



**ORDER**

**OF THE**

**WEST BENGAL ELECTRICITY REGULATORY COMMISSION**

**IN CASES NO.  
FPPCA – 106/ 21 – 22 AND  
APR – 94 /21 – 22**

IN REGARD TO THE APPLICATIONS SUBMITTED BY HALDIA  
ENERGY LIMITED FOR APPROVAL OF FUEL COST  
ADJUSTMENT (FCA) AND ANNUAL PERFORMANCE REVIEW  
(APR) FOR FY 2015-16

**PRESENT:**

**DR. MALLELA VENKATESWARA RAO, CHAIRPERSON  
SRI PULAK KUMAR TEWARI, MEMBER**

**DATE: 22.02.2024**



## CHAPTER – 1 PREAMBLE

- 1.1. The 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 the generating companies or licensees, as the case may be, are subject to Annual Performance Review (APR). The Commission vide its Order dated 29.01.2016 in Case No. TP-64/14-15 determined the tariff for Haldia Energy Limited (HEL) for its 2 X 300 MW Thermal Power Generating Station for the period from FY 2014-15 to FY 2016-17.
- 1.2. The final Project Cost of 2 x 300 MW HEL power plant was approved by the Commission vide its order dated 20.07.2022 in Case No. OA-270/17-18.
- 1.3. In the meanwhile, HEL filed the Petition for approval of Fuel Cost Adjustment (FCA) for FY 2015-16 on 28.02.2022 and the Annual Performance Review petition for FY 2015-16 on 07.01.2022. The Commission had admitted the FCA and APR Petitions and numbered them as Case No FPPCA-106/21-22 and Case No. APR-94/21-22 respectively.
- 1.4. On admission of the APR and FCA Petitions, HEL was directed to publish the gist of the APR and FCA Petitions of FY 2015-16, as submitted by HEL and approved by the Commission. Accordingly, the gist was published simultaneously on 11.04.2022 and 12.04.2022 in the 'The Telegraph', the 'Aajkal', the 'Bartaman', and the 'The Times of India'. The publication requested for submission of suggestions and objections from the members, if any, on the application to the Commission within 21 days from the date of publication of gist. The approved gist along with the APR Petition for FY 2015-16 was also published on the website of HEL. Opportunities were also offered to all to inspect the application and take copies thereof. No objection and suggestion has been received.
- 1.5. During the course of analysis, the Commission has found certain deficiencies and accordingly sought clarifications/additional information from HEL which were duly submitted by HEL from time to time. The submissions of HEL and Commission's analysis on APR and FCA for FY 2015-16 are detailed in the following chapters.



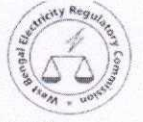
## CHAPTER – 2 COMPUTATIONS OF THE ALLOWABLE FUEL COST

- 2.1. In this part of the order, the Commission takes up the determination of fuel cost allowable to HEL on the quantum of power sold by it to CESC Limited during FY 2015-16 along with any gains arising from the performance of HEL over the operating norms set out by the Commission.
- 2.2. The Fuel and Power Purchase Cost Adjustments (in short “FPPCA”) during the referred adjustment period, i.e., FY 2015-16 are to be ascertained by following the formula as enunciated by the Commission in Part-B of the Schedule - 7A of the Tariff Regulations.
- 2.3. Further, Paragraph A of Schedule 9B of the Tariff Regulations, contains provisions for sharing the gains for coal fired thermal power stations, if any, on account of its better performances over the operating norms set out by the Commission. The operational parameters which are to be considered for such sharing of gains accrued to the generating stations are:
- Gain sharing for better Oil Consumption rate
  - Gain sharing for better Auxiliary Consumption rate
  - Gain sharing for better Gross Station Heat Rate (SHR)
- 2.4. Further, in terms of Paragraph D of Schedule 9 B of the Tariff Regulations, the total gains meant to be passed on to consumers shall be used first to compensate the deficit in fixed charge recovery of the concerned generating station of the generating company in case the availability of the generating station falls below the availability norm and thereafter the balance if any shall be passed on to the consumers.
- 2.5. The Commission in its order dated 20.01.2016 in Case No OA-121/11-12 has specified the normative operating parameters for HEL as below:

**Table 2-1: Normative parameters**

Parameters	Normative value
Plant Availability Factor (PAF)	85%
Plant Load Factor (PLF)	80%
Auxiliary consumption (AEC)	9%
Station Heat Rate (SHR)	2345 kCal/kwh
Transit loss	0.80%
Oil consumption rate	1.00 ml/kWh
O&M expenditure	2014-15: Rs. 7.05 Lakh/MW 2015-16: Rs. 7.47 lakh/MW 2016-17: Rs. 7.92 lakh/MW
Man /MW	1.30

In terms of the Tariff Regulations, during stabilization period generating stations are eligible for additional SHR subject to a ceiling of 50 kCal/kWh and oil consumption ceiling of 3.50



ml/kWh. For coal based and lignite fired thermal generating stations stabilization period is 180 days from the COD.

- 2.6. Before ascertaining the amount of admissible fuel cost as well as the amount of gains, if any, to be shared with the beneficiary (CESC Limited) under the provisions of Tariff Regulations explained in aforesaid paragraphs, the actual performance of HEL in comparison to the operational norms set out by the Commission in the tariff Order for the concerned year needs to be reviewed. Such comparisons are made hereunder:

**Table 2-2: Normative v/s Actual Operating Parameters for FY 2015-16**

Particulars	Units	Norms	Actual (Stabilisation Period)	Actual (Stabilised Period)	Admissible (Stabilisation Period)	Admissible (Stabilised Period)
Rate of Auxiliary Consumption	%	9.00	9.73%	9.31%	9.00%	9.00%
Specific Consumption of Oil	MI/kWh	1.00 (3.50 in Stabilisation Period)	1.83	0.19	1.83 (normative 1.00+ additional 0.83)	1.00
SHR	kCal/kWh	2345	2048.77	1827.90	2345	2345

As COD of HEL Unit -1 and Unit-2 commenced on 28.01.2015 and 21.02.2015 respectively, HEL will get the benefit of additional oil consumption during the stabilization period. HEL has provided audited figures for computation of Rate of Auxiliary Consumption, Specific Consumption of Oil and Station Heat rate. Hence the oil consumption will be allowed up to 1.83 ml/kwh as it is within the norm of Stabilisation period of 3.50 ml/kWh. No additional relief on Station Heat Rate is admissible as the actual Station Heat Rate is within the norms. The computations of actual rate of Auxiliary Consumption, Specific Consumption of Oil and SHR achieved are shown in Annexure - 2A.

- 2.7. As observed from above, actual performance of HEL generating Station relating to Specific Oil Consumption, Auxiliary Energy consumption and SHR qualify for deriving gains for sharing subject to the condition stipulated in Paragraph D of Schedule 9B of the Tariff Regulations.
- 2.8. HEL in APR application has submitted that it has achieved availability of 88.41% over the target availability of 85% as per norms. HEL has submitted the SLDC certificates in support of their claim. As the actual availability is higher than the norms, the gains on improved performance will be shared with CESC Limited. The amount of gain and its share shall be determined in the subsequent paragraphs.



**2.9. Determination of Allowable Fuel Cost**

2.9.1. In terms of paragraph B of schedule -7A to the Tariff Regulations, fuel cost is to be determined for the amount of energy sold by a generating company to the licensee considering the admissible normative parameters and the principles specified in regulation 5.8 of the tariff Regulations. The weighted average calorific value of oil and the weighted average heat value of coal are the variable factors depending upon the actual mix of different grades of fuel used in operation. The declared heat value of each grade of coal varies within a range. The weighted average heat value of coal considered at the tariff fixation level was based on the minimum value of the range of each projected grade of coal and is subject to adjustments in terms of regulation 5.8.1(i) of the Tariff Regulations.

**2.9.2. Generation**

Gross generation of the station has been estimated by taking into consideration the ex-bus injection schedule and normative auxiliary consumption as below:

**Table 2-3: Gross Generation for FY 2015-16**

Scheduled Injection (MU)	Normative Rate (%)	Admissible Gross Generation (MU)	Normative Auxiliary Consumption (MU)
3317.013	9.00	3645.070	328.057

**2.9.3. Auxiliary Consumption**

The quantum of auxiliary consumption at the generating station as per the norms fixed by the Commission is as under:

**Table 2-4: Normative Auxiliary Consumption for FY 2015-16**

	Scheduled Injection (MU)	Normative Rate (%)	Normative Auxiliary Consumption (MU)	Admissible Gross Generation (MU)
Stabilisation Period	919.550	9.00%	90.945	1010.495
Stabilised period	2397.463	9.00%	237.112	2634.575

**2.9.4. Weighted Average GCV and price of Oil**

2.9.4.1 HEL has submitted weighted average calorific value of oil for FY 2015-16 as 9534 kCal/L for the stabilization period and 9429 kCal/L for the stabilized Period. HEL submitted detailed calculation along with month-wise oil stock and sample test report in support of their claim. Average cost of oil (LDO) has been certified by the auditor as Rs.43,226.65/kL for the stabilization period and Rs. 43,899.87/kL for the stabilised period.

