TARIFF ORDER

Determination of Tariff for FY 2014-15
And
True-up for FY 2011-12
And
True-up for FY 2012-13
And
Review for FY 2013-14

Petition No. 121/2014

for

Puducherry Power Corporation Limited (PPCL)
Gas Power Station (32.5 MW)

JOINT ELECTRICITY REGULATORY COMMISSION

For the State of Goa and Union Territories

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April 25' 2014

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List of Abbreviations

Abbreviation		Full Form
Act	:	Electricity Act, 2003
APC	:	Auxiliary Power Consumption
CERC	:	Central Electricity Regulatory Commission
CGS	:	Central Generating Station
Commission/JERC	:	Joint Electricity Regulatory Commission for the state of Goa and union territories
EA 2003	:	Electricity Act, 2003
EDP	:	Electricity Department, Puducherry
FC	:	Fixed Charges
FY	:	Financial Year
GFA	:	Gross Fixed Assets
GCV	:	Gross Calorific Value
JERC	:	Joint Electricity Regulatory Commission for the state of Goa and union territories
MU	:	Million Unit
MW	:	Mega Watt
NAPAF	:	Normative Annual Plant Availability Factor
O&M	:	Operation and Maintenance Expenses
PAF	:	Plant Availability Factor
PLF	:	Plant Load Factor
PPA	:	Power Purchase Agreement
PPCL	:	Puducherry Power Corporation Limited
RO	:	Reverse Osmosis
RoE	:	Return on Equity
SHR	:	Station Heat Rate

Before the

Joint Electricity Regulatory Commission

for the State of Goa and Union Territories

Gurgaon

CORAM[1]
S. K. Chaturvedi (Chairman)
Petition No. 121/2014

In the matter of

Determination of Generation Tariff for the Financial Year 2014-15 for Puducherry Power Corporation Limited (PPCL) Gas Power Station (32.5 MW)

And in the matter of

Puducherry Power Corporation Ltd. (PPCL)……………………………………………Petitioner

Electricity Department, Puducherry …………………………………………………Respondent

<u>ORDER</u>

Date: April 25' 2014

1. INTRODUCTION

1.1 JERC Formation

In exercise of the powers conferred by Section 83 of the Electricity Act, 2003 the Central Government constituted a two member (including Chairperson) Joint Electricity Regulatory

[1] As per section 93 of the Electricity Act, 2003, no act or proceedings of the Appropriate Commission shall be questioned or shall be invalidated merely on the ground of existence of any vacancy or defect in the constitution of the Appropriate Commission. Therefore, Shri S K Chaturvedi constituted the valid Coram for the public hearing in respect of the determination of tariff for FY 2014-15, due to vacancy in the position of Member.

Commission for all Union Territories except Delhi to be known as "Joint Electricity Regulatory Commission for Union Territories'' with headquarters at Delhi as notified vide notification no. 23/52/2003 – R&R dated May 2' 2005. Later on with the joining of the state of Goa, the Commission came to be known as "Joint Electricity Regulatory Commission for the State of Goa and Union Territories" as notified on May 30' 2008. The Joint Electricity Regulatory Commission for the State of Goa and Union Territories (Andaman & Nicobar Islands, Chandigarh, Dadra and Nagar Haveli, Daman & Diu, Lakshadweep and Puducherry) started functioning with effect from September 2008. Office of the Commission is presently located in the district town of Gurgaon, Haryana.

1.2 Puducherry Power Corporation Limited

Puducherry Power Corporation Limited (hereafter referred to as 'PPCL' or 'Petitioner'), an undertaking of Government of Puducherry, is a Government company within the meaning of Companies Act, 1956. Further, it is a "Generating Company", as defined under sub-section 28 of section 2 of Electricity Act, 2003.

PPCL was incorporated on 30th March 1993, with the objective of generating 32.5 MW of Electricity (22.9 MW from gas turbine and 9.6 MW from Steam turbine) at Karaikal which is one of the outlying regions of Union Territory of Puducherry. The required gas of 1.91 lakhs cubic meter of gas per day is obtained from the gas wells at Narimanam in the Cauvary basin under an agreement with the GAIL (India) Ltd.

The commercial operation of the Karaikal station has been declared with effect from 03rd January 2000 and is supplying power to Electricity Department, Puducherry under the Power Purchase Agreement (PPA) signed with them on February 25' 2002. Consequent to setting up of the Joint Electricity Regulatory Commission, the Petitioner had filed petition for determination of tariff for the period FY 2011-12. The Commission vide order dated August 6' 2011 had approved tariff with effect from June 2011 for FY 2011-12. Subsequently, based on review petition filed by the Petitioner, the Commission had revised the tariff vide its order communicated to PPCL on December 28' 2011 and the Corporation then filed Appeal No. 41 of 2012 to APTEL against the review order pertaining to the tariff order FY 2011-12 which was disposed of by the APTEL with directions, as per the judgment dated November 21' 2012.

In the light of observations and findings of the Hon'ble Aptel in appeal no. 41/2012, the petition for tariff determination for FY 2011-12 (petition no. 18/2010) and review petition for FY 2011-12 (petition no. 45/2011) were restored by the Commission vide its order dated December 19' 2012.

The Commission carried out detailed proceedings in this matter and subsequently vide its order dated April 29’ 2013 approved capital cost of Rs 146.45 Crores for FY 2011-12 against the earlier approved capital cost of Rs 137.77 Crores. The order observed that the approved capital cost of Rs 146.45 Crores will be considered along with the audited accounts at the time of approval of True-up for FY 2011-12, True-up for FY 2012-13 and Review for FY 2013-14. The directions of the Aptel and the subsequent order of the Commission have been discussed in detail in para 2.1 of this order.

At present, the tariff of the instant station is at a rate fixed by the Commission to Puducherry Power Corporation Limited vide Commission’s order dated March 28’ 2013 on the basis of petition filed for the tariff period FY 2013-14.

1.3 Regulations

The Commission, in exercise of the powers conferred upon by the Electricity Act, 2003 has notified JERC (Terms and Conditions for determination of Tariff) Regulations, 2009 for determination of tariff (hereinafter referred to as JERC Tariff Regulations).

As per provisions of Clause 19 of the JERC (Terms and Conditions for Determination of Tariff) Regulations 2009, the Commission, while determining the cost of generation of each thermal/gas/hydro-electric generating stations located within the State, shall be guided, as far as feasible, by the principles and methodologies of CERC, as amended from time to time.

1.4 Filing of Petition

The Petitioner was supposed to file the tariff petition for the tariff period FY 2014-15 before November 30’ 2013. The Petitioner submitted before the Commission that the collection of data/information from the various sources is taking more than the estimated time and submitted before the Commission that it may be allowed to file the tariff petition in the last week of January 2014.

Due to the delay in filing of the petition as per the regulatory timelines, the Petitioner filed an application for condonation of delay in filing the tariff petition for FY 2014-15 before the Commission vide its letter dated December 20’ 2013. The Commission acceded to the request of the Petitioner and granted extension of time upto January 15’ 2014 for filing of the petition vide its letter dated December 27’ 2013.

PPCL then filed its petition before the Joint Electricity Regulatory Commission for approval of tariff for FY 2014-15 for Puducherry Gas Power Station (32.5 MW) for sale of power to the deemed distribution licensee of Puducherry, received at the Commission's office on January 9' 2014, under section 62 read with regulation no. 3 to 10 of "Joint Electricity Regulatory Commission (Terms and Conditions for Determination of Tariff) Regulations, 2009".

The true-up petitions for FY 2011-12 and FY 2012-13 were received at the Commission's office on January 15' 2014.

1.5 Admission of Petition

The Commission admitted the petition for determination of Generation Tariff for PPCL for FY 2014-15 along with the true-ups for FY 2011-12 & FY 2012-13 on January 15' 2014 vide its letter addressed to PPCL dated January 16' 2014. The copy of the letter stating the admittance of the petition is enclosed as **Annexure 1** to this Order.

In compliance of Regulation 29 of JERC (Conduct of Business) Regulations 2009 and Regulation 12(5) of JERC (Terms and Conditions for Determination of Tariff) Regulations 2009, the Petitioner was directed to publish the public notice of the tariff petition (abridged form) in atleast two newspapers widely circulated in the area of UT of Puducherry, highlighting the petition and outlining the existing & proposed tariff. Further, it was indicated that the public notice should highlight that the suggestions/objections from the general public/stakeholders should be received latest by February 10' 2014. The Petitioner was directed to submit the copies of the newspapers in which the public notice is published before the Commission.

1.6 Interaction with the Petitioner

The Commission interacted regularly with the Petitioner to seek clarifications and justification on various issues essential for the analysis of the tariff petition. The Commission and the Petitioner also discussed key issues related to the petition, which included norms of operation of the plant, details of fuel expenses submitted to the Commission, etc.

The technical validation session was held at the Commission's office on February 6' 2014, where the representatives of the Petitioner were present. The Commission carried out prudence check of the bills submitted and sought clarifications in the submissions of the Petitioner.

The Petitioner submitted its replies, as shown below, in response to the queries raised by the Commission, which have been considered during approval of the tariff of the Petitioner.

Table 1: List of Correspondence with PPCL

S. No.	Date	Subject
1.	22.01.2014	Queries and additional data sought by the Commission
2.	27.01.2014	Response to the deficiency note submitted vide email dated 27.01.2014
3.	28.01.2014	Supporting bills and hard copy submission received from the Petitioner
4.	07.02.2014	Clarifications sought post the technical validation session vide email dated 07.02.2014
5.	15.02.2014	Response by PPCL on the objections raised by ED-Puducherry vide email dated 15.02.2014
6.	17.02.2014	Response by PPCL on the clarifications sought by the Commission post the technical validation session vide email dated 07.02.2014

1.7 Public Hearing Process

The Commission directed the Petitioner to publish the summary of the tariff petition in abridged form and manner as approved in accordance with the section 64 of the Electricity Act 2003 to ensure public participation.

The public notice was published by PPCL in the following newspapers for inviting objections/ suggestions from the stakeholders on the tariff petition:

Table 2: Details of public notice published by PPCL

S. No.	Date	Name of newspapers	Place
1.	22.01.2014	The New Indian Express (English)	Puducherry, Karaikal
2.	22.01.2014	Dina Malar (Tamil)	Puducherry, Karaikal

The petitioner also cited the public notice and the petition on its website (www.ppcl.puducherry.gov.in) for inviting objections and suggestions on the petition.

Interested parties / stakeholders were requested to file their objections / suggestions on the petition on or before February 10’ 2014. The copies of public notice are attached as **Annexure 2** to this order.

The Commission published the notice for public hearing regarding the approval of the tariff for FY 2014-15. Schedule of the public hearing is given below.

Table 3: Schedule of Public Hearing at Puducherry

S. No.	Date & Time	Venue of Hearing	Subject
1.	March 14' 2014 09:30 am hours onwards for all category of consumers	Hall at Pondicherry Multipurpose Social Service Society (PMSSS) Complex, #81, Laporte Street, Puducherry - 605001	Tariff Petition of PPCL for FY 2014-15; ARR & tariff petition of EDP for FY 2014-15; DELP petition

Table 4: Details of public notice published by the Commission

S. No.	Date	Name of newspapers	Place of Publication
1.	January 18' 2014	Dinakaran	Puducherry
2.	January 18' 2014	Dina Thanthi	Puducherry

Table 5: Repeat public notice published by the Commission

S. No.	Date	Name of newspapers	Place of Publication
1.	March 12' 2014	Dinakaran	Puducherry
2.	March 12' 2014	The Hindu	Puducherry
3.	March 12' 2014	Dina Thanthi	Puducherry

The copies of public notice published by the Commission for intimation of public hearing(s) are attached as **Annexure 3** to this order. The public notices were also published on the website of the Commission (www.jercuts.gov.in).

