MAHARASHTRA ELECTRICITY REGULATORY COMMISSION

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Ref. No. MERC/Tech/FAC/2020-21/E-Letter **Date: 12 June, 2020**

The Managing Director,
Tata Power Company Ltd.,
Dharavi Receiving Station,
New Shalimar Industrial Estate,
Matunga, Mumbai – 400 019

Subject: Prior Approval of Fuel Adjustment Charges (FAC) submission of TPC-D for the month of April 2020.

Reference: 1. TPC-D's FAC submission dated 15 May, 2020 for prior approval of FAC for the month of April 2020.
2. Datagaps communicated to TPC-D vide email dated 17 May, 2020 and 23 May, 2020
3.TPC-D's complete submission received on 30 May, 2020

Sir,

Upon vetting the FAC calculations for the month of April, 2020 as mentioned in the above reference, the Commission has accorded approval for charging FAC to its consumers as shown in the table below:

Month	FAC Amount (Rs. Crore)
April, 2020	**0 (Zero)**

The Commission allows the accumulation of FAC amount of Rs. 7.76 Crore which shall form part of FAC Fund and shall be carried forward to next FAC billing cycle with holding cost as per the Order dated 30 March, 2020 in Case No 326 of 2019. Further, as directed in the said Order, TPC-D shall maintain the monthly account of FAC Fund and upload it on its website to maintain transparency of FAC Fund and also for information of all the stakeholders.

Yours faithfully,
Sd/-
*(*Prafulla Varhade*)*
Director (EE), MERC

Encl: Annexure A: Detailed Vetting Report for the month of April, 2020.

ANNEXURE A

Detailed Vetting Report
Date: 12 June , 2020

PRIOR APPROVAL FOR FAC CHARGES FOR THE MONTH OF APRIL, 2020

Subject: Prior Approval of Fuel Adjustment Charges (FAC) submission of TPC-D for the month of April 2020.

Reference: TPC-D's FAC submission dated 15 May, 2020 for prior approval of FAC for the month of April 2020.

1. FAC submission by TPC-D:

1.1 TPC-D has submitted FAC submissions for the months of April, 2020 as referred above. Upon vetting the FAC calculations, taking cognizance of all the submissions furnished by TPC-D against the data gaps issued, the Commission has accorded prior approval to TPC-D for negative FAC amount of Rs. 7.76 Crore. The approved FAC amount shall form part of FAC Fund and shall be carried forward to next FAC billing cycle with holding cost as per the Order dated 30 March, 2020 in Case No 326 of 2019 (herein after referred to as "Tariff Order").

2. Background

2.1 On 30 March, 2020, the Commission has issued Tariff Order for TPC-D, (Case No.326 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:

> ***"6.7.15 Stabilising variation in consumer bill on account of FAC***
>
> *………………*
>
> *Therefore, using its powers for Removing Difficulty under Regulation 106 of the MYT Regulations, 2019, the Commission is making following changes in the FAC mechanism specified under Regulation 10 of the MYT Regulations, 2019:*
>
> *a. 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:*

(i) Negative FAC amount shall be carried forward to the next FAC billing cycle with holding cost;

(ii) 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;

(iii) 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 TPC-D, such limit shall be Rs. 50 crore. Any accumulated amount above such limit shall be refunded to consumers through FAC mechanism;

(iv) 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.

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 created a FAC fund as stated above to address 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. This will ensure that the FAC mechanism is implemented with the changes as desired by the Commission, and the consumers are not levied FAC without prior approval.

The details of the FAC as per the Regulations, shall be submitted by the 15th of the every month prior to the month in 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 15th of every month prior to the month for which the FAC is proposed to be levied for prior approval.

2.4 Accordingly, TPC-D has filed FAC submissions for the month of April, 2020 for prior approval. The Commission has scrutinized the submissions provided by TPC-D 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 TPC-D in the FAC submission and as approved by the Commission are as shown in the table below:

Consumer Category	Approved by the Commission* (MU)	Monthly Approved* (MU)	Actual Sales* April 2020 (MU)
	(I)	(II=I/12)	(III)
EHV – Industry	214.59	17.88	4.90
HT I - Industry	827.54	68.96	39.53
EHV- Commercial	106.22	8.85	4.29
HT II - Commercial	401.22	33.44	17.32
HT III - Group Housing Society (Residential)	6.77	0.56	0.92
HT IV – Railways/Metro/Monorail			
-22/33 kV	69.06	5.76	2.67
HT V - Public Services			
a) Govt. Edu. Inst. & Hospitals	13.19	1.10	1.13
b) Others	210.87	17.57	14.31
LT I (A)- Residential (BPL)	0.00	0.00	0.00
LT I (B)- Residential	1884.51	157.04	133.52
LT II - LT Commercial			
(A)- upto 20 kW	228.21	19.02	8.97
(B) >20 kW and <50 kW	112.21	9.35	3.42
(C) - 50 kW	345.66	28.81	12.57
LT III (A) - Industry < 20 kW	32.98	2.75	1.40
LT III (B) - Industry > 20 kW	195.88	16.32	8.73
LT IV - Public Services			
a) Govt. Edu. Inst. & Hospitals	23.37	1.95	0.19
b) Others	6.06	0.50	1.01
LT V - EV Charging Stations	0.10	0.01	0.00
Total	**4678.46**	**389.87**	**254.87**