**Table 2-5: GCV and price of oil submitted by HEL**

Particulars	Unit	Stabilisation period	Stabilised period	For year 2015-16 (computed)
Quantum of oil	kL	1863.19	497.33	2360.52
Price of oil	Rs./ kL	43226.65	43899.87	43368.49
Heat value of oil	kCal/L	9534	9429	9511.88

2.9.4.2 As the GCV and Price of oil are variable factors depending on the grades of oil used, the Commission has considered the actual caloric value and price of oil for FY 2015-16 as shown in table above for working out the amount of allowable fuel cost.

**2.9.5. Permitted Transit Loss & Handling Loss of Coal**

2.9.5.1 HEL has claimed 0.80% transit loss on entire coal including imported coal. Accordingly, the same has been considered by the Commission for the purpose of this order.

**2.9.6. Weighted Average GCV and price of coal**

2.9.6.1 HEL has purchased about 78.40% of coal from CIL subsidiaries and balance 21.60% has been sourced through import during the year 2015-16. HEL has submitted the actual fuel price along with the break-up of coal prices. HEL also provided details of transportation cost of both imported and domestic coals. The landed coal price and heat value of coal purchased during the year 2015-16 (for stabilisation period and stabilised period) as submitted by HEL in its FPPCA and APR petitions are as below:

**Table 2-6: Price and UHV of Coal submitted by HEL**

Details of coal purchased	Unit	Stabilisation period	Stabilised period	For year 2015-16 (computed)
a) Quantum of coal	Tonne	726855	1740743	2467598
b) Price of coal	Rs./Tonne	2100.90	1854.20	
c) Transportation cost	Rs./Tonne	1044.80	1001.70	
d) Landed price (b + c)	Rs./Tonne	3145.70	2855.90	2941.26
e) Useful Heat value of coal	kCal/kg	3048	2895	2940.07

2.9.6.2 The Commission observes that HEL has computed coal cost for stabilisation period and stabilised period separately. The Regulation does not allow the computation for coal price in such manner nor it is required as normative station heat rate of both stabilisation period and stabilised period has been considered the same as per para 2.6. Hence, the Commission considers price of coal without freight for the whole year for its purposes.



2.9.6.3 The Price of domestic coal submitted by HEL is as under:

**Table 2-7: Price of Domestic Coal submitted by HEL**

Details of coal purchased	Unit	For year 2015-16 (computed)
a) Quantum of coal	Tonne	1934699
b) Price of coal	Rs./Tonne	1408.89
c) Transportation cost	Rs./Tonne	1004.81
d) Landed price (b + c)	Rs./Tonne	2413.70

2.9.6.4 HEL has fuel supply agreement (FSA) with CIL subsidiary Mahanadi Coalfields Limited (MCL) for G11 to G13 grade coal. HEL has also procured G2, G3 and G4 category coal from ECL based on separate arrangement with MCL. As HEL has procured higher quality coal based on linkage basis, the Commission has considered the same for its purpose of fuel cost determination. The domestic coal prices are as per the basic price of coal for the respective grades as notified by CIL along with royalty, taxes and duties. Therefore, the Commission has considered the price of domestic coal as submitted by HEL.

2.9.6.5 HEL has submitted the invoice wise details of coal transportation along with copies of invoices. The transportation charge claimed by HEL includes demurrage charges. However, HEL has not provided any appropriate justification for the same. As such, the Commission has not allowed the demurrage charges (to the tune of Rs. 4.37/MT) in absence of any specific justification of such claim in terms of clause (vi) of Regulation 5.8.1 of the Tariff Regulations, 2011.

2.9.6.6 Based on the above, the price of domestic coal considered by the Commission is as under:

**Table 2-8: Price of Domestic Coal considered by the Commission**

Details of coal purchased	Unit	For year 2015-16 (computed)	
		Claimed	Admitted
a) Quantum of coal	Tonne	1934699	1934699
b) Price of coal	Rs./Tonne	1408.89	1408.89
c) Transportation cost	Rs./Tonne	1004.81	1000.44
d) Landed price (b + c)	Rs./Tonne	2413.70	2409.33



2.9.6.7 HEL has also procured imported coal through competitive bidding process to meet its balance coal requirement. The Price of Imported Coal submitted by HEL is as under:

**Table 2-9: Price of Imported Coal submitted by HEL**

Details of coal purchased	Unit	For year 2015-16 (computed)
a) Quantum of coal	Tonne	532899
b) Price of coal	Rs./Tonne	3807.26
c) Transportation cost	Rs./Tonne	1049.17
d) Landed price (b + c)	Rs./Tonne	4856.43

2.9.6.8 The Commission observed that HEL has imported coal based on quotes from pre-approved enlisted suppliers on firm price basis. The Commission also noted the tendering was followed on different occasions as and when required basis among pre-approved enlisted suppliers. The Commission thus directed HEL to submit all the invoices regarding the procurement of imported coal. HEL vide letter dated 12.09.2022 has provided the details of the price of imported coal with documentary evidence like invoice of the coal, custom duty invoice, documentary evidence for wharfage, onboard handling, siding and haulage charges etc. From the documentary evidences submitted by HEL the Commission has computed the price of imported coal as Rs. 3785.72/MT. Hence, the Commission admits imported coal price as Rs. 3785.72/MT.

2.9.6.9 HEL vide letter dated 12.09.2022 has also submitted the invoice wise details of coal transportation along with copies of invoices. The transportation charge claimed by HEL includes demurrage charges. However, HEL has not provided any appropriate justification for the same. As such, the Commission has not allowed the demurrage charges (to the tune of Rs. 1.90/MT) in absence of any specific justification of such claim in terms of clause (vi) of Regulation 5.8.1 of the Tariff Regulations, 2011.

2.9.6.10 Based on the above, the price of domestic coal considered by the Commission is as under:

**Table 2-10: Price of Imported Coal considered by the Commission**

Details of coal purchased	Unit	For year 2015-16 (computed)	
		Claimed	Admitted
a) Quantum of coal	Tonne	532899	532899
b) Price of coal	Rs./Tonne	3807.26	3785.72
c) Transportation cost	Rs./Tonne	1049.17	1047.27
d) Landed price (b + c)	Rs./Tonne	4856.43	4832.99





2.9.6.11 Based on the admitted price of Domestic Coal and Imported Coal the landed price of Coal admitted by the Commission for FY 2015-16 is as under:

**Table 2-11: Price of Coal admitted by the Commission**

Details of coal purchased	Unit	Claimed			Admitted		
		Domestic Coal	Imported coal	Total Coal	Domestic Coal	Imported coal	Total Coal
a) Quantum of coal	Tonne	1934699	532899	2467598	1934699	532899	2467598
b) Price of coal	Rs./Tonne	1408.89	3807.26	1926.84	1408.89	3785.72	1922.19
c) Transportation cost	Rs./Tonne	1004.81	1049.17	1014.39	1000.44	1047.27	1010.55
d) Landed price (a + b)	Rs./Tonne	2413.70	4856.43	2941.23	2409.33	4832.99	2932.74

### Heat Value of Coal

2.9.6.12 Considering the coal details submitted by HEL in their FCA application and through subsequent documents, the Commission determines the Useful Heat value (UHV) of coal following the provisions of Regulation 5.8.15 of the Tariff Regulations. However, conversion from GCV to UHV, in terms of Regulation 5.8.15 of the Tariff Regulations is not required for imported coal as such coal contains lesser ash and are of -50 mm in size and is not categorized under different grades of coal of Coal India Limited (CIL). The Useful Heat Value determined considering minimum GCV of respective grade of coal is 2784.04 kCal/kg for FY 2015-16 for coal purchased during the year. The actual Heat Value submitted by HEL is 2940.07 kCal/kg, which is higher than the UHV computed considering the minimum GCV of respective grade of coal. Accordingly, in terms of regulation 5.8.1(i), actual UHV has been considered by the Commission. Detailed computations are shown in Annexure – 2C for the coal purchased during the year.

2.9.6.13 The Commission observed that, HEL has considered the price of coal consumed considering the coal purchased during the year and the opening coal stock available. However, the heat value of coal purchased has only been considered. This has resulted in increase in price of coal per 1000 kCal. The Commission finds it appropriate to compute the heat value of coal duly taking into the impact of coal purchased as well as coal stock. Similarly, the landed price of coal consumed needs to be analyzed based on the admitted coal purchase rates mentioned above and the coal stock position submitted by HEL in notes under Form D3 of its APR petition. Accordingly, the admissible landed price and heat value of coal consumed during FY 2015-16 is computed below:

**Table 2-12: Price and UHV of Coal consumed during FY 2015-16 admitted by the Commission**

Particulars	Legend	Admitted
<b>Stock Quantum (in MT)</b>		
Opening Stock*	A	96921.58
Coal Purchase during the year	B	2467596.92
Coal consumed	C	2346497.10
Closing stock	D=A+B-C	218021.40
<b>Stock price (in Rs. /MT)</b>		
Price of opening stock*	E	3780.80
Price of coal purchased	F	2932.74
Price of coal consumed	$G = ((A * E + B * F) / (A + B))$	2964.79
Price of Closing Stock	$H = ((A * E + B * F) / (A + B))$	2964.79
<b>UHV of Coal (in Kcal/Kg)</b>		
Heat value of opening stock*	I	3070.00
Heat value of coal purchased	J	2940.07
Heat value of coal consumed	$K = ((A * I + B * J) / (A + B))$	2944.98
Heat value of Closing Stock	$L = ((A * I + B * J) / (A + B))$	2944.98

\* The quantum, price and heat value of opening stock has been considered as per the closing stock of 2014-15. As the units operated for only 63 days during 2014-15 the GCV of closing stock is considered equal to the GCV of coal consumed during FY 2014-15.

#### 2.9.7. Admitted Fuel Cost

2.9.7.1 The fuel cost is allowable considering the normative performance parameters. The normative secondary fuel oil consumption for FY 2015-16 is 1 ml/kWh. In addition to the normative secondary fuel oil consumption rate of 1 ml/kWh, additional secondary fuel oil consumption rate of 0.83 ml/kWh is admissible for the stabilisation period as discussed in para 2.6.

2.9.7.2 Thus, the total fuel cost admissible for FY 2015-16 works out to Rs. 88257.57 Lakh against the claimed fuel cost of Rs. 89461.96 Lakh. Detailed Computation of the same is shown in Annexure - 2B.

#### 2.9.8. C<sub>D</sub>: Cost Disallowable

The factor C<sub>D</sub> as referred to in the formula in paragraph B of Schedule 7A of Tariff Regulations, stands for cost as to be found disallowable by the Commission as having been incurred in breach of economic generation or of order/direction of the Commission if any, or for any other reason considered sufficient by the Commission during the adjustment period and adjusted corresponding to actual level of sales. As the unit rates of energy charges from the generating



stations have been worked out based on normative parameters, no further disallowance is required on this account.

### 2.9.9. Gains on account of better performance over operating norms

2.9.9.1 Though, HEL has considered gain due to improved specific oil consumption separately for stabilization period and stabilized period. The Tariff Regulation does not allow gain sharing in such way. As actual specific oil consumption is lower than normative for the whole year gain due to improved specific oil consumption for FY 2015-16 is admissible.

2.9.9.2 As discussed in paragraph 2.7 above, gain due to improved specific oil consumption is as shown in the Table below:

**Table 2-13: Gain due to improved specific oil consumption for FY 2015-16**

Particulars	Unit	2015-16
Specific Consumption of Oil	ml/kWh	1.00
Actual Oil Consumption	ml/kWh	0.65
Category		Category A
Sharing Ratio as per Sl. No. 2 of Category A		65% : 35%
Total Gross Generation	MU	3645.070
Difference in oil consumed	kL	1284.55
Price of Oil	Rs./kL	43368.49
Gain	Rs. Lakh	557.09
Share % of CESC Limited	%	35%
Share of CESC Limited	Rs. Lakh	194.98

2.9.9.3 No gain is admissible for auxiliary consumption for FY 2015 – 16 since the actual auxiliary consumption (9.43%) for the entire year is greater than normative auxiliary consumption (9.00%).

2.9.9.4 Gain due to improved SHR is as shown in the table below:

**Table 2-14: Gain due to improved SHR for FY 2015-16**

Particulars	Unit	FY 2015-16
Ratio of Heat Rate to Design Heat Rate in accordance with Para A3 of Schedule - 9B of the Tariff Regulations ( $SHR_n/D$ )		1.057
Category		Category B
$SHR/SHR_n$		Less than 0.96
Gross Generation	MU	3645.070
Coal cost for sale to the Purchaser (CESC Limited) in accordance with Regulations	Rs. Lakh	86,313.02
Coal cost for sale to the Purchaser considering actual SHR (as per Annexure – 2D)	Rs. Lakh	69592.71



Order on FCA and APR of HEL for FY 2015-16

Particulars	Unit	FY 2015-16
Coal cost difference	Rs. Lakh	16720.31
Applicable criteria in accordance with Para A3 of Schedule - 9B to the Tariff Regulations		5
Share to the Purchaser in accordance with Para A3 of Schedule - 9B to the Tariff Regulations	%	14%
Amount to be passed on to the Purchaser (CESC Limited) in accordance with Para A3 of Schedule - 9B of the Tariff Regulations	Rs. Lakh	2340.84
<b>Overall amount proposed to be passed on to the Purchaser (CESC) in accordance with Para A3 of Schedule - 9B of the Tariff Regulations</b>	<b>Rs. Lakh</b>	<b>2340.84</b>

2.9.9.5 The share of CESC out of total gain on account of improved specific oil consumption and Station Heat Rate is Rs. 2535.82 Lakh (Rs. 194.98 Lakh + Rs. 2340.84 Lakh)

2.9.10. Summing up the findings as explained in the earlier paragraphs, the amount of admissible fuel cost of HEL for FY 2015-16, net of sharing of gains due to improved performance as discussed aforesaid is shown in the table below:

**Table 2-15: Fuel Cost admitted by the Commission after necessary adjustments**

Particulars	Unit	Admitted
Total Admissible Fuel Cost	Rs. Lakh	88257.57
Cost disallowed	Rs. Lakh	-
Less: Sharing of Gains with CESC	Rs. Lakh	2535.82
Fuel Cost admitted	Rs. Lakh	<b>85721.75</b>

2.10. The Commission now views the actual performance with reference to admitted parameters and cost allowed for FY 2015-16 as shown in the Table below:

**Table 2-16: Fuel Cost per unit for FY 2015-16 (Paise/kWh)**

Particulars	Value
Fuel cost per unit as per Tariff Order	262.47
Fuel cost per unit as allowed in FCA	258.43

2.11. HEL has submitted that the Tariff Order of HEL for FY 2015-16 was issued on 29-01-2016 and the recovery of Energy Charge of 262.47 Paise/kWh as approved in the Tariff Order was billed from February 2016. Till January 2016, HEL has recovered from CESC at the rate approved as per MYT order of CESC dated 04-03-2015 at 50% of the infirm power rate i.e., 485 paisa/unit. Thus, Revenue realised by HEL during FY 2015-16 through sale to the purchaser in actual was of Rs. 81360.00 Lakhs.

2.12. Summing up the findings as explained in the earlier paragraphs, the amount of Fuel Cost



Adjustment of HEL generating station for the year 2015-16 is now determined based on the FPPCA formula specified in paragraph B of Schedule -7A of the Tariff Regulations considering admissible fuel cost of HEL for FY 2015-16, net of sharing of gains due to improved performance vis-à-vis the fuel cost recovered during the year is shown in the table below:

**Table 2-17: Fuel Cost Adjustment for 2015-16**

Particulars	Unit	Admitted
Total Admissible Fuel Cost after gain sharing	FC	85721.75
Power Purchase Cost for pumping energy of PSP	PPC	Not applicable
Less: Cost disallowed	C <sub>D</sub>	0.00
Adjustment, if any	A	0.00
Fuel cost recovered through sale to the purchaser	F <sub>c</sub>	81360.00
Power purchase cost allowed in Tariff order for pumping energy		Not applicable
<b>FPPCA</b>	<b>{FC + (PPC -CD) +A} - (Fc + PPC)</b>	<b>4361.75</b>

2.13. The admitted fuel cost has been considered by the Commission while approving the APR of HEL for FY 2015-16 in the next Chapter of the Order.

**COMPUTATION OF ACTUAL STATION HEAT RATE ACHIEVED IN FY 2015-16**

Sl. No.	Particulars	Unit	For whole year
1	Gross Generation (Actual)	MU	3662.360
2	Consumption of Oil (Actual)	KL	2360.52
3	Consumption of Coal (Actual)	MT	23,46,497.59
4	GCV of Oil (Actual)	kcal/lit	9511.70
5	Heat Value of Coal (Actual)	kcal/kg	2944.98
6	Heat from Oil (2X4/1000)	M. kcal	22452.56
7	Heat from Coal (3X5/1000)	M. kcal	6910384.31
8	Total Heat Used (6+7)	M. kcal	6932836.88
9	Station Heat Rate Achieved (8/1)	kcal/kWh	1893.00
10	Normative Station Heat Rate	kcal/kWh	2345.00

**COMPUTATION OF ACTUAL AUXILIARY CONSUMPTION ACHIEVED IN FY 2015-16**

	Actual Gross Generation (MU)	Actual Sent Out Generation (MU)	Auxiliary Consumption (MU)	Actual Auxiliary Consumption	Normative Auxiliary Consumption
For the whole year	3662.360	3317.013	345.347	9.43%	9.00%

**COMPUTATION OF SPECIFIC OIL CONSUMPTION ACHIEVED IN FY 2015-16**

	Actual Sent Out Generation (MU)	Normative Auxiliary Consumption	Admissible Gross Generation (MU)	Actual Oil Consumption (kL) as per auditor's certificate	Specific Oil Consumption (ml/kWh)
Total	3317.013	9.00%	3645.070	2360.52	0.65

