# Before the Karnataka Electricity Regulatory Commission, Bangalore

#### Order Dated 25th February, 2015.

#### Present:

- 1. Sri M.R. Sreenivasa Murthy Chairman
- 2. Sri H.D. Arun Kumar Member
- 3. Sri D.B. ManivalRaju Member

## Petition No. OP 35/2014

## In the matter of Approval of tariff in respect of 500 MW Bellary Thermal Power Station Unit-2 (BTPS Unit-2)

Karnataka Power Corporation Limited (KPCL),

Shakti Bhavan,

Racecourse Road,

Bangalore

...Petitioner

Vs

Bangalore Electricity Supply Company Limited, Bangalore

Mangalore Electricity Supply Company Limited, Mangalore

Chamundeshwari Electricity Supply Corporation Limited, Mysore

Hubli Electricity Supply Company Limited, Hubli

Gulbarga Electricity Supply Company Limited, Gulbarga...Respondents

## <u>ORDER</u>

#### 1. Preamble:

i. The Karnataka Power Corporation Ltd (herein after referred to as the 'Petitioner'), is a Government of Karnataka undertaking registered

underthe Companies Act, 1956, (on 20.07.1970 with fresh Certificate of Incorporation issued consequent to change of name on 01.10.1980). The petitioner is supplying power to all the ESCOMs (herein after referred to as 'Respondents'), in the State of Karnataka.

ii. The petitioner has filed an application on 10<sup>th</sup> March, 2014, before this Commission, for approval of the Power Purchase Agreement (PPA) and determination of tariff in respect of the 500 MW Bellary Thermal Power Station Unit-2 (BTPS Unit-2) for a period of 25 years from the Commercial Operation Date (COD) i.e. from 18.02.2013, under Section 61 read with Section 62 of the Electricity Act, 2003.

#### 2. Petitioner's submissions:

The petitioner, in its application for approval of the PPA and for determination of tariff in respect of BTPS unit-2, has made the following submissions:

- i. The Government of Karnataka, vide G.O. Number: DE 186 PPC 1997, dated 15-06-2002 has allotted the Power Project to the petitioner for construction and operation of 500 MW Thermal PowerPlant to be established at Bellary.
- **ii.** Clearance from the Ministry of Environment & Forests has been received for the project vide Government of Order dated 18-10-2007.
- **iii.** Water allocation from Water Resources Department, GoK has been received for the project.
- iv. Ministry of Coal, Government of India has directed the petitioner to utilise the coal requirement for the Unit 2 of BTPS from the allocated Coal Block of Integrated Baranj OCP at Chandapura District of Maharashtra in WCL area.
- **v.** The present extraction from the captive coal mine is at 2.5 MTPA, which is catering to the requirements of BTPS Unit-1.

- vi. The revised mining plan for enhancement of coal production from 2.5 million tonnes to 5.0 million tonnes per annum to meet the requirement of both the units of Bellary TPS from the coal blocks was approved by the Ministry of Coal, Government of India during August, 2011.
- vii. The procurement of coal from the allocated captive coal block for the project is yet to materialise due to non-receipt of Ministry of Environment & Forests' clearance for the enhanced production.
- **viii.** The Unit was commissioned on 18.02.2013 against the Scheduled date of 18.02.2011 after successful completion of the trial operation for 72 hours at 100% TGMCR from 15.02.2013 to 18.02.2013.
- ix. The BTPS unit-2 power plant has generated energy continuously from August, 2012 and in order to meet the coal requirement, tapering linkage from MCL was allocated by the Ministry of Coal, Government of India up to 31-03-2013.
- x. Thereafter, the petitioner has been procuring coal from SCCL on MOU basis on payment of an additional cost of Rs 1,000/- MT over and above the schedule price of coal in order to meet the requirement of coal for generation of power.
- **xi.** The petitioner is pursuing with the Ministry of Environment & Forests for issuance of clearance for the enhanced production of 2.50 MTPA from the allocated coal block, so as to meet the requirement of unit 2 of BTPS.

#### 3. Notification to the stake holders:

After the application was filed by the petitioner, the Commission invited comments from the beneficiaries (ESCOMs) and the Power Company of Karnataka Ltd., (PCKL) which coordinates the Power Purchase matters on behalf of ESCOMs). PCKL has in turn sought certain clarifications from the petitioner on the tariff application and the petitioner has furnished the details during December, 2014.

## 4. Public hearing process:

i. The Petitioner, as per the directions of the Commission, has published Notices of Public Hearing to be held on 23rd January, 2015, in the following English and Kannada newspapers:

Deccan Herald dated 17.01.2015,
Times of India dated 17.01.2015,
Samyuktha Karnataka dated 17.01.2015,
Vijay Karnataka, dated 17.01.2015,
Vijayavani, dated 17.01.2015

- **ii.** The Commission held a public hearing on 23<sup>rd</sup> January, 2015 and the gist of the submissions made by the petitioner and the Respondents is as under:
  - **a.** The petitionerstated that the capital cost is arrived at after considering the deductions towards infirm power, and liquidated damages. The petitionerhas also mentioned the details of renegotiated loans, rates of interest, operational norms, etc. It also submitted that the loans of Rs. 1629 Cr drawn earlier were taken at a weighted average rate of 10.25% interest.
  - b. Regarding the station heat rate, it was submitted that the same has been claimed as per Regulations. It was informed that the GCV of Coal is considered as landed, not as loaded. It was further submitted that, since there were no coal linkages for this unit, the petitioner has paid Rs 1000 per MT extra for purchase of coal in the initial stages for generating power.
  - c. Further, the petitioner made submissions about the SHR, GCV of fuel, average landed cost of coal, and sharing of the benefit on reduction of interest if any, in case of swapping. The petitioner also outlined the justification for the tariff proposed for the initial few years as well as the terminal year.

- **d.** Objections received from the Stakeholders and PCKL are as here under:
  - (i) PCKL while reiterating the written submissionsfiled, contended that the auxiliary consumption is not considered as per BHEL design which provides for 4.5% as against 7.5% claimed by the petitioner. To this, the petitioner clarified that 4.5% auxiliary consumption is not for the entire station and agreed to consider the auxiliary consumption as per regulations.
  - (ii) PCKL further raised issues on allowability of capital cost due to time overrun, reasons for delay in the completion of the project, infirm power calculations as per CERC rates for UI in Southern region, station heat rate, overheads on account of effluent treatment plant and depreciation.
  - (iii) BESCOM contended that the cost of infirm power and the liquidated damages should be deducted from the capital cost. It also objected to the SRPC rates being considered for computing infirm power instead of considering UI rates as per CERC. BESCOM also stated that MAT should be treated as advance tax and should be set off against the tax liability post tax holiday period.
  - (iv) GESCOM raised issues on uniform escalation on the O & M expenses for all the stations. To this, the petitioner clarified that the same is considered as per CERC Regulations.

