



**ORDER**

**OF THE**

**WEST BENGAL ELECTRICITY REGULATORY COMMISSION**

**FOR THE YEAR 2008-09, 2009-10 & 2010-11**

**IN**

**CASE NO: TP – 42 / 09 – 10**

**CASE NO: TP – 45 / 09 – 10**

**CASE NO: TP – 46 / 09 – 10**

**IN RE THE TARIFF APPLICATION OF THE WEST BENGAL POWER DEVELOPMENT CORPORATION LIMITED FOR DETERMINATION OF TARIFF FOR ITS GREENFIELD THERMAL POWER STATION AT SAGARDIGHI AND EXTENSION UNITS AT BAKRESWAR AND SANTALDIH THERMAL POWER STATIONS FOR THE SECOND CONTROL PERIOD COVERING FINANCIAL YEARS 2008-2009, 2009-10 AND 2010-11 UNDER SECTION 64(3)(a) READ WITH SECTION 62(1) OF THE ELECTRICITY ACT, 2003**

**DATE: 30.12.2011**



## **CHAPTER - 1 INTRODUCTION**

- 1.1 The West Bengal Power Development Corporation Limited (hereinafter referred to as “WBPDCCL”) was entrusted by the Government of West Bengal to set up and operate the following greenfield / extension of Thermal Power Units within the 10<sup>th</sup> Five Year Plan period for the augmentation of the generation capacity in the State.
- (a) Greenfield Thermal Power Generating Station at Sagardighi, Dist. Murshidabad, West Bengal – 2 Units of 300 MW each.
- (b) Santaldih Thermal Power Station – 1 Unit (No. V) of 250 MW capacity as addition to the existing 4 Units of 120 MW each.
- (c) Bakreswar Thermal Power Station – 2 Units (Nos. IV & V) of 210 MW capacity each as addition to the existing 3 Units of 210 MW each.
- 1.2 On completion of the construction of the above referred greenfield / extension units and completion of the normative periods of the trial run, the dates for commercial operation of the referred units had been reported as under:

<b>Generating Station</b>	<b>Name of the Unit</b>	<b>Date of Commercial Operation</b>
Sagardighi	Unit No. I (300 MW)	07.09.2008
	Unit No. II (300 MW)	06.11.2008
Santaldih	Unit No. V (250 MW)	01.04.2009
Bakreswar	Unit No. IV (210 MW)	06.03.2009
	Unit No. V (210 MW)	27.06.2009

- 1.3 Accordingly, WBPDCCL made applications to the West Bengal Electricity Regulatory Commission (hereinafter referred to as the “Commission”) for the determination of tariff (generation charges and capacity charges) for the supply of electricity made / to be made separately from the referred greenfield generating



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station / extension units during the three financial years under second control period ending on 31<sup>st</sup> March, 2011 under the Multi Years Tariff (in short “MYT”) approach.

1.4 On preliminary examination of the referred applications of WBPDCCL, it was found that certain additional information / clarifications in regard to the capital costs of the projects’ execution as well as to the charges recoverable through the tariff revenue would be needed for processing the same. After a series of correspondence in this regard, such information / clarifications were finally received from WBPDCCL. After due consideration of the facts and figures brought out by WBPDCCL, the Commission finally admitted the applications of WBPDCCL and numbered those as under:

- i) Case No. TP – 42 / 09 – 10 – for Sagardighi Thermal Power Station.
- ii) Case No. TP – 45 / 09 – 10 – for the extension unit (No. V) at Santaldih Thermal Power Station.
- iii) Case No. TP – 46 / 09 – 10 – for the extension Units (Nos. IV & V) at Bakreswar Thermal Power Station.

1.5 On admission of the referred applications, and in terms of the provisions of the regulation 2.7.14 of the West Bengal Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2007, as amended (hereinafter referred to as the “Tariff Regulations”) WBPDCCL was asked to publish the gist of its tariff proposals inviting suggestions, objections and comments, if any. It was also directed to post the concerned applications in its website [www.wbpdcl.co.in](http://www.wbpdcl.co.in) before the publication of the gist. WBPDCCL was further advised to allow all the interested parties, stakeholders and the members of the public to inspect the referred applications at its office at Vidyut Unnayan Bhawan, 3/C, LA Block, Bidhannagar, Kolkata 700 098. Accordingly, WBPDCCL published the gist of its tariff proposals as



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approved by the Commission, through the Economic Times, Ganashakti, Ajkal and Sanmarg. The dates of such publication, dates upto which inspection of application were kept open and the dates by which the comments etc. were to be received by the office of the Commission were as under:

<b>Generating Station</b>	<b>Date of Publication</b>	<b>Last date of inspection</b>	<b>Last date of submission of comments</b>
Sagardighi	08.05.2010	04.06.2010	11.06.2010
Santaldih	18.06.2010	05.07.2010	09.07.2010
Bakreswar	18.06.2010	05.07.2010	09.07.2010

- 1.6 No comments, objections or suggestions on the referred proposals were, however, received by the Commission.
- 1.7 The Commission, therefore, proceeded for determination of energy charges and capacity charges separately for the newly commissioned units in the concerned three generating stations, i.e., Sagardighi (Units I & II), Santaldih (Unit V) and Bakreswar (Units IV & V) of WBPDCL for their period of commercial operation for the three financial years (2008-09, 2009-10 and 2010-11) falling within the second control period ending on 31<sup>st</sup> March, 2011. The determination of the amounts of capacity charges, with reference to the declared dates of starting commercial operations, will, however, be for the fraction of the financial years in which such operation started. The different elements of the total capacity charges are related to the capital costs of the fixed assets constructed / acquired and put to operation in the respective generating stations as well as the sources of financing such capital costs. The issues relating to the capital cost and sources thereon are being taken up first in the next chapter.



## CHAPTER - 2 DETERMINATION OF CAPITAL COSTS

2.1 Consideration of the capital cost of the first two units of 300 MW each of Sagardighi Thermal Power Project as well as the extension units of 250 MW at Santaldih and of 300 MW at Bakreswar Thermal Power Stations for determining the tariff (energy charges and capacity charges) is being taken up in this chapter. The techno-economic clearances of the referred generating station / extension units were awarded with the estimated completion costs as under:

Rs. in Lakh

Sl. No.	Particulars	Sagardighi (300x2) MW	Santaldih (250x1) MW	Bakreswar (210x2) MW
1	Land	6000.00	100.00	100.00
2	Supply items	123187.00	71803.00	109340.00
3	Project Management Service	2858.00	0.00	0.00
4	Civil Works	44467.00	26288.00	35712.00
5	Erection, Testing, Trial run & Commissioning	13424.00	8800.00	12185.00
6	Port clearance, Transportation, Insurance, etc.	1835.00	1993.00	1698.00
7	Taxes & Duties	33000.00	15200.00	14000.00
8	Railway Infrastructure	5000.00	1150.00	0.00
9	Transmission system	20800.00	5100.00	0.00
10	Contingency & Share of Common Expenses	2100.00	1000.00	22279.00
11	Other Overhead	3000.00	2200.00	5700.00
12	Total [excluding Interest During Construction (IDC)]	255671.00	133634.00	201014.00
13	IDC*	19300.00	8900.00	8920.00
14	<b>Total Estimated Completion Cost</b>	<b>274971.00</b>	<b>142534.00</b>	<b>209934.00</b>

\*Interest During Construction (IDC) is to be as per actual but not exceeding the amount as considered above.

2.2 The zero dates, i.e., the dates for starting construction of the projects were considered the dates of issuing the Letters of Award (LOA) of the main plant packages. Such zero dates, construction period and the projected dates of



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Commercial Operation (COD) of different units as were considered while awarding techno-economic clearances are shown as under:

Project / Unit	Unit No	Zero Date	Targeted Completion Time	Projected COD
Sagardighi	I	27.07.2004	33 months	27.04.2007
	II	27.07.2004	36 months	27.07.2007
Santaldih	V	27.07.2004	33 months	27.04.2007
Bakreswar	IV	30.11.2004	32 months	30.07.2007
	V	30.11.2004	35 months	30.10.2007

If the projected dates of starting commercial operation of different units are read with the reported actual dates of starting such operation, as shown in paragraph 1.2 in the Chapter - 1, it will transpire that considerable time over-run had been there in putting those in commercial operation.

- 2.3 The audited accounts of WBPDCCL could not be finalized by the date of its submission of the referred application for determination of tariff. Its applications were based on the amounts of capital costs certified by a private consultant M/s KPMG Advisory Services Private Limited. Subsequently, on making the copies of audited accounts available to the Commission, considerable deviations between the total amount of capital cost certified by the aforesaid consultant and that as revealed from audited accounts were noted. Certain capital construction works were going on during the commercial operation period and as such, the completion cost of the projects could not be finally determined and construction accounts closed. In addition to that, it is found that the capital expenditures incurred / to be incurred on certain components of the projects are to serve common benefits for future expansion units. Allocation of such common expenses on some reasonable basis between the present units under consideration and future units is also found necessary. Additional information / clarifications in all these regard were obtained from WBPDCCL, vide its submissions under the references as mentioned below:



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- (i) WBPDCCL/WBERC-14/10/CS-93 dated 28.09.2010
- (ii) WBPDCCL/WBERC-14/10/CS-99 dated 06.10.2010
- (iii) WBPDCCL/WBERC-14/10/CS-104 dated 12.10.2010

2.4 After careful consideration of the facts and figures submitted by WBPDCCL through its original submission and the additional information / clarifications provided through the letters referred above, the Commission decides to go by the Audited Accounts as on 31<sup>st</sup> March, 2009 and making adjustments thereon as are considered necessary for arriving at the estimated capital cost for the purpose of determining the tariff presently. The capital costs of different projects so considered are at Annexure – 2A – 1 to 3. The clarification and reasoning for making necessary adjustments to the audited amounts of capital costs are being given hereunder for different projects. It is, however, to be stated that the estimated capital costs being worked out presently are provisional and subject to finalization on closing of supply / works contracts and submission of necessary particulars by WBPDCCL.

**2.4.1 Revised Capital Cost Estimate of Sagardighi Thermal Power Station:**

- i) WBPDCCL has submitted that unit wise segregation of cost is not available as the construction of the project is made on turnkey basis and there are certain expenditures towards common facilities applicable for both the units I & II.
- ii) As it comes out from Annexure – 2A-1, the total amount of capital expenditure as on 31.03.2009 is stated as Rs. 251746 lakh before considering the amount of charges towards interest during construction. However, it includes adjustment of the actual fuel cost incurred during pre-commercial run period and the deductible amount of sale proceeds of infirm



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power. Interest during construction as on 31.03.2009 amounted to Rs. 31570 lakh. Pre-commissioning expenses towards fuel cost for generation of infirm power is stated to be Rs. 16640 lakh and sales revenue billed for infirm power at an ad-hoc price as determined by the Commission as on 31.03.2009 was Rs. 6442 lakh. The said amount of Rs. 16640 lakh after adjustment of Rs. 6442 lakh is already considered to arrive at actual capital expenditure as on 31.03.2009 amounting to Rs. 251746 lakh mentioned above. The cost to be incurred for carrying out residual capital works mainly towards railway infrastructure had been estimated to be Rs. 5456 lakh. Taking into account other above referred adjustments, the revised cost estimate (RCE) as on 31.03.2009 came as under:

	<b>Rs. in lakh</b>
Actual capital expenditure as on 31.03.2009	251746
Add:	
a) IDC	31570
b) Estimated cost of Residual Project Works	5456
<b>Revised Cost Estimate (RCE) as on 31.03.2009</b>	<b>288772</b>

- iii) The amount of Revised Cost Estimate (RCE) as shown above includes an amount of Rs. 6595 lakh towards cost of mandatory spares. Rs. 6281 lakh out of this amount pertains to supply of Main Plant Package, Coal Handling Plant and Water Plant. The balance amount of Rs. 314 lakh pertains to associated transmission system of the project. Cost of mandatory spares included in the cost of different supply packages and the percentages of the cost of such spares are found as under:





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Rs. in lakh

Sl. No.	Supply Package	Cost excluding spares	Cost of Mandatory Spares	Total Package Cost	Percentage of (4) on (3)
1	2	3	4	5	6
1	Main Plant	104276	5398	109674	5.18
2	Coal Handling Plant	5657	747	6404	13.20
3	Water System	3532	136	3668	3.85
	<b>Total</b>	<b>113465</b>	<b>6281</b>	<b>119746</b>	<b>5.54</b>

- iv) As the cost of mandatory spares as a percentage of the cost of supply package (net of the cost of such spares) appeared to be on the higher side, a clarification in this regard was asked for. In reply, WBPDCCL put forward that the major portion of the equipments were procured from China. To be on the safer side and to ensure the availability of supply in time, following the lengthy process of import, the maintenance of inventory of spares as per the exhaustive list of the supplier was considered necessary. This is specially so when there is no other generating unit with 300 MW capacity available with WBPDCCL.
- v) The reasons advanced by WBPDCCL appeared to be justified. Moreover, it is found that the cost of inventory of spares to be capitalized did not exceed normative 2.5% of the capital cost including IDC incurred upto 31.3.2009, vide regulation 4.1(vi)(a) of the Tariff Regulations, 2007.
- vi) The revised cost estimate of Rs. 288772 lakh included an amount of Rs. 33105 lakh towards erection, testing, trial run and commissioning of the system and the amount appears to be on the higher side in comparison to the similar type of Greenfield power station at Yamunanagar (2x300 MW). The Commission considers to disallow an amount of Rs. 524 lakh in this regard in comparison with the same of the other comparable power stations



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in India. Such disallowances are subject to review on closing of the supply / works contracts and submission of required particulars.

- vii) Railway infrastructure, transmission facilities and the ash pond constructed in the project are to serve common purposes of the presently commissioned two units and the similar units to come up in future. A part of expenditure incurred on such common facilities requires to be transferred to the accounts of future units. Considering the information provided in the submission of WBPDCCL, the Commission considers to reallocate such costs to future units as under:

	<b>Rs. in lakh</b>
Railway infrastructure	927
Ash Pond	1000
Transmission System	4964
<b>Total</b>	<b>6891</b>

- viii) The Commission also considers to disallow a proportionate amount of Rs. 67 lakh (out of the amount of IDC of Rs. 31570 lakh) on account of the amount disallowed towards excess expenditures in regard to erection, testing, trial run and commissioning of the generating system. Allocation of this disallowed amount of IDC to different cost components comes as follows:

	<b>Rs. in lakh</b>
Main Plant Package	63
Coal Handling Plant	2
Plant Water System	2
<b>Total</b>	<b>67</b>

- ix) It is already mentioned in the paragraph 2.4.1(i) that above mentioned capital expenditure as on 31.03.2009 included adjustment of the actual fuel cost amounting to Rs. 16640 lakh incurred during pre-commercial run period



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after deducting the amount of sales proceeds of infirm power at an adhoc price amounting to Rs. 6442 lakh as determined by the Commission in subsequent chapter. The Commission in its order dated 25<sup>th</sup> November, 2009 in case no. FPPCA-35/09-10 in the matter of the application submitted by WBPDCCL for adhoc increase of fuel cost inbuilt in the existing tariff for the year 2009 – 2010 has decided that the cost of fuel incurred during the pre-commercial operation period of the referred new units and income to be derived by the sale of infirm power during that period requires to be adjusted in the capital construction cost and not to be charged in revenue accounts. Accordingly, this amount of Rs. 10198 lakh (Rs. 16640 lakh – Rs. 6442 lakh) remains included in the project cost and not being recoverable separately.

- x) The estimated capital cost after adjustment comes to Rs. 281290 lakh including capital cost of transmission. The component wise break up of the cost are given below:

	<b>Rs. in lakh</b>
(a) Main Plant Package	212232
(b) Coal Handling Plant	21109
(c) Water System	8760
(d) Railway Infrastructure	3710
(e) Ash Pond	1000
(f) Land	4800
(g) Others including net fuel cost during Infirm period, civil works	9825
<b>Sub-Total [(a) to (g)]</b>	<b>261436</b>
(h) Transmission	19854
<b>Total</b>	<b>281290</b>



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xi) In terms of regulation 2.8.5 of the Tariff Regulations, 2007, as amended, the project cost requires to be finally got approved after closure of all contracts making detailed submissions following the procedure laid down therein. Part of the capital construction works are still in progress and supply / work contracts are yet to be closed. The Commission, therefore, decides to reduce the amount of adjusted estimated capital cost of Rs. 281290 lakh by 5% towards cushion for final settlement of accounts with the suppliers and contractors for imposition of L.D. clause / penalty for non-performances, if any. The total of such reduction comes to Rs. 14065 lakh. The capital cost including transmission projects is, thus, presently being considered as Rs. 267225 lakh for the purpose of determining tariff for three years i.e. 2008-2009, 2009 – 2010 and 2010 – 2011 under second control period. The project cost for transmission project is Rs. 18861 lakh.

xii) **Sources of Financing:**

As it comes out from the audited accounts, a total amount of Rs. 82500 lakh had been provided by the Government of West Bengal and drawn by WBPDCCL upto 31<sup>st</sup> March, 2009. The balance amount of the provisional capital cost shown above, i.e., Rs. 184725 lakh, is being considered financed through capital borrowing. The debt – equity ratio on the basis of actual drawal of equity is thus coming presently to 69.13:30.87.

**2.4.2 Revised Capital Cost Estimate of the Extension Unit at Santaldih Thermal Power Station:**

i) As it comes out from the submission made by WBPDCCL at annexure 2A – 2, the total amount of capital expenditure incurred for setting up the referred extension unit (No. V) at Santaldih Thermal Power Station came to Rs. 135510 lakh as on 31.03.2009 before considering chargeable



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Interest During Construction (IDC) on borrowed capital amounting to Rs. 20682 lakh. However, the above Rs. 135510 lakh includes the adjustment of the actual fuel cost incurred during pre-commercial run period amounting to Rs. 11903 lakh and the deductible amount of sale proceeds of infirm power amounting Rs. 1626 lakh. The cost to be incurred for carrying out the residual capital works had been estimated to Rs. 4141 lakh. The revised cost estimate, after carrying out the aforesaid adjustments, thus, comes as under as on 31.03.2009.

	<b>Rs. in lakh</b>
Actual capital expenditure as on 31.03.2009	135510
Add:	
a) IDC	20682
b) Estimated cost of Residual Project Works	4141
<b>Revised Cost Estimate (RCE) as on 31.03.2009</b>	<b>160333</b>

- ii) The amount of Revised Cost Estimate (RCE), as shown above, includes an amount of Rs. 7482 lakh towards cost of mandatory spares. Such costs included in the cost of different supply packages and the percentages of such cost are found as under:

<b>Rs. in lakh</b>					
<b>Sl. No.</b>	<b>Supply Package</b>	<b>Cost excluding spares</b>	<b>Cost of Mandatory Spares</b>	<b>Total Package Cost</b>	<b>Percentage of (4) on (3)</b>
<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>
1	Main Plant	53304	6708	60012	12.58
2	Coal Handling Plant	5600	704	6304	12.57
3	Water System	5209	70	5279	1.34
	<b>Total</b>	<b>64113</b>	<b>7482</b>	<b>71595</b>	<b>11.67</b>

- iii) As the cost of mandatory spares as a percentage of the cost of supply package (net of the cost of such spares) appeared to be on the higher



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side, a clarification in this regard was sought for. In reply, WBPDCL put forward that it installed one 250 MW unit for the first time and, as such, possibility of the inter-plant transfer of such spares in case of need was not there. Moreover, works for setting up another unit (No. VI) of identical capacity have been taken up and no provision for mandatory spares has been kept therein. Inventory of spares for the Vth unit will take care of the need of VIth unit also. In view of reasons so put forward, the Commission decides to transfer the 50% of the cost of such mandatory spares to VIth Unit, i.e., Rs. 3741 lakh from the present RCE. After such transfer of this amount from the amount of revised cost estimate, the percentage of the cost of mandatory spares will remain within the limit of 2.5% of the capital construction cost as specified in regulation 4.1(vi)(a) of the Tariff Regulations.

- iv) The revised cost estimate of Rs. 160333 lakh included an amount of Rs. 14829 lakh towards erection, testing, trial run and commissioning of the referred extension unit and the amount appears to be on the higher side in comparison to the similar type of power station (for extension unit) at Rayalseema, Amarkantak and Suratgarh. The Commission considers to disallow an amount of Rs. 4226 lakh in this regard in comparison of cost of similar power projects in India. Such disallowance is subject to review on closing of the supply / works contracts and submission of required particulars.
- v) Coal handling plant, plant water system, transmission system and the mandatory spares procured along with the supply packages, as mentioned in sub-paragraph (ii) above, are to serve common purposes of the presently commissioned one unit and the similar one unit with same capacity under construction. As per the submission made by WBPDCL, 50% of the amounts of revised estimate on these accounts are being



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considered for transferring to the accounts of unit to be commissioned in future. Total amount of such transfer of cost comes to Rs. 21516 lakh with break-up as under:

	<b>Rs. in lakh</b>
Coal Handling Plant	8687
Plant Water System	5888
Inventory of Mandatory Spares	3741
Transmission System	3200
<b>Total</b>	<b>21516</b>

- vi) The Commission also considers to deduct a proportionate amount of Rs. 645 lakh (out of the amount of IDC of Rs. 20682 lakh) on account of the amount disallowed towards excess expenditures in regard to erection, testing, trial run and commissioning of the newly installed generating system. The allocation of this disallowed amount of IDC to different cost components comes as follows:

	<b>Rs. in lakh</b>
Main Plant Package	460
Coal Handling Plant	96
Plant Water System	89
<b>Total</b>	<b>645</b>

- vii) It is already mentioned in the paragraph 2.4.2(i) that above mentioned capital expenditure as on 31.03.2009 included adjustment of the actual fuel cost amounting to Rs. 11903 lakh incurred during pre-commercial run period after deducting the amount of sales proceeds of infirm power billed at an adhoc price amounting to Rs. 1626 lakh as determined by the Commission. The said amount of Rs. 10277 lakh (Rs. 11903 lakh – Rs. 1626 lakh) remain included in the project cost and not being recoverable separately as explained in paragraph 2.4.1(ix) above. .



