



**ORDER  
OF THE  
WEST BENGAL ELECTRICITY REGULATORY  
COMMISSION**

**IN CASES NO:**

**FPPCA – 79 / 16 – 17 AND  
APR – 58 / 16 - 17**

**IN RE APPLICATIONS OF CESC LIMITED FOR  
FUEL & POWER PURCHASE COST  
ADJUSTMENT (FPPCA) AND ANNUAL  
PERFORMANCE REVIEW (APR) FOR  
THE FINANCIAL YEAR 2015- 2016**

**SRI SUTIRTHA BHATTACHARYA, CHAIRPERSON  
SRI PULAK KUMAR TEWARI**

**DATE: 01.08.2022**



## Chapter 1

### PREAMBLE

- 1.1 Regulation 2.6 of the West Bengal Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2011, as amended from time to time (hereinafter referred to as the 'Tariff Regulations'), mandates that licensees are required to undergo an Annual Performance Review (in short 'APR') process. Accordingly, CESC Limited (hereinafter referred to as 'CESC') submitted their application for Annual Performance Review for 2015 - 2016 on 30.11.2016 and Fuel and Power Purchase Cost Adjustment (in short 'FPPCA') application for 2015 - 2016 on 08.09.2016 in pursuant to regulations 2.8.7 and 5.8 of the Tariff Regulations. The applications were registered as APR-58/16-17 and FPPCA-79/16-17.
- 1.2 CESC has submitted their application of APR for the second year of the fourth control period, i.e., for 2015 - 2016. The review of this instant application on the basis of the audited annual report and accounts of CESC for 2015 - 2016 with reference to the Commission's tariff order dated 04.03.2015 and 10.08.2015 of CESC in Case No. TP- 56/13-14 will result into adjustment of different heads. The net adjustment arising out of such adjustment on different heads will be considered for giving effect to while determining the amount of revenue recoverable/payable through tariff order of further ensuing year or through separate order as specified in regulation 2.6.6 of the Tariff Regulations.
- 1.3 The APR covers the areas of determination of permissible annual fixed charges admissible to the applicant, permissible incentives and the effect of gain sharing as per Schedule-9B and Schedule 10 to the Tariff Regulations respectively. In the APR for the year 2015 - 2016, therefore, the review of the different elements of fixed charges, categorized as controllable and uncontrollable have been done to find out the amounts to be permitted to CESC against each head of element vis-a-vis the amount allowed under the tariff order for 2015 - 2016.
- 1.4 In the application of APR for 2015 - 2016, CESC submitted the required data and information and also a copy of its audited Annual Report and Accounts for 2015 - 2016. The application of APR for 2015 - 2016 had been admitted by the Commission on 15.09.2017 vide letter No. WBERC/APR-58/16-17/0930 dated 18.09.2017.



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- 1.5 On admission of the APR application, CESC was directed to publish the gist of the APR application 2015 - 2016, as submitted by CESC and approved by the Commission. Accordingly, the gist was published simultaneously on 22.09.2017 in 'The Telegraph', the 'Bartaman', the 'Ei Samay' and the 'Dainik Vishwamitra'. The publication requested for submission of suggestions and objections from the members, if any, on the application to the Commission by 16.10.2017. The approved gist along with the APR petition for 2015 - 2016 was also published on the website of CESC. Opportunities were also afforded to all to inspect the application and take copies thereof.
- 1.6 No suggestion / objection was received from the stake-holders during the stipulated time i.e., 16.10.2017.
- 1.7 The Commission also asked for certain additional information from CESC through its letter No. WBERC/APR-58/367 dated 23.02.2021 and CESC submitted its response through letter vide memo No. ED(F):74244 dated 24.03.2021 and ED(F):74474 dated 12.07.2021.
- 1.8 The instant application of CESC for the year 2015 – 2016 is being analysed in the subsequent parts of this order.





## Chapter 2

### COMPUTATION OF THE ALLOWABLE AMOUNT OF FUEL & POWER PURCHASE COST

- 2.1 The admissible fuel and power purchase costs are to be worked out with reference to the actual quantum of energy sold to its own consumers and to other licensee(s) during the concerned adjustment period applying the following formula specified in Schedule – 7A to the Tariff Regulations on the basis of normative parameters as was used in the tariff order for 2015 - 2016 and also on the basis of regulation 5.8.1 of the Tariff Regulations.
- 2.2 The schedule – 9B to the Tariff Regulations, contains provisions for sharing gains derived by the licensee, if any, on account of its better performances over the operating and fuel consumption norms set by the Commission for the concerned year. The operational parameters which are to be considered for such sharing of gains accrued to the licensees are:
- i) Oil consumption rate,
  - ii) Rate of Auxiliary Consumption,
  - iii) Gross Station Heat Rate.
- 2.2.1 Paragraph D of schedule 9B to the Tariff Regulations provides that in case availability of a generating station falls below the availability norm, then the total gains meant to be passed on to the consumers under the items (i) to (iii) above, is first to be used to compensate the deficit in the recovery of the fixed charges by the licensee. and only thereafter the balance, if any, shall be passed on to the consumers.
- 2.3 Before ascertaining the amount of admissible fuel and power purchase cost as well as the amount of gains to be shared with the consumers and other licensees under the provisions of the Tariff Regulations explained in earlier paragraphs, the actual performances of CESC needs to be examined in comparison to the operational and fuel efficiency norms set by the





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Commission in the Tariff Order for the concerned year. Such comparisons of actual values are made here.

SI No	Power Station	Particulars	Unit	As per Tariff Order / Norms	As per Actual
1	<b>Budge Budge</b>	Rate of Auxiliary Consumption	%	9.00	8.05%
		Specific Consumption of Oil	ml/kWh	1.30	0.18
		Station Heat Rate	kCal/kWh	2470	2141.20
2	<b>Titagarh</b>	Rate of Auxiliary Consumption	%	9.00	9.41%
		Specific Consumption of Oil	ml/kWh	2.10	1.84
		Station Heat Rate	kCal/kWh	2910	3734.51
3	<b>Southern</b>	Rate of Auxiliary Consumption	%	9.00	9.76%
		Specific Consumption of Oil	ml/kWh	2.10	1.90
		Station Heat Rate	kCal/kWh	2900	3209.57

The actual station heat rate determination has been provided in Annexure 2E.

- 2.4 As is seen from the above statement, CESC succeeded in performing better than norms for oil consumption in the generating stations at Budge Budge, Titagarh and Southern. Part of the benefits accrued to it in financial terms will, therefore, need to be passed on to its consumers and other licensees in terms of the provisions of Schedule 9B to the Tariff Regulations.
- 2.5 The actual performances of CESC in respect of auxiliary consumption and gross station heat rate in the generating station at Budge Budge is found better than the norms considered in the tariff order for the concerned year. It is therefore, required to share the benefits (in the financial terms) accrued to it in that respect in the manner as provided in paragraphs A2 and A3 of the Schedule 9B to the Tariff Regulations.



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- 2.6 The norm for distribution loss of CESC for the year 2015 – 2016 was considered to be 14.30% under the Regulations. As it comes out from the data as provided by CESC for the year 2015 – 2016, the actual rate of distribution loss experienced by CESC on the quanta of sales to consumers, sales to WBSEDCL and on its own consumption works out at 11.55% as shown below:

Sl. No	Particulars	Figures in MU
<b>Inputs to System</b>		
(a)	Gross Generation	6988.474
(b)	Less: Auxiliary consumption	580.386
(c)	Net Sent Out Energy [(a) – (b)]	6408.088
(d)	Energy purchased during the year	4231.502
(e)	Less: Sale to persons other than Consumers and WBSEDCL including Transmission loss to effect that sale	202.054
(f)	Less: Swap out energy including permissible loss	6.930
(g)	Add: Unscheduled Interchange (Net)	45.629
(h)	<b>Energy delivered to the system for sale to Consumer and licensee [(c) + (d) - (e) - (f) + (g)]</b>	10476.235
(i)	Sale to Consumers and WBSEDCL	9241.664
(j)	Energy consumed in own premises	24.165
(k)	Distribution loss to effect sale to consumers, sale to WBSEDCL and own consumption. [(h) - (i) - (j)]	1210.406
(l)	Distribution loss in % [(k / h) x 100]	11.55%

- 2.7 The actual sale to consumers and WBSEDCL is 9241.664 MU. Energy consumed in the own premises is 24.165 MU as against the admitted energy of 20.00 MU in the Tariff order for the concerned year. The allowable quantum of distribution loss as per norms @ 14.30% on actual quanta of sales to consumers and WBSEDCL as well as the energy consumed in own premises works out at 1546.107 MU  $[(9241.664 + 24.165) / (1.00 - 0.1430)] - (9241.664 + 24.165)$  and actual quanta of distribution loss against that sale and own consumption works out at 1210.410 MU. The savings in this regard thus comes to 335.697 MU (1546.107 MU – 1210.410 MU). As





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provided in paragraph C of Schedule – 9B to the Tariff Regulations, entitled gain in this regard is required to be shared with the consumers.

- 2.8 The amount of fuel and power purchase cost that can be allowed to CESC, after carrying out the adjustments towards gain sharing and the accrual of benefits for savings in the quanta of distribution loss, is being taken up in the next chapter.
- 2.9 The Commission now proceeds to determine the fuel and power purchase costs allowable to CESC in terms of the formula in this regard as specified in Schedule 7A of Tariff Regulations.

**2.10 F.C.: FUEL COST:**

- 2.10.1 Fuel cost of own generation is to be allowed as per normative parameters fixed by the Commission, or on actual basis in absence of any norms, and heat value of coal as may be allowed under regulation, commensurate with actual level of energy sales to own consumers and / or licensees during the adjustment period. The fuel costs to be allowed to CESC for the year 2015 – 2016 for its different power stations shall be based on the following fuel consumption norms:

Particulars	Unit	Budge Budge	Titagarh	Southern
Station Heat Rate	Kcal/Kwh	2470	2910	2900
Specific Oil Consumption	MI/Kwh	1.30	2.10	2.10
Transit loss of Coal	%	0.75	0.75	0.75

- 2.10.2 On the basis of normative parameters as stated above and normative rate of auxiliary consumption as referred to in paragraph 2.3, the amount of fuel cost allowable to CESC for effecting sales to its consumers and WBSEDCL comes to Rs.145349.16 lakh as per computations given in Annexure – 2A. The explanatory notes in this regard are as under:
- 2.10.3 Out of the total ex-bus generation of 6408.088 MU, CESC utilized 202.051 MU to effect sales to persons other than its consumers and WBSEDCL. This quantum has been reduced from ex-bus generation of Budge Budge generating station by CESC in their FPPCA and APR petitions.





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In their Multi year Tariff Petition for 2014-15, 2015-16 and 2016-17 CESC Limited also projected some quantum of surplus energy to be sold to persons other than consumers and licensees and proposed to be adjusted against the generation from their Budge Budge Generating Stations which the Commission did not consider in the Tariff order for 2014-15 determining the ARR for all the three years 2014-15, 2015-16 and 2016-17. The Commission in the Tariff order dated 04.03.2015 for the year 2015-16 considered the full quantum of generation as per normative PLF for all the generating station including Budge Budge generating station and reduced the quantum of energy purchase requirement for sale to consumers and the licensee in the energy balance. The Commission, at paragraph 5.23.1.1 of the tariff order for the year 2015 – 16 decided that if there is any sale to persons other than consumers and licensee in any year during actual operation, then the sharing of gains with the consumers on the basis of actuals as per audited accounts will be taken up for adjustments at the time of Annual Performance Review for the concerned year. The Commission, at paragraph 4.6.2 of the tariff order directed that the surplus energy is required to be appropriately sold out / banking / swap to a person other than consumers and licensee in order to bring down the consumer's tariff and the Commission will review the matter while truing up during the APR of concerned year. The Commission has decided not to reduce the quantum of energy sold to persons other than its consumers and WBSEDCL from total ex-bus generation of Budge Budge generating station as proposed by CESC while determining fuel cost but has adjusted it with power purchase cost instead.

2.10.3.1 The weighted average calorific values of coal and oil are, however, variable factors for assessing the quantity of coal and oil requirements and depend on the actual grade mix of their use in the power stations. Moreover, the declared Heat Value of each grade of coal varies between ranges. The weighted average heat value of coal for each generating station of CESC, as considered in the tariff order, was based on the lower value of the range of the proposed grade mix of use. With reference to actual grade mix of coal and oil at different generating stations, heat value of coal and heat value of oil are as under:

Generating Station	Heat Value of Coal (Kcal/Kg)	Heat Value of Oil (Kcal/Litre)
Budge Budge	3569.25	9553.00
Titagarh	5108.59	9552.00



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Southern	4123.95	9579.00
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Above heat values of coal have been considered with reference to the grade-wise coal consumption of the concerned generating stations, as per documents submitted by CESC, the declared heat value of different grades of coal varying within a range and the minimum allowable heat value in terms of provision of regulation 5.8 of the Tariff Regulations. The weighted average heat value of coal for each generating station as claimed by CESC has been compared with the station wise actual weighted average heat value of coal duly certified by the auditors and the minimum weighted average heat value of coal as per formula given in regulation 5.8.1 of the Tariff Regulations. The computations of the minimum allowable heat value of coal for different generating stations vis-à-vis the actual heat value of coal have been shown in Annexure – 2D to this chapter. In this context it is to be mentioned that the minimum allowable heat value of coal is considered as per provisions of the Tariff Regulations. As is observed from the aforesaid annexures, the actual heat value of coal received by CESC is lower than the minimum allowable heat value in terms of the Tariff Regulations and thus the Commission considers the minimum allowable heat value of coal for different generating stations as computed.

2.10.3.2 The weighted average price of coal and oil, as certified by the auditors in Annexure F3 of Volume-1 of the FPPCA application, came as under:

Generating Station	(Rs/MT)	Price of Oil (Rs/KL)
Budge Budge	3225.24	51770.19
Titagarh	4572.26	49064.65
Southern	3898.12	53132.79

The above prices are inclusive of freight charges which also includes demurrage charges and payment made to Kolkata Port Trust for Southern generating station.

2.10.3.3 CESC Limited has claimed demurrage charges in the above landed price of coal with Auditor's certificate as follows:

Rs Lakh





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Budge Budge	Southern	Titagarh	New Cossipore	Total
279.70	19.78	60.31	NA	359.79

2.10.3.4 From the submissions of CESC Limited, the generating station wise claim of demurrage for the year 2015 – 16 in Rs/MT comes as follows:

Description	Budge Budge	Southern	Titagarh
Claim of Demurrage in Rs Lakh	279.70	19.78	60.31
Coal Qty (MT)	3472738	411140	482992
Demurrage (Rs/MT)	8.05	4.81	12.49

It is noticed that demurrage charges in Rs/MT for the year 2015 – 16 could be reduced consistently with respect to 2013 – 14 only in Southern generating station as follows:

Rs/MT

Description	Budge Budge	Southern	Titagarh
Demurrage for the year 13-14	6.43	5.96	7.08
Demurrage for the year 14-15	6.50	5.29	9.00
Demurrage for the year 15-16	8.05	4.81	12.49

Therefore, as per provision of regulation 5.8.1(vi), the Commission finds it prudent to allow the minimum demurrage charge incurred since 2013 – 14 as follows:

Rs/MT

Sl. No	Description	Budge Budge	Southern	Titagarh
1	Demurrage for the year 13-14	6.43	5.96	7.08
2	Demurrage for the year 14-15	6.50	5.29	9.00
3	Demurrage for the year 15-16	8.05	4.81	12.49
4	Admissible Demurrage (Min since 13-14)	6.43	4.81	7.08
5	<b>Disallowance of Demurrage [3 – 4]</b>	<b>1.62</b>	<b>0.00</b>	<b>5.41</b>

2.10.4 Following Coal Mines (Special Provisions) Act, 2015, a coal block has been allocated to Budge Budge Generating Station against reverse auction and it has now become necessary to adjust the cost of captive coal. Only the fixed rate of Rs. 100 per Tonne is payable for coal procured





from this mine, apart from all statutory duties/ levies/ cess/ royalty / taxes and other applicable charges. CESC has proposed an adjustment of Rs. 17046 Lakh, as reflected in the Notes 26 forming part of the financial statements in the Audited Accounts for 2015 - 2016 pursuant to settlement on this account. Further, CESC vide letter dated 24.03.2021 in response to the query of the Commission has proposed adjustment of captive coal cost at Rs 18865 lakh with calculation.