During the public hearing, each objector was provided an opportunity to present his views on the petition filed by the Petitioner. All those present in the hearing, irrespective of whether they had given a written objection or not, were given opportunity to express their views. The list of objectors is attached as **Annexure 4** to this order. The issues and concerns expressed by stakeholders have been examined by the Commission. The major issues discussed during the public hearing(s), the comments/replies of the utility and the views of the Commission thereon, have been summarized in **Chapter 3** of this order.
The list includes the stakeholders:

1. Those who gave their written objections & did not intend to present orally during the public hearing
2. Those who gave their written objections & expressed to present orally also during the public hearing
3. Those who gave their written objections but had not desired to express orally, but later chose to present orally also. They were also given an opportunity to present orally before the Commission during the public hearing;
4. Stakeholders who did not give their written objection or prior intimation, but participated in the hearing on the spot
5. Stakeholders who did not give their written objection or prior intimation, but participated in the hearing on the spot and also gave written submissions

All these objections/suggestions were responded to by the Licensee in addition to prior written replies, during the hearing itself. Licensee submitted written reply to all written objections/suggestions of the stakeholders.

1.8 Adherence to the Model Code of Conduct

The Commission had noted that in view of the General Elections 2014, the Model Code of Conduct has been imposed since March 5' 2014. In this context, the Principal Secretary, Secretariat of the Election Commission of India, vide its letter no. 437/6/Misc./2014-CC&BE/322 dated February 17' 2014, clarified to the CERC/FOR that the model code of conduct is applicable to the Electricity Regulatory Commissions also as had been done during the last Lok Sabha Elections and that in case any relaxation is required under model code of conduct, CERC/SERC may refer the matter to the Commission.

The FOR (Forum of Regulators) communicated the above mentioned clarification as received from the Election Commission to all SERCs vide its letter no. 15/2(39)/2013-FOR/CERC dated February 24' 2014.

Accordingly, JERC, vide its D.O. No. 21/46/2014-Jerc/1876 dated March 7' 2014 to the Election Commission communicated the following:
Quote:
……………….."While Public Hearings have already been held in respect of tariff petitions filed by Goa and three UTs, the Public Hearings are scheduled from second week of March '14 in respect of tariff petitions filed by Electricity Departments of Puducherry (clubbed with the petition filed by State Generating Station PPCL), Dadra & Nagar Haveli and Chandigarh.

Subsequently, the Commission also is to issue the Tariff Orders for the generator and all the licensees situated in Goa and six Union Territories on or before 31st March 2014.
…………. As the election schedule has already been announced and Model Code of Conduct has been imposed, I earnestly request the Election Commission for grant of permission to JERC to discharge the statutory functions of holding the Public Hearings and issue of Tariff Orders as mentioned earlier and also as envisaged in the Act."
Unquote

Subsequently, the Election Commission of India vide its letter no. 437/GOA-HP/2014/800 dated March 18' 2014, communicated its consent as follows:

Quote:
"*I am directed to refer your DO. No. 21/46/2014-Jerc/1876 Dated 07th March 2014, on the subject cited and to state that the Commission has 'No Objection' for holding meetings and for fixing the revised tariff and for taking a final decision thereon. However, before implementing the same, prior concurrence of the Election Commission of India shall be taken."*
Unquote

In view of above, the Commission conducted the public hearing on March 14' 2014. The Principal Secretary, Secretariat of the Election Commission of India, vide its letter no. 437/6/1//2014/-CC&BE/235 Dated March 29' 2014 further clarified to the CERC as follows:

Quote:
"The Commission has no objection to the continuance of the process required for the decision on the power tariff. However, tariff award shall be made only on the completion of poll in the relevant State i.e. after the poll date/dates in that State.''
Unquote

The FOR (Forum of Regulators) communicated the above mentioned clarifications as received from Election Commission to all SERCs vide its letter no. 15/2(39)/2013 – FOR/CERC/36750 dated April 4' 2014.

The poll date in Puducherry was on **April 24' 2014**, is now over. Hence, in view of the consent and instructions received from the Election Commission of India as above, the Commission has finalized the tariff order and issued the current Tariff Order.

2. Summary of True-up for FY 2011-12, True-up for FY 2012-13 and Tariff for FY 2014-15 filed by the Petitioner

2.1 Introduction

Karaikal Gas Power Station declared commercial operation w.e.f. 03.01.2000 and is supplying power to Electricity Department-Puducherry under a PPA signed with them on 25.02.2002. Consequent to setting up of the Joint Electricity Regulatory Commission, the Petitioner had filed petition for determination of tariff for the period FY 2011-12 (petition no. 18/2010). The Commission vide its order dated August 6' 2011 had approved tariff with effect from June 2011. Subsequently, based on review petition (petition no. 45/2011) filed by the Petitioner on the tariff order dated August 6' 2011, the Commission partially allowed the review petition vide order dated November 3' 2011 and the Corporation then filed Appeal No. 41 of 2012 to APTEL against the review order pertaining to the tariff period FY 2011-12. The Hon'ble Aptel vide its order dated November 21' 2012 partially allowed the Appeal and disposed off the appeal with directions. The key observations and findings of the Aptel are as summarized below.

Quote

"

1. *Tariff Regulation 22(2) provides for determination of the capital cost to be considered on the basis of the audited accounts or approvals already granted by the Commission. The Appellant claimed capital cost of Rs.146.45 Crores based on the audited accounts which were not taken into consideration by the Joint Commission and capital cost of only Rs.137.77 Crores was allowed on the ground that the approval of competent authority was not obtained. This is not a proper approach as the approval of the competent authority was not contemplated under the Regulation. Even though the approval of the competent authority for Rs.146.45 Crores was placed before the Joint Commission for reconsideration of the capital cost in the Review, the Joint Commission wrongly rejected the claim on the ground that nothing new had been pointed out by the Appellant. The Joint Commission should have scrutinized the audited accounts placed before it by the Appellant and considered the approval obtained from the Government and passed the order after prudence check in accordance with law. The Joint Commission is directed to consider the documents on record and pass order according to law after hearing the parties once again.*

2. *The Tariff Regulations provide that the components of generation tariff shall be as laid by the Central Commission in the 2004 Tariff Regulations as amended from time to time. The 2009 Tariff Regulations have been made effective by the Central Commission with*

effect from 1.4.20009. According to the 2009 Regulations, Normative Plant Availability Factor (NAPF) is to be taken as 85% for thermal power stations. However, the Joint Commission in the impugned order adopted NAPF of 87.5% contrary to the Tariff Regulations. The State Commission is directed to pass the consequential order in accordance with the Tariff Regulations.

3. *The State Commission has determined the auxiliary consumption as per the Tariff Regulations. No case has been made out by the Appellant for relaxation of the norms for auxiliary consumption.*

4. *In view of the above, issue No. 1&2 regarding capital cost and Normative Annual Plant Availability Factor is answered in favour of the Appellant. Issue No. 3 regarding Auxiliary Consumption is answered as against the Appellant.*

5. *Thus, the Appeal is partly allowed. ''*

Unquote

In the light of observations and findings of the Hon'ble Aptel in appeal no. 41/2012, the petition for tariff determination for FY 2011-12 (petition no. 18/2010) and review petition (petition no. 45/2011) were restored by the Commission vide its order dated December 19' 2012.

The Commission carried out detailed proceedings in this matter and subsequently vide its order dated April 29' 2013 approved capital cost of Rs 146.45 Crores for FY 2011-12 against the earlier approved capital cost of Rs 137.77 Crores.

Further, the Commission in this order dated April 29' 2013 noted that the approved capital cost of Rs 146.45 Crores will be considered along with the audited accounts at the time of approval of true-up for FY 2011-12 & FY 2012-13 and Review for FY 2013-14.

The Commission also noted that NAPAF of 85% would be considered at the time of true-up for FY 2011-12 and FY 2012-13. NAPAF at 85% had already been approved for FY 2013-14 as per the tariff order for FY 2013-14.

Presently, the tariff of the station is at the rate fixed by the Commission vide its order dated March 28' 2013 on the basis of petition filed for the tariff period FY 2013-14**.**

The Petitioner, this time, has submitted the true-up petitions for FY 2011-12 and FY 2012-13 and the tariff petition for FY 2014-15. The true-up petitions have been submitted along with the audited accounts for the respective years.

For FY 2014-15, the Petitioner has submitted the operational parameters and cost of the generating station. The operational parameters pertain to normative plant availability, station heat rate (SHR) and auxiliary power consumption. The costs cover both the energy (variable) and capacity (fixed) charges.

The summary of the proposal is as mentioned in the following sections.

2.2 Summary of the true-up for FY 2011-12 and FY 2012-13 submitted by the Petitioner

True-up for FY 2011-12

The Petitioner has submitted the true-up for FY 2011-12 on the basis of the approved capital cost of Rs 146.45 Crores as per the Commission's order dated April 29' 2013 by considering Hon'ble Aptel judgment dated November 21' 2012. As per the Aptel judgment dated November 21' 2012, NAPAF at 85% has been considered for FY 2011-12.

The Petitioner has claimed Annual Fixed Charge of Rs 28.09 Crores for FY 2011-12 on the basis of the revised capital cost of Rs 146.45 Crores approved as per Commission's order dated April 29' 2013.

Further, the Petitioner has considered Gross Station Heat Rate = 2400 kcal/kWh and Auxiliary Power Consumption (APC) = 5.50% for FY 2011-12, as per JERC order dated November 3' 2011 (on review petition no. 45/2011)

The Commission in the last year's tariff order dated March 28' 2013 had done the provisional true-up for FY 2011-12 and allowed Rs 21066926 to be recovered as part of the provisional truing-up exercise due to variation in the energy charge rate (considering actual GCV and gas price; normative SHR and auxiliary consumption) from the approved energy rate of Rs 2.03/kWh. The supporting bills for the whole year were taken into consideration during the provisional truing-up exercise.

The Petitioner vide its clarification dated January 27' 2014 has submitted that no supplementary fuel bills have been raised for FY 2011-12 and therefore, the Petitioner is not claiming any amount due to variation in the variable charges from the variable charges approved earlier as part of the provisional truing-up exercise.

True-up for FY 2012-13

The Petitioner has submitted the true-up for FY 2012-13 on the basis of the approved capital cost of Rs 146.45 Crores as per the Commission's order dated April 29' 2013 by considering Hon'ble Aptel judgment dated November 21' 2012. As per the Aptel judgment dated November 21' 2012, NAPAF at 85% has been considered for the true-up of FY 2012-13.

The Petitioner has claimed Annual Fixed Charge of Rs 27.36 Crores for FY 2012-13 on the basis of the revised capital cost approved as per the Commission's order dated April 29' 2013.

