variable Cost (Rs. Cr)*	Variable Cost (Rs. /kWh)	Fixed Cost (Rs. Cr)	Fixed charge (Rs. /kWh)	APPC (Rs. /kWh)	Quantum (MUs)	Variable Cost (Rs. Cr)*	Variable Cost (Rs. /kWh)*	Fixed cost (Rs. Cr)	Fixed charge (Rs. /kWh)	APPC (Rs. /kWh)	Quantum (MUs)	Variable Cost (Rs. /kWh)	Fixed Cost (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
Total MSEDCL	10,800.37	2,590.00	2.40	1,518.14	1.41	3.80	11,661.15	3,205.99	2.75	1,561.70	1.34	4.09	860.78	0.35	(0.07)	0.29

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

4.52 The Table below shows in summary of variation in Quarterly power purchase approved vis-à-vis actual for Q3 of FY 2019-20:

Particular	Approved for Q3 of FY 2019-20						Actual Q3 of FY 2019-20						Variations			
	Quantum (MUs)	Variable Cost (Rs. Cr)*	Variable Cost (Rs. /kWh)	Fixed Cost (Rs. Cr)	Fixed charge (Rs. /kWh)	APPC (Rs. /kWh)	Quantum (MUs)	Variable Cost (Rs. Cr)*	Variable Cost (Rs. /kWh)*	Fixed cost (Rs. Cr)	Fixed charge (Rs. /kWh)	APPC (Rs. /kWh)	Quantum (MUs)	Variable Cost (Rs. Cr)	Fixed Cost (Rs. Cr)	APPC (Rs. /kWh)
MSPGCL	10,785.23	2,397.23	2.22	2,185.73	2.03	4.25	10,925.52	3,058.42	2.80	2,103.05	1.92	4.72	140.29	661.20	(82.69)	0.47
MSPGCL Hydro	992.83	0.00	0.00	56.68	0.57	0.57	950.13	23.54	0.25	156.07	1.64	1.89	(42.70)	23.54	99.40	1.32
NTPC	7,038.64	1,057.30	1.50	1,248.00	1.77	3.28	6,873.61	1,241.48	1.81	1,265.97	1.84	3.65	(165.03)	184.18	17.97	0.37
IPPs	7,308.73	1,550.61	2.12	1,061.75	1.45	3.57	8,102.53	2,029.84	2.51	1,166.99	1.44	3.95	793.80	479.22	105.24	0.37
Solar	1,150.37	478.17	4.16	-	-	4.16	899.33	389.96	4.34	-	-	4.34	(251.04)	(88.23)	-	0.18
Non- Solar	3,779.78	1,980.95	5.24	-	-	5.24	1,587.30	911.38	5.74	-	-	5.74	(2,192.49)	1,069.57	-	0.50
Other Must Run	1,747.34	442.04	2.53	2.25	0.01	2.54	1,551.09	392.40	2.53	2.25	0.01	2.54	(196.26)	(49.64)	0.00	0.00
STTP	-	-	-	-	-	-	339.72	118.24	3.48	-	-	3.48	339.72	118.24	-	3.48
Inter-state	-	-	-	-	-	-	1.94	0.68	3.50	-	-	3.50	1.94	0.68	-	3.50
Total MSEDCL	32,802.92	7,906.31	2.41	4,554.41	1.39	3.80	31,231.16	8,165.94	2.61	4,694.33	1.50	4.12	(1,571.76)	259.65	139.92	0.32

4.53 From the Table above, it can be seen that there is an increase in power purchase cost amounting to Rs. 399.56 Crore {i.e., Rs. 259.63 Crore (variable cost) + Rs. 139.93 Crore (fixed cost)} during Q3 of FY 2019-20 as compared to MTR approved cost. However, there is also increase in corresponding revenue for MSEDCL due to increase in sales and corresponding billing to consumers. During Q3 of FY 2019-20, the total increase in sales is around 527.92 MUs as compared to MTR approved sales.