The petitioner agreed toreviewall the issues once again in thelight of the objections and submit detailed reply/clarifications/workings to the Commission within 27th January, 2015.

## 5. Applicable Regulations:

The Commission has issued KERC (Terms and Conditions of Generation Tariff) Regulations 2009 (Reguations-2009) under the provisions of the Electricity Act, 2003. The generating stations which achieve CoD during the tariff period from

1.4.2009 to 31.03.2014 are governed by these Regulations. The BTPS Unit-2 has achieved CoD on 18.02.2013 and hence this application is being considered in terms of the said Regulations for determination of tariff. As regards the approval of the Power Purchase Agreement (PPA), the same will be considered separately after the determination of the tariff by the Commission.

After the review of the application and after hearing all the parties, the Commission proceeds to give its decisions on the following issues:

#### 6. Date of effect of this Order:

The petitioner has requested for determination of tariff for a period of 25 years from the Commercial Operation Date (COD) i.e. from 18.02.2013. The request being in order, the tariff determined in this Order would be effective from 18.02.2013.

#### 7. Tariff determination:

As perClause 14 of the Regulations-2009, the following are the various components to be considered for determination of tariff:

## (i) Capacity Charges / Fixed charges

- (a) Return on Equity
- (b) Interest on Loan capital
- (c) Depreciation
- (d) Interest on Working capital
- (e) O&M expenses
- (f) Cost of Secondary fuel oil

## (ii) Energy Charges / Variable charge

On the operational parameters, the submissions made by the Petitioner, the norms as per Regulations and the Commission's decisions thereon, are discussed in the relevant paragraphs.

Prior to detailing the individual components of tariff, the overall capital cost of the project and the means of financing the same by loan capital ('Debt') and Equity are discussed below:

## A. Capital cost:

A summary of the capital cost of the project as filed by the petitioner is shown below:

Table: 1
Summary of capital cost as per filings

		Rs in Crores
SL		Amount
No.	Particulars	as per
140.		filing
1.0	Cost of Land & Site Development	
2.0	Plant & Equipment	
2.1	Steam generator Island	405.17
2.2	Turbine generator Island	222.34
2.3	BOP Mechanical	
	Total BOP Mechanical	857.95
2.4	BOP Electrical	
	Total BOP Electrical	228.70
2.5	C & I Package	
	Total Plant & Equipment	1086.65
		Included
2.6	Taxes & Duties	above
	Total Plant & Equipment	1086.65
3.0	Initial Spares	
4.0	Civil Works	
	Total Civil Works	416.65
5.0	Construction & Pre-Commissioning expenses	
	Total Construction & Pre-commissioning expenses	0.00
6.0	Overheads	
	Total Overheads	75.09
7.0	Capital Cost excluding IDC & FC	
8.0	IDC, FC,FERV & Hedging Cost	457.31
	Total of IDC,FC,FERV & Hedging cost	457.31
	Total Capital cost	2035.70

The completion cost as on 18.02.2013 (CoD) is Rs 2035.70 Crs., against the estimated project cost of Rs 2261.00 Crores. The petitioner has considered the Debt-Equity ratio for the project as 80:20, with the debt portion of the capital

cost at Rs. 1629 Crs and the balance being considered as equity. Financial closure of the project was achieved on 26.09.2009 by the execution of loan documents with 12 participating lenders.

In the 204<sup>th</sup> Board meeting of the petitioner held on 18.08.2006, the Board accepted the EPC price offer of Rs 1690 Crores, for construction of the project which was inclusive of all taxes, duties, levies etc., prevailing on 31.7.2006 but exclusive of entry tax, including US Dollar of 25.66 Million and Euro 21.94 Million and INR of 1444.71 Crs (at the exchange rate of Rs 46/ USD and Rs 58/Euro). As submitted by the petitioner the common infrastructure cost of BTPS 1 is not included in the capital cost of BPTS unit-2.

The petitioner has provided independent Auditor's Report certifying the above capital cost. The Auditor's scope of work covered the review of the accounting policy of the company relating to capitalisation, compliance with accounting standards, verification of bills and other claims with respect to the EPC contract, allocation of CWIP to various categories of assets, verification of penalty and liquidated damages with reference to contract, and certification of capitalisation with a detailed report. Based on the auditor's report, the actual expenditure and the allocation are as follows:

Table: 2
Abstract of Capital Cost

Abstract of capital cost	
	Rs Crores
1. EPC contract w/o FERV	1,600.13
2. FERV	15.72
Sub-Total EPC	1,615.85
3. Non-EPC assets	101.82
Total before other capitalisations	1,717.67
4. Gen. Exp & depreciation capitalised	77.64
5. Pre-comm expenses less receipts	176.16
6. Infirm power	(152.43)
7. IDC	457.31
8. LD on EPC contractor	(240.66)
Total capital cost	2,035.69

#### Time overrun:

The scheduled date of commercial operation was 41 months from the "Zero" date i.e., 19.09.2007. However, the project was declared for commercial operation on 18.02.2013, with a time overrun of about 24 months. Liquidated damages of Rs. 240.66 Crores, were levied and recovered from the EPC contractor and deducted from the EPC cost of the Project.

## Infirm power:

The trial run income up to the Commercial Operation date has been worked out based on the UI rates obtained from SRPC and an amount of Rs 152.43 Crs has been reduced from the Capital cost as indicated in the following table:

Table: 3
Infirm Power and its costs as per filings

Month	Gr. Gen.	Net Transmitted	Amount (Rs)	
	(Kwh) (Kwh)			
Jul-12	4014000	1376000	7300665	
Aug-12	17392000	13048000	44862270	
Sep-12	136302000	125722000	478895627	
Oct-12	19898000	13962000	43377180	
Nov-12	136112000	124175000	338781210	
Dec-12	30198000	7936000	20841710	
Jan-13	113786000	104897000	280024142	
Feb-13 (up to				
17.02.13)	101878000	95616000	310266016	
Total	559,580,000	486,732,000	152,43,48,820	

#### Additional capitalisation:

It is submitted by the petitioner that, the additional capital expenditure if any, till the cut-off date i.e. up to 31.03.2016 will be submitted to KERC for approval of the Commission. However, there is no expenditure after the COD date till the date of this order.

## Interest During Construction (IDC):

As per the information provided by the petitioner and in the Auditor's Report, capital cost includes IDC of Rs. 457.31 crs. The IDC claimed by the petitioner is shown in the following table.