- 2.10.5 The mining cost along with additional premium paid for usage of captive coal in Budge Budge, Titagarh, Southern is disallowed by the Commission as follows:

(Rs/MT)

Sl. No.	Particulars	Budge Budge	Southern	Titagarh
A	Mining/Basic cost (ROM)	681	679	679
B	Additional Premium (ROM)	370	370	370
<b>C</b>	<b>Disallowance rate (ROM) [A+B]</b>	<b>1051</b>	<b>1049</b>	<b>1049</b>
D	Mining/Basic cost (Wash)	935	935	935
E	Yield of Washing	72.56%	72.56%	72.56%
<b>F</b>	<b>Disallowance rate (Wash) [D + B / E ]</b>	<b>1445</b>	<b>1445</b>	<b>1445</b>

- 2.10.5.1 The usage of the three stations from the captive mine is 1089398 MT ROM and 453192 MT washed in Budge Budge, 6182 MT ROM and 2898 MT washed in Titagarh together with 92671 MT ROM and 32562 MT washed in Southern respectively. The Commission has determined the deductible amount for captive coal in Rs/MT from the landed coal cost of the respective stations as follows:

Sl. No	Particulars	Budge Budge	Southern	Titagarh
<b>1</b>	<b>Grade Mix %</b>			
a)	Captive ROM Coal	31.37%	22.54%	1.28%
b)	Captive Washed Coal	13.05%	7.92%	0.60%
<b>2</b>	<b>Quantity in MT</b>	<b>3472738</b>	<b>411140</b>	<b>482992</b>
a)	Captive ROM in MT [ 1(a) x 2]	1089398	92671	6182
b)	Captive Washed in MT [1(b) x 2]	453192	32562	2898
3	Ex bus generation in MU	5327	479	601
4	Disallowance rate (ROM) in Rs/MT [Previous table]	1051	1049	1049



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5	Disallowance rate (Washed) in Rs/MT [Previous table]	1445	1445	1445
6	Disallowance in Rs. Lakh $[(2a \times 4 + 2b \times 5)/10^5]$	17998	1443	107
7	<b>Disallowance in Rs/MT <math>[2 \times 6]</math></b>	<b>518.27</b>	<b>350.89</b>	<b>22.10</b>

2.10.5.2 Also, CESC Limited has not considered adjustment of value of rejects for the year 2015 – 16 as stated by them through affidavit dated 22.01.2020. Thus, the Commission finds it prudent to adjust the value from sale of rejects from washing of coal from captive mine as follows:

Sl. No.	Particulars	Unit	Budge Budge	Southern	Titagarh
1	Annual quantity of raw coal used for washing	MT	597554	42935	3821
2	Annual quantity of washed coal derived from above	MT	433578	31153	2773
3	Annual quantity of rejects (1 - 2)	MT	163976	11782	1048
4	% of Yield by washing	%	72.56%	72.56%	72.56%
5	Sale Price of Washery rejects	Rs/MT	400	400	400
6	<b>Revenue earned from sale of rejects <math>(3 \times 5)</math></b>	<b>Rs lakh</b>	<b>655.90</b>	<b>47.13</b>	<b>4.19</b>
7	Quantity of coal as per Auditor's certificate	MT	3472738	411140	482992
8	<b>Deductible amount for Washery rejects <math>(6 / 7)</math></b>	<b>Rs/MT</b>	<b>18.89</b>	<b>11.46</b>	<b>0.87</b>

In the above calculation, Sale Price of Washery rejects is considered Rs 400 MT continuing the sale value of 2014 – 15 in absence of such data in the affidavit dated 22.01.2020.

2.10.5.3 Accordingly, the admitted coal cost in Rs/MT comes as follows after disallowing non admissible cost on account of captive coal and demurrage charge:

Rs/MT

Sl. No	Particulars	Budge Budge	Southern	Titagarh
1	Average Cost of coal	3225.24	3898.12	4572.26
2	Disallowance for Demurrage	1.62	0	5.41
3	Disallowance for captive coal	518.27	350.89	22.10





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4	Disallowance for Sale of washery rejects	18.89	11.46	0.87
5	Average Cost of coal Net of Captive, rejects and Demurrage disallowance [1 - 2 - 3 - 4]	<b>2686.46</b>	<b>3535.77</b>	<b>4543.88</b>

**2.11 PPC: POWER PURCHASE COST:**

2.11.1 The power purchase requirement of CESC during 2015 – 2016 was considered 3574.00 MU; vide the statement of Energy Balance at paragraph 4.7 of the Tariff order dated 4 March 2015 for the concerned year. The total quanta of actual purchase and the cost incurred thereon are claimed as under:

Sources	Quantum MU	Cost incurred (Rs in lakh)	Average rate (paise/kwh)
WBSEDCL	318.722	15232.96	477.94
HEL	3206.151	171082.70	533.61
RPGPTCL (Other than Cogeneration)	312.020	14696.47	471.01
NVVNL	4.220	174.13	412.63
DIL	1.060	35.09	331.04
IEX	337.150	11475.91	340.38
RPGPTCL (Cogeneration)	45.800	1925.32	420.38
Solar	0.130	7.54	580.00
Swap-in	6.250	317.79	508.46
<b>Total</b>	<b>4231.503</b>	<b>214646.77</b>	<b>507.97</b>

CESC Limited has stated that they have considered Rs 214646.77 lakhs towards overall power purchase cost after deducting Rs 301.14 lakh towards swap-in/swap-out power as per regulation 5.15.2(iv). The average power purchase cost thereof including Swap-in is 507.97 paise/kwh as tabulated below:

Sources	Quantum MU	Cost incurred Rs. in Lakh	Average Rate Paise/kWh
WBSEDCL	318.722	15232.96	477.94
Haldia	3206.151	171082.70	533.61





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RPGPTCL (Other than Cogeneration)	312.020	14696.47	471.01
NVVNL	4.220	174.13	412.63
DIL	1.060	35.09	331.04
IEX	337.150	11475.91	340.38
RPGPTCL (Cogeneration)	45.800	1925.32	420.38
Solar	0.130	7.54	580.00
Swap In	6.250	317.79	508.46
<b>Total including Swap-in</b>	<b>4231.502</b>	<b>214947.91</b>	<b>507.97</b>

2.11.2 CESC in its petition considered surplus sale to persons other than consumers and licensee from its Budge-Budge power plant. The Commission in the MYT order for fourth control period for 2014-15, 2015-16 and 2016-17 dated 04.03.2015, has already not considered similar proposal of CESC while computing fuel cost of Budge-Budge power plant and considered the entire generation of power plants for primarily meeting the demand of consumers in the CESC supply area. The Commission is of considered opinion that, primary responsibility of a distribution licensee is to supply power to its consumers from its own generating plants and/or from other sources through PPA on merit order basis. During the process of managing the load-generation balance, licensee may require to sale its incidental surplus power or arrange for banking, etc in such a way that ultimate consumers are get benefitted. This has been clearly mentioned in paragraph 4.6.2 of the tariff order for 2014-15, 2015-16 and 2016-17.

From the energy balance of 2015 – 16 mentioned in paragraph 2.6 above, it is observed that, CESC has sold 202.054 MU (including loss) to persons other than licensee & consumers. The Commission decides to adjust the cost of sale of surplus power at the average variable cost of power purchase cost excluding Solar, Cogeneration and exchange but including own generation of the licensee to ensure ultimate benefit of the end consumers as tabulated below:

Sources	MU	Energy Charge (Rs Lakh)	Energy Charge Rate (p/kwh)
WBSEDCL	318.722	8053.71	252.69
Haldia	3206.151	81360.27	253.76
RPGPTCL (Other than Cogeneration)	312.020	14494.89	464.55
NVVNL	4.220	166.96	395.64
DIL	1.060	30.33	286.13
IEX	337.150	10634.54	315.42



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Sources	MU	Energy Charge (Rs Lakh)	Energy Charge Rate (p/kwh)
RPGPTCL (Cogeneration)	45.800	1606.60	350.79
Solar	0.130	7.54	580.00
SWAp In	6.250	301.14	481.82
Budge Budge	5327.271	113044.76	212.20
Southern	479.428	13694.68	285.65
Titagarh	601.389	17796.79	295.93
<b>Total</b>	<b>10639.590</b>	<b>261192.210</b>	<b>245.49</b>
Less: Cogeneration, Solar, IEX, Swap-in	389.33	12549.82	322.34
<b>Net Total</b>	<b>10250.260</b>	<b>248642.39</b>	<b>242.57</b>

Therefore, the cost of sale to others comes Rs 4901.26 lakh for 202.054 MU @ 242.57 P/kwh. Gain, if any, on account of revenue earned shall be shared in subsequent chapter in terms of clause (iv) of regulation 5.15.2 of the Tariff Regulations.

The Cost of Swap-out power is considered same as total cost of swap-in power Rs 317.79 lakh since both are within the year.

In view of above, the admissible power purchase cost for sale to consumers and WBSEDCL is worked out as below:

Sl. No	Particulars	Energy (MU)	Amount (Rs lakh)
1	Total Power Purchase as in para 2.11.1 above	4231.503	214947.91
2	Less: Swap out power	6.930	317.79
3	Less: Sale to other than consumer & licensee	202.054	4901.26
4	Net Power Purchase for to sale consumers and WBSEDCL (1 – 2 – 3)	4022.518	<b>209728.86</b>

## 2.12 C<sub>D</sub>: COST DISALLOWABLE:

2.12.1 Factor C<sub>D</sub>, as referred to in the FPPCA formula mentioned in Schedule-7A of Tariff Regulations, stands for cost as to be found disallowable by the Commission as per the methodology specified in the FPPCA formula referred to herein. It has been observed that CESC succeeded in sending out generation from each of its generating stations a considerable quantum in excess of the target set for the concerned year. It also succeeded





in keeping the rate of distribution loss much below the norm set out for the year. Paragraph 2.6 may be referred to in this regard. No part of the fuel and power purchase cost is found disallowable and hence, value of factor  $C_D$  is nil.

**2.13 (+) A: PRIOR PERIOD'S ADJUSTMENTS:**

2.13.1 Factor A in the referred FPPCA formula signifies the adjustment, if any, to be made in the current period to account for any excess / shortfall in the recovery of fuel and power purchase cost for the past period. CESC did not ask for any such adjustment and no such adjustment is also found necessary. The value of this factor is, therefore, considered nil.

**2.14 Computations of the aggregate allowable amount of fuel and power purchase cost:**

2.14.1 The aggregate amount of fuel and power purchase cost, commensurate with the actual quantum of sale to the consumers and to the licensee (WBSEDCL), that can be allowed to CESC works out to Rs. 359465.92 lakh with the break-up as given hereunder. The detailed computations in this regard are shown in Annexure – 2B and Annexure – 2C. This amount, however, is inclusive of the amounts of gains derived to CESC on account of its better performances on different parameters of operations and fuel consumption norms:

Sl. No	Particulars/Factors	Rs. in Lakh
1	FC: Fuel cost	149820.99
2	PPC: Power purchase cost	209728.86
3	$C_D$ : Cost disallowable	0.00
4	$\pm A$ : Adjustment relating to earlier period	0.00
5	<b><math>FC + (PPC - C_D) + (\pm A)</math></b>	<b>359549.85</b>

2.15 The amount of fuel and power purchase cost of Rs. 359549.85 lakh, as shown in paragraph 2.14, computed as per FPPCA formula specified in Tariff Regulations is inclusive of the amounts of gains derived by CESC on account of its better performances on different parameters of operational and fuel consumption norms. As mentioned in paragraphs 2.4 and 2.5, CESC is required to pass on part





of such gains derived by it to its consumers and WBSEDCL. The amounts of gains attributable to the consumers and WBSEDCL are being viewed and ascertained hereafter.

## 2.16 Gain Sharing for better Oil Consumption Rate:

2.16.1 The actual specific oil consumption rates for Budge Budge, Titagarh and Southern generating stations are found better than the normative rate as considered in tariff order. The actual rate of oil consumption vis-à-vis rate of specific oil consumption as per tariff order / norms for the respective year for Budge Budge, Titagarh and Southern Generation Stations are given hereunder:

Figures in MI/kWh

Generating Station	As per Tariff Order/ Norms	Actual as per submission	Savings
Budge Budge	1.30	0.18	1.12
Titagarh	2.10	1.84	0.26
Southern	2.10	1.90	0.20

2.16.2 With reference to actual generation for effecting supply to the consumers and to WBSEDCL, the normative and actual consumption of oil at above mentioned specific consumption rate works out as under:

Sl No	Particulars	Unit	Budge Budge	Titagarh	Southern	Total
1	Gross generation for consumers and WBSEDCL with normative auxiliary consumption (refer table in Annexure 2A)	MU	5854.144	660.867	526.844	
2	Normative Oil consumption rate	MI/kwh	1.30	2.10	2.10	
3	Oil Consumption at normative rates for consumers and WBSEDCL	KL	7610.39	1387.82	1106.37	
4	Actual Oil consumption rate (refer table under paragraph 2.3)	MI/kwh	0.18	1.84	1.90	



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SI No	Particulars	Unit	Budge Budge	Titagarh	Southern	Total
5	Actual Oil Consumption for consumers and WBSEDCL	KL	1015.00	1220.98	1009.01	
6	Savings / difference	KL	6595.39	166.84	97.36	
7	Category		B	C	C	
8	Percentage of gain sharing attributable to consumers and WBSEDCL	%	26%	45%	50%	
9	Average price of Oil	Rs. /KL	51770.19	49064.65	53132.79	
10	Gains accrued on saving of Oil	Rs. in Lakh	3414.45	81.86	51.73	
11	Share of gains attributable to consumers and WBSEDCL (In terms of categorization and criteria as per para-A1 of Schedule 9B to Tariff Regulations)	Rs. in Lakh	887.76	36.84	25.87	950.47

## 2.17 Gain Sharing for Better Rate of Auxiliary Consumption:

2.17.1 As shown in Annexure – 2C, the savings arising out of difference between normative quanta of auxiliary consumption on generation meant for supply of power to the consumers and WBSEDCL and actual such consumption were found as given hereunder. The entire benefits of savings in the quanta of auxiliary consumption have been passed on to CESC while computing the amount of allowable fuel and power purchase cost as shown in Annexure – 2B. Such benefits have been valued in monetary terms at the average rate of cost of generation of the respective generating station. In terms of paragraph A2 of Schedule 9B to the Tariff Regulations, part of the gains so derived by CESC requires to be passed on to the consumers and WBSEDCL. Share to be passed on works out as under:

Generating Station	Savings in Auxiliary Consumption (MU)	Cost of Generation (Paise / kWh)	Monetary value of Savings (Rs. in Lakh)	Category	Share to consumers & WBSEDCL	
					Percentage	Amount (Rs. in Lakh)
Budge Budge	60.779	193.10	1173.64	B	25.00	293.41
Titagarh	0.000	269.29	0.00	B	0.00	0.00





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Generating Station	Savings in Auxiliary Consumption (MU)	Cost of Generation (Paise / kWh)	Monetary value of Savings (Rs. in Lakh)	Category	Share to consumers & WBSEDCL	
					Percentage	Amount (Rs. in Lakh)
Southern	0.000	259.94	0.00	B	0.00	0.00
Total	60.779		1173.64			293.41

## 2.18 Share of Savings in Cost of Coal for achieving better Station Heat Rates:

2.18.1 The normative Station Heat Rates considered in the tariff order for different generating stations of CESC Limited with reference to their respective design station heat rates and vintages were as under:

Generating Station	Station Heat Rates as per Norm set (Kcal/kWh)
Budge Budge	2470.00
Titagarh	2910.00
Southern	2900.00

2.18.2 The allowable cost of fuel at different generating stations, as per computations shown in Annexure – 2A, was ascertained based on such normative station heat rates. It has been seen that CESC Limited succeeded in achieving better Station Heat Rate in its Budge Budge generating station as already explained in paragraph 2.3. CESC Limited, thus, could derive some gains by way of saving the fuel cost in the generating station at Budge Budge. In terms of Schedule 9B to the Tariff Regulations, part of such gains derived on account of the savings in the cost of coal are to be passed on to the consumers and to WBSEDCL.