- 4.54 On an overall basis the APPC for the month of October, November and December, 2019 is higher mainly due 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 overall average power purchase cost of **Rs. 4.08/kWh** for the month of October, 2019, **Rs. 4.19/kWh** for the month of November, 2019 and **Rs. 4.09/kWh** for the month of December, 2019 compare to the MTR approved average cost of Rs. 3.78/kWh, Rs. 3.88/kWh, Rs. 3.80/kWh, respectively as shown in the Table above.
- 4.55 Further, the Commission has asked MSEDCL to confirm that all its contracted sources during Q3 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 Q3. 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.

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 Tables. 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 October to December, 2019.

S. No.	Particulars	Units	Oct, 2019	Nov, 2019	Dec, 2019
1	Average power purchase cost approved by the Commission	Rs./kWh	3.78	3.81	3.80
2	Actual average power purchase cost	Rs./kWh	4.08	4.19	4.09
3	Change in average power purchase cost (=2 -1)	Rs./kWh	0.30	0.38	0.28

S. No.	Particulars	Units	Oct, 2019	Nov, 2019	Dec, 2019
4	Net Power Purchase	MU	9,655.41	9,914.61	11,661.15
5	Change in fuel and power purchase cost (=3 x 4/10)	Rs. Crore	285.64	377.45	332.13

5.3 Further, MSEDCL during Q2 of FY 2019-20 has proposed revised methodology wherein it has bifurcated the change in fuel and power purchase cost into Agriculture (AG) and Non-Agriculture (Non-AG) categories based on weighted average of ABR and sales. Based on revised bifurcation methodology MSEDCL has re-allocated the FAC from April 2018 to June 2019 and worked out the adjustment of Rs. 912.70 Crore between AG and Non-AG categories. MSEDCL stated that it is adjusting the aforesaid amount by recovering it from Non-AG consumers for next five months starting from FAC months of November, 2019 to March 2020 and refunding the same to AG consumers in two quarters, i.e., December, 2019 and March, 2020. Accordingly, MSEDCL in present quarter also has adopted the same approach, i.e., bifurcation based on weighted average of ABR and sales and has considered the re-allocation adjustment in its FAC computation. However, the Commission in previous quarter post facto approval has not accepted the approach proposed by MSEDCL and has continued with its earlier adopted approach of bifurcation which was based on corresponding monthly sales only. Thus, in present FAC approval also, the Commission has continued with the same approach as adopted in previous post facto approval.

5.4 Accordingly, the Commission has bifurcated the 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 power purchase cost variation as shown in the Table below:

Particulars	Unit	October, 2019		
		Total	Ag	Non-Ag
Category wise sales during the month	MUs	8,341.50	1,993.00	6,348.50
Change in Fuel cost and power purchase cost attributable to Sales within the License Area (F)	Rs. Crore	285.64	68.25	217.39

Particulars	Units	November, 2019		
		Total	Ag	Non-Ag
Category wise sales during the month	MUs	8,245.15	1,807.40	6,437.75
Change in Fuel cost and power purchase cost attributable to Sales within the License Area (F)	Rs. Crore	377.45	82.74	294.71

Particulars	Units	December, 2019		
		Total	Ag	Non-Ag
Category wise sales during the month	MUs	8,788.85	2,299.66	6,489.19
Change in Fuel cost and power purchase cost attributable to Sales within the License Area (F)	Rs. Crore	332.13	86.90	245.23

10 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. MSEDCL has calculated adjustment factor for over recovery / under recovery by considering previous quarter FAC allowed to be recovered as per its own computation. As this is a post facto approval, hence, the Commission has recomputed adjustment factor by considering the FAC cost allowed to be recovered as approved in previous quarter FAC approval. The incremental cost actually recovered has been considered as submitted by MSEDCL and accordingly, the adjustment factors have been computed.

6.2 The adjustment factor for over recovery/under recovery (B) for the period of October, 2019 to December, 2019 is as below.