Further, the Petitioner has considered Gross Station Heat Rate = 2475 kcal/kWh and Auxiliary Power Consumption (APC) = 5.50% for FY 2012-13, as per the JERC order dated April 13' 2012 on determination of tariff for FY 2012-13 (petition no. 69/2012)

The Commission vide its order dated April 13' 2012 had notified the formula for recovery of energy charges which accounts for the actual gas GCV, actual gas cost, normative gross station heat rate and normative auxiliary consumption. As the recovery of energy charges for FY 2012-13 is on the basis of this formula, no adjustment is due on account of the variation from the approved rates.

Further, the Petitioner vide its clarification dated January 27' 2014 has submitted that no supplementary fuel bills have been raised for FY 2012-13 and therefore, the Petitioner is not claiming any amount due to variation in the variable charges during the true-up exercise.

The break-up of the Annual Fixed Charge (AFC) claimed for FY 2011-12 and FY 2012-13 is as mentioned below.

Table 6: Annual Fixed Charge proposed by PPCL for FY 2011-12 and FY 2012-13

S. No.	Particulars	FY 2011-12	FY 2012-13
1.	Gross generation (MUs)	242.66	241.99
2	Normative Plant Availability Factor (NAPAF)	85%	85%
3.	Auxiliary consumption (%)	5.50%	5.50%
4.	Net generation (MUs)	229.31	228.68

S. No.	Particulars	FY 2011-12	FY 2012-13
5.	**Annual Fixed Charges (Rs. Crores)**	**28.09**	**27.36**
(a)	Interest on loan capital (Rs. Crores)	0.00	0.00
(b)	Depreciation (Rs. Crores)	6.97	5.02
(c)	O&M expenses (Rs. Crores)	8.32	8.79
(d)	Interest on working capital (Rs. Crores)	2.48	3.23
(e)	Return on equity (Rs. Crores)	10.32	10.32

2.3 Summary of the tariff for FY 2014-15 submitted by the Petitioner

The Petitioner has claimed the opening capital cost of Rs 146.45 Crores as approved in the order dated April 29' 2013 plus proposed capitalization amount of Rs 3.32 Crores paid towards the R.O. Plant i.e. Rs 149.77 Crores for FY 2014-15. The Petitioner has submitted that the Commission shall consider this add cap for successful & efficient operation of the plant as per CERC Regulation, 9(2) (iv). Further, it has also been submitted that the capital cost considered for tariff fixation purpose does not include the cost of capitalization of spares amounting to Rs. 1.55 Crores made during FY 2010-11 and the amount incurred towards purchase of Computers, Furniture & Fittings and Office Equipment during FY 2011-12 & FY 2012-13 in line with the approved capital cost by the Commission (order dated April 29' 2013).

The Petitioner has submitted that Normative Plant Availability Factor (NAPAF) of 85% be fixed for FY 2014-15. The Petitioner has submitted that the Commission is to be guided by the principles and methodologies of CERC Regulations for fixation of generation tariff and CERC has specified NAPAF of 85% for the period 2009-14 for thermal generating stations.

The gross and net generation, the fixed and variable charges projected by the Petitioner for FY 2014-15 are as given below.

Table 7: Annual Fixed Charge proposed by PPCL for FY 2014-15

S. No.	Particulars	FY 2014-15
1.	Gross generation (MUs)	257.00
2.	Auxiliary consumption (%)	6.00%
3.	Net generation (MUs)	241.58
4.	**Annual Fixed Charge (Rs. Crores)**	**23.80**
(a)	Interest on loan capital (Rs. Crores)	0.00

S. No.	Particulars	FY 2014-15
(b)	Depreciation (Rs. Crores)	0.33
(c)	O&M expenses (Rs. Crores)	9.83
(d)	Interest on working capital (Rs. Crores)	3.20
(e)	Return on equity (Rs. Crores)	10.43

The Petitioner has proposed that the energy charges would be billed as per the below mentioned formula based on CERC Regulations 2009.

Energy Charge (ECR) = GHRxLGPx100/ {GCV x (100-APC)}

Where

ECR = Energy charge Rate, in Rs per kWh sent out upto three decimal charges,

GHR= Normative Gross Station Heat Rate in kcal/kWh,

LGP= Weighted average landed price of gas in Rs/scm, during the calendar month,

GCV= Gross calorific value of gas, in kcal per scm during the calendar month,

APC= Normative Auxiliary Power Consumption in percentage

The Petitioner has considered Gross Station Heat Rate = 2646 kcal/kWh and Auxiliary Power Consumption (APC) = 6% for FY 2014-15.

The Petitioner has submitted that in addition to the fixed and variable charges, the Petitioner may be allowed to recover statutory taxes, duties etc on actual basis.

Further, the Petitioner has considered the opening capital cost of Rs 146.45 Crores and additional capitalization as nil for FY 2013-14. The Petitioner has submitted the Annual Fixed Charge of Rs 22.89 Crores for FY 2013-14 on the basis of this capital cost.

2.4 Prayer

The petitioner has prayed to the Commission:

Quote

"

i) Carry out the truing up exercise and revise the tariff of Karaikal Power Station for the tariff period 1.4.2011 to 31.3.2012

ii) Carry out the truing up exercise and revise the tariff of Karaikal Power Station for the tariff period 1.4.2012 to 31.3.2013

iii) Approve the tariff for FY 2014-15 as mentioned below at 85% PLF.

Fixed cost - Rs. 23.80 Crores per annum

Variable Energy Charges - As per formula with normative GHR of 2646 kcal/kWh and normative APC of 6%.

iv) Allow the "Normative Annual Plant Availability Factor" @ 85% as laid down in the CERC Regulation vide clause No.26 for Karaikal Power Station for FY 2014-15 for full fixed cost recovery and as per the order of Hon'ble Appellate Tribunal

v) Allow capital cost as prayed by the Petitioner at Rs 149.77 Crores, including the capitalization of Rs 3.32 Crores on the opening capital cost of Rs 146.45 Crores for FY 2014-15

vi) Allow the recovery of filing fees as and when paid to the Commission and publication expenses from the beneficiary

vii) Pass any other order in this regard as the Commission may find appropriate in the circumstances pleaded above

"

Unquote

3. Objections raised, response from PPCL and Commission's comments

3.1 Introduction

In response to the public notice inviting objections / suggestions from the stake holders on the petition filed by PPCL for true-up for FY 2011-12, true-up for FY 2012-13 and approval of tariff for FY 2014-15, the Electricity Department-Puducherry has filed its objections / suggestions in writing.

Public hearing was held at Puducherry on March 14' 2014 where the respondents were given an opportunity to put forth their objections and suggestions on the Tariff Petition to the Commission.

Only ED-Puducherry made a written submission of the objections on the true-up petitions for FY 2011-12 & FY 2012-13 and the tariff petition of PPCL for FY 2014-15; and only ED-Puducherry participated as a stakeholder in the public hearing process.

The objections raise by the Electricity Department, Puducherry & the submissions made by the PPCL thereto are given as under:

3.2 ADDITIONAL CAPITALISATION

3.2.1 Stakeholder's comment

Quote

The Commission may consider the generating company / licensee's investment plan for approval and for this purpose may require the generating company / licensee to provide relevant technical and commercial details. The carrying costs corresponding to the approved investment plan for a given year shall normally be considered for its revenue requirement.

PED submits that Commission may need to do a prudence check on the implementation of Reverse Osmosis Plant and the cost to be approved for the same. The Hon'ble Commission may also check whether the implementation of reverse osmosis plant is carried out through competitive bidding guidelines. The detail of the proposed additional cost of Rs. 4.29 Crores claimed by PPCL in its petition needs to be reviewed by the Commission and to be approved subject to the prudence check. The additional cost as claimed by PPCL needs to be initially approved by the Commission and then can be undertaken. The detail of such approval needs to be verified.

Unquote

3.2.2 Petitioner's submission

Quote

It is submitted that the objective of the R. O. Plant is to treat the Feed water to the Cooling Tower which has high conductivity by way of salinity. Water is sourced from two bore wells located about 10 kms from PPCL plant site. Water from borewells are having high conductivity and it has led to high internal corrosion of pipelines and heat exchangers resulting in Plant downtime, replacement costs of pipelines, heat exchangers, etc. In view of above PPCL's Board has approved proposal for setting up of Reverse Osmosis Plant vide Resolution No 54.10. The cost of R.O. Plant was approved by the Government of Puducherry vide G.O.No.21016/2/98-P3. PF(I), dt.04.02.2003. Central Electricity Authority was the consultant for Project. The specification of R.O. Plant and the tender documents for R.O. Plant was prepared by CEA. Based on the tender documents prepared by CEA open tender was floated and six concerns responded to the tender. The evaluation of the tender was carried out by CEA. The evaluation was put up to the PPCL's Board and in the meeting of the Board of Directors held on 11.1 1.2005 a Sub-Committee of 4 members was formed (One nominee from Central Electricity Authority, Superintending Engineer-I, Electricity Department, Pondicherry, Director of Accounts & Treasuries, Government of Puducherry and Managing Director, PPCL) to examine various issues regarding Bid evaluation. The Sub-Committee submitted the Bid Evaluation Report and comparative study of tender bids and has recommended M/S Doshi Ion Exchange & Chemical Industries Ltd., Chennai who emerged with a lowest price of Rs. 4,29,17,609/- (inclusive of all duties and taxes) and the Board of Directors has approved the recommendations of the Sub-Committee in the meeting held on 20.09.2006 and accordingly approval of the Lt. Governor was also accorded under Clause-86 of the Articles of Association of the Corporation towards the erection of RO/DM Plant at a total cost not exceeding Rs.4,29,17,609/- (inclusive of all taxes) to M/S Doshi Ion Exchange & Chemical Industries Ltd., Chennai vide G.O. Ms No.35 dt. 15.12.2006. The Letter of indent was placed on M/S Doshi Ion Exchange & Chemical Industries Ltd., Chennai and work completion date was 15/12/2007. Whereas, the Contractor M/S Doshi Ion Exchange & Chemical Industries Ltd., Chennai has delayed the execution and after relentless follow up from PPCL side the Project was commissioned and handed over on 31/2/2013. However, the Corporation has claimed a sum of Rs.3.32 Crores so far paid to the company towards supply and erection of R.O. Plant in the tariff petition under the head capital cost as additional capital cost.

Unquote

3.2.3 Commission's Views

The Commission has noted the submission of the Petitioner regarding the additional capitalization pertaining to the RO plant. The Commission has carried out due prudence check and based on additional clarifications received has considered the claim of additional capitalization. The detailed analysis pertaining to this is as discussed in para 7.6.1 of this order.

3.3 RETURN ON EQUITY

3.3.1 Stakeholder's comment

Quote

RoE claimed is 23.481% by PPCL as per CERC (T&C of Tariff) Regulations, 2009 which is computed at corporate rate as the tax holiday is no longer available. However, PED submits that the profit of the Utility needs to be checked based on the book profit and taxable profit which may result into MAT RoE. In case MAT is applicable, RoE will be 17.481% which needs to be reviewed by the Commission.

Unquote

3.3.2 Petitioner's submission

Quote

It is submitted that the Corporation does not have any tax holiday for FY 2014-15. The tax holiday was only applicable till FY 2009- 10. For this reason the Corporation had claimed grossing up of return on equity in the tariff petition, i.e. the Corporation is paying tax on business income besides tax on interest income.