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- viii) The estimated capital cost after adjustment thus comes to Rs. 133946 lakh including capital cost of transmission. The component wise break-up of the capital cost are given below:

	<b>Rs. in lakh</b>
(a) Main Plant Package	113394
(b) Coal Handling Plant	8239
(c) Plant Water System	5764
(d) Railway Infrastructure	1141
(e) Land	121
(f) Others including net fuel cost during Infirmary period, civil works	2087
<b>Sub-Total [(a) to (f)]</b>	<b>130746</b>
(g) Transmission	3200
<b>Total</b>	<b>133946</b>

- ix) As reasoned in case of Sagardighi Thermal Power Station [vide paragraph 2.4.1(x)] above, the Commission decides in case of newly installed Vth generating unit at Santaldih Thermal Power Station also to deduct 5% of the adjusted revised capital cost subject to review on final closure of the supply / works contracts and submission of the required particulars. After such deductions, the capital cost including transmission project is, thus, presently being considered as Rs. 127249 lakh for the purpose of determination of tariff in this order. The present cost for transmission project is Rs. 3040 lakh.

- x) **Sources of Financing:**

A total amount of Rs. 42900 lakh had been provided by the Government of West Bengal and drawn by WBPDCCL upto 31<sup>st</sup> March, 2009. The balance amount of the provisional capital cost shown above, i.e., Rs. 84349 lakh, is considered to be the borrowed capital. The debt equity





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ratio on the basis of actual drawal of equity is thus coming presently to 66.29:33.71.

**2.4.3 Revised Capital Cost Estimate of the Extension Unit at Bakreswar Thermal Power Station:**

- i) Two additional generating units of 210 MW each (Units No. IV & V) were set up at Bakreswar Thermal Power Station which was earlier having 3 units of identical capacity. WBPDCCL has submitted that unit wise segregation of cost is not available as the construction of the project is made on turnkey basis and there are certain expenditures towards common facilities applicable for both the units IV & V. As per submission made by WBPDCCL at Annexure – 2A-3, the actual capital expenditure incurred for setting up these two new units came to Rs. 207291 lakh excluding chargeable Interest During Construction (IDC) on borrowed capital. However, it includes the adjustment of the actual fuel cost amounting to Rs. 13767 lakh incurred during pre-commercial run period and the deductible amount of sale proceeds of infirm power amounting to Rs. 5558 lakh. The cost to be incurred for carrying out the residual capital works had been estimated to Rs. 1727 lakh. The revised capital cost estimate, after carrying out the aforesaid adjustments, thus, comes as under as on 31.03.2009.

	<b>Rs. in lakh</b>
Actual capital expenditure as on 31.03.2009	207291
Add:	
a) IDC	22671
b) Estimated cost of Residual Project Works	1727
<b>Revised Cost Estimate (RCE) as on 31.03.2009</b>	<b>231689</b>



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- ii) The amount of Revised Cost Estimate (RCE), as shown above, includes an amount of Rs. 8953 lakh towards cost of mandatory spares which required to be procured for capitalization along with the cost of supply of items of capital equipments. The costs of such mandatory spares procured along with the supply package of main plant was shown Rs. 4373 lakh and that for coal handling plant was Rs. 474 lakh. In addition to these, the total cost of spares procured against supplies received for other works had been stated to be Rs. 4106 lakh which appears to be very much on the higher side. No reasons justifying such procurement had been advanced except stating that it was as per contract. Regulation 4.1(vi)(a) of the Tariff Regulations, 2007 provides for allowing capitalization of initial spares upto 2.5% of the capital cost of coal based generating station. The revised cost estimate of the referred two extension units had provisionally been shown as Rs. 231689 lakh of which 2.5% comes to Rs. 5792 lakh. Restricting the capitalization of initial spares to this extent, the Commission decides to disallow Rs. 3161 lakh presently subject to finalization and approval of the project cost on closing of supply / works contract and submission of required information under the provisions of regulation 2.8.5 of the Tariff Regulations, 2007. The amount so disallowed will be against other works.
- iii) The provisional revised cost estimate of Rs. 231689 lakh also included a total amount of Rs. 15988 lakh towards erection, testing, trial run and commissioning of the generating system which appears to be on the higher side. Proper justifications for such high cost of erection services etc. were not provided. The Commission decides to disallow an amount of Rs. 5988 lakh presently in comparison to that of Rayalseema (Extension) 2 x 210 MW power station being similar projects in India, subject to



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review at the time of approval of the completion cost of the project under the provisions of regulation 2.8.5 of the Tariff Regulations.

- iv) Infrastructure built for coal handling plant, plant water system, and also for railway infrastructure had provisions for providing services to another unit of 210 MW capacity (Proposed VIth unit). On due consideration of the information provided by WBPDCCL, the Commission considers to allocate 40% of the amounts of estimated railway infrastructure as well as of coal handling plant to proposed VIth unit. Such allocation in case of plant water system has been considered 55%. The amounts so allocated and considered for transfer to proposed VIth unit come as under:

**Rs. in lakh**

<b>Particulars</b>	<b>Total cost (net of adjustments)</b>	<b>Amount considered for transfer</b>
Coal Handling Plant	16158	6463 (40%)
Plant Water System	4104	2257 (55%)
Railway Infrastructure	1300	520 (40%)

- v) The Commission also considers to deduct a proportionate amount of Rs. 912 lakh (out of the amount of IDC of Rs. 22671 lakh) on account of the amounts disallowed towards excess expenditures in regard to erection, testing, trial run and commission of the newly installed generating system. The allocation of this disallowed amount of IDC is Rs. 420 lakh to main plant package and the balance Rs. 492 lakh to coal handling plant.
- vi) It is already mentioned in the paragraph 2.4.3(i) that above mentioned capital expenditure of Rs. 207291 lakh included adjustment of the actual fuel cost amounting to Rs. 13767 lakh incurred during pre-commercial run period after deducting the amount of sales proceeds of infirm power billed



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at an adhoc price amounting to Rs. 5558 lakh as determined by the Commission. The said amount of Rs. 8209 lakh (Rs. 13767 lakh – Rs. 5558 lakh) remains included in the project cost and not being recoverable separately as explained earlier in paragraph 2.4.1(ix).

- vii) The estimated capital cost after adjustment thus comes to Rs. 212388 lakh. The component wise break-up of the capital cost is given below:

	<b>Rs. in lakh</b>
a) Main Plant Package	178682
b) Coal Handling Plant	9203
c) Plant Water System	1847
d) Railway Infrastructure	780
e) Land	828
f) Others including net fuel cost during Infirm period and civil works	21048
<b>Total</b>	<b>212388</b>

- viii) In terms of regulation 2.8.5 of the Tariff Regulations, the project cost requires to be finally got approved after closure of all contracts making detailed submissions following the procedure laid down therein. Part of the capital works are still in progress and supply / work contracts are yet to be closed. The Commission, therefore, decides to reduce the amount of adjusted estimated capital cost by 5% towards cushion for final settlement of accounts with the suppliers and contractors towards imposition of L.D. clause / penalty for non-performances, if any. The capital cost of the project is, thus, presently being considered as Rs. 201769 lakh for the purpose of determining tariff for three years i.e. 2008-2009, 2009 – 2010 and 2010 – 2011 under second control period.



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ix) **Sources of Financing:**

As it comes out from the submission, a total amount of Rs. 63000 lakh had been provided by the Government of West Bengal and drawn by WBPDCCL upto 31<sup>st</sup> March, 2009. The balance amount of the provisional capital cost shown above, i.e., Rs. 138769 lakh, is being considered to be the borrowed capital. The debt equity ratio on the basis of actual drawal of equity is thus coming presently to 68.78:31.22.

Name of the Project: Sagardighi Thermal Power Station (Unit 1 & 2)  
 Installed Capacity:(2x300) 600 MW  
 Date of Commercial Operation (COD): Unit-1 on 07.09.2008 and Unit-2 on 06.11.2008

(Rs. in lakh)

Particulars	Main Plant Package	Coal Handling Plant	Plant Water System	Railway Infrastructure	Ash Pond	Others including Civil Works and Land	Total Project Cost (Excluding Transmission)	Transmission	Total Project Cost (Including Transmission)
Land						4800	4800		4800
Supply Items	109674	6404	3668				119746		119746
Project Management Services	4353	170	36				4559		4559
Civil Works	25802	8968	2489		2000	7541	46800		46800
Erection Services, Testing, Trial run and Commissioning of the system	11568	249	507				12324	20781	33105
Port clearance, Inland transportation, loading and unloading, Insurance charges etc.	22792						22792		22792
Taxes and Duties	3656	1895	654				6205		6205
Overhead	10646	736	660			804	12846	893	13739
<b>Actual Capital Expenditure as on 31.03.2009 excluding Interest During Construction</b>	<b>188491</b>	<b>18422</b>	<b>8014</b>	<b>0</b>	<b>2000</b>	<b>13145</b>	<b>230072</b>	<b>21674</b>	<b>251746</b>
Interest During Construction	24296	2700	769			661	28426	3144	31570
<b>Actual Capital Expenditure as on 31.03.2009 including Interest During Construction</b>	<b>212787</b>	<b>21122</b>	<b>8783</b>	<b>0</b>	<b>2000</b>	<b>13806</b>	<b>258498</b>	<b>24818</b>	<b>283316</b>
Estimated Cost of Residual Project Work				4637		819	5456		5456
<b>Revised Cost Estimate as on 31.03.2009 (RCE)</b>	<b>212787</b>	<b>21122</b>	<b>8783</b>	<b>4637</b>	<b>2000</b>	<b>14625</b>	<b>263954</b>	<b>24818</b>	<b>288772</b>

## Tariff Order of WBPDC for new units for the second control period covering 08-09, 09-10 10-11

Particulars	Main Plant Package	Coal Handling Plant	Plant Water System	Railway Infrastructure	Ash Pond	Others including Civil Works and Land	Total Project Cost (Excluding Transmission)	Transmission	Total Project Cost (Including Transmission)
<b>Disallowances:</b>									
Disallowed expenses on account of excess erection, testing and commissioning component	492	11	21	0	0	0	524		524
<b>Revised Cost Estimate as on 31.03.2009 (RCE) after disallowances</b>	<b>212295</b>	<b>21111</b>	<b>8762</b>	<b>4637</b>	<b>2000</b>	<b>14625</b>	<b>263430</b>	<b>24818</b>	<b>288248</b>
<b>Costs transferred to the common beneficiary Units:</b>									
Transmission System	0	0	0	0	0	0	0	4964	4964
Plant Water System	0	0	0	0	0	0	0	0	0
Railway Infrastructure	0	0	0	927	0	0	927	0	927
Ash Pond	0	0	0	0	1000	0	1000	0	1000
Others	0	0	0	0	0	0	0	0	0
<b>Total Costs transferred to the common beneficiary Units:</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>927</b>	<b>1000</b>	<b>0</b>	<b>1927</b>	<b>4964</b>	<b>6891</b>
Existing Units	0	0	0	0	0	0	0	0	0
Future Units	0	0	0	927	1000	0	1927	4964	6891
<b>Revised Cost Estimate as on 31.03.2009 (RCE) after disallowances and allocations to other Units</b>	<b>212295</b>	<b>21111</b>	<b>8762</b>	<b>3710</b>	<b>1000</b>	<b>14625</b>	<b>261503</b>	<b>19854</b>	<b>281357</b>
On account of IDC on disallowed Cost	63	2	2		0	0	67	0	67
<b>Revised Cost Estimate as on 31.03.2009 (RCE) after recoverable Infirm Cost to be billed separately</b>	<b>212232</b>	<b>21109</b>	<b>8760</b>	<b>3710</b>	<b>1000</b>	<b>14625</b>	<b>261436</b>	<b>19854</b>	<b>281290</b>
<b>Adjustments if any made by the commission</b>									
On account of Contract Closing	10612	1055	438	186	50	731	13072	993	14065
Total Adjustments if any made by the commission	10612	1055	438	186	50	731	13072	993	14065
<b>Project cost as approved by the Commission</b>	<b>201620</b>	<b>20054</b>	<b>8322</b>	<b>3524</b>	<b>950</b>	<b>13894</b>	<b>248364</b>	<b>18861</b>	<b>267225</b>

## Tariff Order of WBPDC for new units for the second control period covering 08-09, 09-10 10-11

Name of the Project: Santaldih Thermal Power Station (Unit # 5)

Installed Capacity:(1x250) 250 MW

Date of Commercial Operation (COD): on 01.04.2009

(Rs. in lakh)

Particulars	Main Plant Package	Coal Handling Plant	Plant Water System	Railway Infrastructure	Others including Civil Works and Land	Total Project Cost (Excluding Transmission)	Transmission	Total Project Cost (Including Transmission)
Land					121	121		121
Supply Items	60012	6304	5279			71595		71595
Project Management Services	2636	154	305			3095		3095
Civil Works	19547	4246	2219			26012		26012
Erection Services, Testing, Trial run and Commissioning of the system	6937	1445	1334		9	9725	5104	14829
Port clearance, Inland transportation, loading and unloading, Insurance charges etc.						0		0
Taxes and Duties	6742	1475	716			8933		8933
Overhead	8416	1196	865			10477	448	10925
<b>Actual Capital Expenditure as on 31.03.2009 excluding Interest During Construction</b>	<b>104290</b>	<b>14820</b>	<b>10718</b>	<b>0</b>	<b>130</b>	<b>129958</b>	<b>5552</b>	<b>135510</b>
Interest During Construction	15932	2264	1638			19834	848	20682
<b>Actual Capital Expenditure as on 31.03.2009 including Interest During Construction</b>	<b>120222</b>	<b>17084</b>	<b>12356</b>	<b>0</b>	<b>130</b>	<b>149792</b>	<b>6400</b>	<b>156192</b>
Estimated Cost of Residual Project Work		918		1141	2082	4141		4141
<b>Revised Cost Estimate as on 31.03.2009 (RCE)</b>	<b>120222</b>	<b>18002</b>	<b>12356</b>	<b>1141</b>	<b>2212</b>	<b>153933</b>	<b>6400</b>	<b>160333</b>
<b>Disallowances:</b>								
Disallowed expenses on account of excess erection, testing and commissioning component	3014	628	580	0	4	4226		4226
Total Disallowances	3014	628	580	0	4	4226	0	4226



## Tariff Order of WBPDCCL for new units for the second control period covering 08-09, 09-10 10-11

Particulars	Main Plant Package	Coal Handling Plant	Plant Water System	Railway Infrastructure	Others including Civil Works and Land	Total Project Cost (Excluding Transmission)	Transmission	Total Project Cost (Including Transmission)
<b>Revised Cost Estimate as on 31.03.2009 (RCE) after disallowances</b>	<b>117208</b>	<b>17374</b>	<b>11776</b>	<b>1141</b>	<b>2208</b>	<b>149707</b>	<b>6400</b>	<b>156107</b>
<b>Costs transferred to the common beneficiary Units:</b>								
Coal Handling Plant		8687				8687		8687
Plant Water System			5888			5888		5888
Transmission System						0	3200	3200
Mandatory Spares	3354	352	35			3741		3741
<b>Total Costs transferred to the common beneficiary Units:</b>	<b>3354</b>	<b>9039</b>	<b>5923</b>	<b>0</b>	<b>0</b>	<b>18316</b>	<b>3200</b>	<b>21516</b>
Existing Units	0	0	0	0	0	0	0	0
Future Units	3354	9039	5923	0	0	18316	3200	21516
<b>Revised Cost Estimate as on 31.03.2009 (RCE) after disallowances and allocations to other Units</b>	<b>113854</b>	<b>8335</b>	<b>5853</b>	<b>1141</b>	<b>2208</b>	<b>131391</b>	<b>3200</b>	<b>134591</b>
On account of IDC on disallowed Cost	460	96	89		0	645	0	645
<b>Revised Cost Estimate as on 31.03.2009 (RCE) after recoverable Infirm Cost to be billed separately</b>	<b>113394</b>	<b>8239</b>	<b>5764</b>	<b>1141</b>	<b>2208</b>	<b>130746</b>	<b>3200</b>	<b>133946</b>
<b>Adjustments if any made by the commission</b>								
On account of Contract Closing	5670	412	288	57	110	6537	160	6697
Total Adjustments if any made by the commission	5670	412	288	57	110	6537	160	6697
<b>Project cost as approved by the Commission</b>	<b>107724</b>	<b>7827</b>	<b>5476</b>	<b>1084</b>	<b>2098</b>	<b>124209</b>	<b>3040</b>	<b>127249</b>

Name of the Project: Bakreswar Thermal Power Station (Unit 4 & 5)  
 Installed Capacity:(2x210) 420 MW  
 Date of Commercial Operation (COD): Unit-4 on 06.03.2009 and Unit-5 on 27.06.2009

(Rs. in lakh)

Particulars	Main Plant Package	Coal Handling Plant	Plant Water System	Railway Infrastructure	Others including Civil Works and Land	Total Project Cost (Excluding Transmission)	Transmission	Total Project Cost (Including Transmission)
Land					828	828		828
Supply Items	106091	6775				112866		112866
Project Management Services	2050					2050		2050
Civil Works	26957		4104	1300	22482	54843		54843
Erection Services, Testing, Trial run and Commissioning of the system	9312	6676				15988		15988
Port clearance, Inland transportation, loading and unloading, Insurance charges etc.	5429					5429		5429
Taxes and Duties	3756	670				4426		4426
Overhead	9392	1469				10861		10861
<b>Actual Capital Expenditure as on 31.03.2009 excluding Interest During Construction</b>	<b>162987</b>	<b>15590</b>	<b>4104</b>	<b>1300</b>	<b>23310</b>	<b>207291</b>	<b>0</b>	<b>207291</b>
Interest During Construction	19603	3068				22671		22671
<b>Actual Capital Expenditure as on 31.03.2009 including Interest During Construction</b>	<b>182590</b>	<b>18658</b>	<b>4104</b>	<b>1300</b>	<b>23310</b>	<b>229962</b>	<b>0</b>	<b>229962</b>
Estimated Cost of Residual Project Work					1727	1727		1727
<b>Revised Cost Estimate as on 31.03.2009 (RCE)</b>	<b>182590</b>	<b>18658</b>	<b>4104</b>	<b>1300</b>	<b>25037</b>	<b>231689</b>	<b>0</b>	<b>231689</b>
<b>Disallowances:</b>								
Disallowed cost of Mandetory Spares above 2.5% of the Project Cost	0	0			3161	3161		3161
Disallowed expenses on account of excess ersion, testing and commissioning component	3488	2500	0	0	0	5988		5988
<b>Total Disallowances</b>	<b>3488</b>	<b>2500</b>	<b>0</b>	<b>0</b>	<b>3161</b>	<b>9149</b>	<b>0</b>	<b>9149</b>
<b>Revised Cost Estimate as on 31.03.2009 (RCE) after disallowances</b>	<b>179102</b>	<b>16158</b>	<b>4104</b>	<b>1300</b>	<b>21876</b>	<b>222540</b>	<b>0</b>	<b>222540</b>

Particulars	Main Plant Package	Coal Handling Plant	Plant Water System	Railway Infrastructure	Others including Civil Works and Land	Total Project Cost (Excluding Transmission)	Transmission	Total Project Cost (Including Transmission)
<b>Costs transferred to the common beneficiary Units:</b>								
Coal Handling Plant		6463				6463		6463
Plant Water System			2257			2257		2257
Railway Infrastructure				520		520		520
Ash Pond						0		0
Others						0		0
Total Costs transferred to the common beneficiary Units:	0	6463	2257	520	0	9240	0	9240
Existing Units						0		0
Future Units	0	6463	2257	520	0	9240	0	9240
<b>Revised Cost Estimate as on 31.03.2009 (RCE) after disallowances and allocations to other Units</b>	<b>179102</b>	<b>9695</b>	<b>1847</b>	<b>780</b>	<b>21876</b>	<b>213300</b>	<b>0</b>	<b>213300</b>
<b>Adjustments if any made by the commission</b>								
On account of IDC on disallowed Cost	420	492	0	0	0	912	0	912
<b>Revised Cost Estimate as on 31.03.2009 (RCE) after recoverable Infirm Cost to be billed separately</b>	<b>178682</b>	<b>9203</b>	<b>1847</b>	<b>780</b>	<b>21876</b>	<b>212388</b>	<b>0</b>	<b>212388</b>
<b>Adjustments if any made by the commission</b>								
On account of Contract Closing	8934	460	92	39	1094	10619	0	10619
<b>Total Adjustments if any made by the commission</b>	<b>8934</b>	<b>460</b>	<b>92</b>	<b>39</b>	<b>1094</b>	<b>10619</b>	<b>0</b>	<b>10619</b>
<b>Project cost as approved by the Commission</b>	<b>169748</b>	<b>8743</b>	<b>1755</b>	<b>741</b>	<b>20782</b>	<b>201769</b>	<b>0</b>	<b>201769</b>



## CHAPTER - 3 FUEL COST FOR SALE OF INFIRM POWER FROM NEW UNITS

- 3.1 Supply of infirm power from Sagardighi Greenfield project as well as from the newly installed extension units at Bakreswar and Santaldih Thermal Power Stations started at the later part of 2007 – 2008 and continued upto a part of 2008 – 2009. Some quantum of such supply of infirm power from the 5<sup>th</sup> unit at Bakreswar Thermal Power Station which was put on commercial operation on 27<sup>th</sup> June, 2009, had also been there during the early period of 2009 – 2010. Fuel charges for supply of such infirm power were billed for recovery from the power recipient, i.e., West Bengal State Electricity Distribution Company Limited (in short “WBSEDCL”) @ 189.67 paise per unit (kWh) for the year 2007 – 2008, except for Santaldih Thermal Power Station where the billing rate came to 189.53 paise per kWh. The same for the years 2008 – 2009 and 2009 – 2010 for these new units came to 111.31 paise per kWh.
- 3.2 The total amounts so billed separately for each of the concerned generating station / extension units considerably fell short of the actual amount (as per audited accounts) spent for generation of such infirm power. The position of short recovery in this regard is summarized as under:

Rs. in lakh

Generating Station	Financial Years			Total
	2007 – 2008	2008 – 2009	2009 – 2010	
Sagardighi	2749.54	7447.90	-	10197.44
Santaldih	0.00	9942.84	-	9942.84
Bakreswar	1082.95	5542.74	1583.30	8208.99
Total	3832.49	22933.48	1583.30	28349.27

The detailed computations in this regard are shown in Annexure 3A, 3B and 3C to this chapter.