S. No.	Particulars	Units	October, 2019		November, 2019		December, 2019	
			Ag	Non-Ag	Ag	Non-Ag	Ag	Non-Ag
1.1	Incremental cost allowed to be recovered in Month n-4	Rs. Crore	NIL*	221.76	NIL*	168.77	283.40	244.52
1.2	Incremental cost in Month n-4 actually recovered in month n-2	Rs. Crore	1.04	213.91	(0.10)	378.03	(172.71)	451.93
1.3	Adjustment factor for (over-recovery)/under-recovery (=1.1 - 1.2)	Rs. Crore	(1.04)	7.85	0.10	(209.26)	456.11	(207.41)

*Allowable FAC for AG categories for the month of October & November is considered cumulatively in the month of December as per quarterly billing cycle.

11 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 October, 2019 to December, 2019.

S. No.	Particulars	Units	October, 2019		November, 2019		December, 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	(1.04)	7.85	0.10	(209.26)	456.11	(207.41)
2	Applicable Interest rate	%	9.55	9.55	9.50	9.50	9.40	9.40
3	Carrying cost for over-recovery /under-recovery	Rs. Crore	(0.02)	0.13	0.00	(3.31)	7.15	(3.25)

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		
					Oct'19	Nov'19	Dec'19
1	Net Energy requirement at T\leftrightarrowD Periphery	a	MU	1,29,507	72,750	82,461	93,623
2	EHV Sales	b	MU	8,549	5,376	6,039	6,747
3	Net Energy Available for Sale at 33kV	c=a-b	MU	1,20,957	67,373	76,422	86,876
4	Energy injected and drawn at 33kV	d	MU	488	291	315	349
5	Total Energy Available for Sale at 33kV	e=c+d	MU	1,21,445	67,664	76,737	87,225
6	LT Agriculture Sales (Including D.F)	f	MU	31,149	16,145	18,401	20,657
7	LT Sales excluding Agriculture Sales (Including D.F)	g	MU	41,016	24,563	27,626	30,522
8	HT Sales excluding EHV level sales (Including D.F)	h	MU	27,654	16,474	18,779	21,197
9	HT/LTIP Credit Sales and HT/LT Offset Export Solar units	i	MU	-	447	491	550
10	Total Sales including D.F (Excluding EHV Sales)	j=f+g+h+i	MU	99,820	57,629	65,297	72,925
11	OA sales	k	MU	5,523	1,932	2,203	2,497
17	Retail Energy Sale to Consumers (Excluding EHV Sales and Including OA Sales)	l=j+k	MU	1,05,342	59,560	67,500	75,423
18	Distribution Loss (Excl. EHV Sales)	m=e-l	MU	16,103	8,104	9,237	11,802
19	% Distribution Loss (Excl. EHV Sales)	n=m/e	%	13.26%	11.98%	12.04%	13.53%
20	Excess Distribution loss = [Actual Distribution loss - Distribution loss approved] x Net Energy Input		MU	-	-	-	28

9.1 The cumulative distribution losses for the month of October, November and December, 2019 is 11.98%, 12.04% and 13.53%, respectively, as compared to MTR approved losses of 13.26%. The cumulative distribution losses of MSEDCL mainly for the months of December, 2019 is above the approved losses hence, excess distribution losses of 28 (MUs) has been worked out for aforesaid period. Based on above specified excess distribution losses and FAC per unit rate computed for the month of December, 2019, the total amount equivalent to Rs. 2.37 Crore has been disallowed.