Table: 4
Year wise interest during construction

Year	Rupees
2007-08	6,97,29,452
2008-09	19,36,94,792
2009-10	42,79,99,106
2010-11	95,78,55,187
2011-12	149,97,00,948
2012-13	
(up to 17.02.13)	142,41,55,775
Total	457,31,35,260

The company has borrowed short term loans at interest rates ranging from 5.4% to 9.0% to meet the fund requirements while the unit was under construction up to the date of financial closure. The Long term loan drawals were also deferred, wherever possible, and substituted with lower interest bearing short term loans so that the interest burden is minimised. The interest rates for short term loans were favourable as compared to the Long term loans. The total short term interest out of capitalised IDC works out to Rs 51.80 Crores.

#### Un-discharged liabilities as on COD

As per the filing, there are no un-discharged liabilities.

#### Commission's observations and analysis

On examination of the Auditor's report, filings and the information provided by the petitioner, the Commission has reworked the capital expenditure of the project based on the following observations.

- It is noted that the initial spares value is not included in the capital cost.
- The revenue from infirm power has been reworked based on the data collected from SLDC and the appropriate UI rate at that relevant time block. Hence the revenue is calculated at Rs 173.62 crores instead of Rs 152.43 crores, as filed by the petitioner. Thus, the capital cost would stand reduced by Rs 21.19 crores.

Table: 5
Revised working of revenue from Infirm power

Month	Energy in MU	Revenue in Rs Cr
Jul-12	4.13	2.20
Aug-12	17.40	6.54
Sep-12	136.63	52.33
Oct-12	19.19	6.11
Nov-12	130.66	37.25
Dec-12	28.94	7.64
Jan-13	109.95	29.60
Up-to 17 Feb '13	98.27	31.96
Total	545.17	173.62

On time overrun, the Commission has considered the penalty levied and recovered by the petitioner on the EPC contractor. This has been set off against the capital expenditure and has provided relief to the beneficiaries. Further, the petitioner has also considered lower interest to be capitalised, as repayments of loan started earlier than the completion of the project. As per regulations, loan repayments prior to COD are not to be considered. This would have resulted in higher normative interest capitalisation and hence higher capital cost. Since this benefit is passed on to the beneficiaries, the Commission is of the opinion that no further penalty on time overrun need be levied on the petitioner.

#### Capital Cost Benchmark:

As per the CERC order No; L-1/103/CERC/2012 of June, 2012, on the benchmark capital cost (hard cost) for thermal power stations, 500 MW with 1

unit, extension (refer to Annexure II, page 19 of the order), hard cost per MW (excluding IDC, taxes and duties, financing charges, right of way charges, R&R etc.) isRs 4.92 Crores per MW. As per the filing (refer page 111 of the filing), the hard cost of the assets is Rs 1717.67 crores. This results in a final cost of Rs 3.44 crores per MW and is within the bench mark cost mentioned above.

Based on the above, the Commission has revised the Capital cost from Rs 2035.70 Crores to Rs 2014.51 Crores and approves the same for the purpose of determination of Tariff.

## B. Loan Capital (Debt);

The details of the loans borrowed as furnished by the Petitioner are as under:

#### Loans:

Based on the financial closure achieved on 26.09.2009, a consortium of 12 banks sanctioned a rupee term loan of Rs 1809 Crores. Till the CoD, Rs. 1582 Crores of loans have been drawn from various banks. Subsequent to CoD, Rs 47 Crores has been drawn by the petitioner to meet the overall Debt Equity ratio envisaged for the project at 80:20. The details of the loans drawn pre and post CoD are as follows:

Table: 6
Details of Borrowed Fund

Rs in Lakhs

	Borrowed
Name of the Bank	amount
Canara Bank	37800
Union Bank of India	29400
Corporation Bank	14900
Dena Bank	2800
Indian Bank	12000
Punjab & Sind Bank	14200
State Bank of Mysore	6000
Syndicate Bank	6600
UCO Bank	6500
State Bank of Travancore	12000
KarurVysya Bank	10000
Vijaya Bank	6000
Sub-total	158200

Post COD - drawn in	
November, 2013	
Canara Bank	2200
Union Bank of India	600
Corporation Bank	1100
Punjab & Sind Bank	800
Sub-total	4700
Total	162900

The interest rates at the time of sanction of Long Term loans were at 10% to 10.25% (based on the PLR of the banks). These rates increased to 12.45% to 13.25% by COD.

#### Loan repayment:

The original terms and conditions of loans were (i) moratorium period of 6 months, and (ii) loans to be repaid in 40 quarterly instalments commencing from 15.10.2011. Accordingly, the petitioner has repaid the loans and the closing balance of long term loans as of March, 2013, was Rs. 1,377 Crores.

## Weighted average rate of Interest:

The weighted average rate of interest for the first year of the full operation viz. FY 14 would be about 12.8% before refinancing. As per the details provided by the petitioner, post refinance, the weighted average rate of interest on loan capital works out to 10.22% in FY 15.

## Refinancing of loans:

The petitioner has taken steps to re-finance the existing loans by approaching other commercial banks. A reduction of 2.25% to 3.00% in interest rates has been achieved for a few of the loans. As of January, 2014, SBI had provided Rs 376.5 Crores (which would be refinancing some of the costlier loans) at 10.2% rate. This has resulted in a fee of Rs 1.33 Crores, which would be borne by the beneficiaries.

#### Commission's observations and analysis:

The Auditor's Report states that Rs 1588 Crores was the loan obtained for the capital expenditure as on CoD. On reviewing the statements filed by the petitioner, it is found that the borrowed fund drawn till CoD is Rs1582 Crs. The Commission has considered the actual loan drawn as per the statement filed by the petitioner, as it forms the basis for the loan repayments and interest calculations provided elsewhere in the filing.

On the subsequent drawal of loan to an extent of Rs 47 Crores after the CoD, the Commission considers it as part of the loan capital based on the following information provided by the petitioner;

- (1) Payment of outstanding contractor bills (as seen in the trial balance annexed as part of filing);
- (2) Post drawal of Rs 47 Crores, the gross loan amount drawn (Rs 1588 + 47 = 1629 crores) is still within the sanctioned limits at the time of the financial closure; and
- (3) Consequentially, this amount is reduced from the equity component as certified in the Auditor's Report.

Thus, the total loan of Rs 1629 Crores (Rs1582+47 crores) for the project is allowed for determination of Tariff of 500 MW BTPS unit-2.

As per the Regulations, the weighted average rate of interest is calculated using the actual loan profile of the above amount of Rs 1629 Crores.