** - Approved and Actual Sales includes the direct sales and changeover sales of TPC-D*

3.2 TPC-D in its submission has considered category wise monthly approved sales for FY 2020-21 in proportion to the actual category wise sales of the same month of FY 2019-20. However, the Commission is of the view that sales of TPC-D also include changeover sales and the said sales show variation on yearly basis based on the tariff approved by the Commission. Accordingly, there is likely to be variation in sales of TPC-D in view of change in such changeover sales and also due to likely switchover. The Commission while approving category wise sales for FY 2020-21 has taken into consideration the said factors. This is likely to change the proportion of actual category wise sales for FY 2020-

21 as compared to FY 2019-20. Accordingly, the Commission has considered monthly sales by dividing the annual approved sales by 12 months.

3.3 Due to spread of Covid-19 pandemic, the Commission had issued Practice Directions on 26 March, 2020 providing certain relaxations in the Supply Code to all the Distribution Licensees in respect of Meter Reading etc. Accordingly, the billed sales submitted by TPC-D are on estimated basis except for the consumers having Automatic Meter Reading (AMR) in place. It is observed that the total sales for April, 2020 is 254.87 MUs. The major variation was observed across all categories in view of consideration of estimated sales for LT category and lower demand on account of lockdown due to Covid-19 pandemic.

4. Power Purchase Details

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

a) Tata Power Company Ltd. (TPC-G)
b) Renewable Energy (Solar and Non-Solar)
c) Short Term Sources (Bilateral and Power Exchange).

In addition to the aforesaid, 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 for TPC-D is as follows:

Sr. No.	Particular	Compliance
1	Sources of approved Power Purchase	TPC-D has purchased power from approved sources
2	Merit Order Dispatch	TPC-D has followed merit order for scheduling of power and preference was given to cheapest power.
3	Fuel Utilization Plan	Usage of coal is as per Fuel Utilisation Plan approved in TPC-G Order
4	Pool Imbalance	TPC-D has supplied 24.85 MUs to the imbalance pool due to lower demand and also due to higher scheduling of power as per state MOD.
5	Sale of Surplus Power	TPC-D has sold 0.23 MUs at Rs.4.83/kWh thereby benefitting its consumers as sale rate is higher than APPC.
6	Power Purchase	Actual Power Purchase is 272.81 MUs as against approved 405.09 MUs due to lower sales

4.2 The following table show the variation in average power purchase cost (Rs/kWh) for the month of April, 2020 submitted by TPC-D as compared to average power purchase cost approved in Tariff Order:

Particulars	Tariff Order Dated 30.03.2020 FY 2020-21 Approved			Actual for April, 2020 as submitted by TPC-D		
	Net Purchase	Cost	Average Power Purchase Cost	Net Purchase	Cost	Average Power Purchase Cost
	MU	Rs. Crore	Rs/kWh	MU	Rs. Crore	Rs/kWh
TPC-G	3,799.84	1,656.33	4.36	258.00	106.87	4.14
RE Sources	373.85	246.46	6.59	19.29	11.78	6.11
Short Term	687.31	244.57	3.56	20.60	5.35	2.59
Unscheduled Interchange	-	-	-	(24.85)	(8.70)	3.50
Sale of Power				(0.23)	(0.11)	4.83
Total	**4,861.01**	**2,147.36**	**4.41**	**272.81**	**115.19**	**4.22**