Under the circumstances, it is respectfully submitted that the return on equity is to be calculated at 23.481% which may be allowed to recover the fixed charges in line with Tariff Regulations of the Hon'ble Commission on return of equity. Moreover, it is also imperative to submit to the Hon'ble Commission that the Corporation is presently paying Corporate Tax as applicable to Companies under the Income Tax Act, since MAT (Minimum Alternate Tax) is not applicable.

Therefore, it is respectfully submitted that the return on equity as calculated @23.481% may be allowed, to recover the fixed charges in line with Tariff Regulations of the Hon'ble Commission on return on equity.

Unquote

3.3.3 Commission's Views

The detailed analysis pertaining to this is as discussed in the sections of the return on equity in the respective chapters of this order.

3.4 STATION HEAT RATE, DEGRADATION FACTOR AND AUXILIARY POWER CONSUMPTION

3.4.1 Stakeholder's comment

Quote

Regulation 26(ii) B of Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2009 gives the multiplication factor for a Gas based (Natural Gas) thermal generating station as 1.05. PED submits that the multiplication factor of 1.1 as taken by PPCL for arriving at the SHR should be re-checked in line with the regulations. PPCL has also taken 5% as degradation factor to arrive at the normative GSHR as mentioned in the petition. However PED requests Hon'ble Commission to contemplate the degradation factor concept as the same has not been specified under the mentioned CERC regulation. PED hereby submits that SHR is to be approved based on the tariff order dated 28th March 2013 i.e. 2600 as the efficiency parameter needs to be maintained by the Generating Plant. Any relaxation needs to be provided only with the proper justification

Regulation 26(iv) (c) of Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2009 suggests the Auxiliary Consumption around 3% for Gas Turbine/ Combined Cycle generating station. Claiming 6% is asking for more than 100% relaxation. Even though CEA has recommended a higher APC of 5.5 % for plants having electric Gas Booster Compressor, further relaxation may not be accepted.

Unquote

3.4.2 Petitioner's submission

Quote

It is submitted that the Regulation 26(ii) (b) of CERC (Terms and Conditions of Tariff) Regulations, 20O9 gives that the Guaranteed Heat rate of Gas-based /Liquid-based thermal generating unit(s)/ block(s) : 1.05 X Design Heat Rate of the unit/block for Natural Gas and RLNG (kCal/kWh) is enclosed as Annexure 1. So the Multiplication factor of 1.05 is to convert the design heat rate to guaranteed heat rate and not for converting Net Heat Rate to Gross Heat Rate. The Multiplication factor (MF) of 1.1 is used for converting the heat rate based on NCV of the fuel to Heat rate based on the GCV of the fuel. The MF of 1.1 is displayed by the fuel supplier, M/S GAIL in their company web site a copy of which is enclosed as Annexure-II. The ratio of Gross Calorific value (GCV) of the fuel to Net Calorific Value of the fuel can be verified from the bills raised M/S GAIL and the value is 1.1. There is loss of power of Combined Cycle Power Plant due to aging and the manufacturer's correction curve is enclosed as Annexure-III. PPCL's Gas Turbine has clocked more than 1,22,280 hrs and the degradation factor as per the curve is 1.05. Hence the degradation factor as allowed in the Hon'ble Commission's Tariff order is in order. In the CERC's order dated 07.06.2002 regarding MP No. I 331201 I in the matter of relaxation of Heat Rate of Assam Gas Power Plant and Agartala Power plant the degradation factor for the Gas Turbine have been applied. Further PPCL is having average monthly under recovery of Rs. 17.77 lakhs due to fixing of lower heat rate. Hence it is requested that the PPCL's request for a Heat Rate for 2646 kcal/kWh may please be allowed.

It is submitted that because of the Electric driven gas booster compressors the Auxiliary Power Consumption is on the higher side. In order to reduce the power consumption higher efficiency compressors have to be installed, which again will lead to higher capital costs. Hence it is imperative to submit that the Hon'ble Commission had held in a number of judgments that the vintage of power plants has to be kept in mind before determining the various operating parameters for the power plant and accordingly the Petitioner considered APC at 6% percentage which is also less than the actual.

In this connection, the Petitioner submits that the Hon'ble Commission has the power to remove difficulties and amend / deviate from the norms provided for Regulations 43 and 44 of the JERC Tariff Regulations, 2009. The power to relax is a judicial discretion vested in this Hon'ble Commission.

Unquote

3.4.3 Commission's Views

The Commission has considered the objection and the submission of the Petitioner in this regard for the purpose of its analysis. The Commission has approved the normative parameters as per the CERC regulations and permitted deviations if necessary after due prudence check.

3.5 FUEL COST

3.5.1 Stakeholder's comment

Quote

It is hereby submitted that deviation from the Regulations of considering the landed fuel cost without any proper justification may not be accepted. Since the regulations clearly specifies that Jan – March 2013 fuel cost needs to be considered, such provision needs to be adopted and deviation may not be allowed.

Unquote

3.5.2 Petitioner's submission

Quote

It is submitted that the Corporation has considered requirement of fuel stock on landed cost of gas for the months of July'13, August'13 and September'13 instead of landed cost of the gas for the months of January'14, February'14 and March'14, since, the Corporation had submitted the tariff petition to the Hon'ble Commission on 7th January' 14. Subsequently, the Corporation also furnished the gas cost of November'13 and December'13 vide reply to deficiency note as desired by the Commission vide Lr.No. 1536/PPCL/MD/2013-14,dt.28.01.2014. In this regard, it is submitted to the Hon'ble Commission that the question of submission of PED on fuel cost from January'13, February'13 and March'13 does not arise, since the Corporation filed the tariff petition pertaining to the tariff period 2014-15.

Unquote

3.5.3 Commission's Views

As per the CERC regulations:

''the *landed cost incurred (taking into account normative transit and handling losses) by the generating company and gross calorific value of the fuel as per actual for the three months preceding the first month for which tariff is to be determined shall be considered and no fuel price escalation shall be provided during the tariff period.''*

The Commission as per the CERC regulations has considered the latest available bills for its analysis and has accordingly considered the fuel cost and GCV of gas as per the bills for the months of October'13, November'13 and December'13. The detailed analysis pertaining to this is in para 7.5 of this order.

3.6 ENERGY CHARGES

3.6.1 Stakeholder's comment

Quote
It is hereby submitted that Energy Charges needs to be recalculated based on Normative SHR and Auxiliary Consumption with the landed cost of fuel in line with the Regulation. The Hon'ble Commission may take cognizance of the details related to excess gas transportation charges in the energy bills and may validate them.
Unquote

3.6.2 Petitioner's submission

Quote
It is submitted to the Hon'ble Commission that the energy charges are normally calculated based on the Normative Station Heat Rate, Auxiliary Consumption to be approved by the Commission and the landed cost of fuel in line with the JERC/CERC Regulations. The Corporation has submitted before the Hon'ble Commission for the tariff period 2014-15 to reconsider the heat rate of 2646 kcal/kWh in view of the tariff order pertaining to the tariff period 2013-14, since the loss to the Corporation due to non recovery of fuel cost.

It is submitted to the Hon'ble Commission to reconsider the Station Heat rate of 2646 kcal/kWh instead of 2600 kcal/kWh in view of tariff order 2013-14 and it is also to submit that the excess gas transportation charges which was resulted due to reduction in calorific value of the gas and the effect also given on this in the landed cost in the form of discount whenever there is a reduction from the Standard Weighted Average Calorific Value of the Gas.

Under the circumstances, it is submitted that the contentions raised by Respondent in its reply and the prayers of the Respondent reply may be rejected. The Petitioner prays that the Hon'ble Commission may please be allowed the tariff as claimed by the Petitioner in the tariff petition 2014-15. **Unquote**

3.6.3 Commission's Views

The Commission has specified the formula for recovery of energy charges which takes into account the normative GSHR and the normative auxiliary consumption for the determination of the energy charge. The formula further takes into consideration the actual GCV and actual gas cost for the month for determination of the monthly energy charges. The determination of the energy charge for FY 2014-15 is on the basis of the normative parameters as approved in this tariff order. The formula has been specified in para 7.8 of this order.

4. True-up for FY 2011-12

4.1 Background

The true-up of FY 2012-12 is to be carried out as per the provisions of regulation 8 of JERC Tariff Regulations, 2009. As per the regulation 8 of JERC Tariff Regulations, 2009:

(8) Review and True Up

1) *The Commission shall undertake a review along with the next Tariff Order of the expenses and revenues approved by the Commission in the Tariff Order. While doing so, the Commission shall consider variations between approvals and revised estimates/pre-actuals of sale of electricity, income and expenditure for the relevant year and permit necessary adjustments/ changes in case such variations are for adequate and justifiable reasons. Such an exercise shall be called 'Review'.*

2) *(i) After audited accounts of a year are made available, the Commission shall undertake similar exercise as above with reference to the final actual figures as per the audited accounts. This exercise with reference to audited accounts shall be called 'Truing Up'.*

   (ii) The Truing Up for any year will ordinarily not be considered after more than one year of 'Review'.

3) *The revenue gap of the ensuing year shall be adjusted as a result of review and truing up exercises.*

4) *While approving such expenses/revenues to be adjusted in the future years as arising out of the Review and / or Truing up exercises, the Commission may allow the carrying costs as determined by the Commission of such expenses/revenues. Carrying costs shall be limited to the interest rate approved for working capital borrowings.*

5) *For any revision in approvals, the licensee would be required to satisfy the Commission that the revision is necessary due to conditions beyond its control.*

6) *In case additional supply is required to be made to any particular category, the licensee may, any time during the year make an application to the Commission for its approval. The application will demonstrate the need for such change of consumer mix and additional supply of power and also indicate the manner in which the licensee proposes to meet the cost for such change of consumer mix and additional supply of power.*

7) *The Commission may consider granting approval to such proposals provided the cost of additional supply is ordinarily met by the beneficiary category.*

The Commission has reviewed the variations between approvals and actual of income and expenditure for FY 2011-12 as per the audited accounts submitted by the Petitioner and has permitted necessary adjustments after prudence check in cases where variations are for reasonable and justifiable reasons.

The Petitioner had filed petition for determination of tariff for the period FY 2011-12 vide petition no. 18/2010. The Commission vide its order dated August 6' 2011 had approved tariff with effect from June 2011. Subsequently, based on review petition (petition no. 45/2011) filed by the Petitioner on the tariff order dated August 6' 2011, the Commission partially allowed the review petition vide its order dated November 3' 2011 and the Corporation then filed Appeal No. 41 of 2012 to APTEL against the review order pertaining to the tariff period FY 2011-12. The Hon'ble Aptel vide its order dated November 21' 2012 partially allowed the Appeal and disposed off the appeal with directions. The same has been discussed in para 2.1 of this order.

In the light of observations and findings of the Hon'ble Aptel in appeal no. 41/2012, the petition for tariff determination for FY 2011-12 (petition no. 18/2010) and review petition (petition no. 45/2011) were restored by the Commission vide its order dated December 19' 2012.

The Commission carried out detailed proceedings in this matter and subsequently vide its order dated April 29' 2013 approved capital cost of Rs 146.45 Crores for FY 2011-12 against the earlier approved capital cost of Rs 137.77 Crores. The revised capital cost of the plant has been taken into consideration during the true-up exercise.