2.18.3 Following the methodology enunciated by the Commission in paragraph A3 of Schedule 9B to the Tariff Regulations, share of such gains attributable to the consumers and WBSEDCL is 14% for Budge Budge Generating Station. The total amount so to be passed on to consumers comes to Rs. 2229.13 lakh as computed in Annexure 2E with the following station wise break-up:

Name of the generating station	Rs in Lakh
Budge Budge	2229.13



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Name of the generating station	Rs in Lakh
Titagarh	0.00
Southern	0.00
<b>Total</b>	<b>2229.13</b>

**2.19 Benefits for savings in Distribution Loss:**

2.19.1 As analysed in paragraph 2.6 and 2.7, CESC Limited saved 335.697 MU by making improvements in the extent of distribution loss. In terms of paragraph C of the Schedule 9B to the Tariff Regulations, 25% of benefits of such savings are required to be passed on to the consumers. The computations in monetary terms work out as under:

Sl. No.	Particulars	Quantum (MU)	Amount (Rs. in Lakh)
1	Ex-bus generation for sale to consumers and WBSEDCL and Fuel cost thereon (Vide Annexure 2A)	6408.088	144536.23
2	Purchase of Energy (vide paragraph 2.11.2)	4022.518	209728.86
3	<b>Total</b>	<b>10430.606</b>	<b>354265.09</b>
4	Average cost per unit in the Distribution System	-	339.64 Paise/kWh
5	Cost of quantity saved (vide paragraph 2.7)	335.697	11401.73

2.19.2 Out of the amount of Rs. 8551.30 lakh (75% of 11401.73 lakh computed above), a total amount of Rs. 5284.76 lakh (Rs. 149820.99 lakh – Rs. 144536.23 lakh) has already been passed on to CESC while computing the allowable fuel costs for sales to WBSEDCL and the consumers by way of adopting the normative rate of distribution loss in the denominator of the fraction for such computation. The balance amount of Rs. 3266.54 lakh (Rs. 8551.30 lakh – Rs. 5284.76 lakh) is now being allowed. Benefit of 2850.43 lakh is passed on to the consumers of CESC.

2.20 The analyses show that the amount of fuel cost computed on the basis of normative parameters and in terms of the specified FPPCA formula comes to Rs. 149820.99 lakh. The amount is





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inclusive of the gains accrued on to CESC for its better performances in regard to fuel consumption norms. In terms of Schedule 9B to the Tariff Regulations, a part of such gains is to be passed on to the consumers and WBSEDCL. Such shares attributable to them have been worked out in this chapter. The net amount of fuel cost allowable to CESC after carrying out adjustments of the shares of gains attributable to the consumers and WBSEDCL comes as under:

Sl. No.	Particulars	Amount (Rs. in Lakh)	Amount (Rs. in Lakh)
1	Fuel Cost on normative basis		149820.99
2	Less: Shares of gains attributable to consumers and WBSEDCL		
	i) cost saving on use of Oil	950.47	
	ii) on improvement in the rate of Auxiliary Consumption	293.41	
	iii) for achieving better Station Heat Rate	2213.56	3475.44
3	Amount adjusted for prior period (vide para 2.10.3.4)		17046.00
4	Net amount of allowable fuel cost		<b>129317.55</b>

**2.21 Station-wise break-up of the allowable fuel cost is given below:**

Sl. No	Particulars	Amount (Rs. In Lakh)			
		Budge Budge	Southern	Titagarh	Overall
1.	Fuel Cost on Normative Basis	117178.08	14195.41	18447.50	149820.99
2.	Less : Share of Gains attributable to consumers and WBSEDCL				
	i) Cost saving on use of Oil	887.76	25.87	36.84	950.47
	ii) On improvement in the rate of Auxiliary Consumption	293.41	0.00	0.00	293.41
	iii) For achieving better Station Heat Rate	2213.56	0.00	0.00	2213.56
	<b>Total (2)</b>	<b>3394.73</b>	<b>25.87</b>	<b>36.84</b>	<b>3457.44</b>
3.	Adjustment for prior period costs	13247.96	1648.23	2149.81	17046.00
4.	Net amount of allowable fuel cost	<b>100535.39</b>	<b>12521.31</b>	<b>16260.85</b>	<b>129317.55</b>



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- 2.22 The amount of power purchase cost considered for purchasing 4022.518 MU from different sources, for the consumers and licensee in the state, as enumerated in paragraph 2.11.2 is Rs 209728.86 lakh.
- 2.23 An additional amount of Rs 3266.54 lakh is found admissible to CESC on account of savings in the rate of distribution loss as shown in paragraph 2.19.2.
- 2.24 Summing up the findings as stated above, the net amount of fuel and power purchase cost allowed to CESC for the year 2015 – 2016 comes as under:

Sl. No	Particulars	Rs in Lakhs
1	Fuel Cost	129317.55
2	Power Purchase Cost	209728.86
3	Additional amount on account of savings in the rate of Distribution loss	3266.54
4	<b>Re-determined Fuel and Power Purchase Cost (1 + 2 + 3)</b>	<b>342312.95</b>

- 2.25 The Commission decides, in terms of regulation 2.8.7.1 of the Tariff Regulations, to consider this amount of Rs. 342312.95 lakh allowable towards fuel and power purchase cost along with the Annual Performance Review for the year 2015 – 2016.





Annexure 2A

Admissible Fuel Cost

Sl. No	Particulars	Unit	Budge Budge	Southern	Titagarh	Total
1.	Energy sent out from own generation	MU	5327.271	479.428	601.389	6408.088
2.	Rate of Normative Auxiliary Consumption	%	9.00	9.00	9.00	
3.	Normative Auxiliary Consumption	MU	526.873	47.416	59.478	633.767
4.	Gross Generation (1 + 3)	MU	5854.144	526.844	660.867	7041.855
5.	Normative Station Heat Rate	kCal/kWh	2470.00	2900.00	2910.00	
6.	Station Heat Rate Required (4 x 5)	M. KCal	14459735.68	1527847.60	1923122.97	17910706.250
7.	Specific Consumption Oil	ml/kWh	1.30	2.10	2.10	-
8.	Normative Consumption Oil on generation (4 x 7)	KL	7610.39	1106.37	1387.82	10104.580
9.	Weighted Average Heat Value of Oil	kCal/Ltr	9553.00	9579.00	9552.00	-
10.	Heat from Oil [8 x 9)/1000]	M. KCal	72702.03	10597.94	13256.46	96556.433
11.	Heat from Coal (6 - 10)	M. KCal	14387033.65	1517249.66	1909866.51	17814149.817
12.	Weighted Average Heat Value of Coal	kCal/Kg	3569.25	4123.95	5108.59	-
13.	Coal required for consumption [(11/12) *1000]	MT	4030828.23	367911.75	373853.94	4772593.917
14.	Coal required with transit loss	MT	4061287.89	370691.94	376679.03	4808658.859
15.	Weighted Average Price of Oil	Rs. /KL	51770.19	53132.79	49064.65	-
16.	Weighted Average Price of Coal	Rs. /MT	2686.46	3535.77	4543.88	-
17.	Cost of Oil (8 x 15)	Rs. in Lakh	3939.91	587.85	680.93	5208.69
18.	Cost of Coal (14 x 16)	Rs.in Lakh	109104.85	13106.83	17115.86	139327.54



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Sl. No	Particulars	Unit	Budge Budge	Southern	Titagarh	Total
19.	Admissible Cost of fuel (17+18)	Rs. in Lakh	113044.76	13694.68	17796.79	144536.23
20.	Average cost of Generation at Generation Bus (19 / 4)	Paise/kWh	193.10	259.94	269.29	205.25





**Annexure – 2B**  
**Computations of allowable fuel and power purchase cost**

Factor Notation	Nomenclature	Unit	Value
t	Norms of Transmission and Distribution loss considered for sale to licensee	%	14.30
D	Norms of distribution loss for sale to consumers	%	14.30
E <sub>o</sub>	Admitted energy for own consumption	MU	24.165
E <sub>SL</sub>	Energy sale to licensee (WBSEDCL)	MU	40.482
E <sub>sc</sub>	Energy sale to consumer	MU	9201.182
Fuel Cost	Fuel cost for generation on normative parameters (Refer Annexure – 2A)	Rs. in Lakh	144536.23
FC <sub>IUC</sub>	Per unit Fuel Cost at distribution input (Refer para A of Annexure – 2C)	Paise/Kwh	138.57
FC <sub>Adm_d</sub>	Admissible Fuel Cost for sale to licensee (Refer para B of Annexure – 2C)	Rs. in Lakh	654.56
FC <sub>Adm_C</sub>	Admissible Fuel Cost for sale to consumer (Para – C of Annexure 2C)	Rs. in Lakh	149166.43
FC	Allowable fuel cost (Refer para D of Annexure 2C)	Rs. in Lakh	149820.99
PPC	Power Purchase Cost (Refer Para 2.10.1)	Rs. in Lakh	<b>209728.86</b>
C <sub>SWAPOUT</sub>	Cost of Swap out Power	Rs. Lakhs	301.14



## Annexure – 2C

A. Fuel Cost per Unit (Kwh) at Distribution Input		Unit	Amount
(i)	Fuel Cost (As per Annexure – 2A)	Rs. in Lakh	144536.23
(ii)	Energy sent out from own generation for the consumers and licensee (refer sl. No. 3 in Annexure-2A)	MU	6408.088
(iii)	Purchase (refer para 2.11.2)	MU	4022.518
(iv)	$FC_{IUC} [(i)/\{(ii)+(iii)\} \times 10]$	Paise/Kwh	138.57

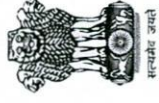
B. Admissible Fuel Cost for Sale to Licensee		Unit	Amount
(i)	$\frac{E_{SL}}{(1 - t \times 0.01)} \times FC_{IUC} = \frac{40.482 \text{ MU} \times 10}{0.8570} \times \frac{138.57}{100}$	Rs. in Lakh	654.56

C. Admissible Fuel Cost for sale to Consumers		Unit	Amount
(i)	$\frac{E_{SC} + E_o}{(1 - d \times 0.01)} \times FC_{IUC} = \frac{(9201.182 + 24.165) \text{ MUX}}{0.8570} \times \frac{138.57}{100}$	Rs. in Lakh	149166.43

D. Allowable Fuel Cost for Sale to Licensee and to Consumers		Unit	Amount
(i)	B + C	Rs. in Lakh	149820.99

E. Excess/Savings (in Auxiliary Consumption)						
Generating Station	Figures in MU					
	Energy sent out for Licensee and Consumers	Normative Rate of Auxiliary Consumption	Normative Auxiliary Consumption	Actual Rate of Auxiliary Consumption	Actual Auxiliary Consumption	Savings
Budge Budge	5327.271	9.00%	526.873	8.0453%	466.094	60.779
Southern	479.428	9.00%	47.416	9.7602%	51.854	0.000
Titagarh	601.389	9.00%	59.478	9.4058%	62.438	0.000
<b>Total</b>	<b>6408.088</b>		<b>633.767</b>		<b>580.386</b>	<b>60.779</b>





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## Annexure 2D

Budge Budge Generating Station 2015-16

Grades	Grade wise coal consumption in (%) for the period April 2015 to March 2016 (A)	Min GCV (G1)	Max GCV of Band (X2)	Min GCV of Band (X1)	Max UHV of Band (Y2)	Min UHV of Band (Y1)	Mean UHV Interpolation $U = Y1 + (G1 - X1)/(X2 - X1) * (Y2 - Y1)$	Product = A X U
G3	0.32	6401	6454	6049	6200	5600	6121	1958.87
G4	1.26	6101	6454	6049	6200	5600	5677	7153.07
G5	3.29	5801	6049	5597	5600	4940	5238	17232.61
G6	5.18	5501	5597	5089	4940	4200	4800	24864.82
G7	3.38	5201	5597	5089	4940	4200	4363	14747.45
G12	6.13	3701	3865	3113	2400	1300	2160	13240.80
G13	2.09	3401	3865	3113	2400	1300	1721	3596.89
WIII	14.31						4714	67457.34
WIV	13.07						3854	50371.78
Non CIL Indigenous	31.37						2605	81718.85
Non CIL Indigenous Washed	13.05						3184	41551.20
Imported	6.55						5043	33031.65
Weighted Average / Minimum Allowable Heat Value for the period								<b>3569.25</b>

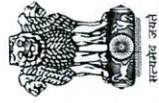


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Titagarh Generating Station 2015-16

Grades	Grade wise coal consumption in (%) for the period April 2015 to March 2016 (A)	Min GCV (G1)	Max GCV of Band (X2)	Min GCV of Band (X1)	Max UHV of Band (Y2)	Min UHV of Band (Y1)	Mean UHV Interpolation $U = Y1 + (G1 - X1)/(X2 - X1) * (Y2 - Y1)$	Product = A X U
G2	1.32	6701	6454	6049	6200	5600	6437	8496.84
G3	4.25	6401	6454	6049	6200	5600	6121	26014.25
G4	48.44	6101	6454	6049	6200	5600	5677	274993.88
G5	22.71	5801	6049	5597	5600	4940	5238	118954.98
G6	8.48	5501	5597	5089	4940	4200	4800	40704.00
G7	0.14	5201	5597	5089	4940	4200	4363	610.84
G13	8.98	3401	3865	3113	2400	1300	1721	15454.58
WIII	0.88						4714	4148.32
WIV	0.10						3854	385.40
Non CIL Indigenous	1.28						2562	3279.36
Non CIL Indigenous Washed	0.60						2918	1750.80
Imported	2.82						5697	16065.54
Weighted Average / Minimum Allowable Heat Value for the period								5108.59