**COMPUTATION OF FUEL COST**

Operating Parameters	Legend	Unit	Claimed	Admitted
Sent out Energy – (Scheduled Injection at Haldia Bus)	A	MU	3317.013	3317.013
Normative Auxiliary Consumption	B	%	9.00%	9.00%
Auxiliary Consumption	C	MU	328.057	328.057
Gross Admissible Generation	D	MU	3645.070	3645.070
Heat Rate	E	kCal/kWh	2359	2345.00
Overall Permitted Heat	F=DxE	GCal	8598215	8547689.15
Permitted Normative Oil Consumption rate	H	ml/kWh	1.23	1.00
Permitted Normative Oil Consumption	I=HxD	kL		3645.07
Additional oil consumption rate admitted during the stabilisation period	J	ml/kWh	4483.78	0.83
Additional oil consumption admitted during the stabilisation period (admissible gross generation of 1010.495 MU)	K=Jx1010.49 5 MU	kL		838.71
Total oil consumption	L=I+K	kL	4483.78	4483.78
Heat Value of Oil	M	kCal/L	9472	9511.70
Permitted Heat from Oil	N=LxM	GCal	42462	42648.37
Permitted Heat from Coal	O=F-N	GCal	8555753	8505040.78
Heat Value of Coal	P	kCal/kg	2936	2944.98
Permitted Coal Consumption	Q=O/P	Tonne	2913698	2887979.13
Transit Loss (0.8%)	R	Tonne	23498	23290.15
Permitted Coal Consumption including transit loss	S=Q/(1-R)	Tonne	2937195	2911269.28
Price of Oil	T	Rs./kL	43622	43368.49
Price of Coal	U	Rs./Tonne	2979	2964.79
Cost of Oil	V=L*T/10^5	Rs. Lakh	1955	1944.55
Cost of Coal	W=S*U/10^5	Rs. Lakh	87506	86313.02
<b>Total cost of Fuel</b>	<b>X=V+W</b>	<b>Rs. Lakh</b>	<b>89462</b>	<b>88257.57</b>



**Annexure – 2C**

**COMPUTATION OF COAL BASED ON MINIMUM OF DECLARED HEAT VALUE FOR HEL THERMAL POWER STATION FOR FY 2015-16**

Source	Grade of coal	Quantity	Minimum GCV for the grade	UHV Min	UHV Max	GCV Min	GCV Max	Mean UHV on interpolation and Extrapolation basis
		MT	kcal/kg	kcal/kg	kcal/kg	kcal/kg	kcal/kg	kcal/kg
ECL	G2	1099	6701	6200		6454		6437
ECL	G3	13774	6401	5600	6200	6049	6454	6121
ECL	G4	91433	6101	5600	6200	6049	6454	5677
MCL	G11	51934	4001	2400	3360	3865	4324	2684
MCL	G12	1103944	3701	1300	2400	3113	3865	2160
MCL	G13	672515	3401	1300	2400	3113	3865	1721
IMPORT	IMPORT	532899	4838					4838
<b>Overall</b>		<b>2467598</b>						<b>2784</b>

**Annexure – 2D**

**Computation of Coal cost at actual SHR**

Operating Parameters	Legend	Unit	Admitted
Sent out Energy – (Scheduled Injection at Haldia Bus)	A	MU	3317.013
Normative Auxiliary Consumption	B	%	9.00%
Auxiliary Consumption	C	MU	328.057
Gross Admissible Generation	D	MU	3645.070
Heat Rate	E	kCal/kWh	1893.00
Overall Permitted Heat	F=DxE	GCal	6900117.51
Permitted Normative Oil Consumption rate	H	ml/kWh	1.00
Permitted Normative Oil Consumption	I=HxD	kL	3645.07
Additional oil consumption rate admitted During the stabilisation period	J	ml/kWh	0.83
Additional oil consumption admitted during the stabilisation period (admissible gross generation of 1010.495 MU)	K=Jx1010.495 MU	kL	838.71
Total oil consumption	L=I+K	kL	4483.78
Heat Value of Oil	M	kCal/L	9511.70
Permitted Heat from Oil	N=LxM	GCal	42648.37
Permitted Heat from Coal	O=F-N	GCal	6857469.14





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Operating Parameters	Legend	Unit	Admitted
Heat Value of Coal	P	kCal/kg	2944.98
Permitted Coal Consumption	$Q=O/P$	Tonne	2328528.25
Transit Loss (0.8%)	R	Tonne	18778.45
Permitted Coal Consumption including transit loss	$S=Q/(1-R)$	Tonne	2347306.70
Price of Oil	T	Rs./kL	43368.49
Price of Coal	U	Rs./Tonne	2964.79
Cost of Oil	$V=L*T/10^5$	Rs. Lakh	1944.55
Cost of Coal	$W=S*U/10^5$	Rs. Lakh	69592.71
<b>Total cost of Fuel</b>	<b><math>X=V+W</math></b>	<b>Rs. Lakh</b>	<b>71537.26</b>



### CHAPTER – 3 FIXED COST DETERMINATION UNDER APR

- 3.1. The Commission in its order dated 29.01.2016 had determined the capacity charge for FY 2015-16 as Rs. 76628.00 Lakh considering the 95% of the project cost as claimed by HEL subject to approval of final project cost to be approved by the Commission.
- 3.2. The Commission vide its order dated 20.07.2022 in Case No. OA-270/17-18 approved the final capital cost as under:

*“18.3 The Hard Cost claimed by HEL is inclusive of the additional capitalisation post COD. As the item wise cost has been approved considering the Hard Cost claimed by HEL, the same need to be apportioned as on COD and post COD. HEL in its additional information submitted the Hard Cost as on COD and the year wise additional capitalisation post COD. The Commission has apportioned the approved Hard Cost in the same proportion as submitted by HEL as on COD and post COD as under:*

**Table 30: Hard Cost as on COD and Additional Capitalisation post COD (Rs. Crore)**

Particulars	Claimed	Computed by the Commission
Hard Cost as on COD	3285.7	3145.2
<b>Additional Capitalisation</b>		
FY 2015-16	50.3	48.1
FY 2016-17	37.6	36.0
FY 2017-18	98.8	94.6
FY 2018-19	39.2	37.5
FY 2019-20	0.7	0.7
Balance Additional Capitalisation	13.4	12.8
Total Additional Capitalisation	240.0	229.7
<b>Total Hard Cost</b>	<b>3525.7</b>	<b>3374.9</b>

**18.4 The additional capitalisation post COD as shown in the above Table as computed by the Commission shall not be construed as final approval by the Commission for the additional capitalisation. The year wise additional capitalisation shall be dealt with in the APR Order for the respective year based on the prudence check of the submissions of HEL in its APR Petitions in accordance with the provisions of the Tariff Regulations.”**

*“24.0 The Commission after considering all the facts and the project report submitted by HEL along with the submissions, clarifications and documents in terms of Regulation 2.8.5.1 of the Tariff Regulations approves the final Project Cost of Rs. 3832.6 Crore as per the details given below:*

**Table 35: Capital Cost approved by the Commission (Rs. Crore)**

Particulars	Claimed	Approved
BTG	1687.8	1680.3
BoP	1302.9	1262.3



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<b>Particulars</b>	<b>Claimed</b>	<b>Approved</b>
Railway Infrastructure	154.0	154.0
Intake Water System	71.0	65.3
Other Enabling Works	104.9	53.5
Land and Site Development	70.6	70.6
Consultancy	22.5	21.0
Overheads	112.0	67.9
Contingencies	0.0	0.0
<b>Total Hard Cost</b>	<b>3525.7</b>	<b>3374.9</b>
<b>IDC and FC</b>	<b>541.5</b>	<b>457.7</b>
<b>Total</b>	<b>4067.2</b>	<b>3832.6</b>

25.0 As discussed earlier, the Hard Cost approved by the Commission includes Additional Capitalization of Rs 229.7 Crore post COD of the Project. The additional capitalization post COD considered as part of Capital Cost shall not be construed as final approval by the Commission. The year wise additional capitalization shall be dealt with in the APR Order for the respective year based on the prudence check of the submissions of HEL in its APR Petitions in accordance with the provisions of the Tariff Regulations.”

- 3.3. HEL has claimed the additional capitalisation of Rs. 5034 Lakh for FY 2015-16. The Commission directed HEL to submit the justification for the claimed additional capitalisation along with package wise/head wise break-up.
- 3.4. The item wise break-up of additional capitalisation submitted by HEL is as shown in the Table below:

**Table 3-1: Item wise break-up of additional capitalisation claimed by HEL (Rs. Lakh)**

<b>Particulars</b>	<b>Claimed</b>
Land and Site development	1549
BTG including taxes and duties	1049
Railway	595
Intake water system	206
Other enabling works	1055
Overhead and pre-operative expenses	580
<b>Total</b>	<b>5034</b>

- 3.5. HEL submitted that the year wise and package wise additional capitalisation details have been submitted along with its Petition for approval of final capital cost. HEL submitted that the additional capitalisation after COD and up to cut-off date has been incurred in terms of the Regulation 5.2.1 of the Tariff Regulations. HEL also submitted that the capital expenditure incurred was, inter alia, of the nature of deferred liabilities / works deferred for execution.
- 3.6. Regulation 1.2.1(xxxiii) of the Tariff Regulations define cut-off date as the date of closing of the first financial year after two years from the date of commercial operation of a project. Unit 2 had achieved COD on 21.02.2015 and accordingly, the cut-off date shall be 31.03.2017.



- 3.7. HEL submitted that the total additional capitalisation during FY 2015-16 was Rs. 7814.92 Lakh which includes capitalisation from Capital Works-in-Progress (CWIP) amounting to Rs. 5484.88 Lakh and replacement of HP heater amounting to Rs. 2330.04 Lakh. However, the amount of Rs. 2781.44 Lakh has been deducted on account of impairment of HP heater and accordingly, the net capitalisation during the year has been claimed as Rs. 5034 Lakh.
- 3.8. HEL in its Petition for approval of capital cost, claimed the additional capitalisation of Rs. 50.3 Crore for FY 2015-16. In reply to a query regarding the additional capitalisation claimed, HEL, in the subject Petition, had submitted as under:

*“1. The breakup of capital cost capitalized in the books of account is given below:*

.....

*Note: In the financial year 2015-16, there was an impairment of a HP Heater included under BTG and valued at Rs. 27.81 Crores which has been replaced at a cost of Rs. 23.3 Crores.”*

- 3.9. Taking into consideration the above submission, the Commission had approved the additional capitalisation of Rs. 48.10 Crore as against the claim of Rs. 50.34 Crore for FY 2015-16.
- 3.10. The Commission, after prudence check of the details submitted by HEL, finds that as FY 2015-16 is prior period to the cut-off date, the additional capitalisation is allowable in terms of the Regulation 5.2.1 of the Tariff Regulations. The Commission finds that the additional capitalisation claimed by HEL for FY 2015-16 is of the nature of deferred works and deferred liabilities and hence allowable. However, as the Commission had approved the total Capital Cost on lower side in comparison to that claimed by HEL, the Commission approves the additional capitalisation of Rs. 4810.00 Lakh as worked out in the approval of capital cost, reproduced above.
- 3.11. Based on the above, the capital cost considered for FY 2015-16 is as shown in the Table below:

**Table 3-2: Capital cost for FY 2015-16 (Rs. Lakh)**

Particulars	Claimed	Admitted
Opening capital cost	382734.80	360284.94
Additional capitalisation	5033.48	4810.00
Closing capital cost	387768.28	365094.94

- 3.12. The Paragraph 3.4 of the Schedule 1 of the Tariff Regulations define capacity charges as Annual Revenue Requirement (ARR) minus the fuel cost. The Commission, in Chapter 2, has dealt with the fuel cost for FY 2015-16. In this Chapter, the Commission deals with the components of ARR, other than fuel cost, claimed by HEL as detailed hereunder.



3.13. HEL has claimed the following components of ARR other than the fuel cost:

- 1) Operation and Maintenance (O&M) expenses
- 3) Insurance premium
- 4) Employee cost
- 5) Coal and Ash handling expenses
- 6) Corporate Social Responsibility (CSR) expenses
- 8) Water Cess
- 9) Interest expenses
- 10) Other finance charges
- 11) Depreciation
- 12) Tax
- 13) Return on Equity
- 14) Incentives
- 15) Special allocation
- 16) Income other than sale of energy
- 17) Interest credit on depreciation
- 18) Capacity Charge adjustment linked to Plant Availability Factor (PAF)

**O&M expenses**

3.14. The O&M expenses viz., repairs and maintenance expenses including cost of consumables, legal and professional charges, audit fees, administrative and general expenses are categorised as controllable items in terms of the Tariff Regulations.

3.15. The Commission vide order dated 20.01.2016 in Case No OA-121/11-12 has approved the normative O&M expenses of Rs. 7.47 Lakh/MW for FY 2015-16 which works out to Rs. 4482.00 Lakh for 600 MW.

**Table 3-3: O&M Expense Normative**

Particulars	Normative O&M Expense (Rs. Lakh/MW)	Capacity (MW)	No of Days in Operation (Days)	Normative O&M Expense (Rs. Lakh)
Unit 1	7.47	300	366	2241.00
Unit 2	7.47	300	366	2241.00
<b>Total</b>				<b>4482.00</b>

3.16. HEL in its petition has claimed Rs. 3460.3 Lakh as Repair & Maintenance Expenses (including consumables and differential O&M Expense), Rs. 38.6 Lakh as legal charges, Rs. 5.6 Lakh as Auditor's fees and Rs. 977.6 Lakh as other Administrative & General Charges in its Form E(B). While scrutinising the petition it is observed that R&M expense including consumption of stores and spares comes to Rs. 3274.3 Lakh. It is also observed that, Rs. 37.80 Lakh related to other bank charges and Rs. 119.50 Lakh for L/C opening charges are claimed separately under Finance Charge, which being routine expenses in nature should come under administrative and



general expenses. On the contrary HEL has claimed an amount of Rs. 186.00 Lakh as differential O&M expenses. Also, it is observed that, HEL has claimed Rs. 212.43 Lakh Expense under the head of Coal and ash handling expense which have been elaborated in para 3.22 in FY 2015-16 which are O&M in nature. In view of above, the Commission recompute the actual O&M expenses based on the submission of the petitioner as below:

**Table 3-4: Actual O&M Expense for FY 2015-16 (Rs. Lakh)**

Sl. No.	Particulars	Actual O&M Expense (Rs. Lakh)
1.	R&M including Consumables	3274.30
2.	R&M Expense related Coal and Ash handling	212.43
3.	Legal Charges	38.60
4.	Auditor Fees	5.60
5.	Other Administrative and General Charges	977.60
6.	Other Bank Charges	37.80
7.	LC Opening Charges	119.50
	<b>Total</b>	<b>4665.83</b>

- 3.17. The actual O&M expenses are higher than the normative expenses and hence in accordance with Regulation 2.5.5, the Commission admits the normative O&M expenses of Rs. 4482 Lakh for FY 2015-16.

**Table 3-5: O&M expenses for FY 2015-16 (Rs. Lakh)**

Particulars	Claimed	Actual	Admitted
O&M expenses	4482.00	4665.83	4482.00

### Insurance premium

- 3.18. HEL has claimed the insurance premium of Rs. 527.60 Lakh for FY 2015-16. The Commission observed that, as per the audited accounts, the total insurance premium for FY 2015-16 is Rs. 608.40 Lakh out of which the amount of Rs. 527.60 Lakh pertains to generation business and the amount of Rs. 80.80 Lakh pertains to evacuation system. The Commission directed HEL to substantiate that the insurance policy was availed after following the transparent process in terms of regulation 5.23.1 of the Tariff Regulation and submit copies of tender documents, quotations received, etc. In response HEL submitted insurance details, property benchmarking and quotes received from vendors, but did not submit the tender documents. From the submitted documents, it is observed that HEL has selected the least quoted insurer for comprehensive mega risk policy. However, the Commission observed that in addition to 'All Risks & Machinery Breakdown', the insurance premium also covers Business interruption in terms of Gross profit & increased cost of working due to reduction in its turnover following loss covered under Machinery Breakdown. The Commission is of considered opinion that insurance covering the loss of profit of the company shall not be passed on to the consumer through tariff.



Thus, premium paid proportionate to sum insured Business Interruption is not admitted. Accordingly, the Commission admits Rs. 438.63 Lakh as insurance premium of HEL Generating station as below:

Table 3-6: Insurance premium for FY 2015-16 (Rs. Lakh)

Particulars	Claimed	Admitted
Insurance premium (Comprehensive Mega risk policy)	476.05	476.05
Less: proportionate premium for business interruption		88.93
Other small insurance coverages	51.51	51.51
Net Insurance premium	527.56	438.63

### Rates and Taxes (other than income tax)

- 3.19. HEL has claimed the amount of Rs. 58.30 Lakh towards rates and taxes for payment made on account of municipal/ panchayat tax, land revenue, way leave license, license fees for railway corridor etc. The actual expenditure on this account has been admitted by the Commission, after prudence check.

Table 3-7: Rates and taxes for FY 2015-16 (Rs. Lakh)

Particulars	Claimed	Admitted
Rates and Taxes	58.30	58.30

### Statutory charges

- 3.20. HEL has claimed an amount of Rs. 28.40 Lakh towards statutory charges in terms of regulation 5.14.1 of the Tariff Regulations for payments made under various statute of Government as well as regulatory authority. The actual expenditure on this account has been admitted by the Commission, after prudence check.