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- 3.3 It can be observed from the statement at Annexure – 3B that the fuel cost incurred per unit (kWh) of infirm power supplied by the Santaldih Thermal Power Station from its newly installed 250 MW unit (Unit No. V) came abnormally high. As against supply of a meager quantum of 0.086 MU, the total fuel cost incurred came to Rs. 336.45 lakh of which Rs. 324.91 lakh for the secondary fuel i.e., oil only. Such state of affair is well indicative that the newly installed Vth unit of Santaldih Thermal Power Station was hardly ready for putting in trial run and the small quantum of generation came out of very abnormal oil support. The Commission does not, therefore, consider it proper to allow WBPDCCL to recover the actual amount of fuel cost it incurred for supply of infirm power from the Vth Unit of Santaldih Thermal Power Station during 2007 – 2008. The amount of short recovery in this regard had already been adjusted by WBPDCCL in the capital construction account. The adjustment as carried out may remain till the time completion cost of the project is got approved under the provision of regulation 2.8.5 of the Tariff Regulations.
- 3.4 For the supply of infirm power from other two generating stations, i.e., Sagardighi for the years 2007 – 2008 and 2008 – 2009, Bakreswar for the years 2007 – 2008, 2008 – 2009 and 2009 - 2010, as well as from Santaldih Thermal Power Station for the year 2008 – 2009, the fuel cost per unit (kWh) comes as under:

<b>Generating Station</b>	<b>2007 – 2008 (paise / kWh)</b>	<b>2008 – 2009 (paise / kWh)</b>	<b>2009 – 2010 (paise / kWh)</b>
Sagardighi (Units I & II)	567.28	275.11	N.A.
Santaldih	N.A.	792.72	N.A.
Bakreswar	458.45	348.14	191.83

- 3.5 If the charges for the supply of infirm power during the concerned years and from the concerned generating stations are recovered at rates stated above, entire amount of the short recovery, other than an amount of Rs. 334.82 lakh in respect



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of Santaldih Thermal Power Station for the year 2007 – 2008 will be recovered. Such recoveries will be needed to be adjusted in capital accounts of the concerned generating station.



**ANNEXURE – 3A**  
**FUEL COST INCURRED AND REVENUE BILLED FOR**  
**SALE OF INFIRM POWER FROM SAGARDIGHI (UNITS I & II)**

Sl. No.	Particulars	Unit	Financial Years		
			2007 – 2008	2008 - 2009	2009 -2010
1	Quantum of Sale	MU	72.814	454.685	-
2	Revenue Billed	Rs. in Lakh	1381.07	5061.10	-
3	Average rate of Sale	Paise/kWh	189.67	111.31	-
4	Cost of Coal	Rs. in Lakh	1932.87	7892.61	
5	Cost of Oil	Rs. in Lakh	2197.74	4616.39	-
6	Total Fuel Cost of Sale (4+5)	Rs. in Lakh	4130.61	12509.00	-
7	Unit Fuel Cost of Sale (6/1)	Paise/kWh	567.28	275.11	-
8	Short recovery of Cost (6 – 2)	Rs. in Lakh	2749.54	7447.90	-



**ANNEXURE – 3B**  
**FUEL COST INCURRED AND REVENUE BILLED**  
**FOR SALE OF INFIRM POWER FROM SANTALDIH (UNIT V)**

Sl. No.	Particulars	Unit	Financial Years		
			2007 – 2008	2008 - 2009	2009 -2010
1	Quantum of Sale	MU	0.086	145.915	-
2	Revenue Billed	Rs. in Lakh	1.63	1624.18	-
3	Average rate of Sale	Paise/kWh	189.53	111.31	-
4	Cost of Coal	Rs. in Lakh	11.54	5035.09	
5	Cost of Oil	Rs. in Lakh	324.91	6531.93	-
6	Total Fuel Cost of Sale (4+5)	Rs. in Lakh	336.45	11567.02	-
7	Unit Fuel Cost of Sale (6/1)	Paise/kWh	39122.09	792.72	-
8	Short recovery of Cost (6 – 2)	Rs. in Lakh	334.82*	9942.84	-
*Already considered in paragraph 3.3					





**ANNEXURE – 3C**  
**FUEL COST INCURRED AND REVENUE BILLED FOR**  
**SALE OF INFIRM POWER FROM BAKRESWAR (UNITS IV & V)**

Sl. No.	Particulars	Unit	Financial Years		
			2007 – 2008	2008 - 2009	2009 -2010
1	Quantum of Sale	MU	40.291	234.039	196.645
2	Revenue Billed	Rs. in Lakh	764.19	2605.09	2188.86
3	Average rate of Sale	Paise/kWh	189.67	111.31	111.31
4	Cost of Coal	Rs. in Lakh	443.25	4851.17	2880.31
5	Cost of Oil	Rs. in Lakh	1403.89	3296.66	891.85
6	Total Fuel Cost of Sale (4+5)	Rs. in Lakh	1847.14	8147.83	3772.16
7	Unit Fuel Cost of Sale (6/1)	Paise/kWh	458.45	348.14	191.83
8	Short recovery of Cost (6 – 2)	Rs. in Lakh	1082.95	5542.74	1583.30



## **CHAPTER - 4**

### **FUEL COST ALLOWABLE FOR COMMERCIAL OPERATION PERIOD**

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- 4.1 In this part of the order, the Commission takes up to ascertain the fuel cost allowable to WBPDCCL for its supply of electricity to WBSEDCL out of commercial operation at Sagardighi Thermal Power Station and also from the newly installed extension units at Santaldih and Bakreswar Thermal Power Stations. The workings in this regard are with reference to submissions made by WBPDCCL and the provisions of Tariff Regulations. The workings involve determination of allowable fuel cost, separately for each of the concerned generating station / extension units for each of the years forming the second control period, i.e., financial years 2008 – 2009, 2009 – 2010 and 2010 – 2011. All the referred three years are already over and the required audited data of actual performances have been submitted by WBPDCCL for the two years through its applications for determination of Fuel Cost Adjustments (in short “FCA”). The Commission had already attended to its application for the FCA for the year 2008 – 2009 and determined the same separately for old generating stations / units, i.e., Kolaghat, Bakreswar (Units I, II & III), Bandel and Santaldih (Units I to IV), vide Commission’s order dated 1<sup>st</sup> June, 2010 in Case No. FPPCA-42/09-10. It was stated in paragraph 1.6 of the referred order dated 1<sup>st</sup> June, 2010, that the admissible fuel costs for supply of infirm and firm power from the extension units as well as from Sagardighi generating station would be viewed at the time of fixing tariff for these units. Accordingly, the Commission now proceeds to determine the fuel cost allowable for supply of firm power from Sagardighi Thermal Power Station as well as from extension units at Bakreswar and Santaldih Thermal Power Stations during 2008 – 2009, based on the audited data submitted by WBPDCCL along with its FPPCA application for that year. The Commission also considers to determine the allowable fuel cost for the concerned generating station and extension units for 2009 – 2010 based on the audited data submitted by WBPDCCL. Hence, no separate consideration of FCA



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for the referred generating station / extension units for the year 2008 – 2009 and 2009 – 2010 will be needed. The allowable amounts of fuel cost of the referred generating station / extension units for the year 2010 – 2011 are, however, being worked out provisionally subject to adjustment at the time of dealing with FCA application for that year.

- 4.2 The instant order of the Commission is to deal with the determination of the amounts of allowable fuel cost to be recovered by WBPDCCL for supply of firm power from its new additions to generation capacity. Determination of such amounts for supply of power from old units are dealt / to be dealt with separately. As supplies had been made simultaneously from both the sources, segregation of the quantum of generation and sales from the new units and old units as well as to reconcile the segregated data with the consolidated figures shown in the audited accounts were considered necessary and the same had been done as under based on data available from records submitted by WBPDCCL.

Generating Station	Figures in MU	
	2008 – 2009	2009 – 2010
Sagardighi (New)		
Generation	1491.388	3313.473
Sales	1284.597	2908.093
Santaldih (New Unit V)		
Generation	Nil	985.564
Sales	Nil	874.174
Santaldih (Old)		
Generation	1277.233	365.795
Sales	1057.314	292.650
Bakreswar (New)		
Generation	89.096	2567.927
Sales	81.077	2338.163
Bakreswar (Old)		
Generation	4913.457	4296.446
Sales	4348.197	3739.317



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**4.3 Allowable Fuel Cost and the Rate of Energy Charges for 2008 – 2009:**

4.3.1 As it came from the audited accounts of WBPDCCL for the year 2008 – 2009, generation of firm power from Sagardighi Thermal Power Station and the extension units of Bakreswar were 1491.388 MU and 89.096 MU respectively. No generation of firm power, however, was there from the newly commissioned Vth unit of Santaldih Thermal Power Station. Taking the quantum of actual generation, as stated above, the energy charges per unit (kWh) of the supply of firm power from Sagardighi Thermal Power Station and the extension units of Bakreswar Thermal Power Station during 2008 – 2009 comes as under:

<b>Generating Station</b>	<b>Actual Sale (MU)</b>	<b>Total amount recoverable (Rs. in Lakh)</b>	<b>Energy Charges (Paise/kWh)</b>
Sagardighi	1284.597	18396.71	143.21
Bakreswar	81.077	1007.22	124.23

Detailed computations in this regard are shown in Annexure – 4A. Explanatory notes on such computations, as considered necessary, are as follows:

- (a) Rates of (i) station heat, (ii) auxiliary consumption, (iii) specific oil consumption and (iv) transit loss of coal have been considered as per the norms fixed by the Commission for the concerned year vide parts A, D, E and F respectively of the Schedule – 9A of the Tariff Regulations.
- (b) WBPDCCL presented the detailed computations of the weighted average calorific value of oil with reference to the month wise supplies received. As this is a variable factor depending on the grades of oil used, the same has been considered for working out the amount of allowable fuel cost.
- (c) The weighted average heat value of coal is also a variable factor depending on the actual grade mix of coal consumption. As ascertained by WBPDCCL, the weighted average heat value of coal consumed came as under:



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	<b>Heat value of coal (K.Cal/Kg)</b>
Sagardighi	4528.460
Bakreswar	4505.616

Above heat values have been viewed with reference to the quantitative accounts of grade wise coal consumption at the generating stations submitted by WBPDCCL and the declared heat value of different grades of coal varying within a range. The station wise evaluation has been shown in Annexure – 4D to this chapter showing the computations leading to arrival of figures shown in the table below:

**Figures in K.Cal/Kg.**

<b>Generating Station</b>	<b>Minimum allowable heat value as per regulation.</b>	<b>Heat value stated as actual</b>
Sagardighi	4579.468	4528.460
Bakreswar	4478.755	4505.616

It may be observed from the above comparative statement that the actual heat value of coal used by WBPDCCL at Bakreswar generating station came higher than the minimum allowable heat value. The actual heat value of coal at Sagardighi generating station, however, came marginally short of the minimum heat value that can be allowed in terms of the Tariff Regulations. It has been noted from the submission that a total amount of Rs. 1633.38 lakh was received during 2008 – 2009 by WBPDCCL from the coal suppliers at Sagardighi through the credit notes as compensation towards grade slippage, which reflects the generating company's efforts and concern towards maintaining desired heat value in accordance with the grade of the coal. Thus, the said amount of credit note has been adjusted while arriving at the average price of coal without pegging the heat value at floor level. In



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view of that the Commission considers to allow the actual heat value for Sagardighi Thermal Power Station.

- (d) Based on the data provided in Notes on Accounts No. B-27 in the audited accounts of WBPDCCL for the year 2008 – 2009, the average price of oil and coal consumed at Sagardighi and Bakreswar have been arrived as under:

	<b>Sagardighi</b>	<b>Bakreswar</b>
Oil (Rs. per K.L.)	41248.30	42255.49
Coal (Rs. per M.T.)	2413.92	1829.97

4.3.2 The Schedule – 9B to the Tariff Regulations contains provisions for sharing the gains, if any, derived by the generating company on account of its better performances over the operating and fuel consumption norms set by the Commission for the concerned year, with the energy recipient. The referred schedule – 9B also provides that in case availability of a generating station of the generating company falls below the availability norms, then the total gains meant to be passed on to the energy recipients is first to be used to compensate the deficit in the recovery of the fixed charges, if any, by the generating company. It, therefore, needs to view the actual performances of WBPDCCL in comparison to the operational and fuel consumption efficiency norms set by the Commission for the year 2008 – 2009. Such comparisons are made hereunder:

<b>Sl. No.</b>	<b>Generating Station</b>	<b>Particulars</b>	<b>Unit</b>	<b>Normative</b>	<b>Actual</b>
	Sagardighi	Plant Availability Factor (PAF)	%	85.00	58.85
		Rate of Auxiliary Consumption	%	9.00	13.87
		Specific Oil Consumption	MI/kWh	2.00	3.64
		Station Heat Rate	K.cal/kWh	2275.000	3163.013



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Sl. No.	Generating Station	Particulars	Unit	Normative	Actual
	Bakreswar (New Units)	Plant Availability Factor (PAF)	%	85.00	67.99
		Rate of Auxiliary Consumption	%	9.00	N.A.*
		Specific Oil Consumption	MI/kWh	1.70	N.A.*
		Station Heat Rate	K.cal/kWh	2590	N.A.*
<p>*Note: Commercial generation from the unit No. IV (210 MW) at Bakreswar started on 6<sup>th</sup> March, 2009. Actual generation upto 31<sup>st</sup> March, 2009 came to 89.096 MU with 67.99% Plant Availability and Plant Load Factors. Other parameters for qualifying extra benefits in fuel cost could not be separately identified by WBPDCCL.</p>					

4.3.3 In view of the position shown in the comparative statement and on account of explanatory note thereon, no extra benefits for savings in the fuel cost is considered allowable to WBPDCCL for the ex-bus supply of power from Sagardighi Thermal Power Station and the IVth unit of Bakreswar Thermal Power Station.

**4.4 Fuel Cost and the Rate of Energy Charges for the year 2009 – 2010:**

4.4.1 The Tariff Regulations, 2007, have since been repealed by the West Bengal Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2011 which is hereinafter referred to as the “Tariff Regulations, 2011”. It has, however, been provided in the Tariff Regulations, 2011 (vide regulations no. 2.1.14 and 2.1.15) that the amount of fuel cost allowable is to be worked out in the present case following the relevant provisions of the repealed Regulations.

4.4.2 The quantum of actual generation at Sagardighi Thermal Power Station and the extension units at Santaldih and Bakreswar Thermal Power Stations were as under:



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	MU
Sagardighi	3313.473
Santaldih (Unit V)	985.564
Bakreswar	2567.927

4.4.3 The average price of oil and that of coal consumed as per the audited accounts were found as under:

	<b>Sagardighi</b>	<b>Santaldih (Unit V)</b>	<b>Bakreswar (Units IV &amp; V)</b>
Oil (Rs. per K.L.)	35206.827	36652.775	38388.638
Coal (Rs. per M.T.)	2645.000	2084.507	2318.084

4.4.4 Weighted average GCVs of oil, as computed by WBPDCCL with reference to the month wise supplies received at the generating stations, were found as under:

	<b>K.Cal/Lit</b>
Sagardighi	9407.533
Santaldih (Unit V)	9423.689
Bakreswar (Units IV & V)	9451.179

4.4.5 The weighted average heat value of coal which is a variable factor depending on the actual grade mix of consumption has been ascertained by WBPDCCL as under:

	<b>Heat value of coal (K.Cal/Kg)</b>
Sagardighi	4005.412
Santaldih (Unit V)	3648.000
Bakreswar (Units IV & V)	4136.795





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Above heat values have been viewed with reference to the quantitative accounts of grade wise coal consumption at the generating stations as submitted by WBPDCCL and the declared heat value of different grades of coal varying within a range. About 21% of the total quantum of coal consumed at Santaldih was washed coal of grade W III and grade W IV. Heat value of such washed coal had been considered at par with those for the year 2008 – 2009. The station wise evaluation has been given in Annexure – 4E to this chapter showing the computations leading to arrival of figures shown in the table below:

**Figures in K.Cal/Kg.**

<b>Generating Station</b>	<b>Minimum allowable heat value as per Regulations.</b>	<b>Heat value stated as actual</b>
Sagardighi	4340.151	4005.412
Santaldih (Unit V)	4217.111	3648.00
Bakreswar (Units IV & V)	4042.614	4136.795

As may be observed from the above comparative statement, the actual heat value of coal used by WBPDCCL at Bakreswar generating station came higher than the minimum allowable heat value. The actual heat value of coal at Sagardighi generating station as well as that of Santaldih Generating Station, however, came short of the minimum heat value that can be allowed in terms of the Tariff Regulations, 2007. It has been noted from the submission that WBPDCCL realized the amounts as stated below from the coal suppliers during 2009 – 2010 towards compensation for grade slippage of coal by way of Credit Notes from these two generating stations.

	<b>Rs. in Lakh</b>
Sagardighi	4152.13
Santaldih	992.51



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The amounts so received had been adjusted while arriving at the average price of coal per MT in those generating stations. The amounts so received by ways of Credit Notes from the coal suppliers did not compensate fully the extent of grade slippage resulting in considerable shortfall in the average heat value of coal. The Commission, therefore, worked out the quantum of coal requirements in the referred two generating stations allowing the minimum heat value in terms of the relevant Tariff Regulations. The average price of coal per MT, however, had been worked out for the referred generating stations prior to the adjustments of the Credit Notes of these two generating stations as below:

<b>Particulars</b>	<b>Sagardighi</b>	<b>Santaldih (Unit No V)</b>
Coal (Rs. per MT)	2845.36	2198.75

However, in case of Bakreswar (Units IV & V), the actual average price so arrived after adjustment of credit notes has been considered corresponding to actual heat value.

- 4.4.6 As per the computations shown in Annexure 4B, the energy charges per unit (kWh) of sale and total fuel cost recoverable for the year 2009 – 2010 come as under:

<b>Generating Station</b>	<b>Actual Sale (MU)</b>	<b>Total Fuel Cost recoverable (Rs. in Lakh)</b>	<b>Energy Charges (Paise/kWh)</b>
Sagardighi	2908.093	49655.69	170.75
Santaldih (Unit V)	874.174	12375.68	141.57
Bakreswar (Units IV & V)	2338.163	38504.87	164.68

- 4.4.7 The actual performances of WBPDCCL in comparison to the operational and fuel consumption efficiency norms set by the Commission for the year 2009 – 2010 had also been viewed to see whether WBPDCCL derived any gain to share with



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the energy recipient. The comparison of the actual performances with normative parameters at the generating stations comes as under:

Sl. No.	Generating Station	Particulars	Unit	Normative	Actual
	Sagardighi	Plant Availability Factor (PAF)	%	85.00	60.69
		Rate of Auxiliary Consumption	%	9.00	11.58
		Specific Oil Consumption	MI/kWh	1.50	2.97
		Station Heat Rate	K.cal/kWh	2275.00	2443.48
	Santaldih (Unit V)	Plant Availability Factor (PAF)	%	85.00	43.68
		Rate of Auxiliary Consumption	%	9.00	12.93
		Specific Oil Consumption	MI/kWh	1.50	12.24
		Station Heat Rate	K.cal/kWh	2350.00	3042.96
	Bakreswar (Units IV & V)	Plant Availability Factor (PAF)	%	85.00	79.69
		Rate of Auxiliary Consumption	%	9.00	10.80
		Specific Oil Consumption	MI/kWh	1.50	1.54
		Station Heat Rate	K.cal/kWh	2560	2728.758

As observed from above comparative statement, the actual fuel consumption efficiency parameters being adverse than the norms set for those, no extra benefit had been derived by WBPDC.

**4.5 Fuel Cost and the Rate of Energy Charges for the year 2010 – 2011:**

4.5.1 Financial year 2010 – 2011 is over. WBPDC has recently filed their application for Fuel Cost Adjustment (FCA) for the year 2010 – 2011 for all the generating stations including new generating stations and extension units of existing generating stations to the Commission supported by the audited accounts for the year 2010 – 2011. Finalization of the FCA for the year 2010 – 2011 on the basis of actual data is under process. The Commission, therefore, considers to arrive some rational rates of energy charges recoverable by WBPDC for the year 2010 - 2011 till the time the FCA for 2010 - 2011 can be finalized. As per the projections made by WBPDC and computations submitted at Form 11.1 relating to the concerned generating station / extension unit, the rate of energy charges arrived therein appear to be much in variance with such rates worked out on



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actual basis for the year 2009 – 2010. A comparative statement in this regard is shown hereunder:

Generating Station / Extension Unit	Rate of Energy Charges projected by WBPDCCL for 2010 – 2011 (Paise / kWh)	Actual Rate of Energy Charges allowed for 2009 – 2010 (Paise / kWh)
Sagardighi	134.76	170.75
Santaldih	196.33	141.57
Bakreswar	172.28	164.68

4.5.2 As is observed from above, the rate of energy charges projected for Sagardighi for the year 2010 – 2011 is abnormally lower than such actual rate for 2009 – 2010; whereas, the rates for Santaldih and Bakreswar are much on the higher side. If the projected rates of energy charges are allowed, there will be high probability of carrying out adjustments of considerable amount on finalization of claims for FCA and that is considered not desirable. The Commission, therefore, makes a rational estimation of energy charges for the concerned units as shown in Annexure 4C considering the weighted average price of coal, oil and heat value of coal and oil as enumerated in the following paragraph. The rates are coming as under:

Generating Station / Extension Unit	Rate of Energy Charges (Paise / kWh)
Sagardighi	167.34
Santaldih	138.53
Bakreswar	163.84

4.5.3 The computations shown in the referred annexure (Annexure – 4C) have been done considering the fuel use efficiency norms such as, station heat rates, specific oil consumption, weighted average heat value of coal and the rate of transit loss of coal as specified in terms of Tariff Regulations. The grade wise use



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of coal and the weighted average price of coal and oil and GCV of oil have been considered at par with such prices and GCV for the year 2009 – 2010.

4.5.4 The computations leading to ascertain the allowable weighted average heat value of coal for the generating stations are shown in Annexure 4F.

**4.6 Amounts of allowable Fuel Cost Recoverable for the period upto 2009 – 2010:**

4.6.1 Summing up the analyses and findings recorded in Chapter – 3 and Chapter – 4, the Commission takes up to arrive at the total amount of fuel charges in respect of Sagardighi Thermal Power Station and the extension units at Santaldih Thermal Power Station (Unit V) and Bakreswar Thermal Power Station (Units IV & V) upto 2009 – 2010. As shown in Annexure 4G, the amounts so recoverable came as under:

<b>Generating Station</b>	<b>Rs. in Lakh</b>
Sagardighi	84692.01
Santaldih (Unit V)	23944.33
Bakreswar (Units IV & V)	53279.22
<b>Total</b>	<b>161915.56</b>

4.6.2 The recovery of such amounts is, however, subject to reconciliation of the source wise supply of power from the concerned units.