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Southern Generating Station 2015-16

Grades	Grade wise coal consumption in (%) for the period April 2015 to March 2016 (A)	Min GCV (G1)	Max GCV of Band (X2)	Min GCV of Band (X1)	Max UHV of Band (Y2)	Min UHV of Band (Y1)	Mean UHV Interpolation $U = \frac{Y1 + (G1 - X1)(Y2 - X1)}{(Y2 - Y1)}$	Product = A X U
G2	0.58	6701					6437	3733.46
G3	3.68	6401	6454	6049	6200	5600	6121	22527.05
G4	17.76	6101	6454	6049	6200	5600	5677	100824.18
G5	15.69	5801	6049	5597	5600	4940	5238	82182.28
G6	15.59	5501	5597	5089	4940	4200	4800	74834.46
G7	1.99	5201	5597	5089	4940	4200	4363	8682.67
G13	9.82	3401	3865	3113	2400	1300	1721	16900.22
WIII	3.78						4714	17818.92
WIV	0.65						3854	2505.10
Non CIL Indigenous	22.54						2620	59054.80
Non CIL Indigenous Washed	7.92						2946	23332.32
Weighted Average / Minimum Allowable Heat Value for the period								4123.95



## Annexure 2E

## Computations of the share of savings in coal cost due to better station heat rate

SI No	Particulars	Unit	Budge Budge	Southern	Titagarh
1	Gross Generation (Actual)	MU	5793.365	531.282	663.827
2	Oil consumed	KL	1015.000	1009	1221
3	Coal consumed	MT	3472738.000	411140	482992
4	HV of Oil	KCal/Ltr.	9553.000	9579	9552
5	HV of Coal	KCal/Kg	3569.250	4124	5109
6	Heat from Oil released	M. KCal	9696.30	9665.21	11662.99
7	Heat from Coal released	M. KCal	12395070.11	1695520.80	2467408.10
8	Total Heat	M. KCal	12404766.41	1705186.01	2479071.09
9	Station Heat Rate	KCal/kWh	2141.20	3209.57	3734.51
10	Design Station Heat Rate (D)	Kcal/Kwh	2247	2707	2659
11	Gross Station Heat Rate considered for the year (SHR <sub>n</sub> )	Kcal/Kwh	2470	2900	2910
12	Ratio of SHR <sub>n</sub> to D	-	1.099	1.071	1.094
13	Categorization of Generating Stations as per Regulations	-	B	B	B
14	SHR/SHR <sub>n</sub>	-	Less than 0.96	More than 1	More than 1
15	Gross Generation (considering normative Auxiliary Energy Consumption vide Annexure – 2A)	MU	5854.144	526.844	660.867
16	Cost of Coal (Vide Annexure – 2A)	Rs in Lakh	109104.85	13106.83	17115.86
17	actual use of coal in generation for supply to consumers and WBSEDCL	MT	3472738.00	411140.16	482991.48
18	Actual cost of Coal used for supply to consumers and WBSEDCL (17 x Admitted Weighted Average cost of coal )	Rs. in Lakh	93293.70	14536.98	21946.57
19	Savings in cost of Coal for achieving better Station Heat Rate (8-10)	Rs. in Lakh	15811.15	(1430.15)	(4830.71)
20	Share of Savings in cost attributable to consumers and WBSEDCL	%	14%	0%	0%
21	Share of Savings in cost attributable to consumers and WBSEDCL	Rs. in Lakh	<b>2213.56</b>	0.00	0.00





## Chapter 3

### FIXED CHARGES

- 3.1 In terms of regulation 2.5.5 of the tariff Regulations and Table 2.5.5-1, items of expenditure are categorised as uncontrollable / controllable. The amounts of actual expenses / charges under such different heads of accounts are, therefore, to be considered on prudence check for carrying out positive or negative adjustments, as the case may be. The review of each of such controllable and uncontrollable heads of fixed charges with reference to the amounts allowed through tariff and the actuals based on the audited accounts of CESC is being taken up hereunder one by one. In its order dated 04.03.2015 in the tariff application of CESC for the years 2015-16, the Commission considered some specific principles of calculation for determination of some elements of fixed charge during projection of ARR. The basic premises of such principles of calculation were:

- (1) Wholesale Price Index (WPI) and Consumer Price Index (CPI),
- (2) Business volume change namely Distribution line length and number of consumers, and
- (3) Sensitivity of expenditure elements to business volume change

The actual figures of above premises for computation of elements of fixed charge computations are provided in Table 3.4-1 and Table 3.4-2.

The rationale behind the Commission's disposal of relevant item heads, after prudence check, is detailed in subsequent paragraphs.

#### 3.2 Water Charges & Coal and Ash Handling Charges:

Water charges and coal and ash handling charges being uncontrollable items of expenditure are allowed in proportion to actual generation, as furnished through Auditors' Certificate in Annex 14. Actual expenses have also been furnished through Auditors' Certificate in Annex 6. The details are in Table 3.2-1 and Table 3.2-2 respectively.

**Table 3.2-1: Water Charges**

Rs. Lakh



Generating Station	Target Generation (MU)	Expenses Admitted in Tariff Order	Actual Generation (MU) related to actual Sale to consumer and WBSEDCL	Expenses proportionate to actual generation related to actual sale to consumer and Licensee	Actual Expenses	Expenses admitted in APR in 2015-16
Budge Budge	5590	12	5573.631	11.96	5	5.00
Titagarh	1685	132	663.827	52.00	51	51.00
Southern	950	81	531.282	45.30	40	40.00
<b>Total</b>	<b>8225</b>	<b>225</b>	<b>6768.740</b>	<b>109.26</b>	<b>96</b>	<b>96.00</b>

**Table 3.2-2: Coal and Ash Handling Charges**

Rs in Lakh

Generating Station	Target Generation (MU)	Expenses Admitted in Tariff Order	Actual Generation (MU) related to actual Sale to consumer and WBSEDCL	Expenses proportionate to actual generation related to actual sale to consumer and Licensee	Actual Expenses	Expenses admitted in APR in 2015-16
Budge Budge	5590	581	5573.631	579.30	877	579.30
Titagarh	1685	925	663.827	364.42	152	152.00
Southern	950	9	531.282	5.03	189	5.03
<b>Total</b>	<b>8225</b>	<b>1515</b>	<b>6768.740</b>	<b>948.75</b>	<b>1218</b>	<b>736.33</b>

### 3.3 Operation and Maintenance Charges for Generation function:

Operation and maintenance expenses for generation include any cost of consumables, legal and professional fees, audit fees, administration and general expenses, and repair & maintenance works. Details of Generation O&M expenses is in Table 3.3-1.

**Table 3.3-1: Generation O&M Expenses (as per Norms)**





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Generating Station	Amount (Rs Lakh)
Budge Budge	9285
Titagarh	3454
Southern	1978
<b>Total</b>	<b>14717</b>

3.4.1 In this APR stage regarding expenses of those heads the Commission considers actual line length in Circuit Kilometre (CKM) of the network and Consumer strength as the business volume parameters on which expenses are sensitive and the actual inflation rate based on hybrid index (WPI+CPI) or WPI index or CPI index, as may be applicable, in line with principles of the tariff order for the fourth control period. In same line with the principles adopted in the tariff order sensitivity of different elements of fixed charges is also considered in this APR. The business volume parameter on which expenses are sensitive and inflation rate considered in the evaluation under Tariff order and APR are given in Table 3.4-1 below:

**Table 3.4-1**

Particulars	Tariff Order	Actual Value of 2015-16	Variation in %
Distribution Line Length in CKM	22502	21531	(4.32%)
Consumer strength in number	3074100	3036810	(1.21%)
WPI in %	6.62%	(2.47%)	(137.31%)
CPI in %	9.15%	5.65%	(38.25%)
Inflation in hybrid index [WPI: CPI (60: 40)] in %	7.63%	0.78%	(89.78%)
Please see WPI and CPI detail in Annexure-4G			

3.4.2 The distribution line length and consumer strength in base year of 2013-14 under the MYT order and as per annual accounts of 2013-14 has been provided in the Table 3.4-2:

**Table 3.4-2**

Particulars	Unit	MYT Order	Annual Accounts
DLL	CKM	20480	20480
Consumers (CSM)	(Number)	2857000	2810197



Since the actual figure of distribution line length and consumer strength for 2013-14 as per annual accounts is less than the corresponding value (i.e., estimated value of 2013-14) considered in MYT order for 2013-14 thus no adjustment is required to be done for target business volume parameter for 2015-16 in line with paragraph 5.5.2.5 of the tariff order dated 04.03.2015.

The distribution line length and consumer strength in base year of 2014-15 under the MYT order and as per annual accounts of 2014-15 has been provided in the Table 3.4-3:

**Table 3.4-3**

Particulars	Unit	MYT Order	Annual Accounts
DLL	CKM	21467	21065
Consumers (CSM)	(Number)	2940900	2920045

3.4.3 The determination process of all the expense for controllable item of CESC distribution does not require any normative parameters. Thus, in such case if the actual expense of any item is less than the amount admitted for that item in tariff order then in such case actual expenses will be admitted in this APR order for that item in pursuance of the regulation 2.6.10(i) and 2.5.5(ii). Accordingly, for controllable items for 2015-16 the permissible expenses as admitted are shown in the following paragraphs:

**3.4.4.1 Repair and Maintenance (R&M) Charges for Distribution function:**

Following Regulation 2.6.8 of Tariff Regulations, as same principle adopted in tariff order is to be followed in determination of Annual Performance Review, Service & Entry Tax has been considered under rates and taxes. In APR application the actual expenditure shown by CESC is Rs. 16597 Lakh. In the tariff order the amount admitted is Rs 17897 Lakh. Against such admitted amount CESC claimed Rs 16597 lakh including Rs 1262.85 lakh for security expense in the APR petition for 2015-16. Security expenses not being a part of R&M is to be excluded from R&M expenses and is to be dealt with under the head Admirative and general expenses. As R&M expenses is controllable item without any role of any norms of operating parameter in





computation of the permissible expenses and as the line length in 2014-15 has not increased and as the combine inflation index has not exceeded the projected combine inflation index for the related periods, thus the R&M expenses has been ceiling at, the actually claimed amount, i.e., of Rs 16597 Lakhs. This claimed amount of Rs 16597 lakhs includes the security expenses of Rs 1262.85 lakhs which is basically the part of A&G expenses. Thus, the admitted amount of R&M expenses is Rs 15334.15 lakhs (Rs 16597 lakhs – Rs 1262.85 lakhs).

In pursuance of the regulation 2.6.10(i) and 2.5.5(ii), the actual expenses on R&M head for distribution is being admitted at Rs 15334.15 lakhs (Rs 16597 lakhs – Rs 1262.85 lakhs) in this APR order in line with the claim of CESC. Details of R&M expenses for distribution and selling functions are furnished in Table 3.4-3, Table 3.4-4 and Table 3.4-5 considering principles mentioned in this order. R&M expenses include repairs & maintenance, consumption of stores & spares.

**Table 3.4-3: R&M Expenses (Distribution & Supply / Selling)**

Particulars	Allowed in Tariff Order	Claimed in APR Petition	Now admitted in APR
Repairs & maintenance	17897	16597	15334.15
Total	17897	16597	15334.15

The above figures are allocated to Distribution and Selling functions as in Table 3.4-4 and 3.4-5 in proportion of claimed amount in APR petition.

**Table 3.4-4: R&M Expenses (Distribution)**

Particulars	Allowed in Tariff Order	Claimed in APR Petition	Now admitted in APR
Repairs & maintenance	16759	15542	14359.00
Total	16759	15542	14359.00

**Table 3.4-5: R&M Expenses (Supply / Selling)**



*Order on APR of CESC for the year 2015-2016*

Particulars	Allowed in Tariff Order	Claimed in APR Petition	Now admitted in APR
Repairs & maintenance	1138	1055	975.15
Total	1138	1055	975.15

**3.4.4.2 Administrative & General (A&G) Expenses for distribution function:**

A&G expenses has four major elements such as Rent, Legal Charges, Audit fees & expenses and Other Administrative & General Expenses. As per regulation the other administrative & General expenses together with rent, legal charges, audit fees & expenses are part of the A&G expenses and the variation of actual expenses corresponding to the admitted amount in tariff order is permissible to the extent allowed under regulation 2.5.5(iv) only.

The features of Administrative and General Expenses is a simple controllable item where no normative parameter is used. From the petition it has been seen that the actual A&G expenses incurred in 2015-16 is Rs 14631 lakhs on A&G head as per form E(b) of Volume 2. Considering the security expenses of Rs 1262.85 Lakh under this A&G expenses head as mentioned in paragraph 3.4.4.1 the total expenses under this head comes to Rs 15893.85 Lakh (Rs 14631 Lakh + Rs 1262.85 Lakh). However, the approved amount as per Tariff Order being Rs. 13537 lakhs. But as A&G expenses is controllable item thus in pursuance of the regulation 2.6.10(i) and 2.5.5(ii), the permissible expenses under this APR cannot exceed the value of Rs 13537 lakhs. In fact, the Table 4.4-1 shows that the parameters of inflation and business volume parameters has already given advantage to the licensee. Thus, the admitted expenses under this APR for A&G expenses in 2015-16 is Rs 13537 lakhs.

Detail of expenses claimed in APR petition for four referred elements are given in Table 3.4-6. On scrutiny of the table it has been found that out of four elements, only in legal & professional head the expense has been reduced by Rs 194 lakhs whereas in other three elements expenses have exceeded by Rs 1288 lakhs. Thus, the re-distribution of excess expenses from all the three items to legal & professional head has not been shown separately by applying regulation 2.5.5(iv) of this Tariff Regulation which was required if the actual total expenses would have been less than Rs 13537 lakhs.





Order on APR of CESC for the year 2015-2016

Thus, the admitted amount on A&G expenses for APR of 2015-16 is as per detailed out in Table 3.4-6, 3.4-7 and 3.4-8 considering principles discussed above.

**Table 3.4-6: A&G Expenses (Distribution & Supply / Selling)**

Particulars	Allowed in Tariff Order	Claimed in APR Petition	Now admitted in APR
Legal & Professional Charges	754	560	560.00
Audit Fee	78	175	78.00
Other Administrative & General expenses	11868	12851*	11868.00
Rent for distribution function	837	1045	837.00
Adjustment under regulation 2.5.5 (iv)			194.00
<b>Total</b>	<b>13537</b>	<b>14631</b>	<b>13537.00</b>

- Including security expenses of Rs 1262.85 Lakh

The above figures are allocated to Distribution and Selling functions as in Table 3.4-7 and 3.4-8 in proportion of claimed amount in APR petition.