Further, the Commission in the last year's tariff order dated March 28' 2013 had done the provisional truing-up for FY 2011-12 (from June 2011 to March 2012 since the tariff order of FY 2011-12 was applicable from June 2011) in view of the actual fuel bills and unaudited accounts submitted for the year. This time the audited accounts have been submitted and after due prudence check of the fuel bills and bills raised to the beneficiary (ED-Puducherry), the Commission has carried out the true-up for the year. At the time of provisional truing-up, variation analysis of the fixed charges was not done as the capital cost of the plant was unchanged at that time. This time, the Commission, has revised the fixed charges for the year due to the change in the approved capital cost of the plant.

4.2 Regulations

As per provisions of Clause 19 of the JERC (Terms and Conditions for Determination of Tariff) Regulations 2009, the Commission, while determining the cost of generation of each thermal/gas/hydro-electric generating stations located within the State, shall be guided, as far as feasible, by the principles and methodologies of CERC, as amended from time to time.

Accordingly, CERC regulations for the tariff period 2009-14 have been referred to here for tariff period FY 2011-12.

4.3 Operational Parameters

Petitioner's Submission

The Petitioner has submitted the following operational parameters for FY 2011-12.

1. **Normative Annual Plant Availability Factor (NAPAF)**
   The Petitioner has considered the NAPAF of 85% as per the Hon'ble Aptel judgment dated November 21' 2012. The Commission as per its order dated April 29' 2013 has observed that the NAPAF of 85% would be considered at the time of true-up for FY 2011-12.

2. **Gross Station Heat Rate**
   The Petitioner has considered the gross station heat rate of 2400 kcal/kWh for FY 2011-12 as per the Commission's review order dated November 3' 2011 on petition no. 45/2011.

3. **Auxiliary Consumption**
   The Petitioner has considered the auxiliary consumption of 5.50% for FY 2011-12 as per the Commission's order dated November 3' 2011 (petition no. 45/2011).

Commission's Analysis

The operational parameters – gross SHR and auxiliary consumption are to be considered as approved earlier by the Commission as per the review order dated November 3' 2011.

It is noted that the Commission had earlier approved NAPAF of 87% for FY 2011-12 as per the review order dated November 3' 2011 and tariff order dated August 6' 2011. NAPAF of 85% is approved for consideration during the true-up exercise as per the Hon'ble Aptel judgment dated November 21' 2012 and also observed in the Commission's order dated April 29' 2013.

4.4 Annual Fixed Charge (AFC) approved for true-up of FY 2011-12

The components of the fixed charges have undergone a change due to change in the approved capital cost as per the Commission's order dated April 29' 2013. The following components have been considered as part of the fixed charges for the year.

1. Depreciation
2. Interest charges on loan
3. Interest on working capital
4. O&M expenses
5. Return on equity

The components of the fixed charges mentioned above are discussed in detail in the following paragraphs. The Commission has arrived at the revised Annual Fixed Charge (AFC) for the year and accordingly approved the differential AFC charges as part of the true-up exercise for FY 2011-12.

4.4.1 Capital Cost for FY 2011-12

Petitioner's Submission

The Petitioner has submitted the capital cost of Rs 146.45 Crores for FY 2011-12 as per the Commission's order dated April 29' 2013 on the revised capital cost. The Petitioner has submitted that the capital cost does not include the cost of capitalization of spares amounting to Rs 1.55 Crores incurred during FY 2010-11 and the amount incurred towards purchase of computers, furniture & fittings, office equipment during FY 2011-12.

The Petitioner has considered the opening capital cost of Rs 146.45 Crores for FY 2011-12, with no additional capitalization claimed for tariff determination purpose.

Commission's Analysis

The Commission has considered the capital cost of Rs 146.45 Crores as per the Commission's order dated April 29' 2013. The Commission in the review order for the year dated November 3' 2011 had considered the capital cost of Rs 137.77 Crores for purposes of tariff determination (petition no. 45/2011). The Commission in the review order for the year had kept the capital cost unchanged from that determined earlier as per the tariff order dated August 6' 2011.

The Commission's order dated April 29' 2013 on petition no. 18/2010 and petition no. 45/2011 approved capital cost of Rs 146.45 Crores (as on 31.03.2011), in compliance with the directions of the Hon'ble Aptel in appeal no. 41/2012 (judgment dated November 21' 2012). Further, the Commission has not considered allowed the cost of capitalization of spares amounting to Rs 1.55 Crores made during FY 2010-11 and amount incurred towards the purchase of computers, furniture & fittings, office equipment during FY 2011-12 for inclusion in the capital cost (which are included in the gross fixed assets as per the audited accounts for the year) as per the order dated April 29' 2013. These costs have not been allowed as part of the approved capital cost. Thus, Rs 146.45 Crores is approved as the capital cost for FY 2011-12 for tariff determination purpose.

It is to be noted that no additional capitalization is approved for FY 2011-12 and accordingly the closing capital cost approved for FY 2011-12 is Rs 146.45 Crores (for tariff determination purpose).

The Commission, therefore, approves Rs 146.45 Crores as the capital cost during true-up of FY 2011-12.

4.4.2 Depreciation

Petitioner's Submission

The Petitioner has submitted the depreciation on the approved capital cost of Rs 146.45 Crores for FY 2011-12. The Petitioner has claimed Rs 6.97 Crores as depreciation for FY 2011-12. Depreciation has been considered as per JERC Regulations 26 and applicable CERC regulations 2009.

The Petitioner has excluded the cost of freehold land of Rs 7.93 Crores for depreciation purpose. The depreciable value of the asset has been capped at 90% of the capital cost. The cumulative depreciation recovered up to the previous year is Rs 112.68 Crores and accordingly the depreciation for the year is Rs 6.97 Crores.

Commission's Analysis

The Commission has considered the opening capital cost of Rs 146.45 Crores for FY 2011-12, and no additional capitalization for the year, for purposes of tariff determination. The cost of the freehold land of Rs 7.93 Crores (as per the audited accounts for FY 2011-12) has been excluded for depreciation purpose. The cumulative depreciation recovered as part of the tariff up to FY 2010-11 (from FY 1999-00) is Rs. 112.68 Crores.

The weighted average depreciation rate of 5.05%[2] has been applied on the capital cost of Rs 138.52 Crores to arrive at the depreciation of Rs 7.00 Crores for the year. It has been noted

[2] Applicable CERC depreciation rates have been applied on the asset-wise break-up available as per the audited accounts; depreciation so arrived has been considered to compute the weighted average rate of depreciation for the purpose of computation of depreciation amount on the approved capital cost of Rs 146.45 Crores.

that the remaining depreciable value of the asset for purposes of computation of the annual depreciation amount is more than the annual depreciation allowed for the year/

The depreciable value of the asset has been capped at 90% of the capital cost of the asset as per the applicable CERC regulations.

Table 8 : Depreciation approved by the Commission for true-up of FY 2011-12 (Rs Crores)

S. No.	Details	Petitioner's Submission	Approved
1	Average Capital cost	146.45	146.45
2	Less cost of Freehold Land	7.93	7.93
3	Capital cost excl FH Land	138.52	138.52
4	Cumulative depreciation upto previous year	112.68	112.68
5	Depreciation for the year	6.97	7.00
6	Cap on depreciation	124.67	124.67
7	**Depreciation for the year**	**6.97**	**7.00**

The Commission, therefore, approves the depreciation for the year at Rs 7.00 Crores for purposes of the revised fixed charges during true-up of FY 2011-12.

4.4.3 Interest Charge on Loan

Petitioner's Submission

The Petitioner has submitted that the entire capital cost of the project has been funded from its own resources and capital investment has been considered at 70% normative loan and 30% normative equity as per the JERC Regulations. If equity deployed is more than 30%, the amount of equity is limited to 30% and the balance amount is to be considered as the normative loan.

The Petitioner has considered the opening capital cost of Rs 146.45 Crores with no additional capitalization for the year for purposes of tariff determination. The Petitioner has considered the gross normative loan of Rs 102.52 Crores, with cumulative repayment of Rs 102.52 Crores, resulting in NIL net opening loans.

The Petitioner has claimed NIL interest charges for FY 2011-12 on the basis of the revised capital cost.

Commission's Analysis

On the basis of the approved capital cost of Rs 146.45 Crores, the gross normative loan is Rs 102.52 Crores (70% of the approved capital cost). The cumulative repayment up to the previous year has been considered at Rs 102.52 Crores and accordingly the net loan opening is NIL.

As per the CERC regulations for the tariff period 2009-14, the repayment shall be deemed to be equal to the depreciation amount. On a clarification from the Commission regarding the cumulative repayment considered for purposes of interest calculation, the Petitioner has responded that the cumulative depreciation recovered so far is higher than the gross normative loan, so the cumulative repayment has been considered equal to the gross normative loan. The submission of the Petitioner is found to be in order and accordingly the cumulative repayment has been limited to the gross normative loan amount. The computation of the interest charges is as below.

Table 9: Interest Charges approved by the Commission for true-up of FY 2011-12 (Rs Crores)

S. No.	Details	Petitioner's Submission	Approved
1.	Average Capital cost for the year	146.45	146.45
2.	Loan at 70% of average capital cost	102.52	102.52
3.	Cumulative repayment up to previous year	102.52	102.52
4.	Net loan opening	0.00	0.00
5.	Addition in loan for the year	0.00	0.00
6.	Repayment of loan for the year	0.00	0.00
7.	Net loan closing	0.00	0.00
8.	**Average net loan**	**0.00**	**0.00**
9.	**Rate of Interest**	**11.25%**	**11.25%**
10.	**Interest**	**0.00**	**0.00**

The Commission, therefore, approves the interest charges for the year as NIL for purposes of the revised fixed charges during true-up of FY 2011-12.

4.4.4 Interest on Working Capital

Petitioner's Submission

The Petitioner has claimed the interest on working capital at Rs. 2.48 Crores for FY 2011-12 as per CERC Regulations 18 (b) and JERC Regulations 29 and interest is considered as per CERC Regulations 18 (3), as per the true-up petition for FY 2011-12.

The rate of interest of 12.25% has been considered by the Petitioner.

Commission's Analysis

As per CERC Regulation 18 (6), the working capital of the Gas Turbine Generating Station shall be considered as under:

i. Fuel cost of one month (Gas) at NAPAF

ii. Maintenance spares at 30% of O&M expenses specified in Regulation 19

iii. Receivables equivalent to two months of capacity and energy charges based on the NAPAF

iv. O&M expenses for one month

The interest on working capital has been considered at the rate of interest on normative basis as prime lending rate (PLR) of State Bank of India (SBI) considering the PLR rate as on April 1' 2011 i.e. 13.00% per annum. The energy charges considered while working out working capital are based on average fuel consumption and payments made from June'11 to August'11 (based on the actual available data as provided by the Petitioner and validated by the Commission) corresponding to generation at NAPAF of 85%. As per the CERC Regulations, the Commission has to consider the landed cost incurred and GCV of fuel as per actual for the three months preceding the first month for which tariff is to be determined; however, since the data for FY 2011-12 is available only from June'11, the Commission has considered the average fuel cost from June'11 to August'11 for arriving at the one month fuel cost for purposes of working capital.

The Commission has considered the working capital and interest thereon as per the regulations mentioned above at an interest rate of 13.00% per annum and arrived at the interest on working capital of Rs 2.58 Crores.