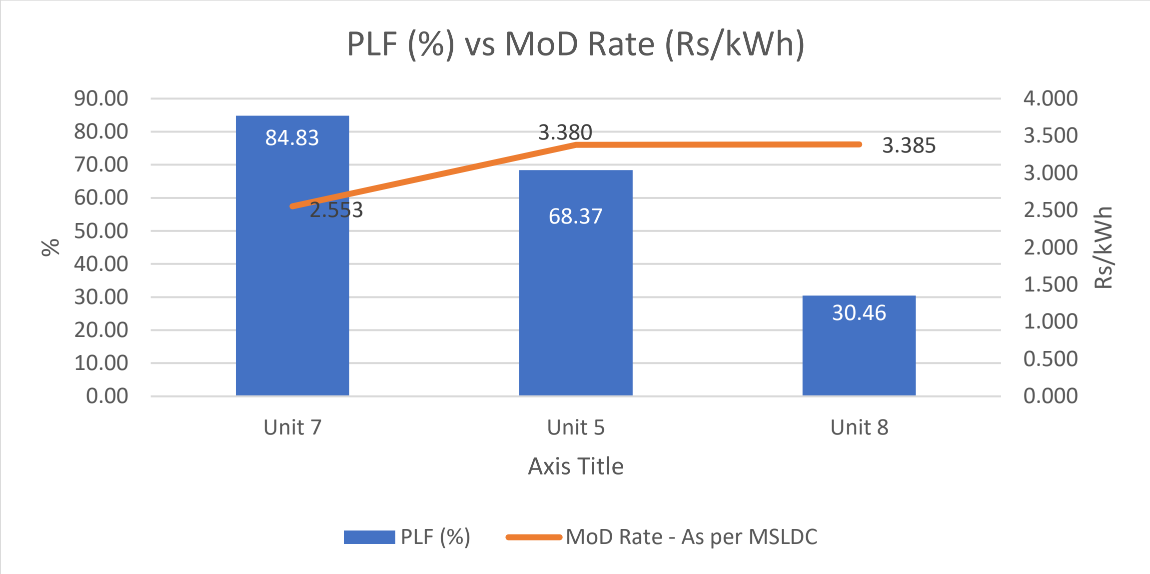
5. Power Purchase Cost

5.1 The Commission has sought detailed bills/invoices for all of the power purchase sources in order to verify the claim of TPC-D with regards to average power purchase cost for the month of April, 2020. 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. TPC-D has purchased power from approved sources as per the Tariff Order.

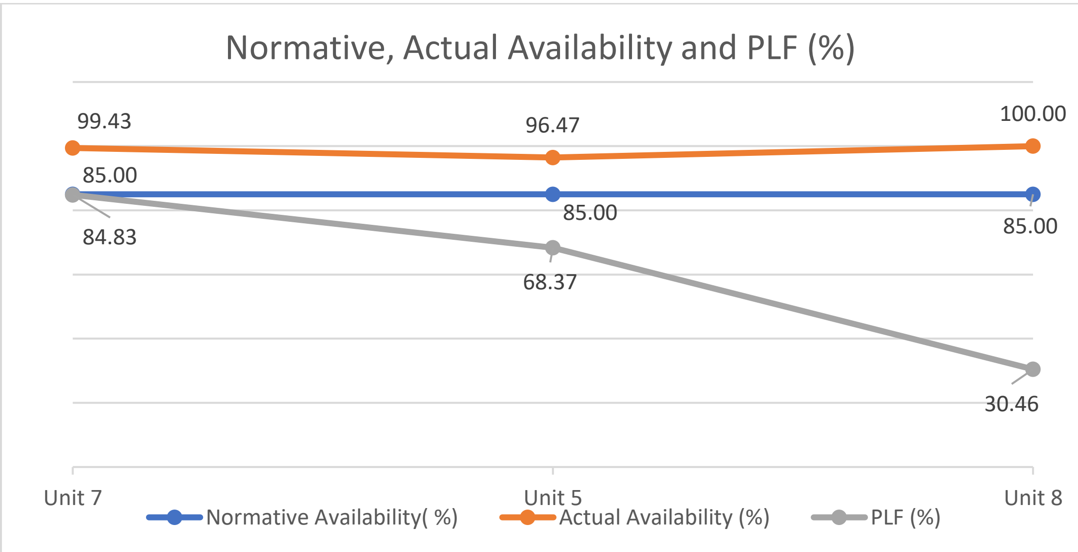
TPC-G

5.2 In view of lower demand due to Covid 19 pandemic, generating stations recorded lower PLF either due to reserve shutdown (Unit 8) or running the unit at technical minimum (Unit 5). In reply to query raised by the Commission in respect of lower PLF for Unit-7 (cheaper source in MOD) as compared to Unit-5 and Unit-8 having higher rate in MOD for the period 1 April, 2020 to 11 April, 2020, TPC-D has submitted that though Unit-5 and Unit-8 were scheduled at technical minimum by Tata Power-D, SLDC had picked up the generation of Unit-5 and Unit-8 as per state MOD to meet the requirement of other Distribution Licensees in the state and the same is evident form the fact that UI in the month of April-2020 is also negative (-24.85 MUs). However, when seen on the monthly basis, it is observed that Unit-7 having lowest cost in MOD has highest PLF and Unit -5 and Unit-7 recording lower PLF thereby following the Merit Order Despatch principle.

The graph showing the comparison of Variable Cost in MoD Stack and monthly PLF for TPC-G thermal/gas units is given below:

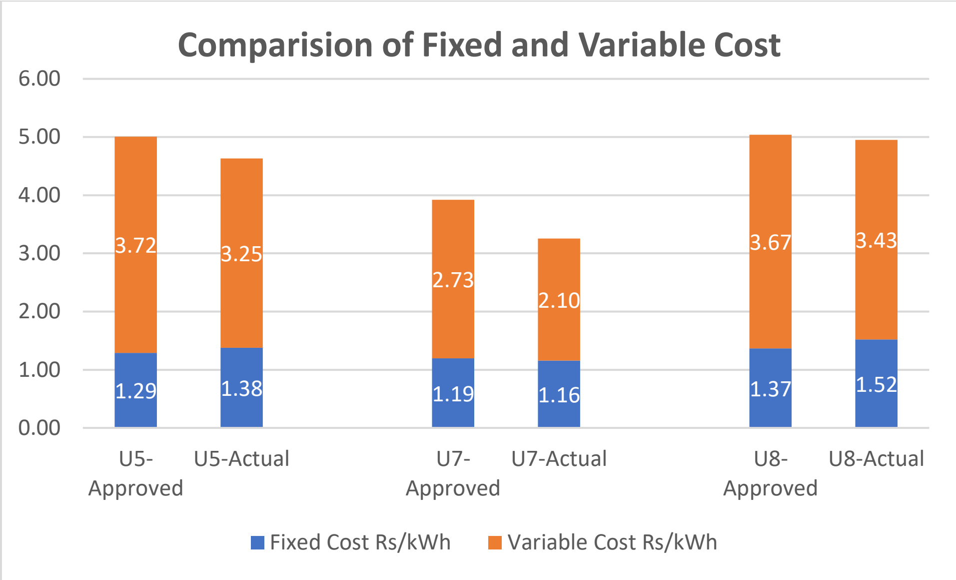


5.3 The Commission has observed that TPC-D has purchased 258.00 MUs from TPC-G. The total overall generation was lower during the month leading to lower PLF mainly due to lower system demand. However, all the Units of TPC-G were available during the above period above normative availability. The graphical comparison of normative availability and actual availability is as given below:



5.4 Even though the PLF for the thermal generating units was lower for the aforesaid month, the entire monthly fixed cost was payable in line with MYT Regulations, 2019 as the cumulative plant availability as shown above was higher than the normative availability of 85%. This has resulted into fixed cost being spread over lower net generation thereby increasing average power purchase price from these Units and thus impacting the APPC.

The comparison of Actual and Approved Fixed and Variable Cost of Units 5, 7 and 8 as shown in the graph below shows the impact of fixed cost due to lower actual generation.



5.5 However, as depicted from the above graph, though the fixed cost per unit is higher than the approved due to lower generation, the variable cost per unit is on a lower side resulting in total power procurement cost well within the limit of the approved power purchase cost.

5.6 Further, the Commission has verified that the payment of Fixed Charges for all the Thermal/Gas Units as well as Hydro Units have been worked out based on the cumulative availability as per the provisions of MYT Regulations, 2019.

5.7 The Commission in its Order dated 30 March, 2020 in Case No 300 of 2019 in respect of Fuel Utilisation Plan of TPC-G as held as follows:

"7.17.7 Regarding the imported coal, it is submitted that Thermal Generating Station at Trombay needs ultra-low sulphur, low ash and Mid GCV coal to adhere with the stringent environment norms. Since, PPAs were not finalised during the year 2019 and there was uncertainty with respect to future tie-ups, the coal tie-ups were done only for a period of one year. The long term contract with Adaro is valid till 2020. Also, annual contract with Kideco and with Avra are valid upto July 31, 2020.

7.17.8 Regarding further fuel arrangement, the Commission notes the TPC-G's submission that, existing PPAs are valid till March 31, 2024 and hence, it is exploring the options to tie up Coal on annual basis or on term basis, to get competitive prices for the required quantity in the best interest of consumers.

7.17.9 As regards Gas Contract, the Commission notes that existing APM gas Contract with GAIL is valid upto December 31, 2020. TPC-G submitted that it will be *approaching GAIL for renewal of the contracts for further period as per usual practice."*

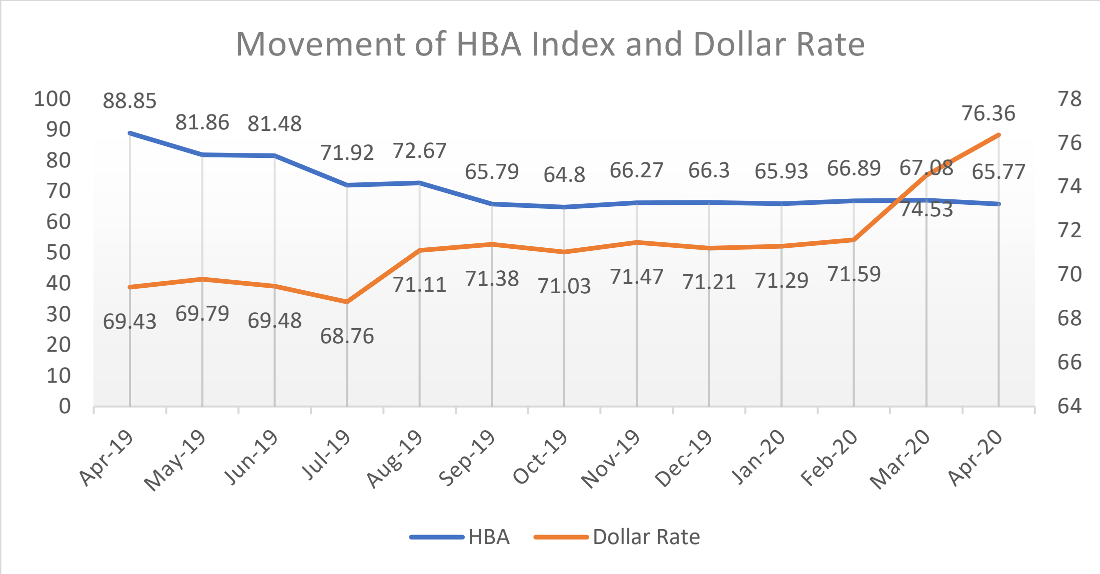
5.8 The Commission notes that from the fuel invoices submitted by TPC-D that coal has been utilised from the contracts approved in the TPC-G's Tariff Order. Further, it has also submitted that they have initiated the competitive bidding process for coal purchase and will conclude the same before expiry of existing contracts.