## ANNEXURE – 4A COMPUTATION OF ALLOWABLE FUEL COST FOR THE YEAR 2008 – 2009

SI No	Particulars	Unit	Sagardighi	Bakreswar
1	Actual Generation	MU	1491.388	89.096
2	Rate of Auxiliary Consumption (normative)	%	9.00	9.00
3	Auxiliary consumption (normative)	MU	134.225	8.019
4	Ex-bus generation (1-3)	MU	1357.163	81.077
5	Station Heat Rate (Normative)	Kcal/kWh	2275.00	2590.00
6	Total Heat Required (1x5)	M.Kcal	3392907.700	230758.640
7	Specific Oil consumption (Normative)	ml/kWh	2.00	1.70
8	Oil consumption (1x7)	KL	2982.776	151.463
9	Average GCV of Oil (Actual)	K.cal/lit	9624.183	9393.229
10	Heat from oil (8x9)/1000	M.Kcal	28706.782	1422.727
11	Heat from coal (6-10)	M.Kcal	3364200.918	229335.913
12	Average Heat value of coal	K.cal/Kg	4528.460	4505.616
13	Coal consumption (11/12) x1000	MT	742901.763	50900.013
14	Normative transit loss of coal	%	1.50	1.25
15	Coal requirement with transit loss	MT	754214.988	51544.317
16	Average price of oil	Rs/KL	41248.30	42255.49
17	Average price of coal	Rs/MT	2413.92	1829.97
18	Cost of oil (8x16)/100000	Rs lakh	1230.34	64.00
19	Cost of coal (15x17)/100000	Rs lakh	18206.15	943.25
20	Cost of Fuel (18+19)	Rs lakh	19436.49	1007.25
21	Average Fuel Cost per unit of normative ex-bus generation (20/4)	Paise/kwh	143.21	124.23
22	Actual ex-bus generation for Sale	MU	1284.597	81.077
23	<b>Fuel cost recoverable on sale ( 21 x 22)</b>	<b>Rs. lakh</b>	<b>18396.71</b>	<b>1007.22</b>



## ANNEXURE – 4B COMPUTATION OF ALLOWABLE FUEL COST FOR THE YEAR 2009 – 2010

SI No	Particulars	Unit	Sagardighi	Santaldih (Unit – V)	Bakreswar (Unit (IV & V))
1	Actual Generation	MU	3313.473	985.564	2567.927
2	Rate of Auxiliary Consumption (normative)	%	9.00	9.00	9.00
3	Auxiliary consumption (normative)	MU	298.213	88.701	231.113
4	Ex-bus generation (1-3)	MU	3015.260	896.863	2336.814
5	Station Heat Rate (Normative)	Kcal/kWh	2275.000	2350.000	2560.000
6	Total Heat Required (1x5)	M.Kcal	7538151.075	2316075.400	6573893.120
7	Specific Oil consumption (Normative)	ml/kWh	1.50	1.50	1.50
8	Oil consumption (1x7)	KL	4970.210	1478.346	3851.891
9	Average GCV of Oil (Actual)	K.cal/lit	9407.533	9423.689	9451.179
10	Heat from oil (8x9)/1000	M.Kcal	46757.415	13931.473	36404.911
11	Heat from coal (6-10)	M.Kcal	7491393.660	2302143.927	6537488.209
12	Average Heat value of coal	K.cal/Kg	4340.151	4217.111	4136.795
13	Coal consumption (11/12) x1000	MT	1726067.517	545905.462	1580326.849
14	Normative transit loss of coal	%	1.25	1.25	1.00
15	Coal requirement with transit loss	MT	1747916.473	552815.658	1596289.746
16	Average price of oil	Rs/KL	35206.827	36652.775	38388.638
17	Average price of coal	Rs/MT	2845.360	2198.750	2318.084
18	Cost of oil (8x16)/100000	Rs lakh	1749.85	541.85	1478.69
19	Cost of coal (15x17)/100000	Rs lakh	49734.55	12155.03	37003.34
20	Cost of Fuel (18+19)	Rs lakh	51484.40	12696.88	38482.03
21	Average Fuel Cost per unit of normative ex-bus generation (20/4)	Paise/kwh	170.75	141.57	164.68
22	Actual ex-bus sales	MU	2908.093	874.174	2338.163
23	<b>Fuel cost recoverable (21 x 22)</b>	<b>Rs Lakh</b>	<b>49655.69</b>	<b>12375.68</b>	<b>38504.87</b>



## ANNEXURE – 4C COMPUTATION OF ALLOWABLE FUEL COST FOR THE YEAR 2010 – 2011

Sl No	Particulars	Unit	Sagardighi	Santaldih (Unit – V)	Bakreswar (Unit (IV & V))
1	Actual Generation	MU	4210.000	1650.000	2943.360
2	Rate of Auxiliary Consumption (normative)	%	9.00	9.00	9.00
3	Auxiliary consumption (normative)	MU	378.900	148.500	264.902
4	Ex-bus generation (1-3)	MU	3831.100	1501.500	2678.458
5	Station Heat Rate (Normative)	Kcal/kWh	2275.000	2350.000	2530.000
6	Total Heat Required (1x5)	M.Kcal	9577750.000	3877500.000	7446700.800
7	Specific Oil consumption (Normative)	ml/kWh	1.00	1.00	1.30
8	Oil consumption (1x7)	KL	4210.000	1650.000	3826.368
9	Average GCV of Oil (Actual)	K.cal/lit	9407.533	9423.689	9451.179
10	Heat from oil (8x9)/1000	M.Kcal	39605.714	15549.087	36163.689
11	Heat from coal (6-10)	M.Kcal	9538144.286	3861950.913	7410537.111
12	Average Heat value of coal	K.cal/Kg	4377.121	4247.150	4080.705
13	Coal consumption (11/12) x1000	MT	2179090.842	909304.101	1815994.322
14	Normative transit loss of coal	%	1.00	1.00	0.75
15	Coal requirement with transit loss	MT	2201101.861	918488.991	1829717.201
16	Average price of oil	Rs/KL	35206.827	36652.775	38388.638
17	Average price of coal	Rs/MT	2845.360	2198.750	2318.084
18	Cost of oil (8x16)/100000	Rs lakh	1482.21	604.77	1468.89
19	Cost of coal (15x17)/100000	Rs lakh	62629.27	20195.28	42414.38
20	Cost of Fuel (18+19)	Rs lakh	64111.48	20800.05	43883.27
21	<b>Average Fuel Cost per unit of Ex-bus Generation (20/4)</b>	<b>Paise/kwh</b>	<b>167.34</b>	<b>138.53</b>	<b>163.84</b>





## ANNEXURE – 4D COMPUTATION OF HEAT VALUE OF COAL BASED ON MINIMUM OF DECLARED HEAT VALUE FOR 2008-2009

Grade of coal	% of use	Declared minimum UHV (K.cal/kg)	Difference of maximum & minimum	Multiplication factor	Value to be added to minimum	Minimum average value allowable	Product (K.cal/kg) (2x5)
(1)	(2)	(3)	(4)	(5)	(6)=(4x5)	7=(3+6)	(8)=(2x7)
<b>SAGARDIGHI</b>							
B	45.72	5600.00	600.00	0.05	30.00	5630.00	257403.60
C	22.60	4940.00	660.00	0.05	33.00	4973.00	112389.80
D	6.63	4200.00	740.00	0.05	37.00	4237.00	28091.31
E	3.72	3360.00	840.00	0.05	42.00	3402.00	12655.44
F	16.93	2400.00	960.00	0.05	48.00	2448.00	41444.64
G	4.40	1300.00	1100.00	0.05	55.00	1355.00	5962.00
<b>TOTAL</b>	<b>100.00</b>						<b>457946.79</b>
<b>Average</b>							<b>4579.468</b>
<b>Actual</b>							<b>4528.460</b>
<b>Allowed</b>							<b>4528.460</b>
<b>BAKRESWAR</b>							
A	2.49	6200.00	0.00	0.05	0.00	6200.00	15438.00
B	26.28	5600.00	600.00	0.05	30.00	5630.00	147956.40
C	17.53	4940.00	660.00	0.05	33.00	4973.00	87176.69
D	35.22	4200.00	740.00	0.05	37.00	4237.00	149227.14
E	5.53	3360.00	840.00	0.05	42.00	3402.00	18813.06
F	10.72	2400.00	960.00	0.05	48.00	2448.00	26242.56
G	2.23	1300.00	1100.00	0.05	55.00	1355.00	3021.65
<b>TOTAL</b>	<b>100.00</b>						<b>447875.50</b>
<b>Average</b>							<b>4478.755</b>
<b>Actual</b>							<b>4505.616</b>
<b>Allowed</b>							<b>4505.616</b>



## ANNEXURE – 4E COMPUTATION OF HEAT VALUE OF COAL BASED ON MINIMUM OF DECLARED HEAT VALUE FOR 2009-2010

Grade of coal	% of use	Declared minimum UHV (K.cal/kg)	Difference of maximum & minimum	Multiplication factor	Value to be added to minimum	Minimum average value allowable	Product (K.cal/kg) (2x5)
(1)	(2)	(3)	(4)	(5)	(6)=(4x5)	7=(3+6)	(8)=(2x7)
<b>SAGARDIGHI</b>							
A	2.00	6200.00	0.00	0.10	0.00	6200.00	12400.00
B	44.63	5600.00	600.00	0.10	60.00	5660.00	252605.80
C	21.59	4940.00	660.00	0.10	66.00	5006.00	108079.54
D	3.30	4200.00	740.00	0.10	74.00	4274.00	14104.20
E	1.49	3360.00	840.00	0.10	84.00	3444.00	5131.56
F	3.35	2400.00	960.00	0.10	96.00	2496.00	8361.60
G	23.64	1300.00	1100.00	0.10	110.00	1410.00	33332.40
<b>TOTAL</b>	<b>100.00</b>						<b>434015.10</b>
<b>Average</b>							<b>4340.151</b>
<b>Actual</b>							<b>4005.412</b>
<b>Allowed</b>							<b>4340.151</b>
<b>SANTALDIH (UNIT V)</b>							
B	25.40	5600.00	600.00	0.10	60.00	5660.00	143764.00
C	11.87	4940.00	660.00	0.10	66.00	5006.00	59421.22
D	5.93	4200.00	740.00	0.10	74.00	4274.00	25344.82
E	15.24	3360.00	840.00	0.10	84.00	3444.00	52486.56
F	20.64	2400.00	960.00	0.10	96.00	2496.00	51517.44
W III	3.53	4838.00	0.00	0.10	0.00	4838.00	17078.14
W IV	17.39	4146.00	0.00	0.10	0.00	4146.00	72098.94
<b>TOTAL</b>	<b>100.00</b>						<b>421711.12</b>
<b>Average</b>							<b>4217.111</b>
<b>Actual</b>							<b>3648.00</b>
<b>Allowed</b>							<b>4217.111</b>
<b>BAKRESWAR (UNITS IV &amp; V)</b>							
A	2.86	6200.00	0.00	0.10	0.00	6200.00	17732.00
B	18.27	5600.00	600.00	0.10	60.00	5660.00	103408.20
C	18.67	4940.00	660.00	0.10	66.00	5006.00	93462.02
D	16.71	4200.00	740.00	0.10	74.00	4274.00	71418.54
E	13.36	3360.00	840.00	0.10	84.00	3444.00	46011.84
F	27.39	2400.00	960.00	0.10	96.00	2496.00	68365.44
G	2.74	1300.00	1100.00	0.10	110.00	1410.00	3863.40
<b>TOTAL</b>	<b>100.00</b>						<b>404261.44</b>
<b>Average</b>							<b>4042.614</b>
<b>Actual</b>							<b>4136.795</b>
<b>Allowed</b>							<b>4136.795</b>



## ANNEXURE – 4F COMPUTATION OF HEAT VALUE OF COAL BASED ON MINIMUM OF DECLARED HEAT VALUE FOR 2010-2011

Grade of coal	% of use	Declared minimum UHV (K.cal/kg)	Difference of maximum & minimum	Multiplication factor	Value to be added to minimum	Minimum average value allowable	Product (K.cal/kg) (2x5)
(1)	(2)	(3)	(4)	(5)	(6)=(4x5)	7=(3+6)	(8)=(2x7)
<b>SAGARDIGHI</b>							
A	2.00	6200.00	0.00	0.15	0.00	6200.00	12400.00
B	44.63	5600.00	600.00	0.15	90.00	5690.00	253944.70
C	21.59	4940.00	660.00	0.15	99.00	5039.00	108792.00
D	3.30	4200.00	740.00	0.15	111.00	4311.00	14226.30
E	1.49	3360.00	840.00	0.15	126.00	3486.00	5194.14
F	3.35	2400.00	960.00	0.15	144.00	2544.00	8522.40
G	23.64	1300.00	1100.00	0.15	165.00	1465.00	34632.60
<b>TOTAL</b>	<b>100.00</b>						<b>437712.14</b>
<b>Average</b>							<b>4377.121</b>
<b>Allowed</b>							<b>4377.121</b>
<b>SANTALDIH (UNIT V)</b>							
B	25.40	5600.00	600.00	0.15	90.00	5690.00	144526.00
C	11.87	4940.00	660.00	0.15	99.00	5039.00	59812.93
D	5.93	4200.00	740.00	0.15	111.00	4311.00	25564.23
E	15.24	3360.00	840.00	0.15	126.00	3486.00	53126.64
F	20.64	2400.00	960.00	0.15	144.00	2544.00	52508.16
W III	3.53	4838.00	0.00	0.15	0.00	4838.00	17078.14
W IV	17.39	4146.00	0.00	0.15	0.00	4146.00	72098.94
<b>TOTAL</b>	<b>100.00</b>						<b>424715.04</b>
<b>Average</b>							<b>4247.150</b>
<b>Allowed</b>							<b>4247.150</b>
<b>BAKRESWAR (UNITS IV &amp; V)</b>							
A	2.86	6200.00	0.00	0.15	0.00	6200.00	17732.00
B	18.27	5600.00	600.00	0.15	90.00	5690.00	103956.30
C	18.67	4940.00	660.00	0.15	99.00	5039.00	94078.13
D	16.71	4200.00	740.00	0.15	111.00	4311.00	72036.81
E	13.36	3360.00	840.00	0.15	126.00	3486.00	46572.96
F	27.39	2400.00	960.00	0.15	144.00	2544.00	69680.16
G	2.74	1300.00	1100.00	0.15	165.00	1465.00	4014.10
<b>TOTAL</b>	<b>100.00</b>						<b>408070.46</b>
<b>Average</b>							<b>4080.705</b>
<b>Allowed</b>							<b>4080.705</b>



**ANNEXURE – 4G**  
**AMOUNT OF ALLOWABLE FUEL COST**  
**(ENERGY CHARGES) UPTO 2009 – 2010**

Particulars	Amount in Rs. in Lakh			
	2007 – 2008	2008 – 2009	2009 – 2010	Total
<b>A. Sagardighi Thermal Power Station (Units I &amp; II)</b>				
Fuel cost of Infirm power (vide Annexure – 3A)	4130.61	12509.00	NIL	16639.61
Fuel cost of Firm power (vide Annexure – 4A & 4B)	NIL	18396.71	49655.69	68052.40
<b>Total (A):</b>	<b>4130.61</b>	<b>30905.71</b>	<b>49655.69</b>	<b>84692.01</b>
<b>B. Santaldih Thermal Power Station (Unit V)</b>				
Fuel cost of Infirm power (vide Annexure – 3B)	1.63	11567.02	NIL	11568.65
Fuel cost of Firm power (vide Annexure – 4A & 4B)	NIL	NIL	12375.68	12375.68
<b>Total (B):</b>	<b>1.63</b>	<b>11567.02</b>	<b>12375.68</b>	<b>23944.33</b>
<b>C. Bakreswar Thermal Power Station (Units IV &amp; V)</b>				
Fuel cost of Infirm power (vide Annexure – 3C)	1847.14	8147.83	3772.16	13767.13
Fuel cost of Firm power (vide Annexure – 4A & 4B)	NIL	1007.22	38504.87	39512.09
<b>Total (C):</b>	<b>1847.14</b>	<b>9155.05</b>	<b>42277.03</b>	<b>53279.22</b>
<b>Total [(A)+(B)+(C)]</b>	<b>5979.38</b>	<b>51627.78</b>	<b>104308.40</b>	<b>161915.56</b>



## CHAPTER - 5 FIXED CHARGES ALLOWABLE FOR COMMERCIAL OPERATION PERIOD

- 5.1 In this part of the order, the Commission takes up to ascertain the amounts of allowable fixed charges separately for Sagardighi Thermal Power Station and the extension units at Santaldih (Unit V) and Bakreswar (Units IV & V) Thermal Power Stations for the second control period comprising the financial years 2008 – 2009, 2009 – 2010 and 2010 – 2011. In terms of regulation 2.3(a) of the Tariff Regulations, the amount of annual capacity charge is the Annual Revenue Requirement (in short 'ARR') recoverable through tariff of a year reduced by the amount of fuel cost for that year. The admissible amounts of fuel cost for the new generating units of the concerned generating stations, separately for each of year comprising the second control period under the Multi Year Tariff (MYT) approach, have been determined in the earlier chapter of the order. The fixed cost elements of the amount of ARR are now being taken up hereunder for determination.
- 5.2 Prior to the submission of the instant tariff applications, WBPDC made an application on 14<sup>th</sup> January, 2009 to the Commission praying for allowing it to recover capacity charges @ 78.36 paise per kWh on ad-hoc basis through tariff with effect from the date of starting commercial operation of the concerned units. The Commission admitted the referred application dated 14<sup>th</sup> January, 2009 of WBPDC and the same was registered as Case No. OA-53/08-09. On careful consideration of its prayers, the Commission provisionally determined the amounts of capacity charges on annual basis considering 85% of normative Plant Availability Factor (in short 'PAF') as under:

			<b>Amount in Rs. in lakh</b>
Sagardighi TPS			
Unit I	12895.35	}	
Unit II	12895.35		25790.70



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Santaldih TPS		
Unit V		10746.13
Bakreswar TPS		
Unit IV	9026.75	} 18053.50
Unit V	9026.75	

It was, however, ordered that recoverable annual capacity charge for a particular plant will, however, be computed in proportion to the number of days after the date of commercial operation in that year (vide order dated 13<sup>th</sup> February, 2009 of the Commission in Case No. OA-53/08-09).

5.3 In its tariff proposals submitted subsequently by WBPDCCL for the second control period, comprising the financial years 2008 – 2009, 2009 – 2010 and 2010 – 2011 for Sagardighi Thermal Power Station and for the extension units at Santaldih (Unit V) and Bakreswar (Units IV & V) Thermal Power Stations, WBPDCCL projected the amounts of fixed charges as under:

Sl. No.	Major Heads of Charges	2008 – 2009	2009 – 2010	2010 – 2011
<b>A.</b>	<b>Sagardighi</b>			
i)	Reimbursement of costs (including Interest, Depreciation & Income Tax)	15112.58	34088.05	34270.73
ii)	Advance against depreciation	1933.73	3927.67	3927.67
iii)	Reserve for unforeseen exigencies	0.00	678.97	678.97
iv)	Return	5569.31	11550.00	11550.00
	<b>Total A</b>	<b>22615.62</b>	<b>50244.69</b>	<b>50427.37</b>
<b>B.</b>	<b>Santaldih (Unit – V)</b>			
i)	Reimbursement of costs (including Interest, Depreciation & Income Tax)	0.00	20040.85	19876.26
ii)	Advance against depreciation	0.00	0.00	145.48
iii)	Reserve for unforeseen exigencies	0.00	0.00	390.48
iv)	Return	0.00	6006.00	6006.00
v)	Less: Revenue from Transmission Charge	0.00	1849.51	1813.36
	<b>Total B</b>	<b>0.00</b>	<b>24197.34</b>	<b>24604.86</b>



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<b>C.</b>	<b>Bakreswar (Units – IV &amp; V)</b>			
i)	Reimbursement of costs (including Interest, Depreciation & Income Tax)	748.07	24489.35	24499.37
ii)	Advance against depreciation	0.00	0.00	0.00
iii)	Reserve for unforeseen exigencies	0.00	383.35	574.91
iv)	Return	120.94	5258.94	8820.00
	<b>Total A</b>	<b>869.01</b>	<b>30131.64</b>	<b>33894.28</b>

5.4 All the financial years of the second control period under MYT approach, i.e., 2008 – 2009, 2009 – 2010 and 2010 – 2011 are already over. The applications for the Annual Performance Review (in short 'APR') duly supported with the copies of audited annual accounts for the years 2008 – 2009 and 2009 – 2010 had also been submitted by WBPDCCL. The applications had been registered as Cases No. APR-17/09-10 and APR-23/10-11 for the years 2008 – 2009 and 2009 – 2010 respectively. The Case No. APR-17/09-10 had already been attended to by the Commission and disposed of in respect of old generating units by an appropriate order dated 26<sup>th</sup> July, 2010. In regard to the new units, it was stated that – “The issue relating to allowances of fixed and variable cost for Sagardighi (Units I & II), Bakreswar (Units IV & V) and Santaldih (Unit V) will be viewed while issuing the separate tariff orders for those units” (vide paragraph 1.7 of the referred order dated 26<sup>th</sup> July, 2010). Accordingly, the Commission now takes up to ascertain the amount of the fixed charges allowable for the year 2008 – 2009 to WBPDCCL under different uncontrollable and controllable heads of accounts in terms of the concerned Tariff Regulations.

**5.5 Allowable Fixed Charges for Sagardighi Thermal Power Station:**

Generating station at Sagardighi is a green field generating station presently having total 600 MW installed capacity consisting of two units of 300 MW each. The 1<sup>st</sup> and 2<sup>nd</sup> unit of the generating station came to commercial operation with effect from 7<sup>th</sup> September, 2008 and 6<sup>th</sup> November, 2008 respectively. Thus, 600 MW installed capacity of the generating stations had been in commercial



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operation for an average period of 176 days during the year 2008 – 2009. During the subsequent two years of the control period, i.e., 2009 – 2010 and 2010 – 2011, the entire 600 MW capacity had been in operation for the full year. As stated earlier, the Commission takes up to determine the different elements of allowable fixed charges for the year 2008 – 2009 based on WBPDCCL's applications of APR and going by its audited accounts. The allowable fixed charges for the years 2009 – 2010 and 2010 – 2011 will, however, be assessed on the prudent analysis of the projections made by the applicant keeping in view the audited accounts for 2009 – 2010 and the trend of actual expenses in previous years.