Table 10: Interest on working capital approved by the Commission for true-up of FY 2011-12 (Rs Crores)

S. No.	Details	Petitioner's Submission	Approved
1.	Cost of gas (one month) at NAPAF	4.13	3.97
2.	Maintenance spares (30% O&M expenses)	2.50	2.50
3.	Receivables (two months) at NAPAF	12.93	12.65
4.	O&M expenses (one month)	0.69	0.69
5.	**Total working capital**	**20.25**	**19.81**
6.	**Rate of interest on working capital**	**12.25%**	**13.00%**
7.	**Interest on working capital**	**2.48**	**2.58**

The Commission, therefore, approves the interest on working capital for the year at Rs 2.58 Crores for purposes of the revised fixed charges during true-up of FY 2011-12.

4.4.5 Operation and Maintenance Expense

Petitioner's Submission

The petitioner has claimed the O&M expenses at Rs. 8.32 Crores for FY 2011-12. The O&M expenses include employee cost, R&M expenses and A&G expenses.

The Petitioner has submitted that the O&M expenses have been taken as @ 22.90 lac/MW as specified by CERC for small gas turbine for FY 2009-10 and thereafter the O&M expenses for relevant year have been worked out considering escalation @ 5.72% p.a. over the base O&M charges of FY 2009-10, based on JERC Regulation 27 and applicable CERC Regulations.

Commission's Analysis

The Commission has examined the O&M expenses claimed by the Petitioner. The expenses claimed are in line with sub regulation (C) of regulation 19 of CERC regulations for determination of tariff, 2009-14 and regulation no. 27 of JERC tariff regulations, 2009 for the 32.5 MW gas turbine plant.

It is to be noted that since the O&M expenses are not dependent on the capital cost, therefore, there is no change in the O&M expenses from that approved earlier for the year as per the order dated August 6' 2011 (petition no.18/2010).

Table 11: O&M expenses approved for true-up of FY 2011-12 (Rs Crores)

S. No.	Financial Year	Approved
1.	2009-10	7.44
2.	2010-11	7.87
3.	**2011-12**	**8.32**

The Commission, therefore, approves the O&M expenses for the year at Rs 8.32 Crores for purposes of the revised fixed charges during true-up of FY 2011-12.

4.4.6 Return on Equity

Petitioner's Submission

The Petitioner has submitted that the entire capital cost of the project has been funded from its own resources and capital investment has been considered as 70% normative loan and 30% normative equity as per JERC Regulations. Regulations stipulate that if the equity employed is more than 30%, the amount of equity for determination of tariff is limited to 30% and the balance amount is to be considered as normative loan.

The Petitioner has submitted the pre-tax rate of return on equity as 23.481% (Base rate of return of 15.5% grossed up by the corporate tax rate of 33.99%) as per JERC Regulations 24 and CERC Regulations. The Petitioner has submitted that it does not have any tax holiday from FY 2010-11 and the tax holiday was applicable only up to FY 2009-10.

The Petitioner has claimed return on equity on 30% of the average capital cost submitted i.e. Rs. 146.45 Crores at the rate of 23.481% which works out to Rs. 10.32 Crores (23.481% of Rs. 43.94 Crores).

Commission's Analysis

The Commission has considered the pre-tax rate of return on equity as 23.481% (Base rate of return of 15.5% grossed up by the corporate tax rate of 33.99%) as per the JERC Regulations 24 and CERC Regulations. The tax holiday was applicable only up to FY 2009-10 and accordingly the Petitioner has been subject to the corporate tax rate.

The opening capital cost considered by the Commission for FY 2011-12 is Rs 146.45 Crores with no additional capitalization for the year for purposes of tariff determination.

The return on equity on the approved average capital cost of Rs. 146.45 Crores on the normative equity capital base works out to Rs. 10.32 Crores. (23.481% on equity portion (30%) of approved average capital cost of Rs. 146.45 Crores).

The Commission, therefore, approves the Return on Equity for the year at Rs 10.32 Crores for purposes of the revised fixed charges during true-up of FY 2011-12.

4.5 Differential Annual Fixed Charge (AFC) approved during true-up of FY 2011-12

The revised Annual Fixed Charge (AFC) approved by the Commission vis-à-vis submitted by the Petitioner is as below for FY 2011-12.

Table 12: Revised Annual Fixed Charge approved for true-up of FY 2011-12 (Rs Crores)

S. No.	Particulars	Petitioner's Submission in the petition	Approved
1.	Depreciation	6.97	7.00
2.	Interest on loan	0.00	0.00
3.	Interest on working capital	2.48	2.58
4.	Operation and Maintenance Expenses	8.32	8.32
5.	Return on Equity	10.32	10.32
6.	**Revised Annual Fixed Charge**	**28.08**	**28.20**

The Commission, therefore, approves the revised Annual Fixed Charge at Rs. 28.20 Crores for the true-up of FY 2011-12.

The Commission in the review order dated November 3' 2011 for FY 2011-12 had approved Annual Fixed Charge of Rs 26.90 Crores on the basis of the capital cost of Rs 137.77 Crores. The AFC has now got revised to Rs 28.20 Crores for FY 2011-12, on the basis of the approved capital cost of Rs 146.45 Crores.

The revised Annual Fixed Charge (AFC) approved by the Commission vis-à-vis approved earlier by the Commission for FY 2011-12 is as below.

Table 13: Annual Fixed Charge approved for FY 2011-12 (Rs Crores)

S. No.	Particulars	Order dated 06.08.2011	Review Order dtd. 03.11.11	Approved during true-up
1.	Depreciation	6.37	6.37	7.00
2.	Interest on loan	0.17	0.17	0.00
3.	Interest on working capital	2.31	2.34	2.58
4.	Operation and Maintenance Expenses	8.32	8.32	8.32
5.	Return on Equity	8.00	9.70	10.32
6.	**Annual Fixed Charge**	**25.17**	**26.90**	**28.20**

The difference in the Annual Fixed Charge i.e. Rs (28.20 – 26.90) = 1.30 Crores is approved by the Commission as part of the true-up exercise for FY 2011-12 and the Petitioner is entitled to bill this amount separately as supplementary bill.

4.6 Variable Charges approved for true-up of FY 2011-12

The Commission in the last tariff order dated March 28' 2013 had carried out the provisional truing-up for FY 2011-12 and approved Rs 21066926 to be recovered as part of the provisional truing-up exercise. The Commission had approved energy rate of Rs 2.03/kWh for FY 2011-12 as per the review order dated November 3' 2011 (petition no. 45/2011). During the review exercise for the year as per the order dated April 13' 2012, the Commission had allowed Rs 11356718 to be recovered for the period from June'11 to October'11 on account of the variation in the energy rate from the approved energy rate.

The Commission during the provisional true-up had considered the variation in the energy rate (basis the actual GCV, actual gas cost, normative gross SHR and normative auxiliary consumption) from the approved energy rate of Rs 2.03/kWh and additionally allowed Rs 21066926 to be recovered for the period from June'11 to March'12.

For the true-up exercise, the Commission had asked a clarification from the Petitioner regarding any supplementary bills raised for the year, to which the Petitioner responded stating that no supplementary bills have been raised for the year. The Petitioner has further clarified that it is not claiming any amount due to the variation in the variable charges for the year during the true-up. The Commission carried out due prudence check of the bills submitted and found that the bills were the same as submitted last time during the provisional true-up exercise. The Commission, therefore, has not considered any amount due for variable charges on account of the variation in the energy rate from the approved energy rate during the true-up exercise.

The Commission, therefore, does not find any amount due for variable charges on account of the variation in the energy rate from the approved energy rate during the true-up exercise for FY 2011-12.

5. True-up for FY 2012-13

5.1 Background

The JERC tariff regulations, 2009 provide for a review of the previous tariff order along with the next tariff order. The regulation 8 of JERC regulations, 2009 stipulates that the above exercise would be carried out again in the nature of 'true-up' once the actual figures as per the audited accounts of the particular year become available. Any further variation between the actual and approved values would be taken care at the time of true-up after prudence check.

The Commission has reviewed the variations between approvals and actual of income and expenditure for FY 2012-13 as per the audited accounts submitted by the Petitioner and has permitted necessary adjustments after due prudence check in cases where variations are for reasonable and justifiable reasons.

The tariff for FY 2012-13 was determined by the Commission as per its order dated April 13' 2012 on the basis of the capital cost of Rs 137.77 Crores (petition no. 61/2012). The capital cost of the plant under consideration has undergone a change vide the Commission's order dated April 29' 2013 in compliance of the directions of the Hon'ble Aptel's judgment dated November 21' 2012. The Commission has revised the capital cost of the plant to Rs 146.45 Crores, which has been taken into consideration during the true-up exercise.

The Petitioner has submitted the true-up petition for FY 2012-13 along with the audited accounts and after due prudence check of the fuel bills and bills raised to the beneficiary (ED-Puducherry), the Commission has carried out the true-up for the year.

5.2 Regulations

As per provisions of Clause 19 of the JERC (Terms and Conditions for Determination of Tariff) Regulations 2009, the Commission, while determining the cost of generation of each thermal/gas/hydro-electric generating stations located within the State, shall be guided, as far as feasible, by the principles and methodologies of CERC, as amended from time to time.

Accordingly, CERC regulations for the tariff period 2009-14 have been referred to for the tariff period FY 2012-13.

5.3 Operational Parameters

Petitioner's Submission

The Petitioner has submitted the following operational parameters.

1. **Normative Annual Plant Availability Factor (NAPAF)**

   The Petitioner has considered the NAPAF of 85% as per the Hon'ble Aptel judgment dated November 21' 2012. The Commission as per its order dated April 29' 2013 has observed that the NAPAF of 85% would be considered at the time of true-up for FY 2012-13.

2. **Gross Station Heat Rate**

   The Petitioner has considered the gross station heat rate of 2475 kcal/kWh for FY 2012-13 as per the Commission's order dated April 13' 2012 on petition no. 69/2012.

3. **Auxiliary Consumption**

   The Petitioner has considered the auxiliary consumption of 5.50% for FY 2012-13 as per the Commission's order dated April 13' 2012 on petition no. 69/2012.

Commission's Analysis

The operational parameters – gross SHR and auxiliary consumption are to be considered as approved earlier by the Commission as per its order dated April 13' 2012 at 2475 kcal/kWh and 5.50% respectively for FY 2012-13.

It is noted that the Commission had earlier approved NAPAF of 87% for FY 2012-13 as per its order dated April 13' 2012. NAPAF of 85% is approved for consideration during the true-up exercise as per the Hon'ble Aptel judgment dated November 21' 2012 and also observed in the Commission's order dated April 29' 2013.

5.4 Annual Fixed Charge (AFC) approved for true-up of FY 2012-13

The components of the fixed charges have undergone a change due to change in the approved capital cost as per the Commission's order dated April 29' 2013. The following components have been considered as part of the fixed charges for the year.

1. Depreciation
2. Interest charge on loan
3. Interest on working capital

4. O&M expenses
5. Return on equity

The components of the fixed charges mentioned above are discussed in detail in the following paragraphs. The Commission has arrived at the revised Annual Fixed Charge (AFC) for the year and accordingly approved the differential AFC charges as part of the true-up exercise for FY 2012-13.