## C. Debt Equity ratio

The Regulations- 2009 provide for a Debt Equity ratio of 70:30. The Equity contribution shall be at actual amount or 30% of the capital cost whichever is lower. If it exceeds 30%, the excess over and above 30 % shall be treated as loan for which interest is to be allowed.

The Commission had sought information from the petitioner to demonstrate that the equity contribution can be traced logically in their company's overall balance sheet. This was to ensure that the equity deployed is not a mere inference from overall capital cost and debt drawn. The equity should also be demonstrated as accrued in the company's consolidated balance sheet.

The following data is provided by the company to demonstrate accrual of equity. The capital expenditure during the periods from FY 08 to FY 13 covers BTPS-2 and RTPS -8 amongst others.

Table: 7
Extract of Balance sheet of the petitioner

#### **Rs in Crores**

Year	Capex	Loan	Equity	Change in Total		Equity investment
			released	Reserves		made by the
			by GOK	and Surplus		petitioner
1	2	3	4	5	6=(4+5)	7=(2-3)
2007-08	716.84	314.00	0.00	188.61	188.61	402.84
2008-09	1238.05	948.00	500.00	259.90	759.90	290.05
2009-10	1001.56	738.00	500.00	407.16	907.16	263.56
2010-11	1453.00	393.00	500.00	484.31	984.31	1060.30
2011-12	1106.37	623.89	625.00	88.20	713.20	482.48
2012-13	2363.17	1741.27	400.00	-34.24	365.76	621.90
Total	7,880.99	4,761.16	2,529.00	1,398.94	3,918.94	3,121.13

Based on the above, the Commission has considered the available equity component at Rs 385.51 Crores. (Capital cost of Rs. 2014.51 Crores minus Loan capital of Rs 1629 Crores)

As per the Auditor's report, the equity for the project was Rs 447.69 Crores (Capital cost of Rs. 2035.69 Crores (against Rs. 2035.70 Crs filed by the Petitioner) minus Loan capital of Rs 1588 Crores). While arriving at this amount, the auditor had not considered the loan amount drawn post CoD amounting to Rs 47 Crores. Besides, the loan capital considered is Rs 6 Crores more than the actual loan drawn till that time. After these corrections, the equity for the project comes to Rs. 406. 70 Crores. From this amount, if the differential

revenue from infirm power of Rs 21.19 Crores (Rs 173.62 Crores minus 152.43 Crores) is deducted, the equity amount comes to Rs. 385.51 Crores

Table:8

Debt and Equity allowed by the Commission

		Rs. Crores	%
1	Debt	1629.00	80.86%
2	Equity	385.51	19.14%

This level of equity works out to 19.14% of the capital cost of the project, which is less than the 30% allowable under the regulations. Thus the effective Debt Equity ratio for BTPS -2 is set at 80.86:19.14.

Therefore, the Commission allows a debt equity ratio of 80.86:19.14 in approving the tariff of 500 MW BTPS unit-2.

The following paragraphs discuss the components of tariff under each individual head and the relevant details are drawn from the capital cost and sources of funding.

#### General

There are only 41 days of commercial operation in FY 13 in the first year of operations. Hence, the Commission allows the annual expenditure in the first year viz. FY 13 for only 41 days. Similarly, in the last year of the life of the Plant, i.e. in the final tariff period viz. FY 37, the expenses are restricted to 324 days.

#### **Capacity Charges/Fixed Charges:**

## (i) Return on Equity:

The Petitioner has claimed RoE at 15.5% of the Equity as follows:

Table: 9
Return on Equity claimed by the petitioner
Rs in Crores

Year	FY 13	FY 14	FY 15	FY 16	FY 17	FY 18	FY 19
Return on Equity	10.12	78.81	78.81	78.81	78.81	78.81	78.81

## Commission's Analysis & Decisions:

Regulation 16, under sub-clauses (3) and (4) of Regulations- 2009, provides for computation of Return on Equity as under;

"(3) The rate of return on equity shall be computed by grossing up the base rate with the normal tax rate for the year 2008-09 applicable to the concerned generating company.

Provided that return on equity with respect to the actual tax rate applicable to the generating company in line with the provisions of the relevant Finance Acts of the respective year during the tariff period shall be trued up separately for each year of the tariff period along with the tariff petition filed for the next tariff period.

(4) Rate of return on equity shall be rounded off to three decimal points and be computed as per the formula given below:

Rate of pre-tax return on equity = Base rate / (1-t)

Where

t is the applicable tax rate in accordance with clause (3) of this regulation".

Accordingly the return on equity is determined by the Commission as discussed below:

The petitioner has proposed the following in the filing: Currently, the unit enjoys tax holiday up to FY22. However, the petitioner is required to pay a minimum MAT @ 20.0775%, during such exemption period.

From FY23 onwards, the petitioner has considered a tax rate of 32.445% against the tax rate of 33.99%. Hence the rate of return (grossed up), to be considered for these two periods, as per the petitioner is:

- **1.** 15.5%/(1-.200775) = ~19.394%
- **2.** 15.5%(1-.32445) = ~22.944%

As the petitioner is eligible for tax holiday and is required to pay the Minimum Alternative Tax (MAT), for the first ten years from CoD, Minimum Alternative Tax (MAT) @ 20.0775% is allowed for the period from FY 13 to FY 22. In the block of the next ten years from FY 23 to FY 32, total MAT paid is assumed to be set off, to the extent permissible under the relevant tax laws. This would reduce the tax rate from normal rate of taxation i.e. 33.99%. The set off from normal tax rate is only up to the level of MAT, as the Company tax rate cannot fall below the MAT rate. These rates are in conformity with the Regulations-2009. From FY 33 onwards, the normal tax rate would be @ 33.99%. With these rates (for different periods) and the equity as discussed in the preceding paragraphs under the heading 'Debt Equity Ratio', the year wise Return on Equity is worked out and allowed as under:

Table:10
Return on Equity allowed by the Commission

#### **Rs in Crores**

Year	FY 13	FY-14	FY-15	FY-16	FY-17	FY-18	FY-19
Return on							
Equity	8.40	74.76	74.76	74.76	74.76	74.76	74.76

The petitioner is directed to provide the actual tax credit availed during thepost-tax holiday period. If there be any correction, the same is required to be filed by the petitioner for truing up in the appropriate tariff period.

#### Note:

- a) The commission has discussed the individual components of the capital cost and the borrowed funds in the paragraphs under the head "A. Capital Cost", "B. Loan Capital (Debt)" and "C. Debt Equity Ratio" respectively. The allowed total capital cost is Rs 2014. 51 Crores and the loan capital is Rs 1629 Crores.
- b) The petitioner's Auditor's Report data, demonstration ofequity were discussed in theparagraphs under the head Debt Equity ratio.