9 Summary of Allowable ZFAC

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

S. No	Particulars	Units	October, 2019		November, 2019		December, 2019	
			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	68.25	217.39	82.74	294.71	86.90	245.23
1.2	Carrying cost for over-recovery/under-recovery (C)	Rs. Crore	(0.02)	0.13	0.00	(3.31)	7.15	(3.25)
1.3	Adjustment factor for over-recovery/under-recovery (B)	Rs. Crore	(1.04)	7.85	0.10	(209.26)	456.11	(207.41)
1.4	ZFAC = F+C+B	Rs. Crore	67.19	225.37	82.85	82.13	550.16	34.57
1.5	ZFAC = F+C+B October'19 for AG Category	Rs. Crore					67.19	
1.6	ZFAC = F+C+B November'19 for AG Category	Rs. Crore					82.85	
1.7	Total ZFAC (Quarterly) for AG Category	Rs. Crore					700.20	
1.8	FAC charged for the billing months	Rs. Crore	-	225.37	-	82.13	700.20	73.87
2.0	Calculation of FAC Charge							
2.1	Energy Sales within the License Area	MU	1,993.00	6,348.50	1,807.40	6,437.75	2,299.66	6,489.19
2.2	Energy Sales within the License Area to AG consumers during last quarter	MU	-	-	-	-	6,100.06	-
2.3	Excess Distribution Loss	MU	-	-	-	-	7.43	20.96
2.4	ZFAC per kWh	Rs./kWh	0.34	0.35	0.46	0.13	2.39	0.11
2.5	ZFAC per kWh Quarterly for Ag	Rs./kWh					1.15	
2.6	FAC Charge allowable in billing month	Rs./kWh	0.34	0.35	0.46	0.13	1.15	0.11
3.0	Recovery of FAC							
3.1	Allowable FAC [(2.1 x 2.6)/10]	Rs. Crore	67.19	225.37	82.85	82.13	550.16	34.57
3.2	FAC disallowed corresponding to	Rs. Crore	-	-	-	-	1.78	0.11

S. No	Particulars	Units	October, 2019		November, 2019		December, 2019	
			Ag	Non-Ag	Ag	Non-Ag	Ag	Non-Ag
	excess Distribution Loss [(2.2 x 2.5)/10]							
4.0	Total FAC based on category wise and slab wise allowed to be recovered	Rs. Crore	67.19	225.37	82.85	82.13	548.39	34.46
5.0	Carried forward FAC for recovery during future period (1.4-3.2-4)	Rs. Crore	-	-	-	-	-	-

9.2 From the Table above it can be seen that standalone FAC for Non-Agriculture category during the months of October, November and December, 2019 is Rs. 225.37 Crore, Rs 82.13 Crore and Rs. 34.46 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 if any, FAC per unit for Non-Agriculture category has been work out as Rs 0.35/kWh, Rs 0.13/kWh and Rs 0.11/kWh for the months of October, November and December, 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
October, 2019	Rs. Crore	506.52	225.37
November, 2019	Rs. Crore	594.60	82.13
December, 2019	Rs. Crore	465.34	34.46
Total	Rs. Crore	1,566.46	341.96

9.4 From the Table above MSEDCL has to recover Rs. 341.96 Crore cumulatively for Q3 of FY 2019-20, however, it has actually recovered Rs. 1566.46 Crore. Hence, MSEDCL is required to refund the differential amount Rs. (1,224.50) Crore along with the interest to consumers.

9.5 The total FAC for Agriculture category for the months of October, November and December, 2019 is Rs. 67.19 Crore, Rs. 82.85 Crore and Rs.584.39 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 0.34/kWh, Rs 0.46/kWh and Rs 2.39/kWh for the months of October, November and December, 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 of the quarter (i.e. on December, 2019). 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. 1.15/kWh.

9.6 The following the Table shows the FAC for Agriculture category during the months of October, November and December, 2019:

Month	Units	MSEDCL's claim	Approved by the Commission
		Ag	Ag
October, 2019	Rs. Crore	(146.73)	67.19
November, 2019	Rs. Crore	(138.25)	82.85
December, 2019	Rs. Crore	(54.13)	548.39
Total	Rs. Crore	(339.11)	698.42

9.7 From the Table above, MSEDCL has to recover total FAC of Rs. 698.42 Crore to Agriculture consumers. However, MSEDCL has computed a refund of Rs. (339.11) Crore mainly due to re-allocation of FAC from April, 2018 to June, 2019. As the Commission has not considered the adjustment due re-allocation of FAC amount, there is under recovery of Rs. 1,037.53 Crore (i.e., Rs. 698.42 Cr – Rs (339.11) Cr).

9.8 Considering the refund of Rs. (1,224.50) Crore with regards to Non-Agriculture category and recovery of Rs. 1,037.53 Crore with regards to Agriculture category, the net refund of FAC stands at Rs. (186.97) Crore for Q3 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 Q3 of FY 2019-20 is only to carry forward the allowance or disallowance to next quarter and subsequently to Q4 of FY 2019-20. Any adjustment of final allowance or disallowance will be reconciled at the time of final True-up of FY 2019-20.

9.10 Also, the Regulation 10.9 of MYT Regulations, 2015 specifies as;

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:

9.11 As the FAC per unit computed is lower than the 20% cap specified in Regulation, hence, there is no restriction triggered with regards to such ceiling for all the months of October, November and December 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: —

$$\text{ZFAC Cat (Rs/kWh)} = [\text{ZFAC} / (\text{Metered sales} + \text{Unmetered consumption estimates} + \text{Excess distribution losses})] * k * 10,$$

Where:

ZFAC Cat = ZFAC component for a particular Tariff category/sub-category/consumption slab in ‘Rupees per kWh’ terms;

$k = \text{Average Billing Rate} / \text{ACOS}$;

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 following table shows per unit ZFAC to be charged to the consumers of MSEDCL in the billing month, i.e., January, February and March, 2020.

Table A- Fuel Adjustment Charges for the Month of October, November and December, 2019 to be levied in January, February and March, 2020, respectively

Sr. No.	Categories	ZFAC to be levied in billing month of Jan'20 (Rs./kWh)	ZFAC to be levied in billing month of Feb'20 (Rs./kWh)	ZFAC to be levied in billing month of Mar'20 (Rs./kWh)
	LT Category			
1	Domestic (LT-I)			
A	BPL (0-30 Units)	0.2104	0.2200	0.1889
B	Consumption > 30 Units per month			
I	1-100 Units	0.5544	0.6100	0.4978
II	101-300 Units	0.9368	1.0829	0.8411
III	301-500 Units	1.1888	1.3740	1.0673

Sr. No.	Categories	ZFAC to be levied in billing month of Jan'20 (Rs./kWh)	ZFAC to be levied in billing month of Feb'20 (Rs./kWh)	ZFAC to be levied in billing month of Mar'20 (Rs./kWh)
IV	500-1000 Units	1.3223	1.5284	1.1872
V	Above 1000 Units	1.4022	1.6208	1.2590
2	Non Domestic (LT-2)			
A	0-20 KW			
A	0-200 Units	0.9348	1.0805	0.8393
B	Above 200 units	1.2535	1.4489	1.1255
B	>20-50 KW	1.3952	1.6126	1.2526
C	>50 KW	1.6987	1.9634	1.5251
3	Public Water Works (LT-III)			
A	0-20 KW	0.3824	0.4300	0.3434
B	20-40 KW	0.5220	0.6034	0.4687
C	above 40 kw	0.6698	0.7741	0.6013
4	Agriculture (LT-IV)			
A	Unmetered Tariff			
1	AG unmetered Pump set			
	Zone 1			
	A) 0-5 HP	0.0000	0.0000	(38.0625)
	B) HP -7.5 HP	0.0000	0.0000	940.2500)
	C) Above 7.5 HP	0.0000	0.0000	(43.9250)
2	Zone 2			
	A) 0-5 HP	0.0000	0.0000	(17.7994)
	B) HP -7.5 HP	0.0000	0.0000	(18.9860)
	C) Above 7.5 HP	0.0000	0.0000	(21.1615)
B	Metered Tariff (Pumpsets)	0.0000	0.0000	(0.8542)
C	Metered Tariff (Other)	0.5777	0.6677	(0.5187)
5	LT Industries (LT-V)			
A	Power Loom			
I	0-20 KW	0.6222	0.7192	0.5586
II	Above 20 KW	0.7861	0.9086	0.7058
B	General			
I	0-20 KW	0.6880	0.7952	0.6177
II	Above 20 KW	0.9642	1.1144	0.8657
6	Street Light (LT-VI)			
A	Grampanchayat A, B & C Class Municipal Council	0.6313	0.7297	0.5668
B	Municipal corporation Area	0.7861	0.9086	0.7058