**Table 3.4-7: A&G Expenses (Distribution)**

Particulars	Allowed in Tariff Order	Claimed in APR Petition	Now admitted in APR
Legal & Professional Charges	584	434	584.35
Audit Fee	61	136	61.00
Other Administrative & General expenses	8095	8765	8095.00
Rent for distribution function	649	810	649.00
<b>Total</b>	<b>9388</b>	<b>10145</b>	<b>9389.35</b>

**Table 3.4-8: A&G Expenses (Supply / Selling)**

Particulars	Allowed in Tariff Order	Claimed in APR Petition	Now admitted in APR
Legal & Professional Charges	170	126	169.65
Audit Fee	17	39	17.00



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Particulars	Allowed in Tariff Order	Claimed in APR Petition	Now admitted in APR
Other Administrative & General expenses	3773	4086	3773.00
Rent for distribution function	188	235	188.00
<b>Total</b>	<b>4149</b>	<b>4486</b>	<b>4147.65</b>

**3.5 Other Operational expenses for generation**

- 3.5.1 Rent of Rs 33 lakhs for generation as provided in form E(B) of the petition, being uncontrollable, has been allowed at actuals in terms of regulations.

**3.6 Other Operational expenses:**

- 3.6.1 In respect of allowance of expenses such as, Rates & Taxes, Insurance, Lease Rental, Cost of outsourcing, the principle adopted in the Tariff Order has been followed and the admitted expenses are discussed in the following paragraphs based on submitted forms and Auditors' Certificate.
- 3.6.2 CESC has claimed an amount of Rs. 759 lakh on account of Rates and Taxes in APR application for 2015 – 2016 against approved amount of Rs 842 lakh in tariff order. The principle adopted in the MYT order is applied for determination of the allowable amount under this head. For admitting the value for Rates and Taxes the escalation rate is determined for this APR purpose by using the formula of 5.5.2.1 comes to 0.78% (0.78%+0×2.21%+0) on the basis of actual inflation rate of 0.78% as per combined/hybrid index (the index on which such expenses is sensitive) as well as considering nil value Ad\_F in terms of principles set out in paragraph 8.10 of the tariff order and value of Ad\_R in the tariff order. Considering the above escalation growth on the value of expenditure on Rates & Taxes of Rs 659 lakhs considered for 2014-15 in APR order, Rates & Taxes for 2015-16 comes to Rs. 664.13 lakhs. Thus, against a claim of Rs. 759 Lakhs, an amount of Rs 664.13 lakh is being admitted. The segregation of such amount on different business functions has been done as proposed by CESC.





- 3.6.3 CESC has claimed an amount of Rs. 1036 lakh on account of Service Tax & entry Tax in APR application for 2015 – 2016 against approved amount of Rs 1103 lakhs in tariff order. The principle adopted in the MYT order is applied for determination of the allowable amount under this head. For admitting the value for Service and Entry Tax the escalation rate is determined by using the formula of 5.5.2.1 which comes to 1.88% ( $0.78\% + 0.5 \times 2.21\% + 0$ ) on the basis of actual inflation rate of 0.78% as per combined/hybrid index (the index on which such expenses is sensitive) as well as considering nil value Ad\_F in terms of principles set out in paragraph 8.10 of the tariff order and value of Ad\_R in the tariff order. The value of BGR in this APR Order is 2.21% on the basis of actual line length of 21065 CKM for 2014-15 and 21531 CKM in 2015-16 against the value of 4.82% considered for BGR in Tariff Order. Considering the above escalation rate on the value of expenditure on Service Tax & Entry Tax of Rs 734 lakhs considered for 2014-15 in APR order, the Service Tax & Entry Tax for 2015-16 comes to Rs. 747.80 lakhs. However, based on proportional admission of O&M expenses, the service tax and entry tax work out to Rs. 691.39 lakhs ( $\text{Rs } 747.80 \text{ lakh} \times 28871.15 / 31228$ ). Thus, the admitted amount under this head for 2015-16 is Rs 691.39 lakhs. The segregation of such amount on different business functions has been done as proposed by CESC. This admitted service tax is also booked as a part of Rates & Taxes. Accordingly, the admitted amount under Rates and Taxes is Rs 1355.52 lakhs (Rs 664.13 lakhs + Rs 691.39 lakhs).
- 3.6.4 CESC has claimed an amount of Rs. 770 lakh on account of insurance in APR application for 2015 – 2016 against approved amount of Rs 971 lakhs in MYT order. Expenditure on insurance for 2014-15, as admitted in the APR order stood at Rs. 797 Lakh. CESC's claim of Rs 770 lakhs, being lower, is thus admitted for this APR order on CESC for 2015-16. The segregation of such amount on different business functions has been done as proposed by CESC.
- 3.6.5 CESC has claimed an amount of Rs. 1072 lakh on account of lease rental charges in APR application for 2015 – 2016 against approved amount of Rs 1111 lakhs in MYT order. Expenditure on lease rental for 2014-15, as admitted in the APR order stood at Rs. 1095 Lakh. CESC's claim of Rs 1072 lakhs, being lower, is thus admitted for this APR order on CESC for 2015-16. The segregation of such amount on different business functions has been done as proposed by CESC.



3.6.6 CESC has claimed an amount of Rs. 891 lakhs on account of cost of Outsourcing in APR application for 2015 – 2016 against approved amount of Rs 950 lakh in tariff order and Rs 967 Lakh approved in the APR order of 2014-15. CESC's claim being lower from both MYT Order and APR order of 2014-15, thus CESC's claim, of Rs. 891 lakh has been considered as admitted value in this APR order. Such amount has been admitted under selling function.

3.6.7 Item wise expenses on the head of other operational expenses is being provided in Table 3.6-1

**Table 3.6-1: Other Operational expenses linked to activity level and inflation**

Particulars	Units	Inflationary Basis	Sensitivity Parameter	Allowed in Tariff Order	2015-16 (Accounts & APR Petition)	2015-16 (Admitted)
Rates & Taxes	Rs Lakh	WPI+CPI	DLL	842	682	664.13
Service Tax & Entry Tax	Rs Lakh	WPI+CPI	DLL	1103	826	691.39
Insurance	Rs Lakh	WPI+CPI	DLL	971	770	770.00
Lease Rental	Rs Lakh	WPI	DLL	1111	1072	1072.00
Outsourcing expenses	Rs Lakh	WPI+CPI	DLL	950	891	891.00

### 3.7 Employee cost:

3.7.1 The own employee cost determined on the basis of annual accounts and submitted petition is as follows in Table 3.7-1:

**Table 3.7-1 – Own Manpower Cost**

Particulars	Amount (Rs. Lakh)
Own Employee cost claimed as per Note 27 of the audited statement of Profit and Loss account for the year ended 2015-2016 (after allocation/ transfer to capital account of Rs. 12563 Lakh) and auditors' certificate and Directors fees as per auditor's certificate.	74954
Less: Shared cost	441





Particulars	Amount (Rs. Lakh)
CESC own employee cost in this APR petition	74513

3.7.2 However as per Form E(B) the claimed amount by CESC is 74513 lakhs as follows:

Sl. No	Particulars	Amount (Rs lakh)
A	<b>Generation Function</b>	
	Budge Budge	4943
	Titagarh	6070
	Southern	4143
	<b>Sub Total of Generation function (A)</b>	<b>15156</b>
B	Distribution Function	44337
C	Supply / Selling Function	15020
D	<b>Sub total of Distribution function (B + C)</b>	<b>59357</b>
D	<b>Total (A+B+C+D)</b>	<b>74513</b>

Accordingly, the amount admitted for APR of CESC for the year 2015-16 is Rs 74513 Lakhs and has been segregated between generation and distribution function as proposed in the E(B) form.

Table 3.7-2

Item heads	Amount admitted in Tariff Order 2015-2016	Amount claimed in APR 2015- 2016	As admitted in APR 2015-2016
Generation Employee Cost (Rs. lakh)	13249	15156	15156.00
Distribution Employee Cost (Rs. lakh)	58752	59357	59357.00

3.7.3 In the Tariff Order for 2015 - 2016, 75% of the amount projected for contractual manpower cost amounting to Rs 4300 lakh in regular establishment of generation was admitted In APR petition of 2015 -16, CESC Limited has claimed Rs 4300 lakh for such costs in Form E(b) but they did not furnish any such claim in the Form 1.17(h) . In terms regulation 5.9.1 of the Tariff Regulations employee cost of own and contracted manpower in regular establishment shall be shown separately. As per regulation 5.9.6, the licensee or generating company shall provide the information under regulation 5.9.3 and 5.9.4 for regular employees and contracted manpower in regular establishment separately. But during the scrutiny of APR petition, this is noticed that the



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contractual manpower cost is a part of repair & maintenance cost as per submitted auditor's certificate in Annexure 6 of Volume 3 of APR Petition. Moreover, in Notes:1 to Form 1.12 in Vol-2 [p-49] of the petition pertaining to employee cost, CESC Limited has stated the following:

*own and employee cost for contractors shown above are considered at actual for the former and the latter has been derived considering the allowable number of employees as per norm and actual cost for relevant station employees, as detailed herein. Such cost for contractors' employees in regular establishments, being actually included under O&M expenses, have been duly deducted therefrom and mentioned separately, as stated above. Number of actual own employees (including officers) as on 31.03.2016, excluding contractors' employees in regular establishment, are 640 for Budge Budge (750 MW), 440 for Southern (135MW), 629 for Titagarh (240 MW). The Auditors' certification of "Other Expenses" and relevant station employee cost are placed in the petition.*

However, in subsequent submission through affidavit, CESC Limited has furnished the cost and number of contractual manpower at regular establishment for each generating station as per the required format of Tariff Regulations which is summarized as below:

Generating Station	Cost of Contractual employee (Rs Lakh)	Number of Contractual employees (No)	per capita cost of Contractual employee (Rs Lakh)	Normative Man/MW	Normative Manpower (No.)	Number of Own Employee (No.)	Allowable number of Contractual Employee (No)
(1)	(2)	(3)	(4)=(2)/(3)	(5)	(6)	(7)	(8)=(6)-(7)
Budge Budge	4366	824	5.30	1.58	1185	640	545
Titagarh	1879	413	4.55	3.65	876	629	247
Southern	932	297	3.14	3.5	473	440	33

The Commission further noticed that Allowable number of Contractual Employee of a generating station was multiplied by per capita own employee cost to arrive at the claim amount in Form E(b) for Budge Budge and Southern. For Titagarh generating station, respective per capita own employee cost is multiplied by 25% of allowable number of contractual employees.

Therefore, the Commission finds it prudent to admit cost under this head as shown below:



Generating Station	Cost of Contractual employee (Rs Lakh)	Number of Contractual employees	per capita cost of Contractual employee (Rs Lakh)	Normative Man/MW	Normative Manpower (No.)	Number of Own Employee (No)	Allowable number of Contractual Employee (No)	Allowable cost of Contractual Employee (Rs lakh)
(1)	(2)	(3)	(4)=(2)/(3)	(5)	(6)	(7)	(8)=(6)-(7)	(9)=(8)x(4)
Budge Budge	4366	824	5.30	1.58	1185	640	545	<b>2888</b>
Titagarh	1879	413	4.55	3.65	876	629	247	<b>1124</b>
Southern	932	297	3.14	3.5	473	440	33	<b>104</b>

Thus, the cost of Contractual manpower cost in regular generation establishment is admitted as summarized in Table below:

**Table 3.7-3 – Contractual manpower cost in regular generation establishment**

Generating Station	Amount admitted in Tariff Order	Amount claimed in APR 2015-2016	As admitted in APR 2015-2016
Budge Budge	2346	3493	2888.00
Titagarh	1059	536	536.00
Southern	55	271	104.00
<b>Total</b>	<b>3460</b>	<b>4300</b>	<b>3528.00</b>

### 3.8 Corporate Social Responsibility (CSR)

3.8.1 The claim of Rs. 1659 lakhs as furnished in Form 1.17 towards Corporate Social Responsibility has not been allowed since the same is an allocation of profit and a statutory obligation.

### 3.9 Borrowing cost

3.9.1 From the submitted Form-C the interest on capital borrowings that have been allowed after prudence check of loan details furnished in Form – C as shown in Table 3.9-1:

**Table 3.9-1: Interest Expenses**

Sl No	Particulars	Amount (Rs. Lakh)
1	Interest (audited annual accounts – Note 28)	46634
2	Less: Amount capitalized (Form C of Petition)	1517
3	Total Amount of interest allowable as above (1-2)	45117
4	Less: Total amount of actual interest on short term loan paid on revenue account under temporary accommodation [Form C of petition]	14981
5	Total Amount of Interest towards capital borrowing	30136

3.9.2 The interest claimed on different heads in Form – C are shown in Table 3.9-2:

**Table 3.9-2: Interest claimed**

Sl. No.	Particulars	Amount (Rs. Lakh)
A. Interest on Capital Borrowings		
1	Gross amount of interest on capital Borrowings (vide detailed computations submitted in Form - C)	31652
2	Less: Amount capitalised (Form - C)	1517
	<b>Total amount of interest claimed towards capital borrowings (1-2)</b>	<b>30136</b>
<b>B. Interest claimed on normative borrowings in terms of Tariff Regulations [Form 1.20(b)]</b>		<b>194</b>
<b>C. Interest on Working Capital [Form 1.17(b)]</b>		<b>8652</b>
<b>D. Interest on temporary accommodation [Form 1.17(a)]</b>		<b>31836</b>
<b>Total (A+B+C+D)</b>		<b>70817</b>

3.9.3 The computation for admitted amount of interest on normative loan of has been determined as per Table 3.9-3 below:

**Table 3.9-3: Calculation of normative debt**





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Particulars	Derivative	Amount (Rs. Lakh)
Opening balance before adjustment of normative debt	A1	14008
Less: Cumulative Repayment of Normative Debt upto previous year	A2	4097.7
Opening balance of net normative debt	$a = A1 - A2$	9910.3
Actual addition to debt this year	b	45000
Addition to the fixed asset during the year	c	58546
Normative addition to debt @70% of c above	$d = c \times 0.7$	40982
Addition to debt for the year to be considered to APR	e = higher of b and d	45000
Additional gross normative debt for the year	$F1 = e - b$	0
Repayment of normative debt during the year on actual	F2	991.03
Net additional gross normative debt during the year	$G = F1 - F2$	-991.03
Closing balance of net normative debt	$h = a + g$	8919.27
Average balance of Normative Debt	$i = (a+h)/2$	9414.79
Weighted average rate of interest paid on term loan during the year	j	10.39%
Interest on normative debt allowed in APR for 2015-2016	$k = j \times i$	978
Closing Balance of Gross Normative Debt	$B1 = A1 + F1$	14008
Cumulative Repayment of Normative Debt upto the end of the year	$B2 = A2 + F2$	5088.73

3.9.4 Computation of interest on admissible Working Capital has been shown under Table 3.9-4 below.

**Table 3.9-4:** Calculation of normative interest on Working Capital

SI No	Particulars	Amount Rs. Lakhs
A1	Gross Fixed Cost	285690.66
A2	Fuel and Power Purchase Cost	342312.95
A	Annual fixed Cost, fuel cost and power purchase (A1 + A2)	628003.61
B1	Less: Depreciation including Advance	43279.00



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SI No	Particulars	Amount Rs. Lakhs
B2	Less: Deferred Revenue Expenditure	72.00
B3	Less: Return on Equity including Performance	57055.88
B4	Less: Bad Debt	3281.82
B5	Less: Reserve for unforeseen exigencies	0.00
B	Total Deductions: (sum B1:B5)	103688.70
C.	Allowable Gross Sales for Working Capital	524314.91
D.	Allowable Working Capital @ 10% on C (A - B)	52431.49

As per provision of regulations 5.6.5.1 and 5.6.5.2 of the Tariff Regulations, the working capital requirement calculated as Rs. 52431.49 lakh. Considering the security amount held by CESC being Rs. 157508 lakh from the consumer, there is no further need of working capital by CESC during the year 2015 – 2016. Thus, no interest on working capital is being admitted in the APR for 2015 – 2016.