## (ii) Interest on Loan Capital:

The interest on loan is based on the following parameters viz. opening balance of loan as on CoD and repayment during the tariff periods from FY 13.

The repayment schedule of loans, as per filings, shows values higher than the depreciation allowable in respectiveyears.

The petitioner has filed the actual loan repayment schedule based on the individual bank's terms and conditions – pre and post refinancing. Thus the opening balance, drawal, repayments, closing balance and interest payable for each bank loan has been presented. These were aggregated and the weighted average rate of interest has been worked out.

The interest on loans as per the petitioner is as follows;-

Table: 11
Interest on Loan capital claimed by the Petitioner

Year	FY 13	FY 14	FY 15	FY 16	FY 17	FY 18	FY 19
Interest on Loan (Rs -Crs)	19.99	165.96	148.18	127.01	105.84	84.68	63.51

## Commission's observations and analysis:

Regulation 17 of Regulations, 2009, provides that,

## "...17. Interest on loan capital.

- (1) The loans arrived at in the manner indicated in Clause 13 shall be considered as gross normative loan for calculation of interest on loan.
- (2) The normative loan outstanding as on 1.4.2009 shall be worked out by deducting the cumulative repayment as admitted by the Commission up to 31.3.2009 from the gross normative loan.
- (3) The repayment for the year of the tariff period 2009-14 shall be deemed to be equal to the depreciation allowed for that year:

- (4) Notwithstanding any moratorium period availed by the generating company, the repayment of loan shall be considered from the first year of commercial operation of the project and shall be equal to the annual depreciation allowed,
- (5) The rate of interest shall be the weighted average rate of interest calculated on the basis of the actual loan portfolio at the beginning of each year applicable to the project.:

Provided that if there is no actual loan for a particular year but normative loan is still outstanding, the last available weighted average rate of interest shall be considered:

Provided further that if the generating station does not have actual loan, then the weighted average rate of interest of the generating company as a whole shall be considered.

- (6) The interest on loan shall be calculated on the normative average loan of the year by applying the weighted average rate of interest.
- (7) The generating company shall make every effort to re-finance the loan as long as it results in net savings on interest and in that event the costs associated with such re-financing shall be borne by the beneficiaries and the net savings shall be shared between the beneficiaries and the generating company in the ratio of 2:1.
- (8) The changes to the terms and conditions of the loans shall be reflected from the date of such re-financing.
- (9) In case of dispute, any of the parties may make an application in accordance with the KERC (General and Conduct of Proceedings) Regulations, 2000, as amended from time to time, including statutory re-enactment thereof for settlement of the dispute:

Provided that the beneficiary shall not withhold any payment on account of the interest claimed by the generating company during the pendency of any dispute arising out of re-financing of loan..."

Thus, the following points have been considered in allowing the expenditure under this head:

- (1) Repayment of loans prior to CoD not to be considered. Hence, the loans are stated at the gross opening level of total drawl as on CoD viz. Rs 1582 Crores.
- (2) The weighted average rate of interest is to be based on the loan capital outstanding at the beginning of each year.
- (3) Loan repayments in any year are to be restricted to the depreciation allowed in that year.

Since, the petitioner has refinanced a portion of the loans in FY 14, the revisedloan repayment schedule and interest outflow were sought from the petitioner. The savings on the interest areto be proportionately shared in the ratio of 2:1 between the beneficiary and the petitioner, as per the above provisions of the Regulations. Details of the sharing of the benefits allowed between the petitioner and the Beneficiaries are as under:

Table: 12
Sharing of the benefits between the petitionerand Beneficiaries

Rs in Crores

Particulars	FY 13	FY 14	FY 15	FY 16	FY 17	FY 18	FY 19	FY 20	FY 21	FY 22
Interest pre-	168.71	165.96	148.18	127.01	105.84	84.68	63.51	42.34	21.17	5.29
refinancing	100.71	103.70	140.10	127.01	103.04	04.00	65.51	42.54	21.17	5.27
Interest post	168.71	165.96	123.77	103.06	85.89	68.71	51.53	34.35	17.18	4.29
refinancing	100.71	163.76	123.//	103.06	03.07	00.71	31.33	34.33	17.10	4.27
Savings	-	-	24.41	23.95	19.96	15.97	11.98	7.98	3.99	1.0
Share of										
beneficiaries	-	-	16.27	15.97	13.31	10.64	7.98	4.32	2.66	0.67
67%										
Share of										
petitioner		-	8.14	7.98	6.65	5.32	3.99	2.66	1.33	0.33
33%										
Net interest to be										
considered		165.96	131.91	111.05	92.54	74.03	55.52	37.02	18.51	4.63

The loan repayment schedule as filed by the petitioner for the period from FY 13 to FY 19 is shown in the following table.

Table: 13

Loan repayment schedule as per the filings of the petitioner and adjusted for refinancing

Year	FY 13	FY 14	FY 15	FY 16	FY 17	FY 18	FY 19
Charges on swapping		1.33					
Opening balance Rs. Cr	1,259.84	1,376.96	1,260.45	1,092.43	924.38	756.33	588.28
Additions Rs. Cr	259.00	47.00	207.50	-	-	-	-
Repayments Rs. Cr	141.88	163.51	375.52	168.05	168.05	168.05	168.05
Closing balance Rs. Cr	1,376.96	1,260.45	1,092.43	924.38	756.33	588.28	420.23
Average Loan balance Rs. Cr	1,318.40	1,318.70	1,176.44	1,008.40	840.35	672.30	504.25
Interest Rs. Cr	19.99	167.29	131.91	111.05	92.54	74.03	55.52
Interest Rate	12.80%	12.59%	11.21%	11.01%	11.01%	11.01%	11.01%

The loan schedule worked out as per KERC Regulations- 2009 is shown in the following table 14.

In this table, the loan opening balance as on CoD is taken at the normative level, repayment restricted to depreciation and the weighted interest taken for interest calculation is for the actual loan portfolio at the beginning of the year.

Table 14
Loan repayment schedule as considered by the Commission
Rsin crores

Year	FY 13	FY 14	FY 15	FY 16	FY 17	FY 18	FY 19
Opening	1,582.00	1,582.00	1,515.63	1,402.26	1,288.89	1,175.51	1,062.14
balance	1,302.00	1,302.00	1,515.05	1,402.20	1,200.07	1,170.01	1,002.14
Additions		47.00	-	-	-	-	-
Repayments	-	113.37	113.37	113.37	113.37	113.37	112.40
Closing	1,582.00	1,515.63	1,402.26	1,288.89	1,175.51	1,062.14	949.74
balance	1,302.00	1,515.05	1,402.20	1,200.07	1,170.01	1,002.14	747.74
Average							
Loan	1,582.00	1,548.81	1,458.94	1,345.57	1,232.20	1,118.83	1,005.94
balance							
Interest	22.74	196.25	163.58	148.18	135.69	123.20	110.76
Interest	12.80%	12.59%	11.21%	11.01%	11.01%	11.01%	11.01%

The difference in opening loan outstanding between the two tables (between filing and Commission's workings) is due to the actual repayment of the loan prior to CoD.

As per regulations, depreciation of 90% of the value of various fixed assets is to berecovered in 25 years. The depreciation required to repay the actual loan outstanding of Rs 1,376.96 Croreswould require 13.5 years of depreciation allowance and for Rs 1,629 Croreswould be 15.5 years.

Thus, interest calculations are impacted by the manner in which the loan repayment schedule is structured. The impact between the actual repayment and the normative repayment as per the Regulationsis presented in the table below:

Table: 15

Details of Total outflows under different scenarios

#### Rs in crores

Without time value of money		
	As per the Petitioner	As allowed by the Commission
Loan Repayment	1376.86	1,629.00
Interest	712.48	1,362.70
Depreciation	1,812.45	1,812.45
With time value of money - Discount @ 11%		
Loan Repayment	766.85	714.46
Interest	598.85	755.75
Depreciation	755.51	755.51

**Note:** The Petitioner has not considered the loan repayment of Rs 205 Crores repaid prior to CoD.

This has impact on the interest as well.

Therefore, considering the Regulationsin force and the overall time value of money, the Commission allows interest on loans as per the above computation.

## (iii) Depreciation:

The depreciation has been worked out by the petitioner based on the rates specified in the Electricity Supply Act, 1948 and wherever rates are not specified, rates as per the Companies Act, 1956 are considered. Depreciation has been worked out up-to a maximum of 90% of the Capital cost. This was

changed to reflect the rates as specified in the Regulations post public hearing. Depreciation worked out is shown in the following table;

Table: 16
Depreciation as per the petitioner

(Rs. in Crores)

Year	FY 13	FY 14	FY 15	FY 16	FY 17	FY 18	FY 19
Depreciation	18.36	106.80	106.80	106.80	106.80	106.80	106.80

#### Commission's observations and analysis:

The Commission has reviewed the Depreciation rates of various fixed assets, head-wise, grouped by the petitioner and found that, the amount and the rate charged for the coal handling plant (gross book value amounting Rs 131.94 Crores)@ 9.5% is not consistent with the depreciation schedule annexed to KERC Generation Tariff Regulations, 2009. Considering the components of this block of asset, the Commission corrects this rate to 6.39% (as 26% of the gross block constitute self-propelled vehicles which is to be depreciated at 9.5% and for the assets not covered in the depreciation schedule annexed to Regulations, 2009, the depreciation considered is at the rate of 5.28%. Thus, the weighted average rate works out to 6.39%).

The depreciation for the first 12 years is allowed based on straight line method as per the Regulations, 2009. For the subsequent period of the useful life of assets, the balance depreciation is distributed over the remaining life of the assets.

For the first two tariff periods, the Commission allows the depreciation as indicated below:

Table:17
Depreciation allowed by the Commission

Rs in Crores

Year	FY 13	FY 14	FY 15	FY 16	FY 17	FY 18	FY 19
Depreciation	12.73	113.37	113.37	113.37	113.37	113.37	112.40

## (iv) Interest on working capital

The component of working capital, as per KERC regulations cover;

- a. Cost of coal for two months
- **b.** Cost of secondary fuel oil for two months
- c. Maintenance spares at 20% of O&M expenses;
- d. Receivables at two months considering the normative plant availability factor with tariff considering fixed cost and variable charges per kWh; and
- e. O&M expenses forone month

The rate of interest for arriving at the working capital requirement shall be the short term prime lending rate of State Bank of India as on 1st April of the year. In this order, it has been assumed at 14.75%. This shall be trued up for actuals at the end of each tariff period.

The petitioner has followed the norms in projecting the working capital, and year wise working capital proposed by the petitioner is shown below:

Table: 18

Year wise working capital proposed by the petitioner

Rs in Crores

Year	FY 13	FY 14	FY 15	FY 16	FY 17	FY 18	FY 19
Cost of Coal	132.13	135.43	138.81	142.28	145.84	149.49	153.23
Cost of Secondary							
fuel oil	5.88	6.03	6.18	6.33	6.49	6.66	6.82
		_	_	_	_	_	_
Fuel Cost	-						
Liquid fuel stock	_	-	-	-	-	-	-
Liquia ioci siock							
O & M Expenses	6.40	6.77	7.15	7.56	8.00	8.45	8.94
Maintenance							
Spares	15.36	16.24	17.17	18.15	19.19	20.29	21.45
Receivables	238.89	216.86	214.81	212.23	209.71	207.25	204.84
Total working							
Capital	398.66	381.32	384.13	386.57	389.23	392.13	395.27
Rate of Interest	14.45%	14.45%	14.45%	14.45%	14.45%	14.45%	14.45%
Interest on							
Working Capital	5.14	55.10	55.51	55.86	56.24	56.66	57.12

## Commission's observations and analysis

The petitioner has claimed fuel component in working capital based on the actual landed price of the fuel. The fuel component in working capital as claimed by the petitioner is as indicated in table-18.

The petitioner has filed for energy charges as per the formula stipulated in the Regulations.

It is submitted that, initially, the Ministry of Coal, Gol directed the petitioner to utilise coal from the integrated Baranj OCP at Chandrapur district in WCL area. The coal is not yet mined as the clearance from MoEF,Gol is not yet received by the petitioner.

The petitioner has further submitted that, in view of the above, the petitioner has resorted to procuring the same from the Singareni Collieries Co. Ltd (SCCL) on MoU basis to generate power and supply it to thebeneficiaries, at an additional cost of Rs 1,000/MT. This position is likely to continue till the coal allocation and mining is commenced.

Regarding the fuel component, Regulation 22, under sub-clause (7) and (8) of KERC Generation Tariff Regulations 2009, provides for computation of Energy charges for Thermal Generating stations as under;

"(7) The landed cost of fuel for the month shall include price of fuel corresponding to the grade and quality of fuel inclusive of royalty, taxes and duties as applicable, transportation cost by rail / road or any other means, and, for the purpose of computation of energy charge, and in case of coal shall be arrived at after considering normative transit and handling losses as percentage of the quantity of coal dispatched by the coal supply company during the month as given below:

Pithead generating stations : 0.2%
Non-pithead generating stations : 0.8%

(8) The landed price of limestone shall be taken based on procurement price of limestone for the generating station, inclusive of royalty, taxes and duties as applicable and transportation cost for the month."

The Commission has worked out the interest on working capital based on the operating norms specified in the KERC Generation Tariff Regulations, 2009.

Thus, the Commission allows the fuel component and the interest on working capital as shown below:

Table: 19
Year wise working capital allowed by the Commission

#### **RsCrores**

Working capital Norms		FY 13	FY 14	FY 15	FY 16	FY 17	FY 18	FY 19
Coal	2 months	12.92	115.01	115.01	115.01	115.01	115.01	115.01
Secondary fuel	2 months	0.35	3.15	3.15	3.15	3.15	3.15	3.15
Maintenance spares - as % of O&M	20 %	1.73	16.24	17.17	18.15	19.19	20.29	21.45
Receivables	2 months	23.12	204.25	199.49	197.73	196.52	195.37	194.11
O&M	1 months	6.40	6.77	7.15	7.56	7.99	8.45	8.94
Total Working capital		44.51	345.41	341.97	341.60	341.86	342.26	342.65
Interest rate for WC (% as of April 1)	14.75%	6.57	50.95	50.44	50.39	50.42	50.48	50.54

## (v) O&M expenses

The Petitioner has workedout O&M expenses based on the KERC Regulations of 2009 up to FY 2013-14. For future years, escalation at the rate of 5.72% per annum has been considered over the previous year, as provided in the Regulations.

Table:20

O&M expenses as filed by the petitioner

#### **Rs.in Crores**

Year	FY 13	FY 14	FY 15	FY 16	FY 17	FY 18	FY 19
O & M Expenses	8.84	81.20	85.84	90.75	95.95	101.43	107.24

## Commission's observations and analysis:

The Commission allows O&M expenditure as indicated in table 20, as per the norms stipulated in the Regulations mentioned above.

Table:21

O&M expenses allowed by the Commission

Rs. in Crores

Year	FY 13	FY 14	FY 15	FY 16	FY 17	FY 18	FY 19
O&M	8.63	81.19	85.84	90.75	95.94	101.43	107.23
expenses							

## (vi) Cost of secondary fuel oil

The petitioner has filed for this cost as per the formula stipulated in the KERC (Terms and Conditions of Generation Tariff) Regulations 2009.

Table:22
Cost of secondary fuel oil as per the petitioner

Rs. in Crores

Year	FY 13	FY 14	FY 15	FY 16	FY 17	FY 18	FY 19
Secondary fuel oil cost	2.03	17.76	18.20	18.66	19.13	19.60	20.09

## Commission's observations and analysis;

The Commission has reviewed the computations on the cost of secondary fuel oil and, allows the cost of secondary fuel oil while approving the Tariff of BTPS unit-2, as indicated in Table-23:

Table:23

Cost of secondary fuel oil allowed by the Commission:

Rs. in Crores

Year	FY 13	FY 14	FY 15	FY 16	FY 17	FY 18	FY 19
Cost of secondary	2.12	8.89	18.89	18.89	18.89	18.89	18.89
fuel oil							

## **Components of Capacity Charges**

As per the petitioner, the annual capacity charges / fixed charges are summarized as under;

Table:24

Components of capacity charges as per the petition (without adjustment for refinancing):

Capapcity Charges - Rs crores	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19
Depreciation	18.36	106.80	106.80	106.80	106.80	106.80	106.80
Interest on Loan	19.99	165.96	148.18	127.01	105.84	84.68	63.51
Return on Equity 1	10.12	78.81	78.81	78.81	78.81	78.81	78.81
Interest on Working Capital	5.14	55.10	55.51	55.86	56.24	56.66	57.12
O & M Expenses	8.84	81.20	85.84	90.75	95.95	101.43	107.24
Secondary fuel oil cost	2.03	17.76	18.20	18.66	19.13	19.60	20.09
Total Capacity charges	64.47	505.62	493.34	477.89	462.76	447.98	433.55

Based on the computation of tariff discussed above, the annual capacity charges / fixed charges allowed for the Generating station for the period FY13 to FY14 and for the period from FY15 to FY19 are summarized as under;

Table: 25

Components of Capacity charges allowed by the Commission

Rs in Crores

Capacity charges	FY 13	FY 14	FY 15	FY 16	FY 17	FY 18	FY 19
Return on Equity	8.40	74.76	74.76	74.76	74.76	74.76	74.76
Interest on Loan capital	22.74	196.25	163.58	148.18	135.69	123.20	110.76
Depreciation	12.73	113.37	113.37	113.37	113.37	113.37	112.40
Interest on working capital	6.57	50.95	50.44	50.39	50.42	50.48	50.54
O&M expenses	8.63	81.19	85.84	90.75	95.94	101.43	107.23
Cost of secondary fuel oil	2.12	18.89	18.89	18.89	18.89	18.89	18.89
Total capacity charges	61.19	535.42	506.89	496.33	489.07	482.13	474.58

## Computation and payment of Capacity Charges:

The petitioner has submitted the following operational norms for considering the same in approving the tariff by the Commission.

Table: 26
Operational Norms proposed by the petitioner in its petition

SL	Parameter	As considered by the				
No		petitioner in its petition				
1	Plant availability factor	85%				
2	Guaranteed design heat rate	2182.5 kcal/kw-hr				
3	Gross station heat rate	2324.36 kcal/kw-hr				
4	Auxiliary consumption	7.50%				
5	Gross calorific value of	4500 kcal/kg				
	design fuel					
6	Specific fuel oil consumption	1.00 ml/kwh				

The Commissionhascompared the SHR with the values provided in the Regulations- 2009, and noted that the values are within the norms provided therein except for that of auxiliary consumption, which needs to be corrected to 6%. With this correction, the Commission allows the operating norms, as under;

Table: 27
Operational Norms allowed by the Commission.

SI.No	Parameter	Allowed by the Commission
1	Plant availability factor	85%
2	Guaranteed design heat rate	2182.5 kcal/kw-hr
3	Gross station heat rate	2324.36 kcal/kw-hr
4	Auxiliary consumption	6%
5	Gross calorific value of design	4500 kcal/kg
	fuel	
6	Specific fuel oil consumption	1.00 ml/kwh

Clauses (1), (2), (3) and (4) of Regulation 22 of KERC Regulations, 2009 provides for computation and payment of capacity charges / fixed charges for thermal generating stations as under.

## "22. Computation and Payment of Capacity Charge and Energy Charge for Thermal Generating Stations;

(1) The fixed cost of a thermal generating station shall be computed on annual basis, based on norms specified under these regulations, and recovered on monthly basis under capacity charge. The total capacity charge payable for a

- generating station shall be shared by its beneficiaries as per their respective percentage share / allocation in the capacity of the generating station.
- (2) The capacity charge (inclusive of incentive) payable to a thermal generating station for a calendar month shall be calculated in accordance with the following formulae:
- (a) Generating stations in commercial operation for less than ten (10) years on 1st April of the financial year:

AFC x (NDM / NDY) x (0.5 + 0.5 x PAFM / NAPAF) (in Rupees);

Provided that in case the plant availability factor achieved during a financial year (PAFY) is less than 70%, the total capacity charge for the year shall be restricted to

AFC x (0.5 + 35 /NAPAF) x (PAFY / 70) (in Rupees)

(b) For generating stations in commercial operation for ten (10) years or more on 1st April of the year:

AFC x (NDM / NDY) x (PAFM / NAPAF) (in Rupees)
Where,

AFC = Annual fixed cost specified for the year, in Rupees.

NAPAF = Normative annual plant availability factor in percentage

NDM = Number of days in the month

NDY = Number of days in the year

PAFM = Plant availability factor achieved during the month, in percent:

PAFY = Plant availability factor achieved during the year, in percent

(3) The PAFM and PAFY shall be computed in accordance with the following formula:

Ν

PAFM or PAFY = 10000 x  $\Sigma$ DCi / { N x IC x ( 100 - AUX ) } %

i = 1

Where,

AUX = Normative auxiliary energy consumption in percentage.

DCi = Average declared capacity (in ex-bus MW), subject to clause (4) below, for the ith day of the period i.e. the month or the year as the case may be, as certified by the concerned load dispatch centre after the day is over.

IC = Installed Capacity (in MW) of the generating unit or station

N = Number of days during the period i.e. the month or the year as the case may be.

**Note:** DCi and IC shall exclude the capacity of generating units not declared under commercial operation. In case of a change in IC during the concerned period, its average value shall be taken.

(4) In case of fuel shortage in a thermal generating station, the generating company may propose to deliver a higher MW during peak-load hours by saving fuel during off-peak hours. The concerned Load Despatch Centre may then specify a pragmatic day-ahead schedule for the generating station to optimally utilize its MW and energy capability, in consultation with the beneficiaries. DCi in such an event shall be taken to be equal to the maximum peak-hour ex-power plant MW schedule specified by the concerned Load Despatch Centre for that day.

Commission noted that, the provision for computation of capacity charges / fixed charges as provided in the draft PPA submitted by the petitioner is in line with the provisions specified under KERC, Generation Tariff Regulation 2009."

Accordingly, the petitioner is allowed to claim on a monthly basis the capacity charges / Fixed charges based on the above provisions of the Regulations, 2009 applying the actuals achieved during the month, cumulative of which for the year shall not exceed the figures in table 25 above.

## (vii) Energy charges

The petitioner has filed for energy charges as per the formula specified in the Regulations and the energy charges (ECR) claimed by the petitioner are as follows:

Table 28:
Energy charge rate (ECR) claimed by the petitioner

Rs. in Crores

Year	FY 13	FY 14	FY 15	FY 16	FY 17	FY 18	FY 19
Energy Charge rate (Ex-bus)	74.39	795.91	795.91	795.91	795.91	795.91	795.91

Clause (5) and (6) of Regulation- 2009, provides for computation of Energy charges for thermal generating stations as under:

"(5) The energy charge shall cover the primary fuel cost and limestone consumption cost (where applicable), and shall be payable by every beneficiary for the total energy scheduled to be supplied to such beneficiary during the calendar month on ex-power plant basis, at the energy charge rate of the month (with fuel and limestone price adjustment). Total Energy charge payable to the generating company for a month shall be:

(Energy charge rate in Rs./kWh) x {Scheduled energy (ex-bus) for the month in kWh.}

(6) Energy charge rate (ECR) in Rupees per kWh on ex-power plant basis shall be determined to three decimal places in accordance with the following formulae:

(a) For coal based stations

 $ECR = \{(GHR - SFC \times CVSF) \times LPPF / CVPF + LC \times LPL\} \times 100 / (100 - AUX)\}$ 

(b) For gas and liquid fuel based stations

 $ECR = GHR \times LPPF \times 100 / \{CVPF \times (100 - AUX)\}$ 

Where,

AUX = Normative auxiliary energy consumption in percentage.

CVPF = Gross calorific value of primary fuel as fired, in kCal per kg, per litreor per standard cubic metre, as applicable.

CVSF = Calorific value of secondary fuel, in kCal per ml.

ECR = Energy charge rate, in Rupees per kWh sent out.

GHR = Gross station heat rate, in kCal per kWh.

LC = Normative limestone consumption in kg per kWh.

LPL = Weighted average landed price of limestone in Rupees per kg.

LPPF = Weighted average landed price of primary fuel, in Rupees per kg, per litre or per standard cubic metre, as applicable, during the month.

SFC = Specific fuel oil consumption, in ml per kWh."

Accordingly, the petitioner is allowed to claim on a monthly basis energy charges based on the above provisions of Regulations- 2009based on the actuals achieved during the month.

#### 8. Truing up

Based on the tariff determined by the Commission in this order, the petitioner shall file an application, before the Commission, for truing up of the actual costs incurred, at the end of each tariff period. Further, the Commission directs the petitioner to file an application for truing up for the tariff period FY09 -14 within the next 6 months.

#### 9. PPA status

The petitioner in its application has submitted that the PPA between the petitionerand ESCOMs was initialled on 18.12.2010, which was submitted by BESCOM on 4.01.2011 and CESC on 01.01.2011. Further, in response to the Commission's letter dated 7.06.2012, and BESCOM'sletter dated 26.12.2012, the petitioner vide its letter dated 6.07.2012 has submitted a modified PPA as suggested by KERC. It is also stated by the petitioner that it has submitted the initialled PPA to KERC on 6-03-2014 along with the tariff determination application and has sought approval of the PPA.

The Commission directs the petitioner to resubmit the initialled PPA duly incorporating the decisions of the Commission, as approved in this Order. The approval of the PPA would be taken up by the Commission separately.

10. This Order is signed on 25th day of February, 2015.

Sd/- Sd/- Sd/
(M.R. Sreenivasa Murthy) (H.D. Arun Kumar) (D.B. ManivalRaju)

CHAIRMAN MEMBER MEMBER