5.4.1 Capital Cost for FY 2012-13

Petitioner's Submission

The Petitioner has submitted the capital cost of Rs 146.45 Crores for FY 2012-13 as per the Commission's order dated April 29' 2013 on the revised capital cost. The Petitioner has submitted that the total capital cost is Rs 148.12 Crores (as on 31.03.2013) as per the audited financial statements pertaining to FY 2012-13; however, for the purposes of tariff determination, amount of Rs 1.55 Crores incurred towards capitalization of spares during FY 2010-11 and the amount incurred towards purchase of computers, furniture & fittings, office equipment during FY 2011-12 & FY 2012-13 has not been included.

The Petitioner has considered the opening capital cost of Rs 146.45 Crores for FY 2012-13, with no additional capitalization claimed for tariff determination purpose.

Commission's Analysis

The Commission has considered the capital cost of Rs 146.45 Crores as per the Commission's order dated April 29' 2013. The Commission in its tariff order dated April 13' 2012 had considered the capital cost of Rs 137.77 Crores for determination of tariff for FY 2012-13.

The Commission's order dated April 29' 2013 on petition no. 18/2010 and petition no. 45/2011 approved capital cost of Rs 146.45 Crores, in compliance with the directions of the Hon'ble Aptel in appeal no. 41/2012 (judgment dated November 21' 2012). Further, the Commission has not considered allowed the cost of capitalization of spares amounting to Rs 1.55 Crores made during FY 2010-11 and amount incurred towards the purchase of computers, furniture & fittings, office equipment during FY 2011-12 and FY 2012-13 for inclusion in the capital cost (which are included in the gross fixed assets as per the audited accounts for the year) as per the order dated April 29' 2013. Thus, Rs 146.45 Crores is approved as the capital cost for FY 2012-13 for tariff determination purpose.

It is to be noted that no additional capitalization is approved for FY 2012-13 and accordingly the closing capital cost approved for FY 2012-13 is Rs 146.45 Crores.

The Commission, therefore, approves Rs 146.45 Crores as the capital cost during true-up of FY 2012-13.

5.4.2 Depreciation

Petitioner's Submission

The Petitioner has submitted the depreciation on the approved capital cost of Rs 146.45 Crores for FY 2012-13. The Petitioner has claimed Rs 5.02 Crores as depreciation for FY 2012-13. Depreciation has been considered as per JERC Regulations 26 and applicable CERC regulations 2009.

The Petitioner has excluded the cost of freehold land of Rs 7.93 Crores for depreciation purpose. The depreciable value of the asset has been capped at 90% of the capital cost. The cumulative depreciation recovered up to the previous year is Rs 119.65 Crores and accordingly the depreciation for the year is Rs 5.02 Crores.

Commission's Analysis

The Commission has considered the opening capital cost of Rs 146.45 Crores for FY 2012-13, and no additional capitalization for the year, for purposes of tariff determination. The cost of the freehold land of Rs 7.93 Crores (as per the audited accounts for FY 2012-13) has been excluded for depreciation purpose. The cumulative depreciation recovered up to FY 2011-12 is Rs 119.68 Crores (as approved in the section on depreciation for FY 2011-12). The weighted average rate of depreciation of 5.05%[3] has been considered to be applicable.

The depreciable value of the asset has been capped at 90% of the capital cost of the asset as per the applicable CERC regulations. Depreciation for FY 2012-13 has been restricted to 90% of the remaining depreciable value of the asset and accordingly the depreciation for the year is approved at Rs 4.99 Crores.

Table 14 : Depreciation approved by the Commission for true-up of FY 2012-13 (Rs Crores)

S. No.	Details	Petitioner's Submission	Approved
1	Average Capital cost	146.45	146.45
2	Less cost of Freehold Land	7.93	7.93

[3] Applicable CERC depreciation rates have been applied on the asset-wise break-up available as per the audited accounts; depreciation so arrived has been considered to compute the weighted average rate of depreciation for the purpose of computation of the depreciation amount on the approved capital cost of Rs 146.45 Crores.

3	Capital cost excl FH Land	138.52	138.52
4	Cumulative depreciation upto previous year	119.65	119.68
5	Depreciation for the year	5.02	4.99
6	Cap on depreciation	124.67	124.67
7	**Depreciation for the year**	**5.02**	**4.99**

The Commission, therefore, approves the depreciation for the year at Rs 4.99 Crores for purposes of the revised fixed charges during true-up of FY 2012-13.

5.4.3 Interest Charge on Loan

Petitioner's Submission

The Petitioner has submitted that the entire capital cost of the project has been funded from its own resources and capital investment has been considered at 70% normative loan and 30% normative equity as per the JERC Regulations. If equity deployed is more than 30%, the amount of equity is limited to 30% and the balance amount is to be considered as the normative loan.

The Petitioner has considered the opening capital cost of Rs 146.45 Crores with no additional capitalization for the year for purposes of tariff determination. The Petitioner has considered the gross normative loan of Rs 102.52 Crores, with cumulative repayment of Rs 102.52 Crores, resulting in NIL net opening loans.

The Petitioner has claimed NIL interest charges for FY 2012-13 on the basis of the revised capital cost.

Commission's Analysis

On the basis of the approved capital cost of Rs 146.45 Crores, the gross normative loan is Rs 102.52 Crores (70% of the approved capital cost). The cumulative repayment up to the previous year has been considered at Rs 102.52 Crores and accordingly the net loan opening is NIL.

As per the CERC regulations for the tariff period 2009-14, the repayment shall be deemed to be equal to the depreciation amount. On a clarification from the Commission regarding the cumulative repayment considered for purposes of interest calculation, the Petitioner has responded that the cumulative depreciation recovered so far is higher than the gross normative loan, so the cumulative repayment has been considered equal to the gross normative loan. The submission of the Petitioner has been found to be in order and accordingly the cumulative repayment has been limited to the gross normative loan amount. Accordingly, the cumulative repayment up to the previous year has been considered at Rs 102.52 Crores and the net loan opening for the year is NIL. The computation of the interest charges is as below.

Table 15: Interest Charges approved by the Commission for true-up of FY 2012-13 (Rs Crores)

S. No.	Details	Petitioner's Submission	Approved
1.	Average Capital cost for the year	146.45	146.45
2.	Loan at 70% of average capital cost	102.52	102.52
3.	Cumulative repayment up to previous year	102.52	102.52
4.	Net loan opening	0.00	0.00
5.	Addition in loan for the year	0.00	0.00
6.	Repayment of loan for the year	0.00	0.00
7.	Net loan closing	0.00	0.00
8.	**Average net loan**	**0.00**	**0.00**
9.	**Rate of Interest**	**13.15%**	**13.15%**
10.	**Interest**	**0.00**	**0.00**

The Commission, therefore, approves the interest charges for the year as NIL for purposes of the revised fixed charges during true-up of FY 2012-13.

5.4.4 Interest on Working Capital

Petitioner's Submission

The Petitioner has claimed the interest on working capital at Rs. 3.23 Crores for FY 2012-13 as per CERC Regulations 18 (b) and JERC Regulations 29 and interest is considered as per CERC Regulations 18 (3), as per the true-up petition for FY 2012-13.

The rate of interest of 14.75% has been considered by the Petitioner.

Commission's Analysis

As per CERC Regulation 18 (6), the working capital to the Gas Turbine Generating Station shall be considered as under:

i. Fuel cost of one month (Gas) at NAPAF

ii. Maintenance spares at 30% of O&M expenses specified in Regulation 19

iii. Receivables equivalent to two months of capacity and energy charges based on the NAPAF

iv. O&M expenses for one month

The interest on working capital has been considered at the rate of interest on normative basis as prime lending rate (PLR) of State Bank of India (SBI) considering the PLR rate as on April 1' 2012 i.e. 14.75% per annum. As per the CERC Regulations, the Commission has to consider the landed cost incurred and GCV of fuel as per actual for the three months preceding the first month for which tariff is to be determined for purposes of the fuel cost for arriving at the working capital of the Petitioner; therefore, the Commission has considered the average fuel cost from Jan'12 to March'12 for arriving at the one month fuel cost for purposes of working capital.

The energy charges considered while working out working capital are based on average actual fuel consumption and payments made from Jan'12 to March'12 (based on the actual available data as provided by the Petitioner and validated by the Commission) corresponding to generation at NAPAF of 85%.

During the technical validation session held at the Commission's office, the Commission had asked for the computation of the fuel cost of one month considered for working capital purposes from the Petitioner. The Petitioner subsequently admitted to a mistake in the computation of the fuel cost for one month and accordingly revised the submission on the interest on working capital to Rs 3.20 Crores from Rs 3.23 Crores submitted earlier.

The Commission has considered the working capital and interest thereon as per the regulations mentioned above at an interest rate of 14.75% per annum and arrived at the interest on working capital at Rs 3.11 Crores.

Table 16: Interest on working capital approved by the Commission for true-up of FY 2012-13 (Rs Crores)

S. No.	Details	Petitioner's Submission in the petition	Revised Submission on Feb 17'14	Approved
1.	Cost of gas (one month) at NAPAF	4.66	4.59	4.40
2.	Maintenance spares (30% O&M expenses)	2.64	2.64	2.64
3.	Receivables (two months) at NAPAF	13.88	13.74	13.33
4.	O&M expenses (one month)	0.73	0.73	0.73
5.	**Total working capital**	**21.91**	**21.70**	**21.10**
6.	**Rate of interest on working capital**	14.75%	14.75%	14.75%
7.	**Interest on working capital**	**3.23**	**3.20**	**3.11**

The Commission, therefore, approves the interest on working capital for the year at Rs 3.11 Crores for purposes of the revised fixed charges during true-up of FY 2012-13.

5.4.5 Operation and Maintenance Expense

Petitioner's Submission

The petitioner has claimed the O&M expenses at Rs. 8.79 Crores for FY 2012-13. The O&M expenses include employee cost, R&M expenses and A&G expenses.

The Petitioner has submitted that the O&M expenses have been taken as @ 22.90 lac/MW as specified by CERC for small gas turbine for FY 2009-10 and thereafter the O&M expenses for relevant year have been worked out considering escalation @ 5.72% p.a. over the base O&M charges of FY 2009-10, based on JERC Regulation 27 and applicable CERC Regulations.

Commission's Analysis

The Commission has examined the O&M expenses claimed by the Petitioner. The expenses claimed are in line with sub regulation (C) of regulation 19 of CERC regulations for determination of tariff, 2009-14 and regulation no. 27 of JERC tariff regulations, 2009 for the 32.5 MW gas turbine plant.

It is to be noted that since the O&M expenses are not dependent on the capital cost, therefore, there is no change in the O&M expenses from that approved earlier for the year as per the order dated April 13' 2012.

Table 17: O&M expenses approved for true-up of FY 2012-13 (Rs Crores)

S. No.	Financial Year	Approved
1.	2009-10	7.44
2.	2010-11	7.87
3.	2011-12	8.32
4.	**2012-13**	**8.79**

The Commission, therefore, approves the O&M expenses for the year at Rs 8.79 Crores for purposes of the revised fixed charges during true-up of FY 2012-13.

5.4.6 Return on Equity

Petitioner's Submission

The Petitioner has submitted that the entire capital cost of the project has been funded from its own resources and capital investment has been considered as 70% normative loan and 30% normative equity as per JERC Regulations. Regulations stipulate that if the equity employed is more than 30%, the amount of equity for determination of tariff is limited to 30% and the balance amount is to be considered as normative loan.