Sr. No.	Categories	ZFAC to be levied in billing month of Jan'20 (Rs./kWh)	ZFAC to be levied in billing month of Feb'20 (Rs./kWh)	ZFAC to be levied in billing month of Mar'20 (Rs./kWh)
7	Temporary Connection (LT-VII)			
A	Temporary Connection (Religious)	0.5635	0.6514	0.5060
B	Temporary Connection (Other Purposes)	1.5611	1.8044	1.4016
8	Advertising and Hording (LT-VIII)	1.8261	2.1108	1.6396
9	Crematorium & Burial (LT-IX)	0.5099	0.5894	0.4578
10	Public Services (LT X)			
A	Government			
A	0-20 kw			
I	0-200 units	0.6000	0.6000	0.5813
II	> 200 units	0.7689	0.8400	0.6904
B	>20 -50 kw	0.8589	0.8600	0.7712
C	>50 kw	0.9328	1.0782	0.8375
B	Others			
A	0-20 KW			
I	0-200 Units	0.6708	0.7753	0.6022
II	Above 200 units	0.9389	1.0852	0.8430
B	>20-50 KW	1.0056	1.1624	0.9029
C	>50 KW	1.0370	1.1986	0.9311
10	Electric Vehicle (EV) Charging Stations (LT XI)	0.0000	0.0000	0.0000

Table B- Fuel Adjustment Charges for the Month of October, November and December, 2019 to be levied in January, February and March, 2020 respectively

Sr. No.	Categories	ZFAC to be levied in billing month of Jan'20 (Rs./kWh)	ZFAC to be levied in billing month of Feb'20 (Rs./kWh)	ZFAC to be levied in billing month of Mar'20 (Rs./kWh)
	HT Category			
1	HT Category – EHV (66 kV & Above)			
A	HT I(A): HT - Industry (General)	0.7972	0.9215	0.7158
B	HT I(B): HT - Industry (Seasonal)	0.8529	0.9858	0.7657
C	HT II: HT – Commercial	1.3122	1.5167	1.1781
D	HT III: HT - Railways/Metro/Monorail	0.8438	0.9753	0.7576
E	HT IV: HT - Public Water Works (PWW)	0.6718	0.7765	0.6031
F	HT V(A): HT - Agricultural – Pumpsets	0.4148	0.4795	0.3724
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
M	Electric Vehicle Charging Stations	0.0000	0.0000	0.0000
2	HT Category –33 kV			
A	HT I(A): HT - Industry (General)	0.8043	0.9297	0.7221
B	HT I(B): HT - Industry (Seasonal)	0.8681	1.0033	0.7794
C	HT II: HT – Commercial	1.3213	1.5272	1.1863
D	HT III: HT - Railways/Metro/Monorail	0.8468	0.9788	0.7603
E	HT IV: HT - Public Water Works (PWW)	0.7122	0.8233	0.6395
F	HT V(A): HT - Agricultural – Pumpsets	0.4229	0.4888	0.3797
G	HT V(B): Agricultural – Others	0.5534	0.6397	0.4969
H	HT VI: HT - Group Housing Society (Residential)	0.7031	0.8127	0.6313
I	HT VIII (A): HT - Temporary Supply Religious (TSR)	0.0000	0.0000	0.0000
J	HT VIII(B): HT - Temporary Supply Others (TSO)	1.3517	1.5623	1.2136
K	HT IX(A): HT - Public Services-Government	0.9227	1.0665	0.8284
L	HT IX(B): HT - Public Services-Others	1.1119	1.2852	0.9983
M	Electric Vehicle Charging Stations	0.0000	0.0000	0.0000
3	HT Category –22 kV			