5.9 The Commission has also verified that the usage of coal is as per Fuel Utilisation Plan approved in the Tariff Order resulting in the economic despatch of generation thereby benefitting the consumers.

5.10 The APPC for TPC-G, which generates power on Imported Coal, Domestic Natural Gas (under APM mechanism), Oil (LSHS), imported RLNG and hydro has been worked out at Rs. 4.14/ kWh as against the approved rate of Rs. 4.36/kWh.

5.11 The variation in APPC is mainly on account of fixed charge payment as explained in paragraph above and also due to lower price of fuel for April 2020. The landed cost of coal for energy charge computation as claimed by TPC-G is Rs. 6138.28/MT as compared to approved rate of Rs. 6705.91/MT. It can be seen that the actual landed price is lower as compared to approved rate in the Tariff Order and the same is due to decrease in the imported coal price primarily attributed to demand supply position of the global coal market. It is also observed that there is reduction in price of APM Gas to Rs. 13,100.16/SCM as compared to approved rate of Rs.17,139.56/SCM.

5.12 TPC-G mainly procures imported coal from Indonesian market. As per the Contract, the coal reference price is HBA index i.e., Harga Batubara Acuan for Indonesian coal which is set by Ministry of Energy and Mineral Resources (Indonesia). The Commission has sought for prevailing HBA index during the aforesaid period along with the detailed computation of FOB price at which the coal has been procured by TPC-G. The graph below shows the trend of HBA index which is considered by TPC-G for energy charge calculations. It can be observed that the HBA index has witnessed a downward trend from April 2019 to April 2020 and in the range of around 65.77 to 88.85 which has resulted in lower imported coal price procured in March 2020. However, the Dollar Exchange rate has witnessed a sharp surge from February 2020.



* - HBA indices at 6,322 kcal/kg GAR coal with 8% total moisture, 15% ash as received and 0.8% sulphur
$ - Dollar Rate source - www.x-rates.com (Average rate for the month for representation purpose and may not be a reference rate at which Coal is procured)

5.13 The Commission has also sought for coal purchase bills considered for April 2020. The Commission has scrutinised the bills submitted and computed the purchase price of coal for the month of April 2020 as shown in Table below:

Date	Invoice QTY	GCV	HBA	Corr. as per FSA	Invoice Rate	Coal Cost	Freight Rate	BF Corr.	Freight Payable	Total Coal Cost		Qty consumed in April 2020
	MT	kcal/kg	$/MT	$/MT	$/MT	$	$/MT	$/MT	$	$	$/MT	MT
a	b	c	d	e	f = d-e	g = f x b	h	i	j = (h-i)*b	k = g+j	L = k/b	m
07-03-2020	55500	4994	67.08	18.79	48.29	2680095	10.57	2.25	461760	3141855	56.61	10002
22-03-2020	63440	4861	67.08	19.08	48.00	3045120	10.57	2.90	486585	3531705	55.67	63440
23-03-2020	55750	4811	67.08	19.71	47.37	2640878	10.57	2.90	427603	3068480	55.04	55750
01-04-2020	63599	4913	65.77	16.53	49.24	3131615	10.57	3.07	476993	3608607	56.74	52032
Total	**238289**	**4894**	**66.73**	**18.48**	**48.25**	**11497707**	**10.57**	**2.79**	**1852940**	**13350647**	**56.03**	**181224**

5.14 The Commission has sought for detailed computation and methodology for booking the coal consumption cost. In response to this, TPC-D stated that the total coal consumption cost is calculated on the basis of Moving Average Price Method by adding the purchases during the month in the opening inventory stock. The closing inventory is then obtained by deducting the coal consumed form the total of opening inventory and purchases during the respective month. The Commission further sought reconciliation of coal cost considered in Form F12 along with each coal invoice. TPC-D submitted the detailed coal computation for the coal purchased in April 2020. In regard to reconciliation, TPC-D submitted that coal cost considered in Form F12 with each coal invoice, is arrived on the basis of Goods Receipt Note (GRN) in the SAP system which is dependent on the rate of coal purchase (in Rs./MT or USD/MT) considered at the time of coal order (PO) booking.

However, the coal cost mentioned in the coal invoice is as per the base price of coal purchase (in Rs./MT or USD/MT) arrived on the basis of actual gross calorific value, Moisture content, Ash content, Sulphur content, HBA indices etc. It further submitted that once the invoice is booked in the SAP system after GRN of full coal quantity of a shipment, the cost as per coal invoice gets booked against each shipment in the SAP system in order to make payment to the supplier. To facilitate this, the difference between coal cost in Goods Receipt Note (GRN) and coal cost in the invoice is booked as adjustment entry in the SAP. Hence, the coal inventory gets valued ultimately at the invoice values and at the coal purchase rate (in Rs./MT or USD/MT) prevailing on the date of billing.

5.15 Further, as the coal purchase during a month is generally not utilised in the same month, hence, there is a variation in above computed coal price vis-à-vis coal price as considered by TPC-G for energy charge calculations. The cost of coal for energy charge computation pertains to coal consumed during the respective months which is arrived based on the actual cost of coal inventory as well as the purchased coal cost received in the coal yard.