Table 3-8: Statutory charges for FY 2015-16 (Rs. Lakh)

Particulars	Claimed	Admitted
Statutory charges	28.40	28.40

### Employee cost

- 3.21. Employee cost include mainly salary and wages, expenditure on account of terminal benefits to the employees and welfare expenses. HEL has claimed the employee cost of Rs. 4469.30 Lakh. From the submissions of HEL, the Commission's findings are as follows:

- a) The maximum ceiling man/MW requirement approved by the Commission vide its Order dated 20.01.2016 in Case No. OA-121/11-12 is 1.3 thereby the maximum ceiling of



- employees corresponding to 600 MW works out to seven hundred and eighty (780).
- b) The actual number of employees is seven hundred and thirty-four (734) comprising of own employees of two hundred and sixteen (216) and contract employees of five hundred and eighteen (518) as per auditor's certificate. Similarly, Actual Employee Expense due to Own Employee is 2576.00 Lakh and due to Contract Employee is 1738.80 Lakh totalling to Rs. 4314.80 Lakh.
- c) However, HEL has considered the number of employees as seven hundred and eighty (780) comprising of own employees of two hundred and sixteen (216) and contract employees of five hundred and sixty-four (564). Accordingly, it claimed Total Employee expense of Rs. 4469.30 Lakh (Own Employee expense Rs. 2576 Lakh and contract employee expense 1893.30 Lakh)
- d) The Commission finds that HEL has claimed increased number of contract employees to match the number of employees corresponding to approved man/MW ratio of 1.3.
- e) As the man/MW requirement of 1.3 is maximum ceiling, the Commission does not find the approach adopted for increasing the number of contract employees and consequent increase in employee cost to be prudent. Hence, the Commission considers the number of employees and employee cost as per auditor's certificate.
- f) Accordingly, the Commission admits the employee cost of Rs. 4314.80 Lakh for FY 2015-16.

**Table 3-9: Employee cost for FY 2015-16 (Rs. Lakh)**

Particulars	Claimed	Admitted
Own Employees	2576.00	2576.00
Contractual Employees	1893.30	1738.80
Employee cost	4469.30	4314.80

### **Coal and Ash handling expenses**

- 3.22. HEL has claimed the amount of Rs. 885.00 Lakh towards coal and ash handling expenses which have also been booked in the annual accounts for FY 2015-16. HEL has submitted the item wise break-up of coal and ash handling expenses claimed. HEL vide letter dated 12.09.2022 has also submitted the supporting documents to substantiate the claimed expenses. The Commission has noted the submission and after prudence check admits Rs.672.52 Lakh towards Coal and ash handling expense. The Commission notes of the remaining expenses claimed under the coal and ash handling expense amounting to Rs. 212.43 Lakh comes under O&M expenses. Hence, the Commission disallows the said amount from the total coal and ash handling expense claimed by





HEL and included in the actual O&M Expenses.

**Table 3-10: Coal and ash handling expenses for FY 2015-16 (Rs. Lakh)**

Particulars	Claimed	Admitted
Coal and ash handling expenses	885.00	672.52

#### Corporate Social Responsibility (CSR) expenses

3.23. HEL has claimed the amount of Rs. 85.50 Lakh towards CSR expenses. The same has not been allowed since the same is an allocation of profit and a statutory obligation. The Commission takes a serious note regarding the said claim of CSR expenses in APR when such Expenditure shall have to be met from the profits of the company. The Commission cautions the petitioner that claiming of CSR expenses in Tariff/APR shall attract penal action in the forthcoming filings.

**Table 3-11: CSR expenses for FY 2015-16 (Rs. Lakh)**

Particulars	Claimed	Admitted
CSR expenses	85.50	0.00

#### Water Cess

3.24. HEL has claimed the amount of Rs. 63.20 Lakh towards water cess. The actual expenditure on this account as per Auditor's certificate has been admitted by the Commission.

**Table 3-12: Water Cess for FY 2015-16 (Rs. Lakh)**

Particulars	Claimed	Admitted
Water Cess	63.20	63.20

#### Depreciation

3.25. HEL has claimed the amount of Rs. 13724.40 Lakh towards depreciation. The claimed depreciation has been computed as per Schedule A in Annexure A of the Tariff Regulations. The Commission decides to go by the amounts of depreciation as claimed after incorporating appropriate reduction on account of reduced project cost. Accordingly, the actual depreciation has been admitted in proportion to the approved average capital cost to the claimed average GFA.

**Table 3-13: Depreciation for FY 2015-16 (Rs. Lakh)**

Particulars	Claimed	Admitted
Opening capital cost	382734.80	360284.94
Closing capital cost	387768.28	365094.94
Depreciation	13724.40	12920.69

**Return on Equity (RoE)**

- 3.26. HEL has claimed the amount of Rs. 15846.00 Lakh towards RoE.
- 3.27. The closing equity approved by the Commission for FY 2014-15 was Rs. 102683.00 Lakh. HEL has considered the opening equity for FY 2015-16 as Rs. 102231.60 Lakh which is different from the closing equity for FY 2014-15. The Commission observed that the difference is on account of adjustment towards replacement of HP heater {Rs. (-) 451.40 Lakh} within the original scope of work. The adjustment towards replacement of HP heater has already been addressed in the Commission's Order on approval of final project cost. Hence, the proposed reduction in equity is considered. As the opening equity base Rs. 102231.60 Lakh is less than 30% of the approved capital cost the Commission has considered the same.
- 3.28. The Commission observes that the entire claimed additional capitalisation for FY 2015-16 has been effectively funded by 100% loan, HEL has not proposed any equity addition during the year. Therefore, the Commission has not considered any equity addition during FY 2015-16. The Commission has admitted the closing equity for FY 2015-16 as Rs. 102231.60 Lakh, the same as claimed by HEL. RoE has been allowed at the rate of 15.50% in accordance with the Regulations.

**Table 3-14: RoE for FY 2015-16 (Rs. Lakh)**

Particulars	Claimed	Admitted
Opening equity	102232.00	102231.60
Net GFA addition	5030.00	4810.00
Equity addition	0.00	0.00
Closing equity	102232.00	102231.60
Rate of RoE	15.50%	15.50%
<b>RoE</b>	<b>15846.00</b>	<b>15845.90</b>

**Interest expenses**

- 3.29. HEL has claimed the amount of Rs. 35099.50 Lakh towards interest expenses. These include (i) interest on capital expenditure loan, (ii) interest on working capital and (iii) interest on temporary accommodation. Each of the above items have been discussed in detail hereunder.

**Table 3-15: Interest expenses claimed by HEL (Rs. Lakh)**

Particulars	Claimed
Interest on capital expenditure loan	31898.70
Interest on working capital	1750.40
Interest on temporary accommodation	1450.40
<b>Total</b>	<b>35099.50</b>

**Interest on capital expenditure loan**

- 3.30. HEL has claimed the amount of Rs. 31898.70 Lakh towards interest on capital expenditure loan. HEL has submitted the computations in the prescribed Form C of Annexure-I of APR



Petition. HEL has also furnished an auditor's certificate for interest cost.

- 3.31. The closing loan balance admitted in the APR of FY 2014-15 has been considered as the opening loan balance for FY 2015-16. The debt portion of the approved additional capitalisation during the year has been considered as the loan addition during the year as there is no equity infusion for funding the additional capitalisation during FY 2015-16. HEL has claimed it has converted Rs. 47639.70 Lakh of Buyer's credit and repaid loans worth Rs. 5986.40 Lakh during FY 2015-16. Hence, net repayment during the year has been Rs. 5986.40 Lakh. The capital cost approved by the Commission is on the lower side in comparison to the capital cost claimed by HEL. Hence, the actual repayment of loan has been considered in proportion to the approved opening loan balance and that claimed by HEL. Based on the above, the actual interest has been admitted on proportionate basis of approved average loan balance to the claimed average loan balance.

**Table 3-16: Interest on capital expenditure loan for FY 2015-16 (Rs. Lakh)**

Particulars	Claimed	Admitted
Opening balance	258976.4	255749.31
Addition	92700.3	4810.00
Repayment	53626.1 (including 47639.7 of Buyers Credit and Rs 5986.40 as loan repayment)	5911.80
Closing balance	298050.5	254647.51
<b>Net interest on capital expenditure loan</b>	<b>31898.7</b>	<b>29228.38</b>

***Interest on working capital***

- 3.32. HEL has claimed the amount of Rs. 1750.40 Lakh towards interest on working capital on normative working capital base. Regulation 5.6.5 of the Tariff Regulations specify the principles for determination of interest on working capital. The interest on working capital has been computed in accordance with the same.
- 3.33. The interest on working capital on normative basis considering short term PLR of SBI as on rate of 01.04.2014 comes to Rs. 1924.88 Lakh as detailed below. The actual interest of working capital during FY 2015-16 is Rs. 2106.10 lakh submitted in Form C of the APR petition. Therefore, in accordance with 5.6.5.2 of the Tariff Regulations, as the normative interest on working capital is lower than the actual interest, the normative interest has been admitted.

**Table 3-17: Computation of interest on working capital for FY 2015-16 (Rs. Lakh)**

Sl. No.	Particulars	Admitted
A	Gross Sales excluding Incentive	159266.88
B1	Less: Depreciation including Advance Depreciation	12920.69
B2	Less: Deferred Revenue Expenditure	0.00



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Sl. No.	Particulars	Admitted
B3	Less: Return on Equity	15845.90
B4	Less: Reserve for unforeseen exigencies	0.00
B	Total Deductions (sum B1:B4)	28766.59
C	Allowable Gross Sales for Working Capital (A-B)	130500.29
D	Allowable Working Capital @ 10% on C	13050.03
E	Interest Rate (SBI short term PLR as on 01.04.2015)	14.75%
F	Interest on Working Capital (E % on D)	1924.88
G	Actual interest paid	2106.10
H	<b>Interest on working capital allowable (Lower of F &amp; G)</b>	<b>1924.88</b>

**Interest on temporary accommodation**

3.34. HEL has claimed the amount of Rs. 1450.4 Lakh towards interest on temporary accommodation. In Form 1.17(a) HEL has submitted the detailed loan balance and interest on temporary accommodation for the year as follows:

3.35. According to Regulation 5.6.5.4 of Tariff Regulation, The Commission may allow Interest on Temporary Accommodation if taken by Generation Company in actual from any source to a reasonable extent. HEL has submitted its claim related to Interest on temporary accommodation in Form 1.17 (a) of the APR Petition for the amounts of interest actually incurred. As per information submitted to the Commission in Form C it is observed that HEL has not availed of any temporary accommodation during FY 2015-16. Hence, the Commission does not admit any amount under interest on Temporary accommodation.

**Table 3-18: Interest on temporary accommodation for FY 2015-16 (Rs. Lakh)**

Particulars	Claimed	Actual as per Form C	Admitted
Interest on temporary accommodation	1450.40	0.00	0.00

3.36. Based on the above, the total interest charges for FY 2015-16 are as under:

**Table 3-19: Interest charges for FY 2015-16 (Rs. Lakh)**

Particulars	Claimed	Admitted
Interest on capital expenditure loan	31898.70	29228.38
Interest on working capital	1750.40	1936.00
Interest on temporary accommodation	1450.40	0.00
<b>Total</b>	<b>35099.50</b>	<b>31164.38</b>

**Other Finance charges**

3.37. HEL has claimed the amount of Rs. 271.40 Lakh towards finance charges. These include (i) guarantee commission, (ii) front end fees, (iii) other bank charges and (iii) LC opening charges. Each of the above items have been discussed in detail hereunder.

**Guarantee commission**

- 3.38. HEL has claimed the amount of Rs. 1.20 Lakh towards guarantee commission. The approved loan balances being lower than the claimed loan balance, the Commission admits the guarantee commission in proportion to the approved average loan balance and the claimed average loan balance. Accordingly, the Commission admits the guarantee commission of Rs. 1.10 Lakh.

**Front end fees**

- 3.39. HEL has claimed the amount of Rs. 112.90 Lakh towards front end fees. The approved loan drawal (Rs. 4810.00 Lakh) being lower than the claimed loan drawal (Rs. 92700.29 Lakh) for the year, the Commission admits the front end fees in proportion to the admitted loan drawal for the year. Accordingly, the Commission admits the front end fees of Rs. 5.86 Lakh.

Particulars	Claimed	Admitted
Loan Drawal	92700.29	4810
<b>Front End Fees</b>	<b>112.90</b>	<b>5.86</b>

**Other bank charges**

- 3.40. HEL has claimed the amount of Rs. 37.80 Lakh towards other bank charges. The Commission noted that details of bank charges for routine cash management services are part of routine A&G expense as furnished in Format 1.17 (c). The Commission has accordingly considered other bank charges under O&M Expense.

**Letter of Credit (LC) opening charges**

- 3.41. HEL has claimed the amount of Rs. 119.50 Lakh towards LC opening charges. The Commission noted that LC opening charges are the charges incurred for issue and/or renewal of letters of credit for procurement of goods and services. Thus, it is part of routine A&G expense as furnished in Format 1.17 (c). The Commission has accordingly considered other bank charges under O&M Expense.

- 3.42. Based on the above, the other finance charges for FY 2015-16 are as shown in the Table below:

**Table 3-20: Other finance charges for FY 2015-16 (Rs. Lakh)**

Particulars	Claimed	Admitted
Guarantee commission	1.20	1.10
Front-end Fees	112.90	5.86
Other Bank Charges	37.80	-
LC opening Charges	119.50	-
<b>Total</b>	<b>271.40</b>	<b>6.96</b>

**Interest credit on depreciation**

- 3.43. HEL has claimed the amount of Rs. 818.70 Lakh towards interest credit on depreciation.



3.44. In terms of Tariff Regulations, depreciation is primarily used for repayment of capital expenditure loan. Where the depreciation falls short of the actual repayment, such shortfall is allowed under Advance Against Depreciation (AAD). Similarly, when the actual loan repayment in a year is lower than the allowed depreciation, an interest credit at the rate of weighted average cost of debt for the corresponding year needs to be adjusted on such excess depreciation charged. Further, in terms of the Tariff Regulations, it is required to be ensured that the depreciation allowed should not go beyond 90% of the original project cost and after repayment of the entire loan the resulting depreciable amount shall be spread over the balance useful life of the fixed asset.

3.45. Accordingly, the Commission decides to compute the interest credit for FY 2015-16 considering the cumulative amount of depreciation and AAD allowed in previous APR orders. Accordingly, the interest credit on depreciation computed by the Commission for FY 2015-16 is as under:

**Table 3-21: Interest credit on depreciation computed by the Commission for FY 2015-16 (Rs. Lakh)**

Particulars	Units	Amount
Admissible Opening Debt	Rs Lakh	255749.31
Repayment of Admissible Debt in FY 2015-16	Rs Lakh	5911.80
1/10th of Original Debt Amount	Rs Lakh	25574.93
Maximum Repayment Admissible for FY 2015-16	Rs Lakh	5911.80
Depreciation Allowed for FY 2015-16	Rs Lakh	12920.69
Excess of Depreciation and AAD over repayment upto 31.03.2015 (as per HEL Generation APR order for FY 2014-15)	Rs Lakh	28.11
AAD for FY 2015-16	Rs Lakh	0
Excess of Depreciation over repayment upto 2015-16	Rs Lakh	7037.00
Weighted Average Cost of Debt	%	11.45%
Interest Credit for FY 2015-16	Rs Lakh	805.74

3.46. Based on the above, the interest credit on depreciation for FY 2015-16 is as shown in the Table below:

**Table 3-22: Interest credit on depreciation for FY 2015-16 (Rs. Lakh)**

Particulars	Claimed	Admitted
Interest credit on depreciation or FY 2015-16	818.70	805.96

#### Income Tax

3.47. HEL has claimed the amount of Rs. 5469.40 Lakh towards income tax. HEL has submitted the income tax assessment order for FY 2015-16. The Commission, after prudence check of the same, admits the tax as claimed by HEL.



**Table 3-23: Income Tax for FY 2015-16 (Rs. Lakh)**

Particulars	Claimed	Admitted
Income Tax	5469.40	5469.40

**Incentives**

3.48. HEL has claimed the amount of Rs. 2887.40 Lakh towards performance incentives. These include (i) incentive for less oil consumption rate, (ii) incentive for better SHR, (iii) incentive for early completion. Each of the above items have been discussed in detail hereunder.

***Incentive for less oil consumption rate***

3.49. HEL has claimed the amount of Rs. 125.20 Lakh towards incentive for less oil consumption rate. Though, HEL has considered incentive due to improved specific oil consumption separately for stabilization period and stabilized period. The Tariff Regulation does not allow incentive in such way. Though actual specific oil consumption is lower than normative for the whole year gain due to improved specific oil consumption for FY 2015-16 is admissible. However, difference of Normative Oil Consumption Rate and Actual Oil Consumption Rate is 0.35 ml/kWh. As per Paragraph 3 of Schedule 10, no incentive is applicable for difference of normative oil consumption and actual oil consumption for less than 0.5 ml/kWh. Hence, no incentive is allowable.

***Incentive for better SHR***

3.50. HEL has claimed the amount of Rs. 91.60 Lakh towards incentive for better SHR. The Commission finds the same to be in accordance with the Paragraph 4 of Schedule 10 Tariff Regulations and hence admits the same.

**Table 3-24: : Incentive for better SHR for FY 2015-16 (Rs. Lakh)**

Particulars	Unit	Value
Actual Station Heat Rate (SHR)	kcal/kWh	1893
Design Heat Rate (DSHR)	kcal/kWh	2219
SHR/(DSHR)		0.9
Rate of Incentive	Paise/Unit	0.25
Admissible gross Generation	MU	3645.070
Incentive on Better Gross Station Heat Rate	Rs. Lakhs	91.13

***Incentive for early commissioning***

3.51. HEL has claimed the amount of Rs. 2670.6 Lakh towards incentive for early commissioning. HEL submitted that it had achieved COD within the construction period specified in the Tariff Regulations and accordingly claimed the incentive. The actual project completion period of 40



months is lower than the normative construction period of 48 months specified in the Tariff Regulations.

3.52. Para 10 of the Schedule 10 of WBERC Tariff Regulations, 2011 states the following:

*“If the actual COD with full load operation and all load bearing equipment’s is **achieved earlier than both the COD as stipulated in the agreement and in Schedule–9C**, 75% of the saved interest during construction shall be allowed as incentive in such number of monthly installments over first four year of operation of the generating station as may be stipulated by the Commission in the tariff order”.*

3.53. While HEL had achieved COD before the specified time in the Tariff Regulations, but there is a delay of 4 months w.r.t. the scheduled COD as per the BTG contract. Hence, on account of non-fulfilment of dual conditions stipulated in Paragraph 10 of Schedule 10 of the Tariff Regulations, the incentive for early commissioning has not been approved by the Commission.

3.54. Based on the above, the incentives for FY 2015-16 is as shown in the Table below:

**Table 3-25: Incentives for FY 2015-16 (Rs. Lakh)**

Particulars	Claimed	Admitted
Incentive for less oil consumption rate	125.20	0.00
Incentive for better SHR	91.60	91.13
Incentive for early commissioning	2670.60	0.00
<b>Total</b>	<b>2887.40</b>	<b>91.13</b>

**15) Special allocation**

3.55. HEL has claimed the amount of Rs. 956.80 Lakh towards special allocation under appropriation to reserve for unforeseen Exigencies.

3.56. Regulation 5.11.1 of the Tariff Regulations specify that the generating company may provide and maintain a reserve for dealing with unforeseen exigencies up to 0.25% of the value of gross fixed assets at the beginning of the year annually and the provision made for the year will be allowed in their Aggregate Revenue Requirement subject to an overall ceiling of 5% of the value of gross fixed assets at the beginning of the year. The existing amount of contingency reserve in the books of accounts of the generating station, if any, will have to be considered while arriving at the overall ceiling as stated herein. Regulation 5.24.1 of the Tariff Regulations specify that the sum apportioned to the reserve for unforeseen exigencies shall have to be invested separately prudently. Further, Regulation 5.24.2 of the Tariff Regulations specify that the interest accrued from such investment shall be reinvested under the same reserve / fund.

3.57. The Commission notes that HEL has not been allowed any such special allocation under





appropriation to Reserve for unforeseen Exigencies in the Tariff Order, neither HEL has submitted any document showing investment towards reserve for unforeseen exigencies in terms of Regulation 5.11. In the absence of any documentary evidence, the Commission does not admit the same.

**Table 3-26: Special allocation for FY 2015-16 (Rs. Lakh)**

Particulars	Claimed	Admitted
Special allocation	956.80	0.00

**Income other than sale of energy**

- 3.58. HEL has claimed the amount of Rs. 86.20 Lakh towards income other than sale of energy. However, Note 2.19 of the Annual Report of HEL shows Rs. 1103.19 lakh as 'Other Income' consisting of Rs. 109.14 Lakh towards 'Interest Income from Bank', Rs. 572.86 Lakh towards 'Gain on sale of investments (net)', Rs. 334.98 Lakh towards 'Dividend Income' and Rs. 86.21 Lakh towards 'Other non-operating income'.
- 3.59. In its additional submission dated 30.01.2024, HEL inter-alia submitted that, except Rs. 86.20 lakh shown under the head of 'other income' all incomes are made out of retained earnings. However, from the submissions made under specific heads of other income, it is observed that, such incomes are generated out of investment of cash / fund available with the Company in the ordinary course of business.
- 3.60. The Commission observed that in terms of the Tariff Regulation, income from investments and bank balances is to be considered under 'Other Income' wherein income from all investments is required to be considered except those made out of profit and / or any equity issue exclusively meant for non-core business excluding embedded generation of licensee. From the submission dated 30.01.2024, the Commission observed that HEL could not explicitly establish that income made from the 'Income from Banks' and 'Gain on sale of current investments (net)' and 'Dividend Income' has been made from investments made out of profits. HEL has affirmed in such submission that the incomes arose due to the term deposits/ investments of mutual fund made out of cash/ funds available with the Company in the ordinary course of business. Therefore, the Commission finds it reasonable to consider these as other incomes in terms of clause 6.1 of Schedule 1 of the Tariff Regulations. As no amount was adjusted in the APR of the evacuation system of HEL, the Commission considers Rs. 1103.19 Lakh as Income other than sale of energy as per audited accounts in its generation function.

**Table 3-27: Other income for FY 2015-16 (Rs. Lakh)**

Particulars	Claimed	Admitted
Other income	86.20	1103.19



**Total Fixed Charge**

3.61. On the basis of above analysis, the total Fixed Charge of HEL for FY 2015-16 comes to Rs. 73636.26 Lakh. The element wise fixed cost for HEL as discussed in para 3.1 to 3.60 is given in Annexure 3A.

**Admissibility of capacity charges based on Availability**

3.62. In terms of Regulation 6.4.2 of the Tariff Regulation, the recovery of capacity charges for generating station of HEL shall be against the normative availability. Schedule 9A of the Tariff Regulations specify the target Plant Availability Factor (PAF) for coal fired thermal generating stations.

3.63. **PAF Achieved:** From the submissions of HEL, it has been observed that the actual PAF achieved during FY 2015-16 was 88.41% which is higher than the norm of 85%. This has been validated from the certificates provided by SLDC.

3.64. **Admissible Capacity Charge:** In terms of Regulation 6.4.2 of the Tariff Regulations, the capacity charge of generating stations is determined. As HEL has submitted the availability parameters of the Generating station at Form 1.1 as well as availability declarations certified by the SLDC and submitted by HEL in the petition are above the normative availability of HEL, the Commission decides to allow the total capacity charge of Rs. 75111.49 Lakh.

**Table 3-28: Admissible Capacity Charge of HEL for FY 2015-16**

Particular	Value
Admitted Fixed Charge (AFC) (In Rs. Lakh) (as per Annexure 3A)	73636.26
Less: Incentive (In Rs. Lakh) (From Table 3-25: Incentives for FY 2015-16 (Rs. Lakh))	91.13
Admitted Fixed Charge (AFC) excluding incentive (In Rs. Lakh)	73545.13
Normative PAF (PAFN)	85%
Actual PAF (PAFA)	88.41%
Admissible Capacity Charge (AFC x (0.5 + 0.5 x PAFA / PAFN) (In Rs. Lakh)	75020.36
Add: Incentive	91.13
Total admissible Capacity Charge	75111.49

**Fixed Charges admitted by the Commission for FY 2015-16 (Rs. Lakh)**

Sl. No.	Particulars	Admitted
1	O&M Expenses	4482.00
2	Rates and Taxes	58.30
3	Insurance Charges	438.63
4	Employee Cost	4314.80
5	Coal and Ash Handling	672.52
6	Water Cess	63.20
7	Statutory Charges	28.40
8	Depreciation	12920.69
9	Return on Equity	15845.90
10	Interest on Capital Expenditure, Loans and Public Deposits	29228.38
11	Interest on Working Capital	1924.88
12	Interest on Temporary Accommodation	0.00
13	Other Finance Charges	6.96
14	Income Tax	5469.40
15	Incentives	91.13
16	Special Allocation	0.00
17	<b>Sub - Total Fixed Cost</b>	<b>75545.19</b>
18	Less: Income other than sale of Energy (Non tariff Income)	1103.19
19	Less: Interest Credit on Depreciation	805.74
20	<b>Total Fixed Cost</b>	<b>73636.26</b>



## CHAPTER – 4 AMOUNT ADJUSTABLE ON APR

- 4.1. Based on the forgoing analysis and admissions of the adjustments under different uncontrollable factors / elements of fixed charges and fuel cost, the re-determined admitted fixed charges as well as fuel cost of HEL during FY 2015-16 is as under:

**Table 4-1: Admitted Net ARR for FY 2015-16 (Rs. Lakh)**

Sl. No.	Particulars	Amount
1	Admitted Fuel Cost (From Para 2.9.10)	88257.57
2	Admitted capacity charge (From Para 3.64)	75111.49
3	Less: Sharing of gain with CESC Limited (From Para 2.9.10)	2535.82
4	<b>Admitted Net ARR for recovery (1+2-3)</b>	<b>160833.24</b>

- 4.2. The total revenue for HEL from operations for FY 2015-16 as per the audited accounts is Rs. 170400.9 Lakh which includes the revenue of Rs. 161372.10 Lakh and Rs. 9028.8 Lakh for Generation and transmission businesses respectively. The total Revenue for Generation Business includes revenues from energy charges and capacity charges of Rs. 81360.00 Lakh and Rs. 80012.10 Lakh respectively.
- 4.3. In view of the admitted net ARR in Table 4-1 above, HEL has to refund an amount of Rs. 538.86 Lakh as under:

**Table 4-2: Amount adjustable on APR for FY 2015-16 (Rs. Lakh)**

Sl. No.	Particulars	Total
1	Total recoverable	160833.24
2	Amount recovered	161372.10
3	Balance refundable / (adjustable) amount (2-1)	538.86

- 4.4. The FCA and APR of HEL for FY 2015-16 has now been finalised and total balance refundable works out to Rs. 538.86 Lakh. In terms of the Tariff Regulations, this amount shall be adjusted with the amount of aggregate revenue requirement for subsequent period or through a separate Order as may be decided by the Commission.
- 4.5. HEL is to take note of this order.
- 4.6. The Petition is thus disposed of.
- 4.7. A copy of the order shall be posted in the website of the Commission.



Order on FCA and APR of HEL for FY 2015-16

- 4.8. HEL shall download the copy of the order from website of the Commission and act on it. Certified copy of the order, if applied for, be given to the parties on completion of formalities laid down in the West Bengal Electricity Regulatory Commission (Conduct of Business) Regulations, 2013 as amended and on submission of necessary fees.

Sd/-

(PULAK KUMAR TEWARI)  
MEMBER

Sd/-

(MALLELA VENKATESWARA RAO)  
CHAIRPERSON

Dated: 22.02.2024

Sd/-  
(SECRETARY)