**5.5.1 Allowable fixed charges for the years 2008 – 2009 and 2009 – 2010:**

As seen from the applications submitted by WBPDCCL, the total amounts of fixed charges claimed are Rs. 22615.62 lakh and Rs. 50244.69 lakh for the years 2008 – 2009 and 2009 – 2010 respectively. The head wise breakup to the amounts so claimed is shown in Annexure – 5A. In terms of regulation 2.5.6.3 read with Table 2.5-1 of the Tariff Regulations, 2007, as amended, which remains applicable in the present case, the expenditures under certain heads of accounts are to be considered uncontrollable. The operation and maintenance (O&M) expenses of the generating stations are to be considered as controllable and regulated as per the norms set by the Commission, vide Part G of the Schedule 9A to the referred Tariff Regulations. The admissibility of charges / expenditures claimed by WBPDCCL under different heads through its applications is being viewed hereunder:

**5.5.1.1 Employee Cost:**

The amounts of actual expenditure incurred as per the audited accounts towards employee cost during 2008 – 2009 and 2009 – 2010 was found as under:





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Sl. No.	Particulars	Amount in Rs. in Lakh	
		2008 - 2009	2009 – 2010
1	Employee Remuneration	1685.15	3122.43
2	Contribution to P.F. and other funds	32.73	313.71
3	Welfare expenses	32.37	53.44
	<b>Total</b>	<b>1750.25</b>	<b>3489.58</b>

WBPDCCL revised its pay structure with effect from 1<sup>st</sup> April, 2007. Such pay revision with retrospective effect necessitated to make arrear payments due to employees during the years concerned. It also required to make provisions for employees' retirement benefits under the mandatory requirement of Accounting Standard – 15 (AS-15). Thus, the actual amount of employee cost increased considerably over the amounts considered in its applications.

Since the expenditures are uncontrollable, the total amounts so incurred are admitted.

**5.5.1.2 Coal & Ash Handling Charges:**

Coal and ash handling expenses are also classified as uncontrollable. The actual expenditure of Rs. 37.23 lakh and Rs. 675.48 lakh incurred by WBPDCCL during the year 2008 – 2009 and 2009 – 2010 respectively as per the audited accounts for the respective years are found reasonable and hence admitted.

**5.5.1.3 Operation & Maintenance Expenses:**

Expenditures, as claimed by WBPDCCL under this head of accounts, are viewed with reference to the norms considered by the Commission in Part G of the Schedule 9A to the applicable Tariff Regulations. The allowable total expenditure under this head as per the aforesaid provisions of the Tariff Regulations computes as under:



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Sl. No.	Particulars	2008 – 2009	2009 – 2010
1	Normative expenditure (Rs. Lakh / MW)	5.21	5.47
2	MW in operation	600	600
3	Normative Expenditure for full year's operation (Rs. in Lakh)	3126.00	3282.00
4	Period of operation (Days)	176	365
5	Proportionate amount admissible (Rs. in Lakh)	1507.33	3282.00

The total amount of actual expenditure incurred during the first year of operation i.e., 2008 – 2009, was Rs. 914.04 lakh only. The amount being less than the amount allowable on normative basis, the Commission allows Rs. 1507.33 lakh for the year 2008 – 2009. So far as the year 2009 – 2010 is concerned, the amount of actual expenditure came to Rs. 5113.35 lakh which exceeded the amount of Rs. 3282.00 lakh allowable under the norms. Going by the provisions of the Tariff Regulations, the Commission admits the normative amounts as under:

	Rs. in Lakh
2008 – 2009	1507.33
2009 – 2010	3282.00

**5.5.1.4 Depreciation:**

As stated earlier, the 1<sup>st</sup> and 2<sup>nd</sup> units of the generating station came to commercial operation with effect from 7<sup>th</sup> September, 2008 and 6<sup>th</sup> November, 2008 respectively. Hence, the installed capacity of 600 MW had been in commercial operation on an average of 176 days during the year 2008 – 2009. In terms of regulation 4.6.2(vi) of the concerned Tariff Regulations, depreciation on fixed assets becomes chargeable from the first year of operation. WBPDCCL



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though claimed an amount of Rs. 4991.81 lakh towards depreciation for the first year of operation, i.e., 2008 – 2009, did not provide any amount in this regard in its books of accounts. WBPDCCL is required to take note of this lapse and to take corrective actions in the accounts of subsequent period through adjustments. As per the submission, full year's depreciation on the fixed assets in use came to Rs. 10983.93 lakh. Proportionate amount for 176 days of operation during 2008 2009 comes to Rs. 5296.36 lakh. The amounts of depreciation are, therefore, being admitted as under:

	<b>Rs. in Lakh</b>
2008 – 2009	5296.36
2009 – 2010	10983.93

It is, however, to mention that amounts of depreciation now being allowed are provisional as the actual amount of chargeable depreciation can be ascertained only on closure of all supply / works contracts and final approval of the completion cost of assets created / procured is obtained.

**5.5.1.5 Advance against Depreciation:**

In terms of regulation 4.6.3.1 read with regulation 4.5.2 of the concerned Tariff Regulations, WBPDCCL is found entitled for advance against depreciation as the actual amounts of depreciation admitted above fell short of actual amount of loan repayment made by them during the referred years.

The amounts so admissible come as under:

Year	Amount in Rs. in Lakh		
	Amount of Loan Repayment	Amount of Depreciation allowed	Entitled Amount of Advance Against Depreciation
2008 - 2009	6925.54	5296.36	1629.18
2009 - 2010	14496.52	10983.93	3512.59



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**5.5.1.6 Return on Equity:**

As it comes out from the audited accounts, a total amount of Rs. 82500.00 lakh was provided by the Government of West Bengal as equity capital for the execution of the project. The entire amount of such equity contribution was drawn by WBPDC before 1<sup>st</sup> April, 2008 and as such remained deployed for the construction of the generating station. No further amount was added to the equity fund during 2008 – 2009 and 2009 – 2010. However, it may be seen from the paragraph 2.4.1(xi) that actual debt equity ratio is coming to 69.13:30.87. In terms of regulation 5.4.2 of the Tariff Regulations, 2011, for the purpose of determination of tariff or new capital expenditure including expenses of existing business, debt equity ratio as on date of commercial operation of generating station and transmission projects shall be 70:30. Where equity employed is more than 30%, the amount of equity shall be limited to 30% and the balance amount shall be considered as normative loan capital. Revised capital cost of Sagardighi Thermal Power Station including transmission project is Rs. 267225 lakh (as per Annexure – 2A-1) and 30% equity as per norms comes to Rs. 80168 lakh. Thus, the return on equity is entitled on Rs. 80168 lakh and balance amount of Rs. 2332 lakh is to be treated as normative debt. The amounts allowable as return on equity capital for the year 2008 – 2009 @ 14% and for 2009 – 2010 @ 15.5% work out as shown hereunder:

Sl. No.	Particulars	Amount in Rs. in Lakh	
		2008 - 2009	2009 – 2010
1	Equity Capital	80168.00	80168.00
2	Return on Equity Capital	11223.52	12426.04
3	Period of utilization of Equity (Days)	176	365
4	<b>Return allowable on proportionate basis</b>	<b>5411.89</b>	<b>12426.04</b>



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**5.5.1.7 Taxes as per Income Tax Act:**

WBPDCCL is an assessee under the Income Tax Act for the company as a whole. Generating station wise assessment is not applicable for them. As per the copies of returns submitted along with the copies of payment challans, total Income Tax for the company as a whole came to Rs. 1498.14 lakh and Rs. 478.16 lakh for the years 2008 – 2009 and 2009 – 2010 respectively. The amounts of tax provided in the books of accounts had been allocated by WBPDCCL to different commercially operative units in the ratio of their profit / loss before tax. Sagardighi Thermal Power Station incurred losses in both the referred years and as such, got allocation of overall negative amounts after adjustment of Fringe Benefit Tax. The negative adjustment for the year 2008 – 2009 came to Rs. 1461.16 lakh and the same for 2009 – 2010 came to Rs. 2039.57 lakh.

**5.5.1.8 Reserve for Unforeseen Exigencies:**

In terms of regulation 4.11.1 of the Tariff Regulations, a reserve @ 0.25% of the value of the gross block of fixed assets at the beginning of the year is allowable for dealing with any unforeseen exigencies. Since commercial operation of Sagardighi Thermal Power Station started during 2008 – 2009, it had no opening balance of fixed assets and as such no reserve is allowable for that year.

The total value of the gross block of fixed assets at the beginning of the year 2009 – 2010 as per the audited accounts was Rs. 283316.37 lakh. The amount of reserve on this amount @ 0.25% comes to Rs. 708.29 lakh and the same is allowed for the year 2009 – 2010. It is, however, to mention that the value of fixed assets as shown in the audited accounts are provisional subject to adjustments on final approval of the completion cost of the generating station. Any change in such value will be taken into consideration in future and will get adjusted within the overall limit of 5% of the value of gross block as specified in the referred regulation.



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**5.5.1.9 Interest on Borrowed Capital:**

**Interest on Loan:**

All borrowings in the capital accounts of Sagardighi Thermal Power Station were from the Power Finance Corporation Limited. The total amount of such borrowings at the beginning and end of the concerned years were found as under:

Sl. No.	Particulars	Amount in Rs. in Lakh	
		2008 - 2009	2009 - 2010
1	Opening Balance	152246.43	164474.23
2	Add: Fresh drawal during the year	19153.34	4250.86
	<b>Total</b>	<b>171399.77</b>	<b>168725.09</b>
3	Less: Repayment during the year	6925.54	14496.52
4	Balance at the close of the year	164474.23	154228.57
5.	Average balance during the year	158360.33	159351.40
6.	Number of days operated in a year	176	365
7.	Average balance for operational days during the year	76360.05	159351.40
8.	Weighted average rate of interest	11.90%	11.16%
9.	Interest during the year	<b>9086.19</b>	<b>17779.41</b>

It comes out from the above enumerations that the total amount of borrowings came to Rs. 175650.63 lakh (Rs. 152246.43 lakh + Rs. 19153.34 lakh + Rs. 4250.86 lakh). Adding Rs. 82500.00 lakh of equity capital received from the Government of West Bengal to this amount of borrowing, the total amount of capital fund deployed from these two sources comes to Rs. 258150.63 lakh which has not exceeded the limit of the amount of provisional estimate of capital cost (Rs. 267225 lakh) of the project. The Commission allows the actual amount of interest charged in the books of accounts as interest on borrowed capital which are Rs. 9086.19 lakh for the year 2008 – 2009 and Rs. 17779.41 lakh for the year 2009 – 2010 against their claim of Rs. 9068.19 lakh for 2008 – 2009 and Rs. 19325.72 lakh for 2009 – 2010 in the petition. Interest will also be allowed on



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normative debt as arrived in paragraph 5.5.1.6 at the average rate of interest for borrowed capital.

**Interest on Normative Debt:**

Based on weighted average rate of interest 11.90% and 11.16% for the years 2008 – 2009 and 2009 – 2010 respectively, interest on normative debt comes as below:

Sl. No.	Particulars	Amount in Rs. in Lakh	
		2008 - 2009	2009 – 2010
1	Normative debt (net)	2332.00	2332.00
2	Weighted average rate of interest per annum	11.90%	11.16%
3	Number of days operated in a year	176	365
4	Normative interest	133.81	260.25

The Commission allowed total interest for the year 2008 – 2009 amounting to Rs. 9220.00 lakh (Rs. 9086.19 lakh + Rs. 133.81 lakh) and for the year 2009 – 2010 amounting to Rs. 18039.66 lakh (Rs. 17779.41 lakh + Rs. 260.25 lakh).

**5.5.1.10 Interest on Working Capital:**

An amount of Rs. 620.70 lakh was borrowed by WBPDCCL during 2008 – 2009 from the United Bank of India @ 10.20% interest per annum to meet up the working capital need. The charges of interest on this borrowing came to Rs. 1.38 lakh. The amount of working capital loan and the rate of interest on such loan being within the norms stipulated in regulation 4.65 of the Tariff Regulations, the Commission admits the amount.

WBPDCCL represented that during 2009 – 2010, it had to resort to borrowing from the nationalized banks based on best available market rate, varied from 8.25% to 9.00% to meet the working capital need mainly due to steep hike in procurement cost of coal. The total amount of such working capital borrowings from the



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nationalized banks came to Rs. 8616.73 lakh and the total amount of interest charges on that was Rs. 221.44 lakh. Here also, the principal amount of borrowings and the rate of interest remained within the norms specified in the regulation. The actual amount of interest on working capital i.e. Rs. 221.44 lakh, is therefore admitted.

**5.5.1.11 Income from other Non-Tariff Sources:**

The incomes derived on account of Sagardighi Thermal Power Station from other non-tariff sources during the year 2008 – 2009 and 2009 – 2010 were found as under:

Sl. No.	Particulars	Amount in Rs. in Lakh	
		2008 - 2009	2009 – 2010
1	Interest from employees	1.91	1.57
2	Interest on short term deposit	930.89	711.10
3	Misc. income	68.56	43.62
4	Interest on Bond	23.69	40.32
5	Dividend on investment	3.85	0.00
6	Government grant	0.00	11.91
	<b>Total</b>	<b>1028.90</b>	<b>808.52</b>

**5.5.1.12 Proportionate allowable cost to Sagardighi Transmission Project:**

As it appears from the submissions of WBPDCCL, 12.6 KM stretch of 400 kV transmission line had been constructed by LILO of Farakka-Subhasgram 450 kV line deploying the capital borrowings to facilitate the evacuation of power from Sagardighi generating station. The matter relating to the transfer / maintenance arrangement of concerned assets to the Power Grid Corporation of India Limited (in short 'PGCIL') or to any other agency has not yet been settled. The amount relating to payment of interest on the borrowed capital, depreciation and return on equity allowable to the Sagardighi Transmission Project, already included in the net fixed charges for 2008 – 2009 and 2009 – 2010 of the Sagardighi generating station, are as below.





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Sl. No.	Total Revenue required for Sagardighi Transmission Project	Amount in Rs. in Lakh	
		2008 - 2009	2009 – 2010
1	Interest	650.76	1273.26
2	Depreciation	373.82	775.26
3	Return on Equity	381.98	877.04
	<b>Total</b>	<b>1406.56</b>	<b>2925.56</b>

The above allocation of cost to Sagardighi Transmission Project is based on the project cost as approved provisionally in Chapter – 2 of this Order.

The Commission, thus, considers not to make any negative adjustments from the elements of fixed charges so admitted for Sagardighi Transmission Project. However, the matter will be viewed afresh on settlement of the matter relating to transfer of concerned assets to PGCIL or any other agency and on finalization of project cost.

**5.5.1.13 Net Fixed Charges for the years 2008 – 2009 & 2009 – 2010:**

Summing up the admissible amounts under different heads of accounts, the total net fixed charges for the year 2008 – 2009 comes to Rs. 22363.56 lakh as against proportionate amount of Rs. 12436.06 lakh (Rs. 25790.70 lakh/365x176) provisionally allowed earlier vide paragraph 5.2. The net amount of total fixed charges admissible for the year 2009 – 2010, as admitted in the statement at Annexure – 5A, comes to Rs. 50490.92 lakh as against Rs. 25790.70 lakh allowed provisionally vide paragraph 5.2. The admissibility of the amounts realizable as capacity charges through tariff will be viewed in the next part with reference to the actual Plant Availability Factor (in short 'PAF') achieved during the concerned years.

**5.5.2 Allowable fixed charges for the years 2010 – 2011:**

The net amount of fixed charges projected by WBPDCCL for the year 2010 – 2011 is Rs. 50427.37 lakh. The head wise breakup to the amounts so projected is shown in Annexure – 5B. The amount admitted in 2010 – 2011 has been taken



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from the corresponding actual amount of charges found admissible for the previous year, i.e., 2009 – 2010.

**5.5.2.1 Employee Cost:**

WBPDCCL projected a total amount of Rs. 1071.00 lakh towards employee cost for the year 2010 – 2011. If viewed with reference to the amount of actual expenditure incurred in this regard in 2009 – 2010, the amount of the projected expenditure will appear to be under estimated. However, the amount of actual expenditure accounted for in 2009 – 2010 was Rs. 3489.58 lakh out of which Rs. 1820.75 lakh was towards liabilities provided for mandatory requirement of the Accounting Standard – 15 (in short 'AS-15') in regard to employees accumulated retirement benefits. The actual amount of employee cost for that year, thus, came to Rs. 1668.83 lakh (Rs. 3489.58 lakh – Rs. 1820.75 lakh). Adding 5% of that towards normal annual increment etc., the Commission allows Rs. 1752.19 lakh on a rational estimation basis for the year 2010 – 2011.

**5.5.2.2 Coal and Ash Handling Charge:**

Rs. 525.00 lakh proposed by WBPDCCL in their application and the same is admitted.

**5.5.2.3 Operation and Maintenance Charge:**

In terms of norms considered by the Commission in Part G of the schedule 9A to the applicable tariff regulations, the amount so arrived, as below, being controllable in nature is admitted.

Sl. No.	Particular	2010 – 2011
1	Normative Expenditure (Rs. Lakh/MW)	5.74
2	MW in Operation	600
3	Normative Expenditure for full year	3444.00



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**5.5.2.4 Interest:**

**5.5.2.4.1 Interest on Borrowed Capital:**

The amount of Rs. 19288.15 lakh proposed by WBPDCCL towards interest on borrowed capital is admitted considering the fresh drawal of loan during the year 2010 – 2011.

**5.5.2.4.2 Interest on Normative Loan:**

Weighted average rate of interest for 2010 – 2011 has been considered at 11.16% as that of 2009 – 2010 and interest on normative loan is, thus, allowed as Rs. 260.25 lakh same as for 2009 – 2010 for 2010 – 2011. The interest allowed in 2010 – 2011 in aggregate comes to Rs. 19548.40 lakh. (Rs. 19288.15 lakh + Rs. 260.25 lakh).

**5.5.2.5 Depreciation:**

In terms of paragraph 5.5.1.4, depreciation for 2010 – 2011 is admitted inline with depreciation allowed in 2009 – 2010 amounting to Rs. 10983.93 lakh.

**5.5.2.6 Advance against Depreciation:**

In terms of the regulation 4.6.3.1 read with the regulation 4.5.2 of the Tariff Regulations, WBPDCCL is entitled to have an advance against depreciation to facilitate the repayments of loan drawn in the capital account. The amount of entitlement, in this regard, comes as under:

	<b>Rs. in Lakh</b>
Repayments due	14280.00
Less: Depreciation chargeable for the year	10983.93
<b>Requirement of advance</b>	<b>3296.07</b>

The amount so computed above in this regard is admitted.



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**5.5.2.7 Return on Equity:**

Since no fresh equity has been inducted during 2010 – 2011, the return on equity is kept as Rs. 12426.04 lakh as admitted in 2009 – 2010.

**5.5.2.8 Reserve for Unforeseen Exigencies:**

The total value of the gross block of fixed asset at Sagardighi project as on 1<sup>st</sup> April, 2009 was Rs. 283316.37 lakh as per audited accounts. The admissible reserve on this amount @ 0.25% comes to Rs. 708.29 lakh and the same is admitted.

**5.5.2.9 Income from Sources other than Tariff:**

WBPDCL did not project any amount towards incomes from the sources other than tariff. This appears to be very much unusual. In the absence of any rational estimate submitted in this regard, the Commission considers that the total of such incomes to remain at par with that of 2009 – 2010. The amount is 808.52 lakh.

5.5.2.10 Proportionate allocable costs to Sagardighi Transmission Project included in the above costs are:

Sl. No.	Particulars	Amount in Rs. in Lakh
		2010 - 2011
1	Interest	1379.75
2	Depreciation	775.26
3	Return on Equity	877.04
	<b>Total</b>	<b>3032.04</b>

The above allocation of cost to Sagardighi Transmission Project is based on project cost as approved provisionally in Chapter – 2 of this Order. However, the matter and cost will be viewed afresh on settlement of the issue and finalization of project cost.



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5.5.2.11 Summing up the analyses and findings above, the net amount of fixed charges for Sagardighi Thermal Power Station for the year 2010 – 2011 comes to Rs. 51874.40 lakh as against Rs. 50427.37 lakh projected by WBPDCCL. The statement at Annexure – 5B may be referred to in this regard.

**5.6 Allowable Fixed Charges for Vth Unit of Santaldih Thermal Power Station:**

The Vth Unit of Santaldih Thermal Power Station with 250 MW capacity is an extension to earlier units in operation. There was no generation from this newly installed unit during 2008 – 2009. This unit was, however, in commercial operation for the full year of 2009 – 2010 and also for 2010 – 2011. Net amount of fixed charges claimed by WBPDCCL for the year 2009 – 2010 is Rs. 24197.34 lakh and the net fixed charges projected for the year 2010 – 2011 is Rs. 24604.86 lakh. Major head-wise break up of the amounts so claimed and projected are shown in Annexure 5C and Annexure 5D respectively to this Chapter.

The copy of the audited accounts of WBPDCCL for the year 2009 – 2010 is made available to the Commission. The Commission, therefore, decides to view the amount of allowable fixed charges for that year based on the aforesaid audited accounts. For the year 2010 – 2011, however, such allowable charges are being viewed on prudent analyses of projections submitted by WBPDCCL keeping in view the trend of actual expenses incurred in the preceding year.

**5.6.1 Allowable fixed charges for the year 2009 – 2010:**

**5.6.1.1 Employee Cost:**

The amount of actual expenditure incurred as per the audited accounts towards employee cost during 2009 – 2010 was found as under:



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Sl. No.	Particulars	Amount in Rs. in Lakh
		2009 – 2010
1	Employee Remuneration	2512.66
2	Contribution to P.F. and other funds	147.67
3	Welfare expenses	81.59
	<b>Total</b>	<b>2741.92</b>

Since the expenditures are categorized as uncontrollable, the total amounts so incurred on that account are admitted.