Sr. No.	Categories	ZFAC to be levied in billing month of Jan'20 (Rs./kWh)	ZFAC to be levied in billing month of Feb'20 (Rs./kWh)	ZFAC to be levied in billing month of Mar'20 (Rs./kWh)
A	HT I(A): HT - Industry (General)	0.8417	0.9729	0.7558
B	HT I(B): HT - Industry (Seasonal)	0.0000	0.0000	0.0000
C	HT II: HT – Commercial	1.3122	1.5167	1.1781
D	HT III: HT - Railways/Metro/Monorail	0.8509	0.9835	0.7639
E	HT IV: HT - Public Water Works (PWW)	0.7618	0.8806	0.6840
F	HT V(A): HT - Agricultural – Pumpsets	0.4371	0.5052	0.3924
G	HT V(B): Agricultural – Others	0.5817	0.6724	0.5223
H	HT VI: HT - Group Housing Society (Residential)	0.7102	0.8209	0.6377
I	HT VIII (A): HT - Temporary Supply Religious (TSR)	0.0000	0.0000	0.0000
J	HT VIII(B): HT - Temporary Supply Others (TSO)	1.3567	1.5682	1.2181
K	HT IX(A): HT - Public Services-Government	0.9308	1.0758	0.8357
L	HT IX(B): HT - Public Services-Others	1.1149	1.2887	1.0010
M	Electric Vehicle Charging Stations	0.0000	0.0000	0.0000
4	HT Category – 11 kV			
A	HT I(A): HT - Industry (General)	1.0198	1.1788	0.9156
B	HT I(B): HT - Industry (Seasonal)	1.1422	1.3202	1.0255
C	HT II: HT - Commercial	1.6127	1.8640	1.4479
D	HT III: HT - Railways/Metro/Monorail	1.0542	1.2185	0.9465
E	HT IV: HT - Public Water Works (PWW)	0.8053	0.9308	0.7231
F	HT V(A): HT - Agricultural - Pumpsets	0.5301	0.6128	0.4760
G	HT V(B): Agricultural - Others	0.6293	0.7274	0.5650
H	HT VI: HT - Group Housing Society (Residential)	0.8964	1.0361	0.8048
I	HT VIII (A): HT - Temporary Supply Religious (TSR)	0.0000	0.0000	0.0000
J	HT VIII(B): HT - Temporary Supply Others (TSO)	1.7958	2.0757	1.6123
K	HT IX(A): HT - Public Services-Government	1.0451	1.2080	0.9383
L	HT IX(B): HT - Public Services-Others	1.3486	1.5588	1.2108
M	Electric Vehicle Charging Stations	0.0000	0.0000	0.0000

11 Summary

11.1 The Table below shows the summary of FAC claimed by MSEDCL vis-à-vis approved by the Commission for Q3 of FY 2019-20:

Particular	Month	Claimed	Approved	Remarks
FAC (Rs. Cr.) For AG categories	October, 2019	(146.73)	67.19	MSEDCL claimed Rs. 1,227.35 Crores, however, approved is Rs. 1,040.38 Crores. Hence, Rs. 186.97 Crores refundable
	November, 2019	(138.25)	82.85	
	December, 2019	(54.13)	548.39	
FAC (Rs. Cr.) For Non-AG categories	October, 2019	506.52	225.37	
	November, 2019	594.60	82.13	
	December, 2019	465.34	34.46	
Total FAC (Rs Cr.)	October, 2019	359.79	292.56	
	November, 2019	456.35	164.98	
	December, 2019	411.21	582.85	
Q3 for FY 2019-20 FAC	Total	1,227.35	1,040.38	
FAC per Unit For AG categories	October, 2019	(0.56)	1.15	
	November, 2019			
	December, 2019			
FAC per Unit For Non-AG categories	October, 2019	0.80	0.35	
	November, 2019	0.92	0.13	
	December, 2019	0.72	0.05	

11.2 MSEDCL has computed total FAC of Rs.1,227.35 Cr. against which the Commission has approved Rs. 1,040.38 Cr. thus Rs. 186.97 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 Q4 of FY 2019-20).