5.16 Apart from above, the Commission has also sought for third party sampling report for GCV verifications. TPC-G has submitted the third party sampling certificate for the respective period. The Commission has verified the document submitted and found to be in order.

5.17 From the Table above the basic purchase cost of imported coal including freight during the month of April 2020 as per sample bills submitted worked out at USD 56.03/MT. TPC-D has booked Rs. 4,254.52/MT (i.e. Rs. 3647.21/MT for Coal and Rs. 607.31 / MT for freight) resulting in conversion rate of Rs. 75.94 per dollar. Also, other coal handling charges such as insurance, handling and wharfage charges, taxes and duties, clean energy cess and other miscellaneous charges considered by TPC-D are in line with the average prices approved in the previous quarters and accordingly, the total landed cost of coal arrived is Rs. 5.939.95/MT. However, in Form 11, the landed coal price considered is Rs. 6138.28/MT, whereby as per TPC-D, the difference in the cost is due to Foreign exchange variation due to difference in dollar rate at the time of booking of Purchase Order and the actual payment made to vendor and the employee cost.

5.18 Accordingly, the break-up of the cost as submitted by TPC-D and as approved by Commission is provided as below whereby employee expenses of Rs. 68,18,111.44 i.e. Rs. 55.52/MT being O&M in nature is not allowed to be included under Fuel Cost.

Sr. No	Particular	Source / Formula	Units	Price as per TPC	Price Approved
1	Coal Cost including Freight	As computed above	USD $/MT	56.03	56.03
2	Dollar exchange rate	As an average	USD/Rs.	75.94	75.94
3	Basic Coal Cost +Freight in Rs.	1 X 2	Rs./MT	4,254.52	4,254.52
4	Excise + Custom Duty + CE Cess+ Insurance	As submitted	Rs./MT	646.97	646.97

Sr. No	Particular	Source / Formula	Units	Price as per TPC	Price Approved
5	Handling and Wharfage	As submitted	Rs./MT	585.68	585.68
6	Other Fuel Handling Charges	As submitted	Rs./MT	497.85	497.85
7	Other Adjustment	As submitted	Rs./MT	(45.67)	(45.67)
8	Total as per Form 12	sum(3:7)	Rs./MT	5,939.35	5,939.35
9	Foreign Exchange Rate Variation	As submitted	Rs./MT	144.68	144.68
10	Employee Cost	As submitted	Rs./MT	55.52	-
11	Other reconciliation adjustment		Rs./MT	(1.26)	(1.26)
12	Total as per Form 11	sum(8:11)	Rs./MT	6,138.28	6,082.76

Renewable Sources

5.19 TPC-D has tied up non-solar generation (Wind) of 168.58 MW and 28.06 MW of solar to meet its Renewable Purchase Obligation. The Commission in the Tariff Order has approved the said purchase for non-solar and solar energy at average rate of Rs. 4.98/kWh and Rs. 9.10/kWh respectively. Further, the Commission has also approved non-solar and solar REC's at Floor Price of Rs.1.00/kWh for approximately 391 MUs towards shortfall in meeting RPO.

5.20 TPC-D had purchased non-Solar and Solar RE power as per the long term PPAs with Wind and Solar generators. TPC-D has submitted invoices for solar energy purchase and the solar purchase considered is as per invoice submitted by TPC-D and the same is considered by the Commission in FAC computation. In respect of non-solar, it has submitted that TPC-D is yet to receive credit notes (invoices) for the wind power procured from various generators during April 2020 and accordingly wind power purchase has been considered based on the monthly meter reading data. It is pertinent to note that TPC-D has filed Case No 89 of 2020 on 27 April, 2020 seeking extension of term of EPA for 50.4 MW Khandke wind project and 11.25 MW Bramanwel wind project up to 14 December, 2020 and 7 May, 2020 respectively. As submitted in the Petition that as per original term and conditions, the purchase of power from the said projects expired on 31 March, 2020. However, both the projects are in currently 13th year of operation and has sought the approval of the Commission for extension of the term till the completion of 13 years. The said Case No 89 of 2020 is pending before the Commission. TPC-D having filed the Petition on 27 April, 2020 has not made any submission regarding the pending Petition in its FAC submissions and has also considered the purchase of energy from these projects pending approval of the Commission in Case No 89 of 2020. The said sources (Khandke and Bramanwel) along with other sources of wind are approved by the Commission in the Tariff Order. In view of the purchase of non-solar energy being from an approved source as per Tariff Order, the Commission has considered the non-solar energy including the energy from Khandke and Bramanwel projects as submitted by TPC-D. The approval of energy from Khandke and Bramanwel projects is subject to outcome of proceedings in Case No 89 of 2020 and any adjustment of cost based on the ruling in the said Petition will be done at the time truing-up of FY 2020-21. However, TPC-D is directed to submit the invoices of non-solar wind energy purchase during the FAC submission of next month for verification.

5.21 The Commission observes that TPC-D has purchased total 19.29 MUs of RE power during the month of April, 2020. This power has been purchased by TPC-D as per Generic Tariff rate approved by the Commission. The average power purchase cost from RE sources is Rs. 6.11/kWh as compared to approved rate of Rs. 6.59/kWh. Even though TPC-D has purchased RE power at approved rate, the APPC is lower than the approved rate due to the fact that TPC-D has not purchased any REC's in the month of April, 2020 whereas same were considered by the Commission in its approval to meet RPO requirement for FY 2020-21. Accordingly, the Commission has considered RE purchase as submitted by TPC-D.

Short Term Purchase

5.22 With regards to short term purchase, TPC-D has purchased 20.60 MUs at average rate of Rs. 2.59/kWh as compared to approved rate of Rs. 3.56/kWh. It was observed that in spite of availability of contracted sources, TPC-D purchased power from Power Exchange at lower rate to optimise its overall power purchase cost. Accordingly, the Commission has considered the power purchased from Power Exchange by TPC-D.

5.23 To summarise, TPC-D has optimised its overall power purchase cost by taking following actions:

(a) Zero Schedule to Unit 8 (highest cost in MOD) from 11.04.2020 to 30.04.2020

(b) Running Unit 5 at Technical Minimum from 21.04.2020 to 30.04.2020 (2nd in MOD)

(c) Lowest Cost Generator – Unit 7 is run at highest PLF among all the thermal/gas generators

(d) Purchasing cheaper power from Power Exchange at Rs 2.59/kWh which is lower than Variable Cost of Unit 5 and Unit 8.

Imbalance Pool

5.24 Further, it was observed that TPC-D has injected 24.85 MUs to the imbalance pool during the month of April 2020. TPC-D has considered the said increment to the pool at provisional rate of Rs. 3.50/kWh. The said injection into the pool is result of either decrease in demand of consumers than estimated by the licensee or due to higher generation than scheduled by the generator. In both the scenarios, power incremented in the imbalance pool is not supplied to its consumers.

5.25 The present FAC mechanism includes any variation in power purchase cost which includes both Fixed Charges and Variable Charges. The imbalance pool settlement is done considering Variable Charges on monthly basis and Fixed Cost Reconciliation on yearly basis. Accordingly, considering monthly surplus imbalance pool quantum at provisional variable cost as per FBSM mechanism will increase the overall average power purchase cost which is computed considering both Fixed and Variable Charges, thereby burdening the consumers with FAC. Further, due to historical issues of delay in computing imbalance pool quantum and cost of power, for which appropriate orders are already passed by the Commission, non-consideration of surplus imbalance pool quantum at the time of FAC computation on monthly basis will not have any adverse impact on licensee as it would have anyway paid the entire fixed cost to the generator even if lower quantum of power was supplied. Further, for FAC computation total energy purchased by the licensee is being considered for FAC Computation. In view of the aforesaid, it would not be prudent to burden the consumers by considering the impact of monthly surplus imbalance pool in FAC computation. Accordingly, to balance overall interest of consumers and licensee, the Commission has not considered the surplus imbalance pool quantum and cost in the monthly FAC computation as it will get adjusted during truing-up of the respective year.

Sale of Power

5.26 TPC-D has done sale of surplus power to the extent of 0.23 MUs during the month at Rs. 4.83/kWh. With such a sale of power TPC-D has earned revenue of Rs. 0.11 Crore. The Commission has compared the rate of sale of surplus power by TPC-D vis-à-vis the Market Clearing Price (MCP) prices of power traded at IEX. The average MCP prices for April 2020 prevailed at Rs. 2.42/kWh at Regional periphery which would be approximately Rs. 2.80/kWh at Maharashtra Periphery. Against the above prices prevailing at IEX, TPC-D has managed to sold the surplus power at a higher rate, thus lowering the APPC and benefitting the consumers. Hence, based on this the Commission has considered the actual quantum and revenue against surplus sale.

Approved Cost of Power Purchase

5.27 In view of the above, the overall cost approved in the Tariff Order and actual for the month of April, 2020 considered by the Commission is as shown below:

Particulars	Source	Power Purchase Quantum (MU)	Fixed Cost (Rs. Crore)	Fixed Cost (Rs./kWh)	Variable Cost (Rs. Crore)	Variable Cost (Rs. /kWh)	Total Cost (Rs. Crore)	APPC(Rs. /kWh)
TPC-G	Approved	316.65	39.26	1.24	98.77	3.12	138.03	4.36
	Actual	258.00	39.26	1.52	67.46	2.61	106.71	4.14
Renewable including REC	Approved	31.15	-	-	20.54	6.59	20.54	6.59
	Actual	19.29	-	-	11.78	6.11	11.78	6.11
Short Term	Approved	57.28	-	-	20.38	3.56	20.38	3.56
	Actual	20.60	-	-	5.35	2.59	5.35	2.59

Sale of Surplus Power	Approved	-	-	-	-	-	-	-
	Actual	(0.23)	-	-	-0.11	4.83	-0.11	4.83
Total	**Approved**	**405.08**	**39.26**	**0.97**	**139.69**	**3.45**	**178.95**	**4.42**
	Actual	**297.66**	**39.26**	**1.32**	**84.47**	**2.84**	**123.73**	**4.16**

5.28 Considering the above, the Commission allows the average power purchase cost of Rs.4.16/kWh for the month of April, 2020 as shown in Table above. The variation in power purchase cost is mainly on account of lower cost of power purchase from TPC-G and short term purchase, as already explained in para above.

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 April, 2020 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 April, 2020.

S. No.	Particulars	Units	April 2020
1	Average power purchase cost approved by the Commission	Rs./kWh	4.42
2	Actual average power purchase cost	Rs./kWh	4.16
3	Change in average power purchase cost (=2 -1)	Rs./kWh	(0.26)
4	Net Power Purchase	MU	297.66
5	**Change in fuel and power purchase cost (=3 x 4/10)**	**Rs. Crore**	**(7.76)**

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

7.1 The Commission is in the process of providing prior approval of FAC for the first month after issuance of Tariff Order and hence there would not be any adjustment factor for previous months that is to be considered 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 April, 2020.

9. Disallowance due to excess Distribution Loss

9.1 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 Z_{FAC} 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_{FAC} 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_{FAC} corresponding to the excess distribution losses (in kWh terms) shall be deducted from the total Z_{FAC} 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	April 2020
1	Net Energy Input at Distribution Voltage	MU	270.21	142.93
2	TPC-D Retail Sales (excluding sales at 110/132 kV level)	MU	267.45	132.26
3	Distribution Loss (1 - 2)	MU	2.76	10.67
4	Distribution Loss as % of net energy input (3/1)	%	1.02%	7.46
5	Excess Distribution Loss = [Actual Distribution Loss (4) - Distribution loss approved] x Net Energy Input (1)	MU	-	9.21
6	**Disallowance of FAC due to excess Distribution Loss**	**Rs. Crore**	**-**	**-**

9.3 As seen from the above table, Distribution Loss for the month of April, 2020 is 7.46% which is higher than the approved Distribution Loss of 1.2% mainly due to estimated sales due to Covid-19 pandemic. The Commission has not worked out any disallowance on account of excess Distribution Loss since the standalone FAC for the month of April, 2020 is negative.

10. Summary of Allowable Z_{FAC}

10.1 The summary of the FAC amount as approved by the Commission for the month of April, 2020 is as shown in the Table below.

S. No.	Particulars	Units	April 2020
1.0	**Calculation of Z_{FAC}**		
1.1	Change in cost of generation and power purchase attributable to Sales within the License Area (F)	Rs. Crore	(7.76)
1.2	Carrying cost for over-recovery/under-recovery (C)	Rs. Crore	0.00
1.3	Adjustment factor for over-recovery/uner-recovery (B)	Rs. Crore	0.00
1.4	**Z_{FAC} = F+C+B**	Rs. Crore	(7.76)
2.0	**Calculation of Per Unit FAC**		
2.1	Energy Sales within the License Area	MU	254.87
2.2	Excess Distribution Loss	MU	0.00
2.3	Z_{FAC} per kWh	Rs./kWh	0.00
3.0	**Allowable FAC**		
3.1	FAC disallowed corresponding to excess Distribution Loss[(2.2 x 2.3)/10]	Rs. Crore	0.00
3.2	FAC allowable [1.4-3.1]	Rs. Crore	(7.76)
4.0	**Utilization of FAC Fund**		
4.1	Opening Balance of FAC Fund	Rs. Crore	0
4.2	Holding Cost on FAC Fund	Rs. Crore	0
4.3	Z_{FAC} for the month (Sr. N. 3.2)	Rs. Crore	(7.76)
4.4	Closing Balance of FAC Fund	Rs. Crore	(7.76)
4.5	Z_{FAC} leviable/refundable to consumer	Rs. Crore	0.00
5.0	**Total FAC based on category wise and slab wise allowed to be recovered in the billing month of Jun-20**	**Rs. Crore**	0.00
6.0	**Carried forward FAC for recovery during future period (4.5-5.0)**	**Rs. Crore**	0.00

10.2 It can be seen from the above table that standalone FAC for the month of April, 2020 is Rs. (7.76) Crore. As the FAC is negative, the said amount will be accumulated in FAC Fund for stabilisation of FAC rate over the period.

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_{FAC} component for a particular Tariff category/sub-category/consumption slab in 'Rupees per kWh' terms;

k = Average Billing Rate / ACOS;

Average Billing Rate = Average Billing Rate for a particular Tariff category/sub-category/consumption slab under consideration in 'Rupees per kWh' as approved by the Commission in the Tariff Order:

Provided that the Average Billing Rate for the unmetered consumers shall be based on the estimated sales to such consumers, computed in accordance with such methodology as may be stipulated by the Commission:

ACOS = Average Cost of Supply in 'Rupees per kWh' as approved for recovery by the Commission in the Tariff Order:

Provided that the monthly 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 in the Tariff Order had held that negative FAC amount shall be carried forward to the next FAC billing cycle with holding cost till the accumulated negative FAC reaches the limit of Rs. 50 Crore. Accordingly, the Commission allows the FAC amount of Rs. (7.76) Crore to be accumulated as FAC Fund and shall be carried forward to the next billing cycle with holding cost.

11.3 In view of the above, the per unit Z_{FAC} for the month of April, 2020 to be levied on consumers of TPC-D in the billing month of June 2020 is **Nil**.