**5.6.1.2 Coal & Ash Handling Charges:**

Coal and ash handling expenses are also classified as uncontrollable. The amount of actual expenditure of Rs. 77.86 lakh incurred and claimed by WBPDCCL as per the audited accounts is found reasonable and hence admitted.

**5.6.1.3 Operation & Maintenance Expenses:**

The expenditures, claimed by WBPDCCL on this account, are Rs. 3192.50 lakh. Such expenditures, being controllable in nature, are, however, required to be viewed with reference to the norms considered by the Commission in Part G of the Schedule 9A to the Tariff Regulations. The allowable total expenditure under this head as per the aforesaid provisions of the Tariff Regulations computes as under:

Sl. No.	Particulars	2009 – 2010
1	Normative expenditure (Rs. Lakh / MW)	6.43
2	MW in operation	250
3	Normative Expenditure for full year's operation (Rs. in Lakh)	1607.50

The amount of such normative expenditure i.e. Rs. 1607.50 lakh is admitted.



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**5.6.1.4 Water Charges / Cess:**

Expenditures towards water charges / cess are uncontrollable and the amount of actual expenditure of Rs. 75.85 lakh incurred as per the audited accounts is found reasonable and hence admitted.

**5.6.1.5 Depreciation:**

The value of total gross block of assets capitalized during the year was Rs. 156192.74 lakh. The amount of depreciation charged for the year came to Rs. 5622.94 lakh and the same is admitted. It is however to mention that the amount of depreciation so admitted is provisional. WBPDCCL may have to revise the figure on final approval of the completion cost of the assets constructed / procured.

**5.6.1.6 Return on Equity Capital:**

As it comes out from the audited accounts and submission, a total amount of Rs. 42900.00 lakh was provided by the Government of West Bengal as equity capital for setting up the Vth generating unit. The entire amount of such equity contribution was drawn by WBPDCCL before 1<sup>st</sup> April, 2009 and, as such, the entire amount of equity remained deployed during 2009 – 2010. However, it may be seen from the paragraph 2.4.2(x) that actual debt equity ratio is coming to 66.29:33.71. In terms of regulation 5.4.2 of the Tariff Regulations, 2011, for the purpose of determination of tariff or new capital expenditure including expenses of existing business, debt equity ratio as on date of commercial operation of generating station and transmission projects shall be 70:30. Where equity employed is more than 30%, the amount of equity shall be limited to 30% and the balance amount shall be considered as normative loan capital. Revised capital cost of Santaldih Thermal Power Station (Unit V) is Rs. 127249 lakh (as per Annexure – 2A-2) and 30% equity as per norms comes to Rs. 38175 lakh. Thus,



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the return on equity is entitled on Rs. 38175 lakh and balance amount of Rs. 4725 lakh is to be treated as normative debt. The amounts allowable as return on equity capital for the year 2009 – 2010 @ 15.5% work out to Rs. 5917.13 lakh and the same is admitted. However, it is subject to review in terms of debt equity norms after finalization of firm project cost.

**5.6.1.7 Taxes as per Income Tax Act:**

A negative amount of Rs. 2050.69 lakh was allocated to the accounts of Santaldih Thermal Power Station towards income tax based on the intra unit accounting principle stated earlier. The same amount is considered for adjustment while arriving at the amount of net fixed charges.

**5.6.1.8 Interest:**

**5.6.1.8.1 Interest on Borrowed Capital:**

All borrowings in the capital accounts of Vth unit of Santaldih Thermal Power Station were from the Power Finance Corporation Limited. The total amount of such borrowings at the beginning and end of the 2009 – 2010 were found as under:

Sl. No.	Particulars	Amount in Rs. in Lakh
		2009 – 2010
1	Opening Balance	90210.50
2	Add: Fresh drawal during the year 2009 – 2010	5210.55
	<b>Total</b>	<b>95421.05</b>
3	Less: Repayment during the year	4731.82
4	<b>Balance at the close of the year</b>	<b>90689.23</b>

It comes out from the above enumerations that the total amount of borrowings came to Rs. 95421.05 lakh. Adding Rs. 42900.00 lakh of equity capital contributed by the Government of West Bengal to this amount of borrowing, the





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total amount of capital fund deployed comes to Rs. 138321.05 lakh which exceeds the capital cost of the project, by Rs. 11072.05 lakh provisionally approved by the Commission. Rs. 10072.28 lakh was charged as actual interest by WBPDCCL during 2009 – 2010 for Santaldih Unit No. V as per Schedule 12 of its units' accounts which included interest on working capital of Rs. 92.27 lakh from public sector banks, which has been dealt separately. Thus, interest on capital borrowing charged to accounts is Rs. 9980.01 lakh. Weighted average cost of debt during 2009 – 2010 comes to 11%. The full amount of actual interest charges as incurred by WBPDCCL on this account can not be allowed. Such charges presently being allowed by the Commission is being computed as under:

Sl. No.	Particulars	Amount in Rs. in Lakh
		2009 – 2010
1	Capital cost provisionally approved	127249.00
2	Less: Equity capital on which return allowed	38175.00
3	Deployment of Borrowed Capital considered	89074.00
4	Interest being allowed @ 11%	9798.14

**5.6.1.8.2 Interest on Normative Debt:**

The amount of normative debt of Rs. 4725 lakh as computed at paragraph 5.6.1.6 is adjusted against excess of actual loan taken over project cost and thus no interest was separately considered as is already covered under interest on actual borrowings allowed.

**5.6.1.9 Interest on Working Capital:**

An amount of Rs. 3848.93 lakh was borrowed by WBPDCCL during 2009 – 2010 from the Public Sector Banks and total interest paid on this borrowing came to Rs. 92.27 lakh. The amount of working capital loan and the rate of interest on



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such loan, being within the norms stipulated in regulation 4.65 of the relevant Tariff Regulations, the Commission admits the amount of interest so paid.

**5.6.1.10 Income from other Non-Tariff Sources:**

An amount of Rs. 70.74 lakh was received by WBPDCCL during 2009 – 2010 towards non-tariff income. That amount is being considered as a deduction from the amount of gross fixed charges for arriving at the allowable net fixed charges.

**5.6.1.11 Interest Credit:**

In terms of applicable regulation 4.5.3, the actual amount of loan repayment during 2009 – 2010 being less than the allowed depreciation, an interest credit at the rate of weighted average cost of debt is provided on such excess depreciation charged.

	<b>Rs. in Lakh</b>
	<b>Santaldih Unit No. V</b>
1. Depreciation allowed during 2009 – 2010	5622.94
2. Loan Repayment during 2009 – 2010	4731.82
3. Excess Depreciation charged during 2009 – 2010	891.12
4. Weighted average cost of Debt	11%
5. Interest Credit	98.10

**5.6.1.12 Fixed Charge recoverable from WBSETCL for Santaldih Transmission System:**

The provisionally approved capital cost of the project is for a total amount of Rs. 127249 lakh which includes an amount of Rs. 3040 lakh towards Santaldih – Bishnupur line for evacuation of power from Santaldih. WBPDCCL stated that after completion of the transmission package, the system will be handed over to WBSETCL, who will be maintaining the system until the borrowings for the



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system are repaid by WBPDCCL. This annual carrying charge of the transmission assets are found as under based on project cost as approved provisionally in Chapter – 2 of this Order. However, the said amount will be ascertained finally on finalization of project cost.

	<b>Rs. in Lakh</b>
	<b>Santaldih Unit No. V</b>
1. Interest	234.08
2. Depreciation	134.37
3. Return on Equity	141.36
<b>Total</b>	<b>509.81</b>

Rs. 509.81 lakh already allowed and included in the gross fixed charge of Santaldih Unit No. V is deducted from gross fixed charges for 2009 – 2010 as the matching amount of Rs. 509.81 lakh is recoverable from WBSETCL.

**5.6.1.13 Net fixed charges for the year 2009 – 2010:**

Summing up the admissible amounts under the different heads of accounts, the net allowable fixed charges comes to Rs. 23204.31 lakh vide Annexure 5C of this chapter.

**5.6.2 Allowable Fixed Charges for the year 2010 – 2011:**

The net amount of fixed charges projected by WBPDCCL for the year 2010 – 2011 for the Vth extension unit at Santaldih Thermal Power Station is Rs. 24604.86 lakh. The major head wise breakup of the amounts so projected is shown in Annexure – 5D. The Commission takes up to view the projected amounts under different heads rationally with reference to the amounts submitted with APR application for 2009 – 2010 found admissible based on audited accounts.



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**5.6.2.1 Employee Cost:**

The projected amount of Rs. 881.07 lakh towards employee cost appears inadequate if viewed with reference to the amount of actual expenditure incurred for the previous year after giving effect of employees' pay revision and mandatory provision for retirement benefits to the employees in terms of AS – 15. The employee cost in the previous year came to Rs. 2741.92 lakh which included a proportionate amount of Rs. 830.00 lakh towards provisions under AS-15. If that amount is excluded, the current expenditure for the year 2009 – 2010 comes to Rs. 1911.92 lakh. Adding average 5% to that towards normal increment etc, the Commission allows Rs. 2007.52 lakh for the year 2010 – 2011, subject to adjustment on submission of the application for APR for the year 2010 – 2011.

**5.6.2.2 Coal & Ash Handling and Water Charges:**

The projection of Rs. 525 lakh and Rs. 30 lakh submitted by WBPDCCL towards coal and ash handling charges and water charges respectively for 2010 – 2011 is widely varying from actual expenditure for 2009 – 2010. The Commission considers to admit 5% increase over the actual expenditure for 2009 – 2010 subject to adjustment in APR. Hence, the admitted amount towards coal and ash handling charges is Rs. 81.75 lakh and towards water charges is Rs. 79.64 lakh.

**5.6.2.3 Operation & Maintenance Expenses (O&M):**

The amount of expenditures projected by WBPDCCL towards repairs and maintenance and other administrative and general charges appear to be much higher than normative level of expenses in terms of provisions contained in Part G of the Schedule 9A to the concerned Tariff Regulations. Following the aforesaid provisions the Commission admits the total of O&M expenses as computed below:



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Sl. No.	Particulars	2010 – 2011
1	Normative expenditure (Rs. Lakh / MW)	6.75
2	MW in operation	250
3	Normative Expenditure [(1x2) (Rs. in Lakh)]	1687.50

**5.6.2.4 Interest on Borrowed Capital:**

As mentioned earlier (vide paragraph 5.6.1.8), all capital borrowings of WBPDCCL for the extension unit at Santaldih Thermal Power Station are from the PFCL. The rates of borrowings made at different trenches vary within the range of 11.25% to 13.50%. There is no projection for fresh capital borrowings during 2010 – 2011; but the repayment is due for Rs. 6000.00 lakh. The amount of Rs. 9232.42 lakh is projected towards interest charges. But to accommodate the amount of total capital borrowing within the ceiling of provisionally approved project cost, the projected amount required to be restricted as has been done for the previous year, vide paragraph 5.6.1.8 and working on the same line, the admissible amount for the year at an average rate of interest of 12.375% on Rs. 89074 lakh comes to Rs. 11022.91 lakh and no further interest is allowable on normative debt as after repayment the excess inadmissible loan is being more than normative debt.

**5.6.2.5 Depreciation:**

Depreciable asset base of the Vth unit remains unchanged over the previous year. Actual amount of depreciation charged in the previous year on such assets was Rs. 5622.94 lakh. The same amount is being considered for 2010 – 2011 as against Rs. 5854.52 lakh projected by WBPDCCL.



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**5.6.2.6 Advance against Depreciation:**

The projected amount of loan repayment during the year 2010 – 2011 is Rs. 6000.00 lakh. In terms of the Tariff Regulations, WBPDCCL is, therefore, entitled to have an amount of Rs. 377.06 lakh (Rs. 6000.00 lakh – Rs. 5622.94 lakh) towards advance against depreciation and the same is admitted.

**5.6.2.7 Return on Equity:**

Return on equity capital is allowable @ 15.50% with effect from the previous financial year. The amount of equity contribution of Rs. 42900 lakh received from the Government of West Bengal is to remain deployed for the full year. The amount of return allowable on Rs. 38175 lakh, thus, comes to Rs. 5917.13 lakh.

**5.6.2.8 Reserve for Unforeseen Exigencies:**

The total value of the gross block of fixed assets at the beginning of the year 2010 - 2011 is Rs. 156192.74 lakh as per audited accounts. The admissible reserve on this amount @ 0.25% comes to Rs. 390.48 lakh and the same is admitted

**5.6.2.9 Income from other Non-Tariff Sources:**

WBPDCCL did not project any amount of incomes to be derived by it from the sources other than tariff. This appears to be very much unusual. All generating stations generally derive some income towards recovery of interest from the loans allowed to the employee and like. Such income in the previous year amounted to total Rs. 70.74 lakh. The Commission considers to keep the amount of such receipts at previous year's level.



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**5.6.2.10 Fixed Charge recoverable from WBSETCL for Santaldih Transmission System:**

Reference may be made to our observations at paragraph 5.6.1.12. The annual carrying charge of the transmission assets for 2010 – 2011 is found as under based on proportion of cost. However, the said amount will be reviewed on finalization of project cost.

Sl. No.	Particulars	Amount in Rs. in Lakh
		2010 - 2011
1	Interest	263.34
2	Depreciation	134.33
3	Return on Equity	141.36
	<b>Total</b>	<b>539.03</b>

Rs. 539.03 lakh is already included in the gross fixed charges of Santaldih Unit No. V and hence the matching amount of Rs. 539.03 lakh is deducted as recoverable from WBSETCL.

**5.6.2.11 Net Fixed Charges for the year 2010 – 2011:**

Summing up the findings in the foregoing paragraph, the admissible net amount of fixed charges for the Vth unit of Santaldih Thermal Power Station comes to Rs. 26577.12 lakh for the year 2010 - 2011. The statement at Annexure – 5D may be referred to in this regard.

**5.7 Allowable Fixed Charges for IVth and Vth Units of Bakreswar Thermal Power Station:**

The IVth and Vth units of Bakreswar with 210 MW capacity each started commercial operation with effect from 6<sup>th</sup> March, 2009 and 27<sup>th</sup> June, 2009 respectively. Thus, IVth unit had been in commercial operation for 26 days during the year 2008 – 2009. WBPDCCL did not ask for any fixed cost separately for this



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unit for that year other than the interest on borrowed capital and ROE. On coming up of Vth unit on 27<sup>th</sup> June, 2009, the additional 420 MW capacity of the generation station came into commercial operation on an average period of 321.5 days, say 322 days during 2009 – 2010. The Commission, therefore, takes up to ascertain the amount of net allowable fixed charges for the years 2009 – 2010 and 2010 – 2011. Subsequent to submission of its tariff application for the aforesaid years, WBPDCCL submitted its audited accounts for the year 2009 – 2010. The Commission, therefore, decides to ascertain the amount of allowable net fixed charges for the year 2008 – 2009 and 2009 – 2010 going by its audited accounts. The same for the year 2010 – 2011 is, however, being assessed on the prudent analysis of the projections made by the applicant as has been done for the new units of Sagardighi and Santaldih Thermal Power Stations. The amounts of net fixed charges projected by WBPDCCL for the years 2009 – 2010 and 2010 – 2011 are Rs. 30131.64 lakh and Rs. 33894.24 lakh respectively. Major head wise break-up of the amounts so projected are at Annexure 5E and 5F.

**5.7.1 Allowable Fixed Charges for 2008 – 2009:**

As seen from the applications submitted by WBPDCCL, the total amounts of fixed charges claimed are Rs. 869.01 lakh for the year 2008 – 2009. The head wise breakup to the amounts so claimed is shown in Annexure – 5E. In terms of regulation 2.5.6.3 read with Table 2.5-1 of the Tariff Regulations, 2007, as amended, which remains applicable in the present case, the expenditures under certain heads of accounts are to be considered uncontrollable. The operation and maintenance (O&M) expenses of the generating stations are to be considered as controllable and regulated as per the norms set by the Commission, vide Part G of the Schedule 9A to the referred Tariff Regulations. The admissibility of charges / expenditures claimed by WBPDCCL under interest on borrowed capital and return on equity through its application is being viewed hereunder.





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The Commission considered that since Bakreswar Unit IV had been in commercial operation for 26 days and WBPDCCL did not make any claim other than interest and return on equity, the Commission will view the admissibility of fixed charges of the same. However, the Commission also considered to admit their proportionate operation and maintenance expenses as per norms being controllable in nature entitled to WBPDCCL.

**5.7.1.1 Operation & Maintenance Expenses:**

Although no amount has been claimed by WBPDCCL during 2008 – 2009 under this head of accounts, but with reference to the norms in Part G of the Schedule 9A to the applicable Tariff Regulations the Commission considered to admit the amount under this head as per the aforesaid provisions of the Tariff Regulations computed as under:

<b>Sl. No.</b>	<b>Particulars</b>	<b>2008 – 2009</b>
1	Normative expenditure (Rs. Lakh / MW)	7.21
2	MW in operation	210.00
3	Normative Expenditure for full year's operation (Rs. in Lakh)	1514.10
4	Period of operation (Days)	26
5	Proportionate amount admissible (Rs. in Lakh)	107.85

Going by the provisions of the Tariff Regulations, the Commission admits the normative amount of Rs. 107.85 lakh towards operation and maintenance expenses for the year 2008 – 2009.



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**5.7.1.2 Interest on Borrowed Capital:**

All borrowings in the capital accounts of Bakreswar Thermal Power Station were from the Government of West Bengal. The total amount of such borrowings at the beginning and end of the concerned years were found as under:

Sl. No.	Particulars	Amount in Rs. in Lakh
		2008 - 2009
1	Opening Balance	108139.41
2	Add: Fresh drawal during the year	23311.43
	<b>Total</b>	<b>131450.84</b>
3	Less: Repayment during the year	1168.67
4	<b>Balance at the close of the year</b>	<b>130282.17</b>

It comes out from the above enumerations that the total amount of borrowings came to Rs. 131450.84 lakh (Rs. 108139.41 lakh + Rs. 23311.43 lakh). Adding Rs. 12127.68 lakh of equity capital received from the Government of West Bengal to this amount of borrowing, the total amount of capital fund deployed from these two sources comes to Rs. 143578.52 lakh which remained within the limit of the amount of provisional estimate of capital cost of the project. The Commission, therefore, allows the actual amount of interest claimed by WBPDCCL amounting to Rs. 748.07 lakh for the year 2008 – 2009.

**5.7.1.3 Return on Equity:**

As it comes out from the audited accounts, a total amount of Rs. 63000 lakh was provided by the Government of West Bengal as equity capital for the execution of the project. The amount of such equity contribution drawn by WBPDCCL upto 31<sup>st</sup> March, 2008 was Rs. 12127.68 lakh which remained deployed for the construction of the generating station. No further amount was added to the equity



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fund during 2008 – 2009. The amounts allowable as return on equity capital for the year 2008 – 2009 @ 14% works out as shown hereunder:

Sl. No.	Particulars	Amount in Rs. in Lakh
		2008 - 2009
1	Equity Capital	12127.68
2	Return on Equity Capital	1697.88
3	Period of utilization of Equity (Days)	26
4	<b>Return allowable on proportionate basis</b>	<b>120.94</b>

**5.7.1.4 Net Fixed Charge for the year 2008 – 2009:**

Summing up the findings in the foregoing paragraph, the admissible net amount of fixed charges for IVth unit of Bakreswar Thermal Power Station comes to Rs. 976.86 lakh for the year 2008 – 2009. The statement at Annexure – 5E may be referred to in this regard.

**5.7.2 Allowable Fixed Charges for 2009 – 2010:**

**5.7.2.1 Employee Cost:**

The amount of actual expenditure incurred as per the audited accounts towards employee cost during 2009 – 2010 was found as under:

Sl. No.	Particulars	Amount in Rs. in Lakh
		2009 – 2010
1	Employees Remuneration	1993.63
2	Contribution to P.F. and other funds	192.14
3	Welfare expenses	36.05
	<b>Total</b>	<b>2221.82</b>

Since the expenditures are categorised as uncontrollable, the total amounts so incurred on that account are admitted.



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**5.7.2.2 Coal & Ash Handling Charges:**

Coal and ash handling expenses are also classified as uncontrollable. The amount of actual expenditure of Rs. 162.14 lakh incurred and claimed by WBPDCCL as per the audited accounts is found reasonable and hence admitted.

**5.7.2.3 Operation and Maintenance (O&M) Expenses:**

The total expenditures, as claimed by WBPDCCL, are Rs. 3180.00 lakh. Such expenditures, being controllable in nature, are, however, being allowed in terms of norms considered by the Commission in Part G of the Schedule 9A to the concerned Tariff Regulations. The allowable total expenditure under this head as per the aforesaid provisions of the Tariff Regulations computes as under:

<b>Sl. No.</b>	<b>Particulars</b>	<b>2009 – 2010</b>
1	Normative expenditure (Rs. Lakh / MW)	7.57
2	MW in operation	420
3	Normative Expenditure for full year's operation (Rs. in Lakh)	3179.40
4	Period of operation (Days)	322
5	Proportionate amount admissible for 322 days (Rs. in Lakh)	2804.84

**5.7.2.4 Water Charges:**

The expenditure towards water charges / cess is uncontrollable and the amount of actual expenditure of Rs. 11.44 lakh incurred as per the audited accounts is found reasonable and hence admitted.



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**5.7.2.5 Interest on Borrowed Capital:**

All borrowings in the capital accounts for IVth and Vth units of Bakreswar Thermal Power Station were from the Government of West Bengal. Outstanding balance of such borrowings at the beginning of the year 2009 – 2010 was Rs. 130282.17 lakh. Fresh borrowing during the year 2009 – 2010 was Rs. 1777.17 lakh and repayment was Rs. 3080.35 lakh. Total borrowings, thus, came to Rs. 132059.34 lakh (Rs. 130282.17 lakh + Rs. 1777.17 lakh). Adding Rs. 37563.84 lakh the average equity capital deployed on which return on equity has been allowed considering Rs. 63000.00 lakh of equity capital received from the Government of West Bengal during the year to this amount of total borrowing, the total amount of capital fund deployed from these sources comes to Rs. 169623.18 lakh which remained within the limit of the amount of provisional estimate of capital cost of the project. The Commission, therefore, allows the actual amount of interest of Rs. 14107.06 lakh charged in the books of accounts out of which, Rs. 136.54 lakh was interest on working capital which has been dealt separately. The Commission admits interest on borrowed capital amounting to Rs. 13970.52 lakh during 2009 – 2010.

**5.7.2.6 Interest on Working Capital:**

An amount of Rs. 5695.58 lakh was borrowed by WBPDCCL during 2009 – 2010 from the public sector banks and the total amount of interest paid on this amount came to Rs. 136.54 lakh. The amount of working capital loan and the rate of interest on such loan being within the norms stipulated in regulation 4.65 of the Tariff Regulations, the Commission admits the amount so paid.

**5.7.2.7 Depreciation:**

The value of total gross block of assets at the beginning of the year 2009 – 2010 was Rs. 125289.34 lakh. Value of assets capitalized during the year came to Rs.



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76810.86 lakh and hence, the total value of depreciable assets came to Rs. 202100.22 lakh. The amount of depreciation chargeable for the concerned year came to Rs. 6506.67 lakh and the same is admitted. As has been mentioned earlier, the amounts of depreciation for the concerned new units of WBPDCCL are provisional. WBPDCCL may have to revise the figure on final approval of the completion cost of the assets constructed / procured.

**5.7.2.8 Return on Equity Capital:**

As it comes out from the audited accounts and submissions, the amount of equity base of the newly installed IVth and Vth units of Bakreswar Thermal Power Station and the amount of allowable return work out as under:

Sl. No.	Particulars	Nomenclature	Rs. in Lakh
1	Opening balance as on 01.04.2009	(a)	12127.68
2	Equity received during 2009 – 2010	(b)	50872.32
3	Equity as on 31.03.2010	(c) = (a)+(b)	63000.00
4	Average equity deployed	(d)=[(a)+(c)/2]	37563.84
5	Return allowable for full year @ 15.50% on (d)	(e)	5822.40
6	<b>Return allowable on proportionate basis for 322 days on (e)</b>	(f)	5136.47

**5.7.2.9 Taxes as per Income Tax Act:**

Following the policy of allocation of the incidence of income tax, as stated in paragraph 5.5.1.6 and paragraph 5.6.1.7, an amount of Rs. 6233.99 lakh was found allocable to the accounts of Bakreswar on this account for the year 2009 – 2010. The same is admitted.



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**5.7.2.10 Reserve for Unforeseen Exigencies:**

The opening balance of the gross block of fixed assets at the beginning of the year 2009 – 2010 was Rs. 125289.34 lakh. The reserve for unforeseen exigencies @ 0.25% on this amount comes to Rs. 313.22 lakh and the same is admitted for the year 2009 – 2010.

**5.7.2.11 Income from Sources other than Tariff.**

Incomes accrued from different non-tariff sources during 2009 – 2010 amounted to total Rs. 354.77 lakh. This amount is being considered as a deduction from the gross amount of fixed charges.

**5.7.2.12 Interest Credit:**

In terms of applicable regulation 4.5.3, the actual amount of loan repayment during 2009 – 2010 being less than the allowed depreciation, an interest credit at the rate of weighted average cost of debt is provided on such excess depreciation charged.

	<b>Rs. in Lakh Bakreswar IV &amp; V Units.</b>
1. Depreciation allowed during 2009 – 2010	6506.67
2. Loan Repayment during 2009 – 2010	3080.35
3. Excess Depreciation charged during 2009 – 2010	3426.32
4. Weighted average cost of Debt	8.5%
5. Interest Credit	291.24

**5.7.2.13 Net Fixed Charges for the year 2009 – 2010:**

Summing up the findings in the foregoing paragraph, the admissible net amount of fixed charges for the IVth and Vth units of Bakreswar Thermal Power Station



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comes to Rs. 36851.64 lakh for the year 2009 – 2010. The statement at Annexure – 5E may be referred to in this regard.

**5.7.3 Allowable Fixed Charges for 2010 – 2011:**

The net amount of fixed charges projected by WBPDCCL for the year 2010 – 2011 for the IVth and Vth extension units at Bakreswar Thermal Power Station is Rs. 33894.28 lakh. The major head wise breakup of the net amounts so projected is shown in Annexure – 5F. The Commission takes up to view the projected amounts under different heads rationally with reference to the amounts found admissible for the previous year, i.e., 2009 – 2010 based on audited accounts.

**5.7.3.1 Employee Cost:**

WBPDCCL projected an amount of Rs. 1351.22 lakh towards employee cost for the year 2010 – 2011. As has been seen earlier, the actual amount of expenditure accounted for the previous year, i.e., 2009 – 2010 was an amount of Rs. 2221.82 lakh which was inclusive of the mandatory provision for retirement benefits to the employees in terms of AS – 15. If the amount of such provision is excluded from the previous year's amount of expenditure, actual employee cost for that year amounts to of Rs. 1351.22 lakh. Adding 5% to that towards normal increment, etc. the Commission allows Rs. 1418.78 lakh for 2010 – 2011, subject to adjustment on submission of the application for APR for the concerned year.

**5.7.3.2 Coal & Ash Handling Charges:**

The amount of Rs. 520.00 lakh projected towards coal and ash handling charges appears to be on the higher side if compared with the amount of actual expenditure of Rs. 163.14 lakh incurred in the previous year. Adding average 5%





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increase in expenditure over the previous year's figure, the Commission admits an amount of Rs. 171.30 lakh for the year 2010 – 2011.

**5.7.3.3 Water Charges / Cess:**

WBPDCCL did not project any amount for the year 2010 – 2011 towards water charges / cess payable for the use of water for the extension units. The actual expenditure incurred during the previous year on this account came to Rs. 11.44 lakh. Since the expenditures under this head of accounts have been categorized as uncontrollable, the Commission considers to admit a provision under this head at the level of 5% increase over the previous year's figure of actual expenditure, i.e., Rs. 12.01 lakh for the year 2010 – 2011.

**5.7.3.4 Operation & Maintenance (O&M) Expenses:**

In terms of norms fixed by the Commission in Part G of the Schedule 9A to the concerned Tariff Regulations, the total amount allowable to WBPDCCL under this head of accounts computes as under:

<b>Sl. No.</b>	<b>Particulars</b>	<b>2010 – 2011</b>
1	Normative expenditure (Rs. Lakh / MW)	7.95
2	MW in operation	420
3	Normative Expenditure for full year's operation (Rs. in Lakh)	3339.00

**5.7.3.5 Interest on Borrowed Capital:**

As observed in paragraph 5.7.2.5, capital borrowings of WBPDCCL for the extension units at Bakreswar Thermal Power Station and the amount of equity



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drawn from the Government of West Bengal upto the end of 2009 - 2010 was Rs. 132059.34 lakh and Rs. 63000.00 lakh respectively. Thus, the total amount of capital fund deployed at the beginning of the year 2010 – 2011 was Rs. 195059.34 lakh, which remains within the limit of the amount of capital cost of the project approved by the Commission. No further borrowing in the capital accounts during 2010 – 2011 has been projected. As per the projections submitted, the amount of loan refundable during the year has been shown as Rs. 2223.86 lakh. Interest chargeable on the actual borrowing has been projected at Rs. 10963.21 lakh. The Commission admits the same. Besides, the interest on normative debt is considered at Rs. 2469.00 lakh as worked out below. Thus, the total amount of Rs. 11168.18 lakh is being allowed on account of interest on loan including normative debt.

Sl. No.	Particulars	Amount in Rs. in Lakh
		2010 – 2011
1	Capital cost provisionally approved	201769.00
2	Less: Equity capital on which return allowed [(30% of (1))]	60531.00
3	Actual Equity	63000.00
4	Actual borrowed capital	132059.37
5.	Projected interest on actual borrowed capital	10963.21
6.	Normative Debt	2469.00
7.	Proportionate interest on normative debt	$\frac{10963.21 \times 2469.00}{132059.37}$ 204.97
8.	Total Interest including normative debt (5+7)	11168.18

**5.7.3.6 Depreciation:**

Assets relating to both the extension units of Bakreswar Thermal Power Station were capitalized and put on operation before 31<sup>st</sup> March, 2010. As is found in the audited accounts for the year 2009 – 2010, the total value of depreciable assets came to Rs. 202100.22 lakh and the amount of chargeable depreciation worked



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out to Rs. 6506.67 lakh. In view of that, the amount of Rs. 8325.94 lakh projected towards depreciation appears to be on the higher side. The Commission decides to admit the amount at previous year's level, i.e., Rs. 6506.67 lakh provisionally for the year 2010 – 2011.

**5.7.3.7 Return on Equity:**

Total amount of equity capital drawn by WBPDCCL from the Government of West Bengal upto 31<sup>st</sup> March, 2010 was for Rs. 63000.00 lakh. No addition to this amount was made during 2010 – 2011. However, it may be seen from the paragraph that actual debt equity ratio is coming to 68.78:31.22. In terms of regulation 5.4.2 of the Tariff Regulations, 2011, for the purpose of determination of tariff or new capital expenditure including expenses of existing business, debt equity ratio as on date of commercial operation of generating station and transmission projects shall be 70:30. Where equity employed is more than 30%, the amount of equity shall be limited to 30% and the balance amount shall be considered as normative loan capital. Revised capital cost of Bakreswar Thermal Power Station (Units IV & V) is Rs. 201769 lakh (as per Annexure – 2A-3) and 30% equity as per norms comes to Rs. 60531 lakh. Thus, the return on equity is entitled on Rs. 60531 lakh and balance amount of Rs. 2469 lakh is to be treated as normative debt. WBPDCCL is, therefore, entitled to return on Rs. 60531 lakh @ 15.5% per annum. The allowable amount of return, thus, works out to Rs. 9382.31 lakh.

**5.7.3.8 Reserve for Unforeseen Exigencies:**

The value of the gross block of fixed assets as at the beginning of the year was Rs. 202100.22 lakh. Amount of reserve on this amount @ 0.25% comes to Rs. 505.25 lakh and the same is admitted.



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**5.7.3.9 Income from Sources other than Tariff:**

WBPDCCL did not project any amount of income receivable from sources other than tariff. The Commission considers to keep the total of such income at the previous year's level of Rs. 354.77 lakh.

**5.7.3.10 Interest Credit:**

In terms of applicable regulation 4.5.3, the actual amount of loan repayment during 2010 – 2011 being less than the allowed depreciation, an interest credit at the rate of weighted average cost of debt is provided on such excess depreciation charged.

**Bakreswar IV & V Units.**

1. Depreciation allowed during 2010 – 2011	6506.67
2. Loan Repayment during 2010 – 2011	2223.86
3. Excess Depreciation charged during 2010 – 2011	4282.81
4. Weighted average cost of Debt	8.5%
5. Interest Credit	364.04

**5.7.3.11 Net amount of Estimated Fixed Charges:**

Summing up the findings as stated above, the estimated net amount of fixed charges comes to Rs. 31784.69 lakh as against Rs. 33894.28 lakh projected by WBPDCCL. The statement at Annexure 5F may be referred to in this regard.

**5.8 Admissible Aggregate Revenue Requirements:**

5.8.1 Summing up the analyses and findings recorded so far and shown in the statement covering the amounts of fuel charges as well as capacity charges for the concerned new units of WBPDCCL for the years 2008 – 2009, 2009 – 2010 and 2010 – 2011, the Commission now draws the statement showing the



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amounts of Aggregate Revenue Requirement (in short 'ARR') vide Annexure 5G. The following points in this regard need to be taken note of:

- i) Since the amounts of admissible fuel cost for the years 2008 – 2009 and 2009 – 2010 have been worked out in terms of concerned Tariff Regulations and the actual quantum of power sold to WBSEDCL, no further adjustments on account of FCA will be needed. The amount of such cost as worked out and admitted for the year 2010 – 2011 is, however, subject to adjustment on submission of application in this regard by WBPDCCL.
- ii) The amounts of capacity charges as considered herein are subject to achieving normative 85% Plant Availability Factor (PAF) and are subject to adjustments on the basis of actual level of PLF achieved.
- iii) Since the admissible amounts of capacity charges at 85% PAF for the year 2008 – 2009 have been worked on the basis of audited accounts and in terms of the concerned Tariff Regulations, no further adjustments on APR for that year will be needed.
- iv) The amounts of capacity charges for the year 2009 – 2010 and for 2010 – 2011 are subject to adjustments on taking up APR for those years. Impact of APR for 2009 – 2010 and 2010 – 2011 will be given effect through separate orders.



**ANNEXURE – 5A**  
**FIXED CHARGES FOR SAGARDIGHI (UNITS I & II)**  
**THERMAL POWER STATION FOR THE YEARS**  
**2008 – 2009 & 2009 – 2010**

(Amount in Rs. in Lakh)

Sl. No.	Heads of Fixed Charges	2008 – 2009		2009 – 2010	
		As claimed	As Admitted	As Claimed	As Admitted
1	Employee Cost	420.85	1750.25	1020.00	3489.58
2	Coal and Ash Handling Charges	0.00	37.23	500.00	675.48
3	Water Charges / Cess	0.00	0.00	0.00	0.00
	<b>Operation &amp; Maintenance Charges</b>				
4	(a) Repairs & Maintenance including consumables	395.75	1507.33	1955.00	3282.00
	(b) Other Administration & General Charges	217.98		935.00	
	<b>Interest and Finance Charges</b>				
5	(a) Interest	9086.19	9220.00	19325.72	18039.66
	(b) Interest on working capital	0.00	1.38	0.00	221.44
	(c) Other Finance Charges	0.00	0.00	0.00	0.00
	<b>Depreciation</b>				
6	(a) Chargeable for the year	4991.81	5296.36	10352.33	10983.93
	(b) Advance against Depreciation	1933.73	1629.18	3927.67	3512.59
7	Return on Equity	5569.31	5411.89	11550.00	12426.04
8	Taxes as per Income Tax Act	0.00	(1461.16)	0.00	(2039.57)
9	Reserve for Unforeseen Exigencies	0.00	0.00	678.97	708.29
10	<b>Gross Capacity Charges (1 to 9)</b>	<b>22615.62</b>	<b>23392.46</b>	<b>50244.69</b>	<b>51299.44</b>
	<b>Less: Deductions</b>				
11	(a) Incomes from sources other than tariff	0.00	1028.90	0.00	808.52
	(b) Other deduction	0.00	0.00	0.00	0.00
	<b>Total Deductions</b>	<b>0.00</b>	<b>1028.90</b>	<b>0.00</b>	<b>808.52</b>
12	<b>Net Amount of Fixed Charges (10 – 11)</b>	<b>22615.62</b>	<b>22363.56</b>	<b>50244.69</b>	<b>50490.92</b>



**ANNEXURE – 5B**  
**FIXED CHARGES FOR SAGARDIGHI THERMAL**  
**POWER STATION (UNITS I & II) FOR THE YEAR 2010 – 2011**

(Amount in Rs. in Lakh)

Sl. No.	Heads of Fixed Charges	2010 – 2011	
		As Projected	As Found Admissible
1	Employee Cost	1071.00	1752.19
2	Coal and Ash Handling Charges	525.00	525.00
3	Water Charges / Cess	0.00	0.00
4	<b>Operation &amp; Maintenance Charges</b>		
	(a) Repairs & Maintenance including consumables	2052.50	3444.00
	(b) Other Administration & General Charges	981.75	
5	<b>Interest and Finance Charges</b>		
	(a) Interest	19288.15	19548.40
	(b) Interest on working capital	0.00	0.00
	(c) Other Finance Charges	0.00	0.00
6	<b>Depreciation</b>		
	(a) Chargeable for the year	10352.33	10983.93
	(b) Advance against Depreciation	3927.67	3296.07
7	Return on Equity	11550.00	12426.04
8	Taxes as per Income Tax Act	0.00	0.00
9	Reserve for Unforeseen Exigencies	678.97	708.29
10	<b>Gross Capacity Charges (1 to 9)</b>	<b>50427.37</b>	<b>52683.92</b>
11	<b>Less: Deductions</b>		
	(a) Incomes from sources other than tariff	0.00	808.52
	(b) Other deduction	0.00	0.00
	<b>Total Deductions</b>	<b>0.00</b>	<b>808.52</b>
12	<b>Net Amount of Fixed Charges (10 – 11)</b>	<b>50427.37</b>	<b>51874.40</b>



## ANNEXURE – 5C FIXED CHARGES FOR SANTALDIH THERMAL POWER STATION (UNIT V) FOR THE YEAR 2009 – 2010

(Amount in Rs. in Lakh)

Sl. No.	Heads of Fixed Charges	2009 – 2010	
		As Claimed	As Admitted
1	Employee Cost	766.15	2741.92
2	Coal and Ash Handling Charges	500.00	77.86
3	Water Charges / Cess	30.00	75.85
4	<b>Operation &amp; Maintenance Charges</b>		
	(a) Repairs & Maintenance including consumables	2257.50	1607.50
	(b) Other Administration & General Charges	935.00	
5	<b>Interest and Finance Charges</b>		
	(a) Interest on borrowed capital	9697.68	9798.14
	(b) Interest on working capital	0.00	92.27
	(c) Other Finance Charges	0.00	0.00
6	<b>Depreciation</b>		
	(a) Chargeable for the year	5854.52	5622.94
	(b) Advance against Depreciation	0.00	0.00
7	Return on Equity	6006.00	5917.13
8	Taxes as per Income Tax Act	0.00	(2050.69)
9	Reserve for Unforeseen Exigencies	0.00	0.00
10	<b>Gross Capacity Charges (1 to 9)</b>	<b>26046.85</b>	<b>23882.92</b>
11	<b>Less: Deductions</b>		
	(a) Incomes from sources other than tariff	0.00	70.74
	(b) Interest Credit	0.00	98.10
	(c) Fixed charge recoverable from WBSETCL for Santaldih Transmission System	1849.51	509.81
	<b>Total Deductions</b>	<b>1849.51</b>	<b>678.65</b>
12	<b>Net Amount of Fixed Charges (10 – 11)</b>	<b>24197.34</b>	<b>23204.27</b>





## ANNEXURE – 5D FIXED CHARGES FOR SANTALDIH THERMAL POWER STATION (UNIT V) FOR THE YEAR 2010 – 2011

(Amount in Rs. in Lakh)

Sl. No.	Heads of Fixed Charges	2010 – 2011	
		As Projected	As Found Admissible
1	Employee Cost	881.07	2007.52
2	Coal and Ash Handling Charges	525.00	81.75
3	Water Charges / Cess	31.50	79.64
4	<b>Operation &amp; Maintenance Charges</b>		
	(a) Repairs & Maintenance including consumables	2370.00	1687.50
	(b) Other Administration & General Charges	981.75	
5	<b>Interest and Finance Charges</b>		
	(a) Interest on borrowed capital	9232.42	11022.91
	(b) Interest on working capital	0.00	0.00
	(c) Other Finance Charges	0.00	0.00
6	<b>Depreciation</b>		
	(a) Chargeable for the year	5854.52	5622.94
	(b) Advance against Depreciation	145.48	377.06
7	Return on Equity	6006.00	5917.13
8	Taxes as per Income Tax Act	0.00	0.00
9	Reserve for Unforeseen Exigencies	390.48	390.48
10	<b>Gross Capacity Charges (1 to 9)</b>	<b>26418.22</b>	<b>27186.93</b>
11	<b>Less: Deductions</b>		
	(a) Incomes from sources other than tariff	0.00	70.74
	(b) Fixed charge recoverable from WBSETCL for Santaldih Transmission System	1813.36	539.07
	<b>Total Deductions</b>	<b>1813.36</b>	<b>609.81</b>
12	<b>Net Amount of Fixed Charges (10 – 11)</b>	<b>24604.86</b>	<b>26577.12</b>



**ANNEXURE – 5E**  
**FIXED CHARGES FOR BAKRESWAR THERMAL**  
**POWER STATION (UNITS IV & V) FOR THE YEARS**  
**2008 – 2009 AND 2009 – 2010**

(Amount in Rs. in Lakh)

Sl. No.	Heads of Fixed Charges	2008 – 2009		2009 – 2010	
		As Claimed	As Admitted	As Claimed	As Admitted
1	Employee Cost	0.00	0.00	1286.88	2221.82
2	Coal and Ash Handling Charges	0.00	0.00	500.00	162.14
3	Water Charges / Cess	0.00	0.00	0.00	11.44
	<b>Operation &amp; Maintenance Charges</b>				
4	(a) Repairs & Maintenance including consumables	0.00	107.85	2600.00	2804.84
	(b) Other Administration & General Charges			580.00	
	<b>Interest and Finance Charges</b>				
5	(a) Interest on borrowed capital	748.07	748.07	13924.96	13970.52
	(b) Interest on working capital	0.00	0.00	0.00	136.54
	(c) Other Finance Charges	0.00	0.00	0.00	0.00
	<b>Depreciation</b>				
6	(a) Chargeable for the year	0.00	0.00	5597.51	6506.67
	(b) Advance against Depreciation	0.00	0.00	0.00	0.00
7	Return on Equity	120.94	120.94	5258.94	5136.47
8	Taxes as per Income Tax Act	0.00	0.00	0.00	6233.99
9	Reserve for Unforeseen Exigencies	0.00	0.00	383.35	313.22
10	<b>Gross Capacity Charges (1 to 9)</b>	<b>869.01</b>	<b>976.86</b>	<b>30131.64</b>	<b>37497.65</b>
	<b>Less: Deductions</b>				
11	(a) Incomes from sources other than tariff	0.00	0.00	0.00	354.77
	(b) Interest Credit	0.00	0.00	0.00	291.24
	<b>Total Deductions</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>646.01</b>
12	<b>Net Amount of Fixed Charges (10 – 11)</b>	<b>869.01</b>	<b>976.86</b>	<b>30131.64</b>	<b>36851.64</b>



**ANNEXURE – 5F**  
**FIXED CHARGES FOR BAKRESWAR THERMAL**  
**POWER STATION (UNITS IV & V) FOR THE YEAR 2010 – 2011**

(Amount in Rs. in Lakh)

Sl. No.	Heads of Fixed Charges	2010 – 2011	
		As Projected	As Found Admissible
1	Employee Cost	1351.22	1418.78
2	Coal and Ash Handling Charges	520.00	171.30
3	Water Charges / Cess	0.00	12.01
4	<b>Operation &amp; Maintenance Charges</b>		
	(a) Repairs & Maintenance including consumables	2730.00	3339.00
	(b) Other Administration & General Charges	609.00	
5	<b>Interest and Finance Charges</b>		
	(a) Interest on borrowed capital	10963.21	11168.18
	(b) Interest on working capital	0.00	0.00
	(c) Other Finance Charges	0.00	0.00
6	<b>Depreciation</b>		
	(a) Chargeable for the year	8325.94	6506.67
	(b) Advance against Depreciation	0.00	0.00
7	Return on Equity	8820.00	9382.31
8	Taxes as per Income Tax Act	0.00	0.00
9	Reserve for Unforeseen Exigencies	574.91	505.25
10	<b>Gross Capacity Charges (1 to 9)</b>	<b>33894.28</b>	<b>32503.50</b>
11	<b>Less: Deductions</b>		
	(a) Incomes from sources other than tariff	0.00	354.77
	(b) Interest Credit	0.00	364.04
	<b>Total Deductions</b>	<b>0.00</b>	<b>718.81</b>
12	<b>Net Amount of Fixed Charges (10 – 11)</b>	<b>33894.28</b>	<b>31784.69</b>



**ANNEXURE – 5G**  
**STATEMENT SHOWING AMOUNTS OF**  
**AGGREGATE REVENUE REQUIREMENT**  
**COVERING THE SECOND CONTROL PERIOD**

Particulars	Amount in Rs. in Lakh		
	2008 – 2009	2009 – 2010	2010 – 2011
<b>A. Sagardighi Thermal Power Station (Units I &amp; II)</b>			
Fuel Cost Recoverable (Vide Annexure – 4A, 4B & 4C)	18396.71	49655.69	64111.48
Fixed Charges (Vide Annexure 5A & 5B)	22363.56	50490.92	51874.40
<b>Total (A):</b>	<b>40760.27</b>	<b>100146.51</b>	<b>115985.88</b>
<b>B. Santaldih Thermal Power Station (Unit V)</b>			
Fuel Cost Recoverable (Vide Annexure – 4B & 4C)	0.00	12375.68	20800.05
Fixed Charges (Vide Annexure 5C & 5D)	0.00	23204.27	26577.12
<b>Total (B):</b>	<b>0.00</b>	<b>35579.95</b>	<b>47377.17</b>
<b>C. Bakreswar Thermal Power Station (Units IV &amp; V)</b>			
Fuel Cost Recoverable (Vide Annexure – 4A, 4B & 4C)	1007.22	38504.87	43883.27
Fixed Charges (Vide Annexure 5E & 5F)	976.86	36851.64	31784.69
<b>Total (C):</b>	<b>1984.08</b>	<b>75356.51</b>	<b>75667.96</b>



## CHAPTER - 6 ADMISSIBLE CAPACITY CHARGES FOR THE YEARS 2008 – 2009, 2009 – 2010 AND 2010 – 2011

- 6.1 Admissible amounts of fixed charges for Sagardighi Thermal Power Station and for the extension units at Santaldih (Unit V) as well as at Bakreswar (Units IV & V) Thermal Power Station for the years 2008 – 2009, 2009 – 2010 and 2010 – 2011 have been ascertained in the previous chapter. In terms of regulation 5.4.2 of the Tariff Regulations, the recovery of the amounts of allowable fixed charges as capacity charges can be allowed on achieving the normative PAF. Normative level of PAF for all the concerned newly installed units of WBPDC, as mentioned above, was set at 85%. As it comes out from the submissions, none of the new units of WBPDC could achieve the above normative level of PAF during 2008 – 2009 and 2009 – 2010 and as such, the recovery of the full amounts of allowable fixed charges can not be admitted. The recovery of the amounts of fixed charges as capacity charges needs to be restricted depending on the PAF achieved.
- 6.2 The permissible amounts recoverable through tariff as capacity charges for Sagardighi Thermal Power Station and for the extension units in other generating stations work out as under:

Sl. No.	Generating Station / Extension Unit	Unit	2008 – 2009	2009 – 2010
A.	Sagardighi			
	i) Allowable Fixed Charges at normative PAF level	Rs. Lakh	22363.56	50490.92
	ii) Normative PAF	%	85.00	85.00
	iii) Actual PAF	%	58.85	60.69
	iv) Proportionate amount realizable as fixed charges	Rs. Lakh	15483.48	36050.52
B.	Santaldih (Unit V)			
	i) Allowable Fixed Charges at normative PAF level	Rs. Lakh	NIL	23204.27
	ii) Normative PAF	%	N.A.	85.00
	iii) Actual PAF	%	N.A.	43.68
	iv) Proportionate amount realizable as fixed charges	Rs. Lakh	NIL	11924.26



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C.	Bakreswar (Units IV & V)			
	i) Allowable Fixed Charges at normative PAF level	Rs. Lakh	976.86	36851.64
	ii) Normative PAF	%	85	85.00
	iii) Actual PAF	%	67.99	79.69
	iv) Proportionate amount realizable as fixed charges	Rs. Lakh	781.37	34549.50

6.3 The amounts of capacity charges recoverable through tariff for the year 2008 – 2009 and 2009 – 2010, as computed above, as well as such charges for the year 2010 – 2011 as shown in Annexure, 5B, 5D and 5F to earlier chapter come as under:

<b>Generating Station</b>	<b>2008 – 2009</b>	<b>2009 – 2010</b>	<b>2010 – 2011</b>
Sagardighi	15483.48	36050.52	51874.40
Santaldih (Unit V)	NIL	11924.26	26577.12
Bakreswar (Units IV & V)	781.37	34549.50	31784.69

6.4 The figures for 2010 – 2011 are computed based on normative 85% of PAF and are subject to actual level of PAF and in terms of provisions of the Tariff Regulations.



## CHAPTER - 7 ADDITIONAL AMOUNT RECOVERABLE THROUGH TARIFF

- 7.1 In the earlier parts of the instant order, the Commission has determined the admissible amounts of energy charges and the capacity charges, separately for all the concerned years for Sagardighi Thermal Power Station (greenfield) as well as for the extension units at Santaldih (Unit V) and Bakreswar (Units IV & V) Thermal Power Stations. It now requires to ascertain with reference to the amounts of sales revenue billed and accounted for by WBPDC whether it is liable to refund part of such billed sales revenue or is entitled to recover additional amounts to meet up the revenue gap. The findings in this regard are shown in Annexure – 7A to 7C.
- 7.2 As may be seen, total amount of additional sales revenue recoverable from the West Bengal State Electricity Distribution Company Limited, the sole purchaser of power from WBPDC (in short 'WBSEDCL') upto the end of the financial year 2009 – 2010 in respect of supplies made from its new units by WBPDC comes to Rs. 88768.18 lakh with following generating station wise break up:

	Rs. in Lakh
Sagardighi	46309.50
Santaldih (Unit V)	9047.26
Bakreswar (Units IV & V)	33411.42
<b>Total:</b>	<b>88768.18</b>

### 7.3 Rate of Energy Charges for 2010 – 2011:

- 7.3.1 In its tariff order dated 29<sup>th</sup> July, 2010 for the year 2010 – 2011 in Case No. TP-39/08-09, the Commission provisionally allowed WBPDC to recover energy charges during 2010 – 2011 at an uniform rate of 158.13 paise / kWh for all its new units, vide paragraph 3.5 of the referred tariff order. Energy charges in



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respect of different new units, as now computed in terms of the Tariff Regulations, vide Annexure – 4C to chapter 4, differ as shown hereunder:

<b>Generating Station / Unit</b>	<b>Provisional Rate allowed earlier</b>	<b>Rate admitted for 2010 – 2011</b>
Sagardighi	158.13	167.34
Santaldih (Unit V)	158.13	138.53
Bakreswar (Units IV & V)	158.13	163.84

**7.4 Capacity Charges for 2010 – 2011:**

7.4.1 In its order dated 13.02.2009 in Case No. OA-53/08-09, the Commission provisionally determined the amounts of capacity charges on annual basis considering 85% of normative PAF. The amounts of fixed charges on normative PAF now fixed differ with the charges provisionally allowed earlier. The comparative statement in this regard is as under:

<b>Generating Station / Unit</b>	<b>Allowed provisionally at 85% PAF</b>	<b>As now coming at 85% PAF</b>
Sagardighi	25790.70	51874.40
Santaldih (Unit V)	10746.13	26577.12
Bakreswar (Units IV & V)	18053.50	31784.69





**ANNEXURE – 7A**  
**STATEMENT SHOWING THE AMOUNTS**  
**OF ADDITIONAL SALE REVENUE RECOVERABLE UPTO**  
**2009-2010 FOR SAGARDIGHI THERMAL POWER STATION**

Particulars	Amount in Rs. in Lakh			
	2007 – 2008	2008 – 2009	2009 – 2010	Total
A. Fuel Cost (Firm Power)	0.00	18396.71	49655.69	68052.40
B. Fixed Charges	0.00	15483.48	36050.52	51534.00
<b>C. Total amount recoverable (A+B)</b>	<b>0.00</b>	<b>33880.19</b>	<b>85706.21</b>	<b>119586.40</b>
D. Sales revenue billed (Firm Power )				
i) Fuel	0.00	14298.85	32369.98	46668.83
ii) Fixed Charges	0.00	8193.51	18414.56	26608.07
<b>E. Total Revenue Billed</b>	<b>0.00</b>	<b>22492.36</b>	<b>50784.54</b>	<b>73276.90</b>
<b>F. Additional amount recoverable (C-E)</b>	<b>0.00</b>	<b>11387.83</b>	<b>34921.67</b>	<b>46309.50</b>

Notes:

- i) Amounts billed for firm power for the years 2008 – 2009 and 2009 – 2010 are as per submissions made through applications for APR and reconciled with the amount of Sales Revenue booked in the audited accounts.



**ANNEXURE – 7B**

**STATEMENT SHOWING THE AMOUNTS OF ADDITIONAL  
SALE REVENUE RECOVERABLE UPTO 2009-2010 FOR  
SANTALDIH THERMAL POWER STATION (UNIT – V)**

Particulars	Amount in Rs. in Lakh			
	2007 – 2008	2008 – 2009	2009 – 2010	Total
A. Fuel Cost (Firm Power)	0.00	0.00	12375.68	12375.68
B. Fixed Charges	0.00	0.00	11924.26	11924.26
<b>C. Total amount recoverable (A+B)</b>	<b>0.00</b>	<b>0.00</b>	<b>24299.94</b>	<b>24299.94</b>
D. Sales revenue billed (Firm Power )				
i) Fuel	0.00	0.00	9730.43	9730.43
ii) Fixed Charges	0.00	0.00	5522.25	5522.25
<b>E. Total Revenue Billed</b>	<b>0.00</b>	<b>0.00</b>	<b>15252.68</b>	<b>15252.68</b>
<b>F. Additional amount recoverable (C-E)</b>	<b>0.00</b>	<b>0.00</b>	<b>9047.26</b>	<b>9047.26</b>

Notes:

- i) Amounts billed for firm power for the years 2009 – 2010 are as per the submissions made through applications for APR and reconciled with the amount of sales revenue booked in the audited accounts.



**ANNEXURE – 7C**  
**STATEMENT SHOWING THE AMOUNTS OF ADDITIONAL**  
**SALE REVENUE RECOVERABLE UPTO 2009-2010 FOR**  
**BAKRESWAR THERMAL POWER STATION (UNITS – IV & V)**

Particulars	Amount in Rs. in Lakh			
	2007 – 2008	2008 – 2009	2009 – 2010	Total
A. Fuel Cost (Firm Power)	0.00	1007.22	38504.87	39512.09
B. Fixed Charges	0.00	781.37	34549.50	35330.87
<b>C. Total amount recoverable (A+B)</b>	<b>0.00</b>	<b>1788.59</b>	<b>73054.37</b>	<b>74842.96</b>
D. Sales revenue billed (Firm Power )				
i) Fuel	0.00	0.00	26026.09	26026.09
ii) Fixed Charges	0.00	496.93	14908.52	15405.45
<b>E. Total Revenue Billed</b>	<b>0.00</b>	<b>496.93</b>	<b>40934.61</b>	<b>41431.54</b>
<b>F. Additional amount recoverable (C-E)</b>	<b>0.00</b>	<b>1291.66</b>	<b>32119.76</b>	<b>33411.42</b>

Notes:

- i) Amounts billed for firm power for the years 2008 – 2009 and 2009 – 2010 are as per the submissions made through applications for APR and reconciled with the amount of sales revenue booked in the audited accounts.



## CHAPTER - 8 TARIFF ORDERS

8.1 Based on the analyses done and findings stated in the earlier chapters in regard to fixation of tariff for the Greenfield Thermal Power Station at Sagardighi as well as new extension of generating units at Bakreswar and Santaldih Power Stations of WBPDC for the Second Control Period comprising financial years 2008-2009, 2009-2010 and 2010-2011, the Commission now orders as hereunder.

### 8.2 Capital Cost:

8.2.1 The amounts of Capital Costs considered presently for the fixation of tariff for the aforesaid new generating units are as under:

Rs. in Lakh

Generating Station	Project Cost	Transmission System	Total Project Cost
Sagardighi (Units I & II)	248364	18861	267225
Santaldih (Unit V)	124209	3040	127249
Bakreswar (Units IV & V)	201769	0	201769

8.2.2 The above amounts of Capital Cost so considered are provisional and subject to adjustments at the time of according final approval to the amounts of completion cost for which WBPDC is yet to submit the required information/ data on closing of the relevant works/ supply contracts. WBPDC is directed to submit those within three months from the date of this order.

### 8.3 Cost of Infirm Power:

8.3.1 The amounts of Capital Costs as considered provisionally are inclusive of the actual fuel costs incurred during the infirm period less the amounts billed for the supply of Infirm Power from the concerned new units. There was a short recovery in realization of fuel cost during the infirm period. The amounts of short recovery of the fuel cost of Infirm Power are found as under:



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**Rs. in Lakh**

<b>Generating Station</b>	<b>2007 – 2008</b>	<b>2008 – 2009</b>	<b>2009 – 2010</b>	<b>Total</b>
Sagardighi (Units I & II) (Vide Annexure 3A)	2749.54	7447.90	0.00	10197.44
Santaldih (Unit V) (Vide Annexure 3B)	0.00	9942.84	0.00	9942.84
Bakreswar (Units IV & V) (Vide Annexure 3C)	1082.95	5542.74	1583.30	8208.99
<b>Grand Total</b>	<b>3832.49</b>	<b>22933.48</b>	<b>1583.30</b>	<b>28349.27</b>

As explained in earlier paragraphs, WBPDCCL is not entitled to recover these amounts as additional revenue towards sale of Infirm Power and those are included in the project cost of the respective new / extension units of generating station. Accordingly, WBPDCCL will need to make necessary adjustment in the accounts of the Capital Costs of the concerned new units before the submission of necessary data for obtaining approval to the final completion costs.

8.3.2 The adjustment of the amounts of cost of Infirm Power to the Capital Accounts will affect the value of different items of fixed assets capitalized on which the amounts of the provisions for depreciation as well as of the Reserve for Unforeseen Exigencies have been considered in the instant order. Such adjustments may also alter the amounts of allowable interest on borrowings in the Capital Account in certain cases. WBPDCCL is, therefore, directed to reflect the effects of required adjustments in the referred items of fixed charges while submitting its subsequent applications for the APR.

**8.4 Rate of Energy Charges and the amounts of admissible Fixed Charges:**

8.4.1 The rates of energy charges and the amounts of fixed charges for the supply of firm power from the concerned new units for the years comprising the second control period are determined as under:



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Years	Particulars	Unit	Sagardighi (Units I & II)	Santaldih (Unit V)	Bakreswar (Units IV & V)
2008-2009	Rate of Energy Charges	Paise/ KWh	143.21	-	124.23
	Fixed Charges	Rs. Lakh	15483.48	-	781.37
2009-2010	Rate of Energy Charges	Paise/ KWh	170.75	141.57	164.68
	Fixed Charges	Rs. Lakh	36050.52	11924.26	34549.50
2010-2011	Rate of Energy Charges	Paise/ KWh	167.34	138.53	163.84
	Fixed Charges	Rs. Lakh	51874.40	26577.12	31784.69

8.4.2 In regard to the rates of energy charges and the amounts of Capacity Charges, as stated above, the following points are to be noted:

- a) The rates of energy charges for all concerned new units for the years 2008-2009 and 2009-2010 have been determined with reference to the audited annual accounts and in terms of provisions contained in the Tariff Regulations and hence, are not subject to any further Fuel Cost Adjustments (FCA).
- b) The amounts recoverable as fixed charges for the year 2008-2009 and for 2009-2010 have been determined with reference to Plant Availability Factors (PAFs) actually achieved (vide workings in Chapter 6) and as such are not subject to further adjustment. However some adjustments, to the amount of net admissible fixed charges for 2009-2010 may come on finalization of APR for that year which is under process.
- c) The rates of energy charges and the amounts of fixed charges for the year 2010-2011 are subject to variations depending on adjustments as may be necessary on finalization of the Fuel Cost Adjustments (FCA) and APR for that concerned year.



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**8.5 Additional amounts of Sales Revenue recoverable upto 2009-2010:**

As shown in Annexure – 7A to 7C to the instant order, total amount of additional sales revenue recoverable from the West Bengal State Electricity Distribution Company Limited (in short WBSEDCL) upto the end of the financial year 2009-2010 in respect of supply of Firm Power made from its concerned new generating units by WBPDCCL works out to Rs. 88768.18 lakh with the following station wise breakup.

	<b>Rs. in Lakh</b>
Sagardighi (Units I & II)	46309.50
Santaldih (Unit V)	9047.26
Bakreswar (Units IV & V)	33411.42
<b>Total</b>	<b>88768.18</b>

- 8.6 (a) Annual capacity charges for the year 2010 – 2011 is recoverable at the normative annual plant availability as provided in the following table for 2010 – 2011:

<b>Generating Station</b>	<b>Target Normative Plant Availability Factor (PAF)</b>
Sagardighi TPS (Units I & II)	85%
Santaldih TPS (Unit V)	85%
Bakreswar TPS (Units IV & V)	85%

- (b) Energy charge of each of the new / extension units of the generating stations mentioned above shall be recoverable for the year 2010 – 2011 against energy (ex-bus) for each month under implemented injection schedule during the year 2010 – 2011.



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- (c) WBPDCCL shall continue with the energy charge and capacity charge as approved for the year 2010 – 2011 for each new / extension unit of the generating stations during the year 2011 – 2012 and onward till tariff order of WBPDCCL for 2011 – 2012 comes into force.
- 8.7.1 WBPDCCL shall raise the energy bill for the new units as per the energy charge rate and capacity charge rate as approved for the year 2010 – 2011 for respective new / extension unit of generating stations starting from the bill for the month of December, 2011.
- 8.7.2 Adjustment, if any, for over recovery / under recovery from WBSEDCL for the period prior to December, 2011 including the recoverable amount as mentioned in paragraph 8.5 above shall be made in 72 (seventy two) equal monthly instalment through subsequent energy bills.
- 8.8 WBPDCCL submitted the application for adhoc tariff for Unit VI at Santaldih TPS. The date of commercial operation as declared by WBPDCCL is 30.09.2011. The Commission vide its Order dated 23<sup>rd</sup> December, 2011 allowed WBPDCCL to continue with the rate for energy charge and capacity charge for unit VI at Santaldih TPS as per the rates provisionally approved for Unit V at Santaldih TPS. Now WBPDCCL is allowed to claim the capacity charge and energy charge for Unit VI of Santaldih TPS at the rate as allowed for Unit V of Santaldih TPS for 2010 – 2011 in this order from the date of Commercial Operation (COD) of Unit VI till the tariff of Unit VI is finalized.
- 8.9 The annual capacity charge recoverable by WBPDCCL from April, 2011 for the generating stations / new units at Bakreswar (Units IV & V), Santaldih (Units V & VI) and Sagardighi (Units I & II) shall be on the following basis:
- 8.10.1 The annual capacity charge recoverable by WBPDCCL from WBSEDCL shall be on monthly basis depending on actual availability during the month with





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reference to the normative annual plant availability subject to the conditions as laid down in regulation 6.11.4 of the new Tariff Regulations.

- 8.10.2 The annual capacity charge is recoverable at the annual normative availability for the respective new / extension units of generating stations.
- 8.11 WBPDCCL shall raise the energy bill as per the energy accounting and availability declared by State Load Despatch Centre (in short 'SLDC') in its monthly energy accounting schedule.
- 8.12 In addition to the tariff determined under this tariff order, WBPDCCL will be further entitled to recover additional amounts towards enhanced cost of fuel to be termed as Monthly Fuel Cost Adjustment (MFCA), if any, from 1 April, 2011 as per provision of new Tariff Regulations. Such recovery of MFCA shall be subject to adjustment in accordance with the new Tariff Regulations.
- 8.13 As directed in the tariff order for 2008 – 2009, WBPDCCL shall continue to ensure that the generation of energy, energy consumed in auxiliaries and energy sent out from Unit IV and Unit V of Bakreswar Thermal Power Station are recorded separately. Similarly the generation of energy, energy consumed in auxiliaries and energy sent out from the Unit V & VI of Santaldih Thermal Power Station shall also be recorded separately.
- 8.14 Any matter, which has not been explicitly mentioned in this order, shall be guided by regulations 2.9.8 and 2.9.9 of the new Tariff Regulations.
- 8.15 It is directed that where there is any difference between the amounts appearing in the audited annual accounts and the amounts appearing in the application for determination of tariff or in the application for APR or in the application for Fuel and Power Purchase Cost Adjustment (in short 'FPPCA') under any head, due to adjustments, for any reason whatsoever, a reconciliation statement is to be



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furnished along with such application for determination of tariff or APR or FPPCA, as the case may be, in respect of each of such heads.

- 8.16 For merit order despatch, SLDC / ALDC shall consider the energy charge of the extension units / new units of the generating stations of WBPDCCL as per the following table:

<b>Generating Station</b>	<b>Energy Charge for Merit Order Despatch (Paise/kWh)</b>
Bakreswar (Units IV & V)	163.84
Santaldih (Units V & VI)	138.53
New Units of Sagardighi (Units I & II)	167.34

- 8.17 WBPDCCL shall submit to the Commission a gist of this order along with the names of at least four leading daily newspapers (at least one of which will be in English and one in Bengali) within three working days from the date of receipt of this order for approval of the Commission and on receipt of the approval shall publish the approved gist in those newspapers within four working days from the date of receipt of the approval of the Commission.

Sd/-  
SUJIT DASGUPTA  
MEMBER

Sd/-  
PRASADRANJAN RAY  
CHAIRPERSON

DATE: 30.12.2011