The Petitioner has submitted the pre-tax rate of return on equity as 23.481% (Base rate of return of 15.5% grossed up by the corporate tax rate of 33.99%) as per JERC Regulations 24 and CERC Regulations. The Petitioner has submitted that it does not have any tax holiday from FY 2010-11 and the tax holiday was applicable only up to FY 2009-10.

The Petitioner has claimed return on equity on 30% of the average capital cost submitted i.e. Rs. 146.45 Crores at the rate of 23.481% which works out to Rs. 10.32 Crores (23.481% of Rs. 43.94 Crores).

Commission's Analysis

The Commission has considered the pre-tax rate of return on equity as 23.481% (Base rate of return of 15.5% grossed up by the corporate tax rate of 33.99%) as per the JERC Regulations 24 and CERC Regulations. The tax holiday was applicable only upto FY 2009-10 and accordingly the Petitioner has been subject to the corporate tax rate.

The opening capital cost considered by the Commission is Rs 146.45 Crores with no additional capitalization for the year.

The return on equity on the approved average capital cost of Rs. 146.45 Crores on the normative equity capital base works out to Rs. 10.32 Crores. (23.481% on equity portion (30%) of approved average capital cost of Rs. 146.45 Crores).

The Commission, therefore, approves the Return on Equity for the year at Rs 10.32 Crores for purposes of the revised fixed charges during true-up of FY 2012-13.

5.5 Differential Annual Fixed Charge (AFC) approved during true-up of FY 2012-13

The revised Annual Fixed Charge (AFC) approved by the Commission vis-à-vis submitted by the Petitioner is as below for FY 2012-13.

Table 18: Revised Annual Fixed Charge approved for true-up of FY 2012-13 (Rs Crores)

S. No.	Particulars	Petitioner's Submission in the petition	Revised Submission on Feb 17'14	Approved
1.	Depreciation	5.02	5.02	4.99
2.	Interest on loan	0.00	0.00	0.00
3.	Interest on working capital	3.23	3.20	3.11
4.	Operation and Maintenance Expenses	8.79	8.79	8.79
5.	Return on Equity	10.32	10.32	10.32
6.	**Revised Annual Fixed Charge**	**27.36**	**27.33**	**27.21**

The Commission, therefore, approves the revised Annual Fixed Charge at Rs. 27.21 Crores for the true-up of FY 2012-13.

The Commission in its tariff order dated April 13' 2012 for determination of tariff for FY 2012-13 had approved Annual Fixed Charge of Rs 26.71 Crores on the basis of the capital cost of Rs 137.77 Crores. The AFC has now got revised to Rs 27.21 Crores for FY 2012-13, on the basis of the approved capital cost of Rs 146.45 Crores.

The revised Annual Fixed Charge (AFC) approved by the Commission vis-à-vis approved earlier by the Commission for FY 2012-13 is as below.

Table 19: Annual Fixed Charge approved for FY 2012-13 (Rs Crores)

S. No.	Particulars	Order dated 13.04.2012	Approved during true-up
1.	Depreciation	4.94	4.99
2.	Interest on loan	0.00	0.00
3.	Interest on working capital	3.28	3.11
4.	Operation and Maintenance Expenses	8.79	8.79
5.	Return on Equity	9.70	10.32
6.	**Annual Fixed Charge**	**26.71**	**27.21**

The difference in the Annual Fixed Charge i.e. Rs (27.21 - 26.71) = 0.50 Crores is approved by the Commission as part of the true-up exercise for FY 2012-13 and the Petitioner is entitled to bill this amount separately as supplementary bill.

5.6 Variable Charges approved for true-up of FY 2012-13

The Commission as per its order dated April 13' 2012 had approved the formula for recovery of variable charges for FY 2012-13. The formula for the energy charge (per unit basis) accounted for the actual gas cost, actual gross calorific value of the gas, normative auxiliary consumption and normative gross station heat rate (normative parameters approved by the Commission for FY 2012-13). The Petitioner has been billing the variable charges for FY 2012-13 on the basis of this formula.

The Commission as part of the prudence check during the truing-up exercise has verified the bills that have been raised to the beneficiary i.e. EDP for FY 2012-13. The Commission has found the bills to be in order and as per the parameters approved by the Commission. For the true-up exercise, the Commission had asked a clarification from the Petitioner regarding any supplementary bills raised for the year, to which the Petitioner responded stating that no supplementary bills have been raised for the year. The Commission, therefore, has not considered any amount due to the Petitioner for the variable charges.

The Commission, therefore, does not find any amount due to the Petitioner for the variable charges during the true-up exercise.

6. Review for FY 2013-14

6.1 Background

The Commission had approved tariff for FY 2013-14 vide its order dated March 28' 2013 (petition no. 98/2013). The Commission in the order had noted that the determination of tariff is on the basis of the provisional capital cost of Rs 137.77 Crores and would be subject to revision depending on the outcome of petition no. 18/2010 and petition no. 45/2011.

In the light of observations and findings of the Hon'ble Aptel in appeal no. 41/2012, the petition for tariff determination for FY 2011-12 (petition no. 18/2010) and review petition (petition no. 45/2011) were restored by the Commission vide its order dated December 19' 2012, as also discussed in para 2.1 of this order.

The Commission carried out detailed proceedings in this matter and subsequently vide its order dated April 29' 2013, approved capital cost of Rs 146.45 Crores against the earlier approved capital cost of Rs 137.77 Crores. Due to the revision in the capital cost of the plant, the Commission has revised the Annual Fixed Charges (AFC) for the year in this review exercise undertaken.

6.2 Regulations

As per provisions of Clause 19 of the JERC (Terms and Conditions for Determination of Tariff) Regulations 2009, the Commission, while determining the cost of generation of each thermal/gas/hydro-electric generating stations located within the State, shall be guided, as far as feasible, by the principles and methodologies of CERC, as amended from time to time.

Accordingly, CERC regulations for the tariff period 2009-14 have been referred to for the tariff period FY 2013-14.

6.3 Operational Parameters

Petitioner's Submission

The Petitioner has submitted the following operational parameters.

1. **Normative Annual Plant Availability Factor (NAPAF)**

   The Petitioner has considered the NAPAF of 85% as per the Hon'ble Aptel judgment dated November 21' 2012. The Commission as per its order dated April 29' 2013 has observed that the NAPAF of 85% would be considered for FY 2013-14.

2. **Gross Station Heat Rate**

   The Petitioner has considered the gross station heat rate of 2600 kcal/kWh for FY 2013-14 as per the Commission's order March 28' 2013 on petition no. 98/2013.

3. **Auxiliary Consumption**

   The Petitioner has considered the auxiliary consumption of 5.50% for FY 2013-14 as per the Commission's order dated March 28' 2013 on petition no. 98/2013.

Commission's Analysis

The operational parameters – gross SHR, auxiliary consumption and NAPAF are to be considered as approved by the Commission earlier as per its order dated March 28'2013 for FY 2013-14. NAPAF of 85% is in line with the judgement of the Hon'ble Aptel dated November 21' 2012 in appeal no. 41/2012 and also observed in the Commission's order dated April 29' 2013.

6.4 Annual Fixed Charge (AFC) approved for Review of FY 2013-14

The components of the fixed charges have undergone a change due to change in the approved capital cost as per the Commission's order dated April 29' 2013. The following components have been considered as part of the fixed charges for the year.

1. Depreciation
2. Interest charge on loan
3. Interest on working capital
4. O&M expenses
5. Return on equity

The components of the fixed charges mentioned above are discussed in detail in the following paragraphs. The Commission has arrived at the revised Annual Fixed Charge (AFC) for the year and accordingly approved the differential AFC charges as part of the Review for FY 2013-14.

6.4.1 Capital Cost for FY 2013-14

Petitioner's Submission

The Petitioner has submitted the capital cost of Rs 146.45 Crores for FY 2013-14 as per the Commission's order dated April 29' 2013 on the revised capital cost. The Petitioner has submitted that the total capital cost is Rs 148.12 Crores (as on 31.03.2013) as per the audited financial statements pertaining to FY 2012-13; however, for the purposes of tariff determination, amount of Rs 1.55 Crores incurred towards capitalization of spares during FY 2010-11 and the amount incurred towards purchase of computers, furniture & fittings, office equipment during FY 2011-12 & FY 2012-13 have not been included.

Commission's Analysis

The Commission has considered the capital cost of Rs 146.45 Crores as per the Commission's order dated April 29' 2013. The Commission in its last tariff order dated March 28' 2013 had stated that the Commission provisionally approves the capital cost of Rs 137.77 Crores and the capital cost would be revised depending on the outcome of petition no. 18/2010 and petition no. 45/2011.

The Commission's order dated April 29' 2013 on the above mentioned petitions approved capital cost of Rs 146.45 Crores for FY 2013-14, in compliance with the directions of the Hon'ble Aptel in appeal no. 41/2012 (judgment dated November 21' 2012).

Further, no additional capitalization is approved for FY 2013-14 and accordingly the closing capital cost approved for FY 2013-14 is Rs 146.45 Crores.

The Commission, therefore, approves Rs 146.45 Crores as the capital cost during Review of FY 2013-14.

6.4.2 Depreciation

Petitioner's Submission

The Petitioner has submitted the depreciation on the approved capital cost of Rs 146.45 Crores for FY 2013-14. The Petitioner has claimed NIL depreciation for FY 2013-14. Depreciation has been considered as per JERC Regulations 26 and applicable CERC regulations 2009.

The Petitioner has excluded the cost of freehold land of Rs 7.93 Crores for depreciation purpose. The depreciable value of the asset has been capped at 90% of the capital cost. The cumulative depreciation recovered up to the previous year is Rs 124.67 Crores and accordingly the depreciation for the year is NIL.

Commission's Analysis

The Commission has considered the opening capital cost of Rs 146.45 Crores for FY 2013-14, and no additional capitalization for the year, for purposes of tariff determination. The cost of the freehold land of Rs 7.93 Crores (as per the audited accounts for FY 2012-13) has been excluded for depreciation purpose. The cumulative depreciation recovered up to FY 2012-13 is Rs 124.67 Crores (as approved in the section on depreciation for FY 2012-13).

The depreciable value of the asset has been capped at 90% of the capital cost of the asset as per the applicable CERC regulations and accordingly the depreciation for the year is approved as NIL.

Table 20 : Depreciation approved by the Commission for Review of FY 2013-14 (Rs Crores)

S. No.	Details	Petitioner's Submission	Approved
1	Average Capital cost	146.45	146.45
2	Less cost of Freehold Land	7.93	7.93
3	Capital cost excl FH Land	138.52	138.52
4	Cumulative depreciation upto previous year	124.67	124.67
5	Depreciation for the year	0.00	0.00
6	Cap on depreciation	124.67	124.67
7	**Depreciation for the year**	**0.00**	**0.00**

The Commission, therefore, approves the depreciation for the year as NIL for purposes of the revised fixed charges for FY 2013-14.

6.4.3 Interest Charge on Loan

Petitioner's Submission

The Petitioner has submitted that the entire capital cost of the project has been funded from its own resources and capital investment has been considered at 70% normative loan and 30% normative equity as per the JERC Regulations.

The Petitioner has considered the opening capital cost of Rs 146.45 Crores with no additional capitalization for the year for purposes of tariff determination. The Petitioner has considered the gross normative loan of Rs 102.52 Crores, with cumulative repayment of Rs 102.52 Crores, resulting in NIL net opening loans.

The Petitioner has claimