



महाराष्ट्र विद्युत नियामक आयोग  
Maharashtra Electricity Regulatory Commission

Ref. No. MERC/FAC/2021-22/0130

Date: 5 April, 2022

To,

**The Managing Director**

Maharashtra State Electricity Distribution Company Ltd.,  
5<sup>th</sup> Floor, Prakashgad, Plot No. G-9  
Bandra (East), Mumbai 400 051

**Subject:** Prior Approval of Fuel Adjustment Charges (FAC) submission of MSEDCL for the month of December, 2021.

**Reference:** 1. MSEDCL's FAC submission dated 2 March, 2022 for prior approval of FAC for the month of December, 2021.  
2. Data gaps communicated to MSEDCL vide email dated 7 March, 2022.  
3. MSEDCL's response to data gaps by email dated 10 March, 2022.

Sir,

Upon vetting the FAC calculations for the month of December, 2021 as mentioned in the above reference, the Commission has accorded approval for FAC amount of Rs. 226.39 Crore. However, the net leviable amount after adjustment from the existing FAC Fund is Rs 71.49 Crore and the same is being carried forward and will be accumulated for next three-month period i.e up to the month of February 2022 as per letter dated 5 April, 2022 issued by the Commission and accordingly the FAC chargeable to consumers is as shown in the table below:

Month	FAC Amount (Rs. Crore)
December, 2021	0 (Zero)

Yours faithfully,

(Dr. Rajendra G. Ambekar)  
Executive Director, MERC

**Encl:** Annexure A: Detailed Vetting Report for the month of December, 2021.

## ANNEXURE A

**Detailed Vetting Report**

**Date: 5 April, 2022**

### **PRIOR APPROVAL FOR FAC CHARGES FOR THE MONTH OF DECEMBER, 2021**

**Subject:** Prior Approval of Fuel Adjustment Charges (FAC) submission of MSEDCL for the month of December, 2021.

**Reference:** MSEDCL's FAC submission dated 2 March, 2022 and 10 March, 2022 for prior approval of FAC for the month of December, 2021.

#### **1. FAC submission by MSEDCL:**

1.1 MSEDCL has submitted FAC submissions for the month of December, 2021 as referred above. Upon vetting the FAC calculations, taking cognizance of all the submissions furnished by MSEDCL against the data gaps issued, the Commission has accorded prior approval to MSEDCL for FAC amount of Rs. 226.39 Crore. The approved FAC amount is being adjusted from the FAC Fund and the balance amount of Rs 71.49 Crore is being carried forward and will be accumulated for next three-month period i.e up to the month of February, 2022 as per letter dated 5 April, 2022 issued by the Commission. At the end of the three-month period, the Commission will allow the recovery of cumulative amount for three-month period equally over the next three-month period during prior approval of the third month along with carrying cost.

#### **2. Background**

2.1 On 30 March, 2020, the Commission has issued Tariff Order for MSEDCL, (Case No.322 of 2019) for True-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. Revised Tariff has been made applicable from 1 April, 2020.

2.2 In the Tariff Order, the Commission has stipulated methodology of levying FAC as follows:

*“8.5.12 Therefore, using its powers for Removing Difficulty under Regulations 106 of the MYT Regulations, 2019, the Commission is making following changes in the FAC mechanism stipulated under Regulation 10 of MYT Regulations, 2019:*

*Distribution Licensee shall undertake computation of monthly FAC as per Regulation 10 of the MYT Regulations, 2019 except for treatment to be given to negative FAC as follows:*

- *Negative FAC amount shall be carried forward to the next FAC billing cycle with holding cost;*

- *Such carried forward negative FAC shall be adjusted against FAC amount for the next month and balance negative amount shall be carried forward to subsequent month with holding cost;*
- *Such carry forward of negative FAC shall be continued till the accumulated negative FAC becomes 20% of monthly tariff revenue approved by the Commission in Tariff Order. In case of MSEDCL, such limit shall be Rs. 1500 crore. Any accumulated amount above such limit shall be refunded to consumers through FAC mechanism;*
- *In case such FAC Fund is yet to be generated or such generated fund is not sufficient to adjust against FAC computed for given month, then Distribution Licensee can levy such amount to the consumers through FAC mechanism.*

*8.5.13 In order to maintain transparency in management and use of such FAC Fund, the Distribution Licensee shall maintain monthly account of such FAC fund and upload it on its website for information of stakeholders. Further, till date, the Distribution Licensees have been levying FAC up to the prescribed limit of 20% of variable component of tariff without prior approval in accordance with the MYT Regulations, 2015, and submitting the FAC computations on a quarterly basis within 60 days of the close of each quarter, for post facto approval. However, as the Commission has now created a FAC fund as stated above to stabilise the increase in fuel prices and power purchase costs, the Commission has modified the FAC mechanism such that the Distribution Licensees shall submit the FAC computations on a monthly basis for prior approval, irrespective of whether FAC is chargeable in a month or whether some amount is accruing to the Fund on account of negative FAC.*

*8.5.14 The details of the FAC as per the Regulations, shall be submitted by the 15th of the every month prior to the month on which the FAC is proposed to be levied and the Commission will endeavour to decide on the same within 10 days so that the same can be levied from the 1st of the subsequent month. This prior approval will facilitate the addressing of any difficulties that may arise in giving effect to this fund. All the details will be submitted by the Distribution Licensee as is being done for approval of FAC on post facto basis. Thus the FAC to the consumers shall now be levied with prior approval of the Commission”*

- 2.3 Vide its letter dated 20 April, 2020, the Commission communicated the excel formats along with the checklist to file FAC submissions for prior approval to all Distribution Licensees. The Commission also directed all Distribution Licensees to file FAC submissions by 15<sup>th</sup> of every month prior to the month for which the FAC is proposed to be levied for prior approval.
- 2.4 Accordingly, MSEDCL has filed FAC submissions for the month of December, 2021 for prior approval. The Commission has scrutinized the submissions provided by MSEDCL and has also verified the fuel and power purchase bills provided along with its submissions.

### **3. Energy Sales of the Licensee**

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

Consumer Category	Yearly Approved by the Commission (MU)	Monthly Approved (MU)	Actual Sales
			December 2021 (MU)
<b>HT Category</b>			
Industry (General)	35,183.18	3,009.58	3,019.15
Industry (Seasonal)	102.93	13.93	20.87
Commercial	1,927.21	143.32	126.34
Railways/Metro/Monorail	82.07	5.84	6.89
Public Water Works (PWW)	2,047.87	170.72	177.25
Agricultural - Pumpssets	1,282.89	144.01	22.78
Agricultural - Others	267.54	20.82	19.75
Group Housing Society (Residential)	241.73	17.69	16.27
Public Services - Government	285.74	20.34	21.19
Public Services - Others	863.17	62.02	54.18
Electric Vehicle Charging Stations	0.31	0.03	1.46
MSPGCL Auxiliary	183.74	12.99	15.52
Other Adjustment	4,842.00	403.50	463.22
<b>Sub-total (A)</b>	<b>47,310.39</b>	<b>4,024.79</b>	<b>3,964.87</b>
<b>LT Category</b>			
BPL	47.34	4.82	4.28
Residential	23,983.09	1,551.44	1,620.81
Non-Residential	7,503.43	549.56	414.33
Public Water Works	941.77	78.36	81.11
AG Metered (Pump-sets)	18,084.07	1,237.63	1,475.67
AG Metered (Others)	140.00	10.46	14.98
Industrial	10,084.02	864.79	957.02
Street Lights	2,417.55	198.83	117.14
Public Services	610.03	41.81	43.90
Electric Vehicle Charging Stations	0.23	0.02	0.16
<b>Sub-total (B)</b>	<b>63,811.51</b>	<b>4,537.73</b>	<b>4,729.40</b>
<b>Total – Metered (C = A+B)</b>	<b>1,11,121.91</b>	<b>8,562.52</b>	<b>8,694.27</b>
Unmetered Sale (D)	8,783.32	810.92	840.42
<b>Grand Total(C+D)</b>	<b>1,19,905.23</b>	<b>9,373.44</b>	<b>9,534.69</b>

\* Other Adjustment is related to Sales to Open Access Consumer (Conventional and Renewable)

3.2 For the month of December, 2021, it is observed that actual sales of 9534.69 MU is higher by 1.7% as compared to the approved energy sales of 9373.44 MU. This is mainly due to higher Ag Sales considered by MSEDCL than approved by the Commission.

3.3 MSEDCL has submitted the data providing actual billing and estimated billing undertaken for the calculation of total energy consumption for the month of December, 2021. **As per the data, the billing of about 97.7% of sales is undertaken as per actual meter readings and balance 2.3% is assessed on an estimated basis. 100% of HT billing is undertaken on actual basis and estimation is only for LT category.** The figures do not include the agriculture sales which is on estimated basis for the month of December, 2021.

3.4 The number of actual and estimated meter readings undertaken by MSEDCL for the month of December, 2021 except for agriculture consumers are as given below:

Sr. No.	Particulars	No. of Meters for which <u>actual</u> meter reading is done either manually or through AMR	No. of Meters for which meter reading are <u>estimated</u> .	Total Meters
1	HT	22528	0	22528
2	LT	22142884	2351959	24494843
	<b>Total</b>	<b>22165412</b>	<b>2351959</b>	<b>24517371</b>

3.5 Further, comparison of sales for April, 2021 to December, 2021 as compared to last year is as shown below:

Particulars	LT - Residential (MU)	LT Others (MU)	HT (MU)	Ag- Unmetered	Total (MU)
Apr-21	2010	3231	3734	677	9652
Apr-20	1525	2687	2120	921	7254
May-21	2024	3091	3508	677	9300
May-20	2075	2559	2802	925	8361
June-21	2026	3126	3553	677	9382
June-20	2936	2449	3009	773	9167
July-21	2032	2879	3716	665	9293
July-20	2294	2366	2967	711	8339
August-21	2037	3084	3876	752	9749
August-20	2003	2408	3090	711	8212
September-21	2041	3101	3818	752	9712
September-20	1890	2990	3287	657	8825
October-21	1830	3121	4528	840	10320
October-20	1857	2766	3583	834	9040

Particulars	LT - Residential (MU)	LT Others (MU)	HT (MU)	Ag- Unmetered	Total (MU)
November-21	1801	3060	3720	840	9421
November-20	1646	2765	3367	834	8612
December-21	1621	3109	3965	840	9535
December-20	1507	2870	3732	834	8943
<b>April 21 to December 21</b>	<b>17422</b>	<b>27802</b>	<b>34418</b>	<b>6722</b>	<b>86364</b>
<b>April 20 to December 20</b>	<b>17734</b>	<b>23859</b>	<b>27957</b>	<b>7202</b>	<b>76752</b>

3.6 The Commission observes that overall sales in December, 2021 have increased as compared to December, 2020 due to increase in sales of all categories.

3.7 MSEDCL has considered agriculture sales are estimated based on consumption norms as per Tariff Order and previous three-year trend is used for estimation of monthly sale. The Commission while approving the FAC for the month of October, 2021 has restricted the agriculture sales to approved sales (based on the approved norm of Consumption/HP) as specified in MYT Order. MSEDCL in response to data gaps raised by the Commission has submitted the load (HP) details of agriculture connection based on the reading done in December 2021. Further, the Commission has approved monthly sales for the agriculture connections. Accordingly, the Commission has computed the norm of consumption/HP based on the monthly approved agriculture sales and considered the norms based on monthly approved sales for allowing the sales for the month of April, 2021 to December, 2021. Any adjustment in sales due to HP variation will be reconciled while actual data is submitted as per actual billing undertaken by MSEDCL. Based on the norms approved by the Commission in the Tariff Order, the agriculture sales - metered and unmetered approved by the Commission are as given below:

Particulars	Metered			Unmetered			Total		
	Sale in MU's	Cumulative Load (HP)	Consumption / HP - Units	Sale in MU's	Cumulative Load (HP)	Consumption / HP - Units	Sale in MU's	Cumulative Load (HP)	Consumption / HP - Units
MSEDCL - April 21 - Dec 21	13715	133861107	102	6722	68403011	98	20437	202264118	101
As Approved - April 21 - Dec 21	12512	133861107	93	6572	68403011	96	19084	202264118	94

3.8 The Commission has already restricted the agriculture metered sales for the months of April, 2021 to November, 2021. Accordingly, based on the cumulative agriculture sales approved in the above table, the incremental adjustment of 282.49 MU for metered connections and 19.36 MU for Unmetered connections in agriculture sales is being done in the month of September, 2021 and considered in computation of Distribution Loss so as to restrict the consumption based on actual sales per HP or approved Sales per HP, whichever is lower.

#### 4. Power Purchase Details

4.1 The Commission has approved following sources in the Tariff Order for power purchase by MSEDCL.

- a) MSPGCL
- b) Central Generating Stations i.e. NTPC, TAPP etc
- c) IPPs i.e. JSW, Adani Power, Mundra UMPP, Emco, Rattan India and Sai Wardha
- d) Renewable Energy (Solar and Non-Solar)

In addition to the aforesaid, MSEDCL procures power in short term, though the said source is not approved by the Commission, in case of any shortfall of approved sources or to optimize the power purchase cost. Also, there may be some variation in real time (unscheduled interchange) which will be settled through Balancing and Settlement Mechanism approved by the Commission.

4.1 Summary of Power Purchase from MSEDCL is as follows:

Sr. No.	Particular	Compliance			
1	Sources of approved Power Purchase	MSEDCL has purchased power from approved sources. In addition, power is procured on power exchange to optimise the power purchase cost			
2	Merit Order Dispatch	MSEDCL has followed merit order for scheduling of power and preference was given to cheapest power.			
3	Fuel Utilization Plan	Usage of coal is not as per approved Fuel Utilisation Plan (Detailed Explanation given below – Para 5.8 and Para 5.9)			
4	Deviation Quantum	MSEDCL has underdrawn (92.86 MU) from the actual schedule			
5	Sale of Surplus Power	MSEDCL has sold 38.60 MU at Rs. 4.98/kWh thereby benefitting its consumers.			
6	Power Purchase	Actual Net Power Purchase is 11770.24 MU as against approved 11032.98 MU.			
7	Source wise Power Purchase	<b>Source Name</b>	<b>Approved (MU)</b>	<b>Actual (MU)</b>	<b>Proportion of each Source in Actual Purchase</b>
		MSPGCL	3,679.23	4,228.33	36%
		NTPC	1,947.56	2,750.49	23%
		IPP	2,501.11	2,833.57	24%
		Renewable	2,362.00	1,569.28	13%
		Must Run	543.09	465.10	4%
		Short Term	0.00	54.94	0%
		Sale of Power	0.00	38.60	0%
		DSM	0.00	-92.86	-1%
		<b>Total</b>	<b>11,032.98</b>	<b>11,770.24</b>	<b>100%</b>
8	Power Purchase:	<b>A. MSPGCL</b>			

Sr. No.	Particular	Compliance
	a. Section 62 of Electricity Act, 2003	As part of verification of fixed cost claimed by MSEDCL, the same has been verified from the MYT Order in Case No. 322 of 2019 and invoice submitted by MSEDCL  As part of verification of energy charges claimed by MSEDCL, verification of operational parameters, fuel cost, GCV etc. vis-à-vis the MYT Order/Tariff Regulations is carried out and invoice submitted by MSEDCL  <b>B. CGS- NTPC etc</b>  Cost and MUs are verified as per invoice
	b. Section 63 of Electricity Act, 2003 – IPPs	Cost and MUs verified as per Invoice
9	RE Purchase	Cost and MUs verified as per summary of renewable purchase details submitted by MSEDCL and invoices of power purchased from SECI, NVVN and other IPPs.
10	Short Term Power Purchase	Short-term power purchase invoices of December, 2021 are submitted by MSEDCL. All the power purchase quantum and rate are verified from the invoices and has been considered for FAC calculation.

4.2 The following table show the variation in average power purchase cost (Rs/kWh) for the month of December, 2021 submitted by MSEDCL as compared to average power purchase cost approved in Tariff Order:

Particulars	Tariff Order Dated 30.03.2020 Approved for December 2021			Actual for December, 2021 as submitted by MSEDCL			Variation		
	Quantum	PP Cost	Average Power Purchase Cost	Quantum	PP Cost	Average Power Purchase Cost	Quantum	PP Cost	Average Power Purchase Cost
	MU	Rs. Crore	Rs/kWh	MU	Rs. Crore	Rs/kWh	MU	Rs. Crore	Rs/kWh
MSPGCL – Thermal	3,399.25	1,532.11	4.51	4,094.79	1,825.94	4.46	695.54	293.83	(0.05)
MSPGCL-Hydro (including Lease Rent)	279.98	68.73	2.45	133.54	60.22	4.51	(146.44)	(8.51)	2.05
NTPC	1,947.56	774.06	3.97	2,750.49	1,049.18	3.81	802.93	275.12	(0.16)
<i>I.JSW</i>	164.28	62.44	3.80	-	-	-	(164.28)	(62.44)	-



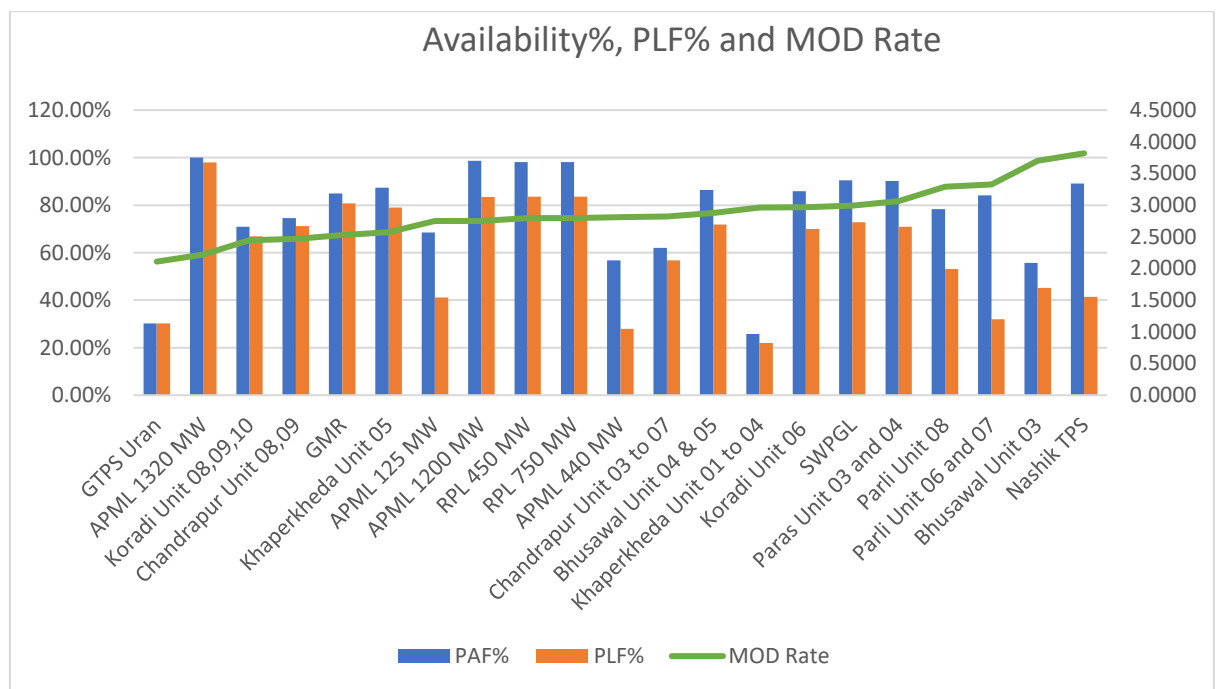
Particulars	Tariff Order Dated 30.03.2020 Approved for December 2021			Actual for December, 2021 as submitted by MSEDCL			Variation		
	Quantum	PP Cost	Average Power Purchase Cost	Quantum	PP Cost	Average Power Purchase Cost	Quantum	PP Cost	Average Power Purchase Cost
	MU	Rs. Crore	Rs/kWh	MU	Rs. Crore	Rs/kWh	MU	Rs. Crore	Rs/kWh
2.Mundra UMPP	438.07	132.43	3.02	-	0.02	-	(438.07)	(132.40)	-
3.Adani Power	1,782.40	672.15	3.77	1,837.84	710.28	3.86	55.44	38.12	0.09
4.Emco	116.36	55.11	4.74	120.12	45.00	3.75	3.76	(10.11)	(0.99)
5.Rattan India	0.00	57.71	-	745.54	276.38	3.71	745.54	218.67	3.71
6. Sai Wardha	0.00	0.00	-	130.06	61.48	4.73	130.06	61.48	4.73
<b>Total IPPs (1 to 6)</b>	<b>2,501.11</b>	<b>979.83</b>	<b>3.92</b>	<b>2,833.57</b>	<b>1,093.15</b>	<b>3.86</b>	<b>332.46</b>	<b>113.33</b>	<b>(0.06)</b>
7.Non- Solar	1,483.00	706.00	4.76	1,127.27	620.41	5.50	(355.73)	(85.59)	0.74
8.Solar	879.00	309.63	3.52	442.00	176.74	4.00	(437.00)	(132.89)	0.48
<b>Renewable Energy including REC (7 to 8)</b>	<b>2,362.00</b>	<b>1,015.63</b>	<b>4.30</b>	<b>1,569.28</b>	<b>797.15</b>	<b>5.08</b>	<b>(792.72)</b>	<b>(218.48)</b>	<b>0.78</b>
Must Run - KAPP, TAPP, Dodson etc	543.09	147.32	2.71	465.10	141.51	3.04	(77.99)	(5.81)	0.33
Short Term	0.00	0.00		54.94	16.36	2.98	54.94	16.36	2.98
Sale of Power	0.00	0.00		38.60	19.22	4.98	38.60	19.22	4.98
DSM	0.00	0.00		-92.86	-6.13	0.66	(92.86)	(6.13)	0.66
PGCIL	0.00	290.63		-	201.56		-	(89.07)	-
<b>Total</b>	<b>11,032.98</b>	<b>4,808.31</b>	<b>4.36</b>	<b>11,770.24</b>	<b>5,159.72</b>	<b>4.38</b>	<b>737.26</b>	<b>351.41</b>	<b>0.03</b>

4.3 Thus, for the month of December, 2021, total variation in power purchase cost is Rs. 351.41 Crore, out of which Rs. 321.31 Crore was on account of higher quantum (737.26 MU) of power purchase and Rs. 30.11 Crore was on account of higher rate of average power purchase by Rs. 0.03/kWh. FAC mechanism allows only impact of variation in power purchase rate to be passed through as FAC rate over and above approved Tariff. The Commission observes that increase in sales without corresponding increase in power purchase quantum than approved by the Commission has resulted in lower distribution loss than approved by the Commission in the Tariff Order.

4.4 The detailed explanation in respect of approval of cost of power purchase of each of the source mentioned in the above table is given in subsequent paragraphs.

## 5. Power Purchase Cost

- 5.1 The Commission has sought detailed bills/invoices for all of the power purchase sources in order to verify the claim of MSEDCL with regards to average power purchase cost for the month of December, 2021. The Commission has verified the Net Purchase, Variable Cost, Fixed Charge and the Power Purchase Cost from the relevant bills/invoices received for all purchasing sources. MSEDCL has purchased power from approved sources as per the Tariff Order. Further, it was observed that MSEDCL has purchased power from Power Exchange to take advantage of the lower prices prevailing in the market by giving zero schedule to generating stations having higher variable cost and have benefitted the consumers by lowering the average power purchase cost.
- 5.2 It was observed that due to planned/forced outages during the month, the availability of some of the MSPGCL and IPP generating stations was lower than normative availability.
- 5.3 The Commission notes that CGS stations having lower variable cost were dispatched almost to the extent of availability declared by the generator.
- 5.4 The Commission has also verified the PLF% and MOD rates of all the operational State Generating Stations and IPPs and has found that units having lower rates in MOD had higher PLF. The graph showing the comparison of Variable Cost in MoD Stack and monthly Plant Availability Factor and PLF for SGS and IPPs is given below:



*SGS/IPP's Stations are considered for comparison and MOD Rate considered is as applicable from 18 December, 2021 to 31 December, 2021.*

It is observed that Nashik Unit having higher MOD rate was kept on bar due to transmission constraints as per direction of MSLDC. Further, Bhusawal 3 having higher MOD rate has higher PLF than Parli 6-7 Units. This is due to the fact that MOD rate (Rs

3.37/kWh) for Parli 6-7 units for 1<sup>st</sup> to 17<sup>th</sup> December, 2021 was higher than Bhusawal (Rs 3.18/kWh) and hence the Bhusawal Unit was run at higher PLF for the said period. Similar observation can be drawn for APM 125 MW and 440 MW wherein the MOD Rate was lower for the period 22<sup>nd</sup> to 31<sup>st</sup> December, 2021 as compared to earlier period for the month.

#### **MSPGCL:**

- 5.5 The Commission has observed that MSEDCL has purchased 4138.29 MU from MSPGCL Thermal and Gas Stations. It was observed that MSEDCL has purchased energy from Bhusawal 3,4,5 Nashik, Parli 6-7, Koradi 6, Parli 8 generating stations of MSPGCL even though not included in MoD stack approved by the Commission in the Tariff Order in view of the fact that actual rates considered for MoD were lower than the approved rate.
- 5.6 The total overall generation was marginally higher than approved during the month. The monthly fixed cost was payable in line with MYT Regulations, 2019 considering the availability of the plant. The Commission has verified that the fixed cost for all the Thermal/Gas Units as well as Hydro Units has been considered as per invoice raised by MSPGCL for December, 2021. The comparison of Actual and Approved Fixed and Variable Cost of MSPGCL Thermal/Gas units as shown in the table below shows the impact of fixed cost due to lower actual generation.

Particulars	Approved for December 2021						Actual for December 2021						Variations			
	Quantum	VC	VC	FC	FC	APP C	Quantum	VC	VC	FC	FC	APPC	Quantum	VC	FC	APP C
	MU	Rs./k Wh	Rs. Crore	Rs. Crore	Rs./k Wh	Rs./k Wh	MU	Rs./k Wh	Rs. Crore	Rs. Crore	Rs./k Wh	Rs./k Wh	MU	Rs./k Wh	Rs./k Wh	Rs./k Wh
MSPGCL – Thermal	3,399.25	2.57	872.64	659.47	1.94	4.51	4,094.79	2.87	1,173.72	652.22	1.59	4.46	695.54	0.30	(0.35)	(0.05)

*Variable charge inclusive of other charges (Fuel adjustment charges, CIL etc.)*

- 5.7 Further, in response to data gaps raised by the Commission, MSEDCL submitted that minor mismatch in Fixed Charges claimed in FAC and invoice raised by MSPGCL is due to variation in Average of Cumulative Availability considered by MSEDCL & MSPGCL for Koradi 6 and Koradi 8-10. Also, the Commission has verified that the payment of fixed cost for all the Thermal/Gas Units as well as Hydro Units has been considered as per invoice raised by MSPGCL and as submitted by MSEDCL for the said units.
- 5.8 The Commission in its Order dated 30 March, 2020 in Case No 296 of 2019 has approved Fuel Utilisation Plan of MSPGCL. The Commission in the said Order has given in principle approval for the various measures proposed by MSPGCL including coal beneficiation and procurement of imported coal to meet the requirement of coal for maintaining normative availability and accordingly approved the variable/energy charges for the MSPGCL Stations.
- 5.9 The Commission notes that while approving the FUP, the washed coal and imported coal was required to be used in all the MSPGCL stations except Paras and Parli Stations. In

response to query raised by the Commission in respect of status of Washed coal and imported coal procurement as approved in FUP, MSEDCL submitted that MSPGCL has finalized the washed coal (beneficiated coal) supply contracts with M/s. MSMC for beneficiation of coal and supply of washed coal has started and supplied to Koradi 8,9,10, Koradi 6, Khaperkheda 5 and Chandrapur 8-9 in December, 2021.

5.10 MSEDCL submitted that as the working of the third party coal analysis agency, M/s. CIMFR is severely hampered due the COVID-19, the CIMFR reports for most of the coal samples for coal supplied in December 21 to all the MSPGCL stations are not received. In view of the same, MSPGCL has raised provisional FAC bill considering GCV as per the methodology submitted by MSPGCL in Case No 97 of 2020 as given below:

- a. GCV- As Billed: Consideration of certified loading end GCV data wherever available and where certified data is not available, use mid-point of declared grade GCV.
- b. GCV – As Received: GCV is considered based on the results available at each Station from their respective Station Laboratory.

Accordingly, MSPGCL has raised provisional FAC bill dated 17 January, 2022 considering the aforesaid methodology.

5.11 The comparison of Approved and Actual Energy Charge (including FAC) is as given below:

Power Station	Approved Energy Charge Rs/kWh	Actual Energy Charge Rs/kWh	Difference Rs/kWh	Difference %
Bhusawal Unit 03	4.007	3.810	-0.197	-4.92%
Bhusawal Unit 04 & 05	3.350	2.834	-0.516	-15.40%
Khaperkheda Unit 1 to 4	2.876	3.070	0.194	6.75%
Khaperkheda Unit 05	2.520	2.781	0.261	10.36%
Nashik TPS	3.480	3.861	0.381	10.95%
Chandrapur Unit 03 to 07	2.598	3.029	0.431	16.59%
Chandrapur Unit 08 and 09	2.512	2.684	0.172	6.85%
Paras Unit 03 and 04	3.067	3.091	0.024	0.78%
Parli Unit 06 and 07	4.118	3.589	-0.529	-12.85%
Parli Unit 08	3.943	3.546	-0.397	-10.07%
Koradi Unit 06 and 07	3.225	2.959	-0.266	-8.25%
Koradi Unit 08,09,10	2.340	2.431	0.091	3.89%
GTPS Uran	2.764	2.094	-0.670	-24.24%

5.12 The Commission notes that for the month of December, 2021, energy charge of Khaperkheda, Chandrapur and Nashik Units is beyond 5% of the approved charge. Hence, it is essential that MSPGCL takes adequate steps, appropriate action and work on various options to implement the approved FUP to reduce the fuel cost. As mentioned above, MSPGCL has awarded contract for washing of coal and such washed coal is being used for Koradi 8-10, Koradi 6, Khaperkheda-5 and Chandrapur 8-9 in December 2021.

Further, actual Energy Charge is being computed considering GCV loss of 625 kCal/kg applicable from April, 2021 as allowed by the Commission in review order dated 1 March, 2021 of MSPGCL as against 500 kCal/kg considered by the Commission while approving Energy Charge in the Tariff Order. This has also resulted in increase of Energy Charge of 8-13 Paise/kWh for the aforesaid stations.

- 5.13 MSPGCL has undertaken Case-4 bidding and accordingly entered into contract with Dhariwal Industries Ltd (DIL) at Rs. 2.889/kWh for supply of 185 MW net sent out in lieu of power from one unit of at Nashik (Rs. 3.394/kWh) by transfer of corresponding linkage coal quantity to DIL unit for the period 1 November, 2019 to 31 October, 2020. The said arrangement was extended for further three months i.e. up to January, 2021 on the same terms and conditions. Thereafter, the agreement is extended up to March, 2022. It was observed that DIL has voluntarily lowered its rate upto Rs 2.78/kWh in December, 2021. Accordingly, for the month of December, 2021, DIL has supplied 105.38 MU at Rs 2.82/kWh. The Commission has accordingly considered the said purchase of 105.38 MU for Rs 29.69 Crore at Rs 2.82/kWh.
- 5.14 The Commission has verified that actual quantum of power purchase and cost from the detailed summary bills/invoices submitted by MSEDCL and found to be in order.
- 5.15 Considering the overall cost of MSPGCL thermal/gas stations, the average power purchase cost is Rs. 4.46/kWh as against Rs. 4.51/kWh approved in the Tariff Order. The average power purchase cost is marginally lower mainly due to decrease in Fixed Cost by Rs 0.35/kWh.
- 5.16 Variation in power purchase expenses from MSPGCL can be divided on account of change in quantum and per unit rate as follows:

Month	Increase in Expenses for power purchase from MSPGCL (Rs. Crore)		
	On Account of change Quantum of Power Purchase	On Account of change in Per Unit rate of Power Purchase	Total
December 2021	313.49	(19.67)	293.83

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

**NTPC:**

- 5.18 MSEDCL has purchased total 2750.49 MUs of power from NTPC's stations as compared to approved MoD stack of 1947.56 MUs during the month of December, 2021.
- 5.19 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 NTPC's generating stations for December, 2021.

Particulars	Approved for December 2021						Actual for December, 2021						Variations			
	Quantum	VC	VC	FC	FC	APPC	Quantum	VC	VC	FC	FC	APPC	Quantum	VC	FC	APPC
	MU	Rs./kWh	Rs. Crore	Rs. Crore	Rs./kWh	Rs./kWh	MU	Rs./kWh	Rs. Crore	Rs. Crore	Rs./kWh	Rs./kWh	MU	Rs./kWh	Rs./kWh	Rs./kWh
NTPC	1,947.56	1.74	337.96	436.09	2.24	3.97	2,750.49	2.26	620.64	428.54	1.56	3.81	802.93	0.52	(0.68)	(0.16)

Variable charge inclusive of other charges (Fuel adjustment charges, CIL etc.)

5.20 The Commission has verified that actual quantum of power purchase and cost from the detailed summary bills/invoices submitted by MSEDCL and found to be in order and accordingly considered the same in FAC computation.

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

Month	Increase in Expenses for power purchase from NTPC (Rs. Crore)		
	On Account of change Quantum of Power Purchase	On Account of increased Per Unit rate of Power Purchase	Total
December 2021	319.13	(44.00)	275.12

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

### IPPs

5.22 MSEDCL has long term PPA's with IPP's viz: JSW, CGPL Mundra, APM, Emco and Rattan India. The said PPAs are approved by the Commission and power availability from the said sources is considered as per Tariff Order issued by the Commission. Further, MSEDCL has signed PPA with Sai Wardha Power Generation Ltd (SWPGL) for 240 MW as per the Order dated 15 June 2020 in Case No 91 of 2020. SWPGL started delivering 240 MW power to MSEDCL from 5 July 2020.

5.23 During scrutiny of the invoices submitted by MSEDCL it was observed that there were differences in the other charges related to Change in Law as considered in FAC computations. The Commission sought clarifications on the same along with reconciliation and additional bills, if any. 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.

5.24 Change in Law (CIL) events in respect of IPPs are related to imposition of GST compensation cess, change in royalty, custom duty, change in NCDP, shortfall in domestic coal etc. These Change in Law events have been approved by the respective Commission's through various 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 except for claim related to SHAKTI. 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 / actual parameters. These parameters include SHR of power plant, Auxiliary consumption, GCV of coal, etc. which have impact of coal consumption. Therefore, there is difference in CIL amount claimed by generator and that worked out by MSEDCL. MSEDCL has submitted the detailed reconciliation of CIL, as summarised in Table below:

IPP	As per Vendor – Rs Cr			As per MSEDCL – Rs Cr		
	CIL	Shakti	Total	CIL	Shakti	Total
JSW	-	-	-	-	-	-
CGPL	-	-	-	-	-	-
APML 125 MW	2.92	0.10	3.02	1.28	0.97	2.25
APML 1320 MW	36.54	181.79	218.33	28.46	66.28	94.74
APML 1200 MW	28.00	0.98	28.98	24.95	18.96	43.91
APML 440 MW	5.08	0.18	5.26	3.07	2.34	5.40
GMR Warora	5.45	-	5.45	4.96	-	4.96
RIPL 450 MW	15.06	-	15.06	9.70	-	9.70
RIPL 750 MW	25.11	-	25.11	16.16	-	16.16
Sai Wardha	5.98	-	5.98	5.16	-	5.16
<b>Total</b>	<b>124.14</b>	<b>183.05</b>	<b>307.19</b>	<b>93.74</b>	<b>88.54</b>	<b>182.29</b>

5.25 Thus, on an overall basis considering the above impact, the average power purchase cost from IPPs stands at Rs. 3.86/kWh as compared to monthly approved rate of Rs. 3.92/kWh for the month of December, 2021. The said cost is being considered for the FAC computation based on the scrutiny of invoices submitted by MSEDCL.

5.26 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 IPPs for December, 2021.

Particulars	Approved for December 2021						Actual for December 2021						Variations				
	Quantum	VC	VC	FC	FC	APPC	Quantum	VC	VC	FC	FC	APPC	Quantum	VC	FC	APPC	
	MU	Rs./kWh	Rs. Crore	Rs. Crore	Rs./kWh	Rs./kWh	MU	Rs./kWh	Rs. Crore	Rs. Crore	Rs./kWh	Rs./kWh	MU	Rs./kWh	Rs./kWh	Rs./kWh	
1.JSW	164.28	3.00	49.34	13.09	0.80	3.80	-	-	-	-	-	-	(164.28)	-	-	-	-
2.Mundra UMPP	438.07	2.11	92.43	39.99	0.91	3.02	-	-	-	-	-	-	(438.07)	-	-	-	-
3.Adani Power	1,782.40	2.49	443.11	229.04	1.29	3.77	1,837.84	2.68	492.43	217.84	1.19	3.86	55.44	0.19	(0.10)	0.09	-
4.Emco	116.36	3.44	40.06	15.05	1.29	4.74	120.12	2.46	29.53	15.46	1.29	3.75	3.76	(0.98)	(0.01)	(0.99)	-
5.Rattan India	-	-	-	57.71	-	-	745.54	2.80	208.46	67.91	0.91	3.71	745.54	-	-	-	-
6. Sai Wardha	-	-	-	-	-	-	130.06	2.98	38.79	22.70	1.74	4.73	130.06	-	-	-	-
<b>Total IPPs (1 to 6)</b>	<b>2,501.11</b>	<b>2.50</b>	<b>624.94</b>	<b>354.89</b>	<b>1.42</b>	<b>3.92</b>	<b>2,833.57</b>	<b>2.71</b>	<b>769.24</b>	<b>323.92</b>	<b>1.14</b>	<b>3.86</b>	<b>332.46</b>	<b>0.22</b>	<b>(0.28)</b>	<b>(0.06)</b>	<b>-</b>

Variable charge inclusive of other charges, CIL etc.

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

Month	Increase in Expenses for power purchase from IPP (Rs. Crore)		
	On Account of change Quantum of Power Purchase	On Account of increased Per Unit rate of Power Purchase	Total
December 2021	130.25	(16.92)	113.33

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

5.28 MSEDCL has submitted claim of Rs 396.59 Crore as per its own computation of principal amount as against Rs 632.04 Crore claimed by RIPL towards domestic coal shortfall and taxes and duties. As per the order dated 14 February, 2022 in CA No 1805 of 2021 of the Hon'ble the Supreme Court, MSEDCL has claimed the principal amount of Rs 198.30 Crore (50% of claim as calculated by MSEDCL) towards domestic coal shortfall and taxes and duties in respect of RIPL. The relevant extract of the order is as given below:

“Respondent no.1 is entitled to the sum equivalent to 50% of the outstanding claimed amount”

The Commission has considered Rs 198.30 Crore towards 50% of the outstanding principal claim amount as per principle adopted by the Commission in the MYT Order and the Order of Hon'ble the Supreme Court. The said amount is being added to the standalone FAC amount for December 2021.

### **Short Term Power Purchase**

5.29 MSEDCL has purchased 54.94 MU at average rate of Rs. 2.98/kWh from Power Exchange. The Commission notes that it has not approved any short-term purchase in the Tariff Order. However, MSEDCL has purchased short term power to meet the demand in view of lower availability of contracted thermal plants and to optimise power purchase cost. The Commission has verified the details of power purchase cost from the Daily Obligation Summary Report issued by Power Exchange and accordingly considered the said purchase in FAC computation. Accordingly, the total short term power purchased by MSEDCL is 54.94 MU at Rs 2.98/kWh for December, 2021.

### **Must-Run Sources**

5.30 The sources of Must Run Stations include KAPP, TAPP 1&2, TAPP 3&4, SSP, Pench, Dodson I and Dodson II, Renewable Energy and MSPGCL Hydro (including Ghatghar) etc.

5.31 A detailed comparison of approved against actual purchase from Must Run Stations is shown in Table below:



Particulars	Approved for December 2021						Actual for December 2021						Variations			
	Quantum	VC	VC	FC	FC	APPC	Quantum	VC	VC	FC	FC	APPC	Quantum	VC	FC	APPC
	MU	Rs./kWh	Rs. Crore	Rs. Crore	Rs./kWh	Rs./kWh	MU	Rs./kWh	Rs. Crore	Rs. Crore	Rs./kWh	Rs./kWh	MU	Rs./kWh	Rs./kWh	Rs./kWh
MSPGCL-Hydro*	279.98	-	-	22.41	0.80	0.80	133.54	0.29	3.82	12.31	0.92	1.21	(146.44)	0.29	0.12	0.41
MSPGCL-Hydro Lease rent	-	-	-	46.32	-	-	-	-	-	44.08	-	-	-	-	-	-
1.Non-Solar	1,483.00	4.76	706.00	-	-	4.76	1,127.27	5.47	617.07	3.34	0.03	5.50	(355.73)	0.71	0.03	0.74
2.Solar	879.00	3.52	309.63	-	-	3.52	442.00	4.00	176.73	-	-	4.00	(437.00)	0.48	-	0.48
Renewable Energy including REC (1 to 2)	2,362.00	4.30	1,015.63	-	-	4.30	1,569.28	5.06	793.80	3.34	0.02	5.08	(792.72)	0.76	0.02	0.78
Others-KAPP, TAPP, Dodson etc	543.09	2.70	146.55	0.77	0.01	2.71	465.10	3.03	140.74	0.77	0.02	3.04	(77.99)	0.33	0.00	0.33

*\*Variable Cost for Hydro Power is approved in MSPGCL Order whereas total cost is considered under Fixed Cost in the Tariff Order of MSEDCL.*

5.32 As seen from the aforesaid table, MSEDCL has purchased 133.54 MU of Hydro Power as per variable cost approved by the Commission. This being the cheapest source of power helps in reduction of overall average cost of power purchase. The Koyna generation works on the principle of water year (1st June to 30 May) and hence the available water is used for the peak requirement based on the requirement of MSEDCL. It is observed that hydro purchase is lower than 279.98 MU approved by the Commission. In response to data gaps raised by the Commission, MSEDCL has submitted that due to increase in thermal generation availability as compared to November, 21, demand was catered mostly from the thermal and other must run generation and therefore Koyna hydro was utilized only during peak demand hours as per daily requirements. The Commission notes the submission of MSEDCL.

5.33 It is observed that Solar and Non-Solar energy purchased in December, 2021 i.e., 1569.28 MU was lower than approved i.e. 2362 MU by the Commission in the Tariff order. The generation is lower due to low wind and lower solar capacity addition due to pandemic than considered by the Commission in the Tariff Order. MSEDCL has not purchased any REC's in the month of December, 2021. The Commission observes that MSEDCL has purchased 0.02 MUs of RE power from G-DAM Market at Rs 4.24/kWh. The Commission has considered the renewable purchase as per details submitted by MSEDCL and invoices of power purchased from SECI, NVVN and other IPPs.

### **ISTS Charges - CTU**

5.34 As per Regulation 10 of the MYT Regulations, 2019, any variation in Inter-State Transmission Charges shall be pass through under FAC component of Z-factor charge as an adjustment in Tariff on monthly basis. The ISTS charges paid by MSEDCL to Central Transmission Utility of India Ltd (CTU) are considered under FAC computation. Accordingly, the Commission has considered the amount of Rs. 201.56 Crore towards

ISTS charges payable to payable to CTU as against Rs. 290.63 Crore approved in the Tariff Order towards FAC computation as per invoice raised by CTU.

### Sale of Power

5.35 MSEDCL has done sale of surplus power to the extent of 38.60 MU during the month at Rs. 4.98/kWh. With such a sale of power MSEDCL has earned revenue of Rs. 19.22 Crore.

5.36 It is observed that entire 38.60 MU was sold on IEX. The sale realisation was more than that of variable cost of generator running above technical minimum operating in MOD. Accordingly, the overall realisation in respect of sale of power is Rs.4.98/kWh has benefitted the consumers. Hence, the Commission has considered the actual quantum and revenue against surplus sale.

### Deviation Quantum and Cost

5.37 MSEDCL has submitted that the deviation quantum (under drawl) as per invoice raised by MSLDC is 92.86 MU and corresponding realisation of Rs (6.13) Crore at Rs 0.66/kWh. Accordingly, the Commission has considered the said Deviation quantum and cost in the FAC computation for the month of December, 2021.

### Approved Cost of Power Purchase

5.38 In view of the above, the overall cost approved in the Tariff Order and actual for the month of December, 2021 considered by the Commission is as shown below:

Particulars	Approved for December 2021						Actual for December 2021						Variations			
	Quantum	VC	VC	FC	FC	APPC	Quantum	VC	VC	FC	FC	APPC	Quantum	VC	FC	APPC
	MU	Rs./kWh	Rs. Crore	Rs. Crore	Rs./kWh	Rs./kWh	MU	Rs./kWh	Rs. Crore	Rs. Crore	Rs./kWh	Rs./kWh	MU	Rs./kWh	Rs./kWh	Rs./kWh
MSPGC L – Thermal	3,399.25	2.57	872.64	659.47	1.94	4.51	4,094.79	2.87	1,173.72	652.22	1.59	4.46	695.54	0.30	(0.35)	(0.05)
MSPGC L-Hydro	279.98	-	-	22.41	0.80	0.80	133.54	0.29	3.82	12.31	0.92	1.21	(146.44)	0.29	0.12	0.41
MSPGC L-Hydro Lease Rent	-	-	-	46.32	-	-	-	-	-	44.08	-	-	-	-	-	-
NTPC	1,947.56	1.74	337.96	436.09	2.24	3.97	2,750.49	2.26	620.64	428.54	1.56	3.81	802.93	0.52	(0.68)	(0.16)
IPPs	2,501.11	2.50	624.94	354.89	1.42	3.92	2,833.57	2.71	769.24	323.92	1.14	3.86	332.46	0.22	(0.28)	(0.06)
RE including REC	2,362.00	4.30	1,015.63	-	-	4.30	1,569.28	5.06	793.80	3.34	0.02	5.08	(792.72)	0.76	0.02	0.78
Must Run - KAPP, TAPP, Dodson etc	543.09	2.70	146.55	0.77	0.01	2.71	465.10	3.03	140.74	0.77	0.02	3.04	(77.99)	0.33	0.00	0.33
Short Term	-	-	-	-	-	-	54.94	2.98	16.36	-	-	2.98	54.94	-	-	-
Sale of Power	-	-	-	-	-	-	38.60	4.98	19.22	-	-	4.98	38.60	-	-	-

Particulars	Approved for December 2021						Actual for December 2021						Variations			
	Quantum	VC	VC	FC	FC	APP C	Quantum	VC	VC	FC	FC	AP PC	Quantum	VC	FC	APPC
	MU	Rs./k Wh	Rs. Crore	Rs. Crore	Rs./k Wh	Rs./k Wh	MU	Rs./kWh	Rs. Crore	Rs. Crore	Rs./k Wh	Rs./kWh	MU	Rs./k Wh	Rs./k Wh	Rs./kWh
DSM	-	-	-	-	-	-	(92.86)	0.66	(6.13)	-	-	0.66	(92.86)	-	-	-
PGCIL	-	-	-	290.63	-	-	-	-	-	201.56	-	-	-	-	-	-
<b>Total</b>	<b>11,032.98</b>	<b>2.72</b>	<b>2,997.72</b>	<b>1,810.58</b>	<b>1.64</b>	<b>4.36</b>	<b>11,770.24</b>	<b>2.97</b>	<b>3,492.96</b>	<b>1,666.75</b>	<b>1.42</b>	<b>4.38</b>	<b>737.26</b>	<b>0.25</b>	<b>(0.22)</b>	<b>0.03</b>

Variable charge inclusive of other charges (Fuel adjustment charges, CIL etc.)

5.39 The overall power purchase cost is marginally higher mainly due to higher variable cost and under drawl of 93 MUs by MSEDCL with realisation of only Rs 0.66/kWh resulting in higher average power purchase cost.

5.40 Considering the above, the Commission allows the average power purchase cost of Rs.4.38/kWh for the month of December, 2021 as against Rs. 4.36/kWh approved in the Tariff Order.

## 6. FAC on account of fuel and power purchase cost (F)

6.1 The Commission has worked out the average power purchase cost for the month of December, 2021 as shown in above table. The same has been compared with the average power purchase cost approved by the Commission in Tariff Order dated 30 March, 2020 and accordingly arrived at differential per unit rate at which  $Z_{FAC}$  is to be passed on to the consumers.

6.2 The following table shows the  $Z_{FAC}$  worked out by the Commission on account of difference in fuel and power purchase cost for the month of December, 2021.

S. No.	Particulars	Units	December 2021
1	Average power purchase cost approved by the Commission	Rs./kWh	4.36
2	Actual average power purchase cost	Rs./kWh	4.38
3	Change in average power purchase cost (=2 -1)	Rs./kWh	0.03
4	Net Power Purchase	MU	11,770.24
5	<b>Change in fuel and power purchase cost (=3 x 4/10)</b>	<b>Rs. Crore</b>	<b>30.10</b>

## 7. Adjustment for over recovery/under recovery (B)

7.1 The adjustment for over recovery/under recovery has to be done for the (n-4) month as per provisions of MYT Regulations, 2019. As 'Nil' FAC levied for the month of August, 2021, there would not be any adjustment factor while computing the allowable FAC.

## 8. Carrying Cost for over recovery/under recovery (B)

8.1 As explained in the above paragraph in absence of any adjustment factor for previous month, there is no carrying cost which is to be allowed in FAC for the month of December, 2021.

## 9. Disallowance due to excess Distribution Loss

9.1 Regulation 10.8 of MYT Regulations, 2019 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 Z<sub>FAC</sub> 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 Z<sub>FAC</sub> 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 annual sliding distribution losses of the Distribution Licensee exceed the level approved by the Commission, the amount of Z<sub>FAC</sub> corresponding to the excess distribution losses (in kWh terms) shall be deducted from the total Z<sub>FAC</sub> recoverable”*

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

S. N	Particulars	Units	Approved in Tariff Order	Actual for December 2021	Actual - April 2021 to Dec 2021	Annual Sliding Distribution Loss – Jan 21 to Dec 21
1	Net Energy Input at Distribution Voltage	MU	1,25,356.68	10,720.82	95,456.98	129984.24
2	MSEDCL Metered Sales (excluding sales at EHV level)	MU	96,520.20	7,465.98	70,084.86	93028.81
3	Estimated Consumption of unmetered Sales	MU	8,783.32	821.06	6,572.21	8716.30
4	Distribution Loss (1-2-3)	MU	20,053.16	2,433.78	18,799.91	28239.13
5	Distribution Loss as % of net energy input (4/1)	%	16.00%	22.70%	19.69%	21.73%
6	Excess Distribution Loss = [Actual Distribution Loss (5) - Distribution loss approved] x Net Energy Input (1)	MU	-	613.77	-	-
7	<b>Disallowance of FAC due to excess Distribution Loss</b>	<b>Rs. Crore</b>	-	<b>2.00</b>	-	-

9.3 As seen from the above table, the standalone distribution loss for the month of December is higher at 22.70% as against approved loss of 16%. However, the cumulative distribution loss upto December 2021 is 19.69% which is also higher than approved loss. The standalone loss for December, 2021 is higher mainly due to estimated Ag sales and sales considered as per billing cycle whereas power purchase is considered for the standalone month.

9.4 The comparison of Distribution Loss for the April, 2021 to December, 2021 as compared to last year is as given below:

Particulars	FY 2021-22	FY 2020-21
<i>Approved Loss</i>	<i>16%</i>	<i>18%</i>
April	30.44%	30%
May	27.15%	28.47%
June	13.31%	24.28%
July	16.05%	11.90%
August	19.36%	11.12%
September	13.93%	15.63%
October	9.86%	15.04%
November	20.73%	24.97%
December	22.70%	29.36%
<b>Cumulative upto December</b>	<b>19.69%</b>	<b>19.56%</b>

9.5 As Annual Sliding Distribution Loss of 21.73% is higher than the approved loss of 16%, the Commission has disallowed Rs 2.00 Crore towards the same.

## 10. Summary of Allowable Z<sub>FAC</sub>

10.1 The summary of the FAC amount as approved by the Commission for the month of December, 2021 is as shown in the Table below:

S. No.	Particulars	Units	December 2021-As submitted	December 2021- As Approved
<b>1</b>	<b>Calculation of Z<sub>FAC</sub></b>			
1.1	Change in cost of generation and power purchase attributable to Sales within the License Area (F)	Rs. Crore	228.39	30.10
1.2	Carrying cost for over-recovery/under-recovery (C)	Rs. Crore	0	0
1.3	Adjustment factor for over-recovery/under-recovery (B)	Rs. Crore	0	0
<b>1.4</b>	<b>Z<sub>FAC</sub> = F+C+B</b>	Rs. Crore	228.39	30.10
<b>2</b>	<b>Calculation of Per Unit FAC</b>			

S. No.	Particulars	Units	December 2021-As submitted	December 2021- As Approved
2.1	Energy Sales within the License Area	MU	9534.69	9232.84
2.2	Excess Distribution Loss	MU	416.93	613.77
2.3	ZFAC per kWh	Rs./kWh	0.24	0.03
<b>3</b>	<b>Allowable FAC</b>			
3.1	FAC disallowed corresponding to excess Distribution Loss [(2.2 x 2.3)/10]	Rs. Crore	-	2.00
3.2	FAC allowable [1.4-3.1]	Rs. Crore	228.39	28.10
<b>4</b>	<b>Utilization of FAC Fund</b>			
4.1	Opening Balance of FAC Fund	Rs. Crore	(154.44)	(154.44)
4.2	Holding Cost on FAC Fund	Rs. Crore	(0.46)	(0.46)
4.3	Z <sub>FAC</sub> for the month (Sr. N. 3.2)	Rs. Crore	228.39	28.10
4.4	Closing Balance of FAC Fund	Rs. Crore	73.49	(126.80)
4.5	Z <sub>FAC</sub> leviable/(refundable) to consumer	Rs. Crore	0	0
<b>5</b>	<b>Total FAC based on category wise and slab wise allowed to be recovered in the billing month of January, 2022</b>	<b>Rs. Crore</b>	<b>0</b>	<b>0</b>

10.2 The standalone FAC for the month of December, 2021 is Rs 28.10 Crore which will be adjusted from the FAC Fund. The approved amount is lower than claimed by MSEDCL in view of the fact that Commission has not considered claim of Rs 198.30 Crore towards past claim of Change in Law in the standalone computation of FAC for December 2021.

10.3 Further, as mentioned above in Para 5.28, the Commission has considered Rs 198.30 Crore towards Change in Law claim in relation to domestic coal shortfall and taxes and duties in respect of RIPL. The Commission has considered the said amount in the standalone FAC for the month of December, 2021 and considering the said adjustment, the total FAC Amount is Rs 226.39 Crore.

## 11. Recovery from Consumers:

11.1 Regulation 10.9 of MYT Regulations, 2019 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: —*

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

Where:

$Z_{FAC\ Cat}$  = Z<sub>FAC</sub> 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  $Z_{FAC}$  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  $Z_{FAC}$  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....”*

- 11.2 The Commission allows the FAC amount of Rs. 226.39 Crore for the month of December, 2021 to be adjusted from the FAC Fund.
- 11.3 The Commission in its approval for the month of November, 2021 has directed MSEDCL to carry forward the approved FAC amount of Rs. (154.44) Crore to be accumulated as FAC Fund to be carried forward to the next billing cycle with holding cost. The opening balance of FAC fund along with holding cost is Rs. (154.90) Crore.
- 11.4 Accordingly, considering the approved FAC amount of Rs. 226.39 Crore for the month of December, 2021 and the same after being adjusted from the FAC fund of Rs. (154.90) Crore, the total balance amount to be recovered is Rs. 71.49 Crore. The said amount of Rs 71.49 Crore is being carried forward and will be accumulated for next three-month period i.e up to the month of February, 2022 as per letter dated 5 April, 2022 issued by the Commission. At the end of the three-month period, the Commission will allow the recovery of cumulative amount for three-month period equally over the next three-month period during prior approval of the third month along with carrying cost.
- 11.5 In view of the above, the per unit  $Z_{FAC}$  for the month of December, 2021 to be levied on consumers of MSEDCL in the billing month of February, 2022 is **Nil**.