- 3.9.5 Interest on temporary accommodation as claimed by CESC in Form 1.17 (a) dated 30.11.2016 is Rs 31836 lakhs @ SBI PLR of 14.45% on unrealised arrears from sale of power arising out of Commission's Orders, claim for recoverable amount out of sale of power for the year 2015-16 considering actual expenditure prior to truing up exercise by the Commission along with requirement of fund for statutory additional levy incurred by CESC Ltd up to the year 2013-14 as submitted at page 45 of their petition in Volume 2. CESC Ltd submitted one petition before the Commission for allowing Rs 89673 lakh incurred by them as an additional levy which was admitted by the Commission in Case no. OA-211/15-16. CESC Ltd revised their claim for interest on temporary accommodation as per submission dated 10.05 2022 to Rs 16887 lakh updated with admitted recoverable amount of APR 2013-14. Commission has since rejected claim of additional levy on coal vide Order dated 30.07.2022 in Case No. OA-211/15-16. Accordingly, such claim is not considered for the purpose of computation of interest on temporary accommodation. CESC has shown detailed computation of Interest on Temporary Accommodation for Rs 16887 lakh as claimed @14.45% on Average balance of Rs 116865 lakh. Requirement of fund has arisen out of different tariff orders and APR Orders of the Commission which remained unrealised in 2015-16. As per regulation 5.6.5.4 of WBERC Tariff Regulations, 2011 interest on temporary accommodation becomes due on unrealised arrears from the consumers / beneficiaries. The claim of CESC Limited for temporary accommodation includes





recoverable amounts for the period 2013-14 to 2015-16. Accordingly, interest on temporary accommodation has been computed following Regulation 5.6.5.4 considering admitted recoverable amounts and refundable amounts in respective APR orders for the years 2010 – 2011, 2011 – 2012, 2012 – 2013, 2013 – 2014, 2014 – 2015 and recovery directions of such recoverable amounts in Tariff Order for the years 2014 – 2015 to 2015-2016 besides adjustment of refundable amount in APR 2015-16. Considering the weighted average interest of temporary accommodation at 10.02%, the admissible interest on temporary accommodation works out to Rs. 4281.11 lakh. As evidenced from Form C read with additional submission dt 10.05.2022 the borrowing cost incurred to meet various short-term requirements is Rs. 14981 Lakh. Thus Rs 4281.11 lakhs being lower than the claim is admitted in APR 2015-16 for interest on temporary accommodation.

CESC shall follow strict prudence while borrowing short term loan on temporary accommodation.

**Table 3.9.5:** Calculation of normative interest on Temporary Accommodation

Sl. No.	Particulars	Rs. Lakhs
<b>A</b>	<b>Opening balance as on 1.4.2015 (as below)</b>	
i	As per APR 2014-15	64181.47
<b>B</b>	<b>Adjustment for 2014-15</b>	
i	Part release of APR 2010-11 & APR 2011-12 in Tariff Order 2014-15	921.37
ii	Adjustment for recovery related to Tariff Order 2011-12	10329.00
iii	Part release of APR 2012-13 in Tariff Order 2014-15	7000.00
iv	Adjustment for recovery related to Tariff Order 2014-15	12781.00
v	Refundable in 2015-16	11880.25
	<b>Total B [SUM(i:v) - Adjustment in 2015-16]</b>	<b>42911.62</b>
<b>C</b>	<b>Closing Balance as on 31.3.2015 (A-B)</b>	<b>21269.85</b>
<b>D</b>	<b>Average Balance (A + C) / 2</b>	<b>42725.66</b>
<b>E</b>	<b>Interest on Temporary Accommodation @10.02% (D x 10.02%)</b>	<b>4281.11</b>

3.9.6 Based on above discussions different components of borrowing cost are as per following table:



**Table 3.9-6:** Approved borrowing costs

Sl. No	Particulars	Amount (Rs. Lakh)
1)	Amount of Interest towards capital expenditure	30136.00
2)	Interest on normative debt	978.20
3)	Interest cost on capital borrowing (1+2)	31114.20
4)	Interest cost on working capital	-
5)	Interest on Temporary Accommodation	4281.11

### 3.10 Interest on Consumers' Security Deposits

The total amount of interest paid to the consumers on their security deposits was found to be Rs. 9861 lakh as against an amount of Rs. 9322 lakh allowed in the tariff order for the concerned year. The total amount of such security deposit at the beginning of the year was Rs. 140811 lakh and at the end of the year was Rs. 157508 lakh as per balance sheet ended 31 March 2016.

CESC Limited submitted a certificate from their auditors at Annex 16 of Volume 3 of the petition. As per that certificate an amount of Rs.9861 lakh has been settled during the year 2015- 2016 in the following manner:

(a) Credit to consumers' account	Rs. 6676 lakh
(b) Addition to security deposit of Existing consumer	Rs. 2786 lakh
(c) Payment of Tax as per I. T. Act 1961	Rs. 399 lakh
Total	Rs. 9861 lakh

The Commission admits an amount of Rs. 9861 lakh in the APR 2015 - 2016 under this head of expense under with allocation to distribution function only.

### 3.11 Other Finance Charges

Other Finance charges of Rs. 1180 lakhs based on auditors' certificate under Annex 11 of Volume 3 of the petition are allowed on actual basis and distributed among different functions as per form E(B) of the APR Petition.





### 3.12 Bad Debt

Amount actually written off as per Auditors' Certificate amounting to 3528 Lakh has been found to be above 0.5% of the earning from the sale of electricity of Rs 646553 Lakh in Form 1.25, Annexure 1 of the APR petition. Hence, an amount of Rs. 3281.82 lakh is admitted as per limit specified in the Regulations.

### 3.13 Depreciation & Amortisation charges

The total amount of depreciation as charged in the books of accounts was Rs. 36920 lakh including an amount of Rs. 750 lakh being the depreciation against trademark which is to be excluded. An amount of Rs. 219 lakh out of the total depreciation is on assets created by utilizing the proceeds from sale of old assets and has not been claimed in terms of regulation 5.15.1(iv). An amount of Rs. 594 lakh pertains to amortization of coal mining rights. The chargeable amount of depreciation for determination of tariff, therefore, comes to Rs. 35357 lakh (Rs. 36920 lakh - Rs. 750 lakh - Rs. 219 lakh - Rs. 594 lakh) as against an amount of Rs. 35080 lakh allowed in the tariff.

As the capitalization programme vis-a-vis amount of depreciation cannot be precisely determined at tariff order stage, the Commission, thus, stipulated in the tariff order that the amount of depreciation found chargeable as per audited books of accounts, shall be considered for carrying out necessary adjustment in APR for the concerned year.

Thus, in terms of the Tariff Regulations, the Commission admits the amount of Rs. 35357 lakh towards depreciation in the APR for the year 2015 - 2016. The cost center-wise breakups of the amount admitted are as follows:

Particulars	Amount (Rs. in Lakh)
<b>(A) Generation function</b>	
Budge Budge	9108.90
Titagarh	588.95
Southern	301.48
<b>Total (A)</b>	<b>9999.33</b>
<b>(B) Distribution Function</b>	23410.54
<b>(C) Supply / Selling Function</b>	1947.13



Particulars	Amount (Rs. in Lakh)
<b>Total (A+B+C)</b>	<b>35357.00</b>

Depreciation and amortisation charges have been allowed on the basis of assets capitalised and are detailed in Table 3.13 -1 and Table 3.13 -2

Table 3.13 -1: Depreciation expenses

Particulars	Amount in Rs. Lakh
Depreciation as per accounts (P&L Accounts)	36920
Less: amount for Trademark (Note 13 of Annual Accounts)	750
Less: depreciation on assets created by utilising proceeds from one-time sale of old assets (Form B of Petition)	219
Amortisation of Coal Mining Rights	594
Chargeable amount of depreciation	35357

Table 3.13 -2: Advance Against Depreciation

SI No.	Particulars	Amount (Rs. Lakh)
(a)	Repayment of Loan (Form C of petition)	43873.00
(b)	1/10 <sup>th</sup> of original loan amount (Form C of petition)	50318.60
(c)	Maximum permissible amount of loan repayment restricted to 1/10 <sup>th</sup> of original loan amount	43873.00
(d)	Depreciation admitted in APR of 2015 – 2016 before deduction of Coal Mining Rights	35951.00
(e)	Allowable Advance against depreciation (c-d)	7922.0

### 3.14 Return on Equity

3.14.1 Return on equity is detailed in Table 3.14-1, Table 3.14-2, Table 3.14-3, Table 3.14-4 and Table 3.14-5.

Table 3.14-1: Actual Addition to Equity during 2015 - 2016 has been arrived as below:

SI No	Particulars	Amount (Rs. Lakh)
1	Profit for the year (P&L Account)	70701
2	Write off of Misc. Expenditure (Annex 6 of Vol 3 of Petition)	72
3	One time sale amount of assets invested in creation of new asset in terms of regulation 5.15.1(iv) (Form 1.20(a) of petition)	1146





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SI No	Particulars	Amount (Rs. Lakh)
4	Total (1+2+3)	71919
	Less:	
5	Dividend including tax paid (Para (g) of Note 4 of Annual Accounts)	15955
6	Unforeseen Exigencies Reserve (Annex 13 of Vol 3 of petition)	1663
7	<b>Total (5+6)</b>	17618
8	<b>Actual addition to equity base during 2015-16 (4-7)</b>	54301

3.14.2 In terms of Form 1.18 of APR read with Notes 4, 12 & 13 of audited financial statements for 2015-2016 the net addition of fixed cost is as per Table 3.14-2

**Table 3.14-2:** Addition to original cost of fixed asset

Particulars	Amount (Rs. Lakh)
Addition to fixed assets	82097
Less: Normal Retirement of Assets	6360
Less: Addition to Capital contribution	12106
Less: Cost of inoperative asset	5085
Net addition to fixed asset	58546

3.14.3 In terms of regulation 5.15.1 (iv) of the Tariff Regulations, CESC Limited invested proceeds of one time sale of asset to the tune of Rs. 1146 lakh in creation of new assets in the electricity business of the company for which no depreciation has been claimed. This amount of Rs. 1146 lakh is included in actual addition to equity base of Rs. 54301 lakh for 2015-2016 and addition to fixed assets of Rs. 58546 lakh. Return on such equity shall be admissible to the CESC Limited.

3.14.4 Equity base for allowing returns to the licensees at the specified rate is an uncontrollable factor in terms of the Tariff Regulations. In tariff order dated 04.03.2015, CESC Limited was allowed return on the projected average equity base of Rs. 339419 lakh comprising generation function and distribution function @ 15.5% and 16.5% respectively and that came to Rs. 18835 lakh for generation function and Rs. 35954 lakh for distribution function aggregating to Rs. 54789 lakh. The average equity base for the purpose of computation of return on equity during the year 2015 - 2016 came to Rs. 341249 lakh as per the computation shown hereunder.



- 3.14.5 In terms of Form 1.18 of APR read with Notes 4, 12 & 13 of audited financial statements for 2015-2016 the net addition of fixed cost and admissible equity base is as per Table 3.14-3 below:

**Table 3.14-3: Admissible Equity Base for 2015 - 2016**

Sl No.	Particulars	Amount (Rs. Lakh)
1	Actual equity base at the beginning of the year	502953
2	Admissible equity base at the beginning of the year 2015 – 2016	332066
3	Actual addition to equity base during the year (refer to para 3.13.1)	54301
4	Actual equity base at the end of the year (1+3)	557254
5	Net addition to original cost of fixed asset (refer to para 3.13.2)	58546
6	Less: Asset created in terms of regulation 5.15.1(iv) of the Tariff Regulations	1146
7	Net addition to the original cost of fixed assets during the year other than the assets created in terms of regulation 5.15.1(iv) of the Tariff Regulations (5-6)	57400
8	Normative addition to equity base (30% of 7)	17220
9	Addition to equity base considered for the year (lower of 3 and 8)	17220
10	Add: Asset created in terms of regulation 5.15.1(iv) of the Tariff Regulations	1146
11	Addition to equity base during the year for the purpose of computation of return as per Tariff Regulations (9+10)	18366
12	Admissible equity base at the closing of the year 2015 - 2016 (2+11)	350432
13	Average admissible equity base for allowing returns $[(2+12)/2]$	341249

- 3.14.6 In terms of regulation 5.6.1.1 return on equity for generating company and transmission licensee shall be computed on the equity capital at the applicable rate provided by Central Electricity Regulatory Commission and in terms of regulation 5. 6.1.2, the said rate will be one percent higher and will be related to distribution assets only. In terms of Central Electricity Regulatory Commission (Term and Conditions of Tariff) Regulations, 2009, the rate of return on equity for generation and transmission activity is 15.5%.

- 3.14.7 Allocation of equity base between generation function and distribution function based on the ratio of gross cost of fixed asset at the beginning of the year and addition during the year:



**Table 3.14-4:** Functional Allocation of Equity Base

Particulars	Opening equity base of 2015-16	Addition to equity base during 2015-16	Closing equity base of 2015-16	Average equity base of 2015-16	Return on equity (in percent)	Return admitted in APR for 2015-16
Generation	121357	-477	120880	121118.50	15.5	18773.37
Distribution	197730	18049	215779	206754.50	16.5	34114.49
Supply / Selling	12978	794	13772	13375.00	16.5	2206.88
<b>Total</b>	<b>332065</b>	<b>18366</b>	<b>350431</b>	<b>341249.00</b>		<b>55094.74</b>

3.14.8 Equity base specifically attributable to a function has been shown under such function. Centrally maintained capitalised expenses have been allocated to Generation and Distribution function on basis of respective capitalisation.

**Table 3.14-5:** Function-wise allocation of the amount of return admitted in APR for 2015 - 2016

Particulars	As admitted in APR for 2015-2016 Rs in Lakh
<b>(A) Generation function</b>	
Budge Budge	16018.85
Titagarh	1474.69
Southern	1279.83
<b>Total (A)</b>	<b>18773.37</b>
<b>(B) Distribution Function</b>	34114.49
<b>(C) Supply / Selling Function</b>	2206.88
<b>Total (A+B+C)</b>	<b>55094.74</b>

Return on Equity has been computed on the basis of equity base furnished in Table 3.14-4 above.

### 3.15 Appropriation to Reserve for Unforeseen Exigencies

As per MYT Order dated 04.03.15, no amount was allowed to CESC Limited under the head Reserve for Unforeseen Exigencies. The actual amount of such reserve created by CESC Limited



at the same rate on the actual gross block of fixed assets as on 1 April 2015 was Rs. 19545 lakh and amount appropriated towards interest during 2015 - 2016 is Rs. 1663 lakh. The amount of such reserve had separately been invested along with the amount of Rs. 1663 lakh of interest accrued to such investments in accordance with the relevant regulation of the Tariff Regulations of this Commission. As per audited accounts of 2015 - 2016, CESC Limited has a closing balance of Rs. 21208 lakh (Rs. 19545 lakh + Rs. 1663 lakh) in this fund. CESC Limited submitted the necessary audit certificates in Annex 13 of Volume 3 of this petition in this regard.

No such appropriation has been allowed in the tariff order and made except accrued interest in terms of regulations and no amount is therefore due on account of the same.

### **3.16 Tax on Income**

The Company has duly furnished Assessment Order for the relevant year before the Commission. Necessary Auditors' Certificate has been furnished by the company for the amount of tax paid for the assessment year 2015 – 2016 and is allowed with functional allocation on the basis of respective functional admitted return of equity and furnished in Annexures 3A to 3G. According to clarification through mail dated 24.02.20 CESC has challenged additional claims of Income Tax before competent authorities. CESC has also mentioned that marginal adjustments of tax (if any) may be claimed through APR in the years of settlement. CESC's such claim is for 2013-14. Moreover, according to CESC, no income tax pertaining to any earlier period has been claimed in the APR for the year 2015-16. Thus, Commission decides to admit the claimed amount of Rs 18566 lakhs as Income tax payment by CESC in APR of 2015-16. Any additional claim from the IT authority due to challenge of the assessment order, as may be prayed by the Company, shall be allowed in the year of settlement subject to prudence check.

### **3.17 Permitted Incentive**

Generation at Budge Budge generating stations was higher than normative generation. Further, performance of this station in terms of specific oil consumptions as well as gross station heat rates are found to be better than norms.





As per regulation 6.4.2, for generating stations of licensee, for performance beyond the targeted availability factor it will be entitled to incentive based on actual PLF as per Paragraph - 1 of Schedule - 10 only. CESC Limited has submitted Plant availability factor in the data-format for all the generating stations but no certificate from SLDC has been provided along with their APR petition. In a separate proceeding in case no B-36/ABT/9 on the issue of installation of ABT meter and DC certification of all the embedded generating stations of CESC by SLDC, CESC Limited has submitted through affidavit that the On-line monitoring display arrangement of generation and sent-out figures as well as dedicated voice communication from CESC Control room and WBSLDC Control room are in place since 2009. The on-line SCADA data records are also available since 01.04.2014 with CESC. It is also submitted by CESC Limited that the Availability Schedule and Injection Schedule on day-ahead basis is being provided regularly by CESC to SLDC in prescribed format of SLDC since 2009. Revision of Schedules on real time basis are also sent by CESC to SLDC. Initial Schedules are being uploaded on CESC website since 01.04.2014. Commission while dealing the issue in the above case vide order dated 30.07.2022 in case No B-36/ABT/9, has also observed that communication and on-line monitoring are in place. Commission has also observed that CESC was never asked for demonstration of availability by SLDC. Commission has thereafter observed in such order that availability submitted by CESC needs to be considered in absence of specific direction for demonstration .

In view of the above decision taken in Case No.B-36/ABT/9 vide order dated 30.07.2022, the Commission now decided to consider the availability for the year 2015-16 for Budge Budge, Southern and Titagarh Generating Station as submitted by CESC in form 1.1 of the APR petition.

Normative PAF and actual PAF of generating stations of the licensee is tabulated below :-

SL No	Factors	Unit	Budge Budge	Titagarh	Southern
1	Sent out generation	MU	5327.271	601.389	479.428
2	Normative sent out generation	MU	4796.064	1534.740	863.292
3	PAF declared	%	<b>95.90</b>	<b>96.80</b>	<b>89.50</b>
4	Normative PLF	%	80	80	80
5	Normative PAF	%	<b>85</b>	<b>85</b>	<b>85</b>



Incentives become payable only to Budge Budge generating station of CESC Limited on account of generation being higher than annual norms as well as better performance for specific oil consumption and gross heat rate better as per regulation 6.14.1 and Schedule-10 of the Tariff Regulations. The consequent incentives have been worked out as under:

**Table 3.17-1:** Incentive for generation higher than Norm

SL No	Factors	Unit	Budge Budge
1	Sent out generation	MU	5327.271
2	Normative sent out generation	MU	4796.064
3	Additional units [(1) – (2)]	MU	531.207
4	PLF achieved	%	87.94
5	Normative PLF	%	80
6	Additional PLF [(4) – (5)]	%	7.94
7	Applicable category		B
8	Applicable rate	Paise/kwh	27
9	Amount eligible [(3) x (8)/10]	Rs. In Lakh	1434.26

**Table 3.17-2:** Incentive for Oil consumption better than norms

SL No	Factors	Unit	Budge Budge
1	Gross Generation for sales to consumers & WBSEDCL	MU	5854.144
2	Oil rate saved	MI/kwhr	1.12
3	Applicable Rate of incentive	Paise/kwh	0.40
4	Eligible Amount [(1) x (3)/10]	In Rs lakhs	234.17

**Table 3.17-3:** Incentive for better gross station heat rate than norms

SL No	Factors	Unit	Budge Budge
1	Gross Generation for sales to consumers & WBSEDCL	MU	5854.144
2	Actual Station Heat	Kcal/Kwhr	2141.20
3	Design station heat rate	Kcal/Kwhr	2247.37





SL No	Factors	Unit	Budge Budge
4	Ratio of Actual Station Heat / Design Station Heat Rate		0.95
5	Age of the Station Heat rate	Years	13 Years plus
6	Applicable Rate of incentive	Paise/kwh	0.50
7	Eligible Amount [(1) x (6) /10]	Rs Lakhs	292.71

**Table 3.17-4:** Incentive for better gross station heat rate than norms

SL No	Factors	Budge Budge	Total
1	Incentive for higher generation than norms in Rs Lakhs	1434.26	1434.26
2	Incentive for better oil rate in Rs Lakhs	234.17	234.17
3	Incentive for better heat rate in Rs Lakhs	292.71	292.71
	<b>Total</b>	1961.14	1961.14

**3.18 Net UI charges paid**

CESC Limited paid an amount of Rs. 790 lakh during the year on account of unscheduled interchange charges (UI). In terms of regulation 5.17.2 of the Tariff Regulations, net payable UI charges shall be considered as an expenditure and shall be limited to 5% of the total power purchase cost.

The claim on this account of Rs 790 Lakh is well within the permissible limit of 5% of power purchase cost Rs 459506.52 lakhs including the deemed power purchase from own generating stations.

**3.19 Written off of intangible assets**

As per Annex 6 the written off value of intangible asset is Rs 72 lakhs which is being admitted by the commission. Such amount is distributed among different functions according to the proportion of depreciation of each function.

**3.20 Income from non-tariff sources**

As per note 24 and 25 of audited annual reports and accounts read with submissions in Form 1.26 to Annex 1, such income from non tariff sources is Rs 9622 Lakh for 2015-2016 as detailed out in Table 3.20--1.

**Table 3.20-1: Non-Tariff Income break-up**

SL No.	Particulars	Amount (Rs. Lakh)
1	Rental of meters and other apparatus hired out	4731
2	Sale and repair of lamps etc.	229
3	Transfer service connection fees	-
4	Income from investments and bank balance	2343
5	Surcharge for late payments	1291
6	Other General receipts arising from and ancillary or incidental to the business of electricity	1028
7	<b>Net income from non-tariff sources</b>	<b>9622</b>

Rental of meters and other apparatus hired out, sale and repair of lamps etc., and surcharge for late payments (items 1, 2, and 5 in Table 3.20-1 above) have been entirely accounted in supply / selling function. Income heads such as income from investments and bank balances, other general receipts arising from and ancillary or incidental to the business of electricity (items 4 and 6 in Table 3.20-1 above) are allocated to all functions based on the respective return on equity computed in Table 3.14-5 above. Accordingly, business function-wise allocation of non-tariff income stands as Table 3.20-2

**Table 3.20-2: Allocation of non-tariff income**

Particulars	As admitted in APR 2015-2016
<b>(A) Generation function</b>	
Budge Budge	980.12
Titagarh	90.23
Southern	78.31
<b>Total (A)</b>	<b>1148.66</b>
<b>(B) Distribution function</b>	2087.31
<b>(C) Supply / Selling Function</b>	6386.03
<b>Total (A+B)</b>	<b>9622.00</b>

### 3.21 Benefits passed on to consumers

Based on form 1.24 of volume-2 of APR petition and Annual accounts and Benefits passed on to the consumers in terms of the regulations are detailed as under:





**Table 3.21-1 Benefits** passed on to the consumers in terms of regulations

SL. No.	Sources	Revenue Received	Related cost	Gains derived	Rate of share of benefit to consumers	Share to Consumers & WBSEDCL
1	2	3	4	5= (3-4)	6	7=5x6
1	Sale to persons other than consumers and licensees	5347.00	4901.26	445.74	50%	222.87
2	Auxiliary Services	216.00	106.00	110.00	40%	44.00
3	Other business - consultancy services	309.29	308.97	0.32	40%	0.13
4	Other business - user fee	1210.00	-	1210.00	40%	484.00

Both the revenue received and related attributable cost shown in Form 1.24 are Rs 309 lakhs. But gains shown as Rs 0.32 lakhs. Commission cannot accept such claim and thus considered the gain as nil. Since costs pertaining to consultancy services are not part of the claim, the related revenue is also not shared. No loss is passed on to consumers as well.

**Table 3.21-2** Cost centre-wise break up of benefits passed on to consumers and WBSEDCL:

Particulars	Aux. Services	Other Business - consultancy Services	Other Business - User Fee	Sale to persons other than consumers and licensees
Distribution Function (entirely allocated)	44.00	0.13	484.00	222.87

### 3.22 Admissibility of recovery of Capacity Charges as per provisions of regulation 6.4.2 of the Tariff Regulation



*Order on APR of CESC for the year 2015-2016*

In terms of regulation 6.4.2 of the Tariff Regulations, from the third control period, the recovery of capacity charge for all the generating station of the licensee and generating company shall be against the normative availability. However, for this purpose licensee has to provide schedule of availability for all 15 minute time block of each generating station to SLDC for recording and subsequent demonstration of their declared capacity as mentioned in regulation 6.7 of the Tariff Regulations.

CESC has submitted the availability parameters of their own generating stations in their APR petition at Form 1.1 which was not supported with the certificate by WBSLDC. The Plant Availability Factor (PAF) as declared by the plants and submitted by CESC in their petition are above the normative PAF of the respective plants. As decided in para 3.17 of this order, Commission considers to allow the capacity charge for the generating stations of CESC for the year 2015-16 on the basis of PAF declared by the plants as submitted in Form 1.1 and decides to allow the computed fixed cost of generating stations as Rs.79,689.04 lakh.

Thus, the fixed cost for generating stations, distribution business and overall are admitted as follows:

**Table- 3.22-3**

<b>Sl. No</b>	<b>Particulars</b>	<b>Admitted Fixed Charges</b>
1	Generation Function	
	Budge Budge	57824.31
	Titagarh	13094.90
	Southern	8769.83
2	<b>Total for Greneration</b>	<b>79689.04</b>
3	<b>Distribution and Selling Function</b>	<b>206001.62</b>
4	<b>TOTAL [(2)+(3)]</b>	<b>285690.66</b>

The element wise fixed cost for all the generating stations, distribution business and overall as discussed in para 3.1 to 3.21 is given in Annexure 3A to Annexure 3F.



**Annexure 3A**

Rs. in Lakh

SL. No.	Particulars	Budge Budge Generating Stations		
		Amount admitted in Tariff Oder 2015-2016	Amount claimed in APR 2015-2016	As admitted in APR 2015-2016
1	Water Charges/Cess	12	5	5.00
2	Coal & Ash Handling Charges	581	877	579.30
3	Operation & Maintenance Expenses	9285	9285	9285.00
4	(a) Employee Cost	4264	4943	4943.00
	(b) Cost of contractual manpower	2346	3493	2888.00
5	Rent for generation	-	-	-
6	Rates & Taxes (other than Income Tax)	319	368	322.12
7	Insurance	503	396	396.00
8	Lease Rental	-	-	-
9	Cost of Outsourcing	-	-	-
10	Corporate Social Responsibility	-	482	-
11	Interest on Capital Borrowings	5243	5281	5416.98
12	Interest on Temporary Accommodation	733	-	-
13	Interest on Consumer's Security Deposit	-	-	-
14	Foreign Exchange Rate Variations (FERV)	-	-	-
15	Other Finance Charges	251	336	336.00
16	Bad Debt	-	-	-
17	Depreciation	8796	9707	9108.90
18	Advance against Depreciation	3764	2139	2126.83
19	Written off Intangible Assets	19	19	19.33
20	Return on Equity	16062	16019	16018.85
21	Reserve for Unforeseen Exigencies	-	-	-
22	Income Tax	3212	5398	5397.98
23	Performance Incentive	-	1396	1961.14
24	<b>Fixed Charges (1 to 23)</b>	<b>55390</b>	<b>60144</b>	<b>58804.43</b>
25	Interest on working Capital	-	-	-
26	<b>Gross Fixed Charges (24+25)</b>	<b>55390</b>	<b>60144</b>	<b>58804.43</b>
27	Less: Income from Non-Tariff Sources	602	980	980.12
28	<b>Total Net amount deductible (27)</b>	<b>602</b>	<b>980</b>	<b>980.12</b>
29	<b>Net Fixed Charge for the year 2015 - 16 (26-28)</b>	<b>54788</b>	<b>59164</b>	<b>57824.31</b>



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**Annexure 3B**

Rs. Lakhs

SL. No.	Particulars	Titagarh Generating Stations		
		Amount admitted in Tariff Oder 2015-16	Amount claimed in APR 2015-16	As admitted in APR 2015-16
1	Water Charges/Cess	132	51	51.00
2	Coal & Ash Handling Charges	925	152	152.00
3	Operation & Maintenance Expenses	3454	3454	3454.00
4	(a) Employee Cost	5374	6070	6070.00
	(b) Cost of contractual manpower	1059	536	536.00
5	Rent for generation	-	-	-
6	Rates & Taxes (other than Income Tax)	190	90	78.78
7	Insurance	103	84	84.00
8	Lease Rental	62	-	-
9	Cost of Outsourcing	-	-	-
10	Corporate Social Responsibility	-	45	-
11	Interest on Capital Borrowings	558	-	-
12	Interest on Temporary Accommodation	273	-	-
13	Interest on Consumer's Security Deposit	-	-	-
14	Foreign Exchange Rate Variations (FERV)	-	-	-
15	Other Finance Charges	93	60	60.00
16	Bad Debt	-	-	-
17	Depreciation	597	587	588.95
18	Advance against Depreciation	255	129	137.52
19	Written off Intangible Assets	1	1	1.25
20	Return on Equity	1422	1475	1474.69
21	Reserve for Unforeseen Exigencies	-	-	-
22	Income Tax	284	497	496.94
23	Performance Incentive	-	-	-
24	<b>Fixed Charges (1 to 23)</b>	<b>14782</b>	<b>13231</b>	<b>13185.13</b>
25	Interest on Working Capital	-	-	-
26	<b>Gross Fixed Charges (24+25)</b>	<b>14782</b>	<b>13231</b>	<b>13185.13</b>
27	Less: Income from Non-Tariff Sources	53	90	90.23
28	<b>Total Net amount deductible (27)</b>	<b>53</b>	<b>90</b>	<b>90.23</b>
29	<b>Net Fixed Charge for the year 2015 - 16 (26-28)</b>	<b>14729</b>	<b>13141</b>	<b>13094.90</b>





Order on APR of CESC for the year 2015-2016



**Annexure 3C**

Rs. in Lakh

SL. No.	Particulars	Southern Generating Station		
		Amount admitted in Tariff Oder 2015-16	Amount claimed in APR 2015-16	As admitted in APR 2015-16
1	Water Charges/Cess	81	40	40.00
2	Coal & Ash Handling Charges	9	189	5.03
3	Operation & Maintenance Expenses	1957	1978	1978.00
4	(a) Employee Cost	3611	4143	4143.00
	(b) Cost of contractual manpower	55	271	104.00
5	Rent for generation	21	33	33.00
6	Rates & Taxes (other than Income Tax)	66	21	20.13
7	Insurance	61	49	49.00
8	Lease Rental	208	-	-
9	Cost of Outsourcing	-	-	-
10	Corporate Social Responsibility	-	38	-
11	Interest on Capital Borrowings	362	338	345.37
12	Interest on Temporary Accommodation	155	-	-
13	Interest on Consumer's Security Deposit	-	-	-
14	Foreign Exchange Rate Variations (FERV)	-	-	-
15	Other Finance Charges	53	47	47.00
16	Bad Debt	-	-	-
17	Depreciation	301	301	301.48
18	Advance against Depreciation	129	66	70.39
19	Written off Intangible Assets	1	1	0.64
20	Return on Equity	1351	1280	1279.83
21	Reserve for Unforeseen Exigencies	-	-	-
22	Income Tax	270	431	431.27
23	Performance Incentive	-	-	-
24	<b>Fixed Charges (1 to 23)</b>	<b>8691</b>	<b>9226</b>	<b>8848.14</b>
25	Interest on Working Capital	-	-	-
26	<b>Gross Fixed Charges (24+25)</b>	<b>8691</b>	<b>9226</b>	<b>8848.14</b>
27	Less: Income from Non-Tariff Sources	51	78	78.31
28	<b>Total Net amount deductible (27)</b>	<b>51</b>	<b>78</b>	<b>78.31</b>
29	<b>Net Fixed Charge for the year 2015 - 16 (26-28)</b>	<b>8640</b>	<b>9148</b>	<b>8769.83</b>



Order on APR of CESC for the year 2015-2016

Annexure 3D

Rs. Lakhs

SL. No.	Particulars	New Cossipore Generating Station		
		Amount admitted in Tariff Oder 2015-16	Amount claimed in APR 2015-16	As admitted in APR 2015-16
1	Water Charges/Cess	-	-	-
2	Coal & Ash Handling Charges	-	-	-
3	Operation & Maintenance Expenses	112	-	-
4	(a) Employee Cost	-	-	-
	(b) Cost of contractual manpower	-	-	-
5	Rent for generation	-	-	-
6	Rates & Taxes (other than Income Tax)	-	-	-
7	Insurance	-	-	-
8	Lease Rental	-	-	-
9	Cost of Outsourcing	-	-	-
10	Corporate Social Responsibility	-	-	-
11	Interest on Capital Borrowings	-	-	-
12	Interest on Temporary Accommodation	-	-	-
13	Interest on Consumer's Security Deposit	-	-	-
14	Foreign Exchange Rate Variations (FERV)	-	-	-
15	Other Finance Charges	-	-	-
16	Bad Debt	-	-	-
17	Depreciation	-	-	-
18	Advance against Depreciation	-	-	-
19	Written off Intangible Assets	-	-	-
20	Return on Equity	-	-	-
21	Reserve for Unforeseen Exigencies	-	-	-
22	Income Tax	-	-	-
23	Performance Incentive	-	-	-
24	Terminal Benefit	-	-	-
25	<b>Fixed Charges (1 to 24)</b>	<b>112</b>	-	-
26	Interest on Working Capital	-	-	-
27	<b>Gross Fixed Charges (25+26)</b>			
28	Less: Income from Non-Tariff Sources	-	-	-
29	<b>Total Net amount deductible (28)</b>	-	-	-
30	<b>Net Fixed Charge for the year 2015 -16 (27-29)</b>	<b>112</b>	-	-

Annexure 3E

Rs. Lakhs





Order on APR of CESC for the year 2015-2016

Distribution				
SL. No	Particulars	Amount admitted in Tariff Oder 2015-16	Amount claimed in APR 2015-16	As admitted in APR 2015-16
1	Water Charges/Cess	-	-	-
2	Coal & Ash Handling Charges	-	-	-
3	Repair & Maintenance	17897	16597	15334.15
4	Administrative & General	13537	14631	13537.00
5	Employee Cost	58752	59357	59357.00
6	Rates & Taxes (other than Income Tax)	1370	1314	934.49
7	Insurance	304	241	241.00
8	Lease Rental	841	1072	1072.00
9	Cost of Outsourcing	950	891	891.00
10	Corporate Social Responsibility	-	1093	-
11	Interest on Capital Borrowings	26098	24711	25351.85
12	Interest on Temporary Accommodation	1994	31836	4281.11
13	Interest on Consumer's Security Deposit	9322	9861	9861.00
14	Foreign Exchange Rate Variations (FERV)	-	-	-
15	Other Finance Charges	683	737	737.00
16	Bad Debt	2674	3528	3281.82
17	Depreciation	25386	25356	25357.67
18	Advance against Depreciation	10863	5587	5587.26
19	Written off Intangible Assets	51	51	50.78
20	Return on Equity	35954	36321	36321.37
21	Reserve for Unforeseen Exigencies	-	-	-
22	Income Tax	7192	12240	12239.46
23	Performance Incentive	-	-	-
24	Net UI Payable	-	790	790.00
25	<b>Fixed Charges (1 to 24)</b>	<b>213868</b>	<b>231265</b>	<b>215225.96</b>
26	Interest on Working Capital	-	8652	-
27	<b>Gross Fixed Charges (25+26)</b>	<b>213868</b>	<b>239917</b>	<b>215225.96</b>
28	Less: Income from Non-Tariff Sources	7563	8473	8473.34
29	Less: Income from UI charges receivable	-	-	-
30	Less : Benefits passed on to consumers for sale to persons other than consumers or licensee			222.87
31	Less: Benefits to pass on to consumers for Auxiliary Services	100	100	44.00
32	Less: Benefits to pass on to consumers for Consultancy Services	0	0	0.13
33	Less: Benefits to pass on to consumers from other business	440	440	484.00
34	<b>Total net amount deductible (28 to 33)</b>	<b>8103</b>	<b>9013</b>	<b>9224.34</b>





Order on APR of CESC for the year 2015-2016

Distribution				
SL. No	Particulars	Amount admitted in Tariff Oder 2015-16	Amount claimed in APR 2015-16	As admitted in APR 2015-16
35	Net Fixed Charge for the year 2015 - 2016 (26 – 34)	205765	230904	206001.62

Actual expenses higher. Expenditure-heads not claimed in APR petition not considered.

Annexure 3F

Rs. Lakh

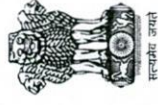
SL. No.	Particulars	Overall (2015 – 16)		
		Amount admitted in Tariff Oder	Amount claimed in APR	As admitted in APR
1	Water Charges/Cess	225	96	96.00
2	Coal & Ash Handling Charges	1515	1218	736.33
3	Operation & Maintenance Expenses for generation	14808	14717	14717.00
4	Repair & Maintenance for Distribution	17897	16597	15334.15
5	Administrative & General for Distribution	13537	14631	13537.00
6	Own Employee Cost + Cost of contractual manpower	75461	78813	78041.00
7	Rent	21	33	33.00
8	Rates & Taxes (other than Income Tax)	1945	1793	1355.52
9	Insurance	971	770	770.00
10	Lease Rental	1111	1072	1072.00
11	Cost of Outsourcing	950	891	891.00
12	Corporate Social Responsibility	-	1658	-
13	Interest on Capital Borrowings	32261	30330	31114.20
14	Interest on Temporary Accommodation	3155	16887	4281.11
15	Interest on Consumer's Security Deposit	9322	9861	9861.00
16	Foreign Exchange Rate Variations (FERV)	-	-	-
17	Other Finance Charges	1080	1180	1180.00
18	Bad Debt	2674	3528	3281.82
19	Depreciation	35080	35951	35357.00
20	Advance against Depreciation	15011	7921	7922.00
21	Written off Intangible Assets	72	72	72.00
22	Return on Equity	54789	55095	55094.74
23	Reserve for Unforeseen Exigencies	-	-	-
24	Income Tax	10958	18566	18565.65
25	Performance Incentive	-	1396	1961.14
26	Net UI Payable	-	790	790.00
27	<b>Fixed Charges (1 to 26)</b>	<b>292843</b>	<b>313866</b>	<b>296063.66</b>
28	Interest on Working Capital	0	8652	-





Order on APR of CESC for the year 2015-2016

SL. No.	Particulars	Overall (2015 – 16)		
		Amount admitted in Tariff Oder	Amount claimed in APR	As admitted in APR
29	<b>Gross Fixed Charges (27+28)</b>	<b>292843</b>	<b>322518</b>	<b>296063.66</b>
30	Less: Income from Non-Tariff Sources	8269	9621	9622.00
31	Less: Income from UI charges receivable	-	-	-
32	Less: Benefits passed on to consumers for sale to persons other than consumers or licensee	-	-	222.87
33	Less: Benefits to pass on to consumers for Auxiliary Services	100	100	44.00
34	Less: Benefits to pass on to consumers for Consultancy Services	0	0	0.13
35	Less: Benefits to pass on to consumers from other business	440	440	484.00
36	<b>Total Net amount deductible (30 to 35)</b>	<b>8809</b>	<b>10161</b>	<b>10373.00</b>
37	<b>Net Fixed Charge for the year 2015 - 16 (29 – 36)</b>	<b>284034</b>	<b>312357</b>	<b>285690.66</b>



Order on APR of CESC for the year 2015-2016

**Annexure 3G**

**Distribution O&M parameters:**

**Inflation**

Particulars	Tariff Order	APR Order
WPI	6.62%	-2.47%
CPI	9.15%	5.65%
WPI: CPI (60: 40)	7.63%	0.78%

**Monthly Rate of Inflation in CPI number for Industrial Workers (Source: Labour Bureau, GOI)**

Year	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar
2014-15	242	244	246	252	253	253	253	253	253	254	253	254
2015-16	256	258	261	263	264	266	269	270	269	269	267	268

**Monthly Rate of Inflation computed based on CPI number for Industrial workers**

Year	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Average
2015-16	5.79	5.74	6.10	4.37	4.35	5.14	6.32	6.72	6.32	5.91	5.53	5.51	5.65

Average value is computed

**Monthly Inflation Rate based on WPI from Office of the Economic Adviser, GOI**

Year	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar
2014-15	181	182	183	185	186	185	184	181	179	177	176	176
2015-16	176	178	179	178	177	177	177	178	177	175	174	175

**Monthly Inflation Rate based on WPI**

Year	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Average
2015-16	(2.43)	(2.20)	(2.13)	(4.00)	(5.06)	(4.59)	(3.70)	(2.04)	(1.06)	(1.07)	(0.85)	(0.45)	(2.47)





## Chapter 4

### AMOUNT ADJUSTABLE ON ANNUAL PERFORMANCE REVIEW

- 4.1 A summarised position of the fixed cost for four generating stations, distribution and selling/supply functions have been detailed in Table 4.1-1 of this order. Further, the Commission also determined the fuel and power purchase cost allowable to CESC totalling to Rs. 342312.95 lakh, after meeting the amounts relating to shares of various gains attributable to its consumers and WBSEDCL in terms of the Tariff Regulations in chapter 3 of this order. The Commission, in its order dated 04.03.2015 in Case No: TP-56/13-14 had decided to adjust Rs 7921.37 Lakh, with the ARR for 2015-2016 with the allowable amount entitled to CESC. Revenue recovered by CESC as per Audited Accounts, duly adjusted for share of savings of 335.697 MU in terms of Tariff Regulations net off amount already considered in variable cost determination, is now required to be adjusted against Rs 635924.98 Lakh (i.e., 285690.66 +342312.95 +7921.37)
- 4.2 The revenue earned by CESC through sale of power to Consumer and WBSEDCL with reference to its audited accounts as detailed out below:

SL. No.	Particulars	Amount
1	Earnings from sale of electricity (Net of the amount of Advance Depreciation) as per Note 24(a) of audited accounts of CESC Ltd in Rs Lakh	643444.00
2	Add: Advance against Depreciation in Rs Lakh (As per note 24(c) of Notes on Accounts)	15011.00
3	Add: Adjustment effects of previous orders in Rs Lakh (Form 1.25)	3189.00
4	Gross earnings from sale of electricity in Rs Lakh (1+2+3)	661644.00
5	less: earnings from sale of energy to persons other than own consumers & WBSEDCL in Rs Lakh	5346.95
6	Add: Contribution to festivals in Rs Lakh	66.00
7	<b>Actual revenue realised from sale of energy to own consumers and WBSEDCL in Rs Lakh</b>	<b>656363.05</b>
8	The net adjustment for distribution performance after taking into effect of gain sharing to consumers and benefit already passed through variable cost.	
a	Total Fixed and Variable Cost in Rs Lakh	628003.61
b	Units saved vide FPPC Order in MU	335.70
c	<b>Cost saved</b>	
d	Energy sold to consumers & WBSEDCL in MU	9241.664
e	Rate in paise/kwh (a / d )	679.54
f	Savings for improved distribution loss performance in Rs Lakh (e x b )	22812.16



Order on APR of CESC for the year 2015-2016

SL. No.	Particulars	Amount
g	25% share of savings with the consumers in terms of Regulations in Rs Lakh (f x 25%)	5703.04
h	Benefit already passed through in Variable Cost in Rs Lakh (Para 2.19.2 of APR order)	8551.30
i	Net adjustment with revenue realised from such savings in Rs Lakh (f – g – h)	8557.82
9	Amount recovered from sale of power (7 – 8i) (Adjusted for savings due to better performance in distribution loss.) #	647805.23
#The net adjustment for distribution performance has been done after taking into effect of gain sharing to consumers and benefit already passed through variable cost.		

4.3 The amount adjustable on Annual Performance Review is detailed as under in Table 4.1-1

Table 4.1-1

Sl. No	Particulars	Amount (in Rs. Lakh)
1	Fixed Charges	285690.66
2	Fuel & Power Purchase Cost	342312.95
3	Part of recoverable amount in APR 2011-12 and 2012-13, allowed in 2015-16 Tariff Order	7921.37
4	Total Recoverable (1 + 2 + 3)	635924.98
5	Amount recovered from sale of power	647805.23
6	Balance Recoverable (4 – 5)	(-) 11880.25

4.4 In terms of regulation 2.6.6 of the Tariff Regulations, the entire refundable amount of Rs. 11880.25 lakh or a part thereof shall be adjusted with the amount of Aggregate Revenue Requirement for any ensuing year or through a separate order, as may be decided by the Commission.

Sd/-  
(PULAK KUMAR TEWARI)  
MEMBER

Sd/-  
(SUTIRTHA BHATTACHARYA)  
(CHAIRPERSON)

Date: 01.08.2022

Sd/-  
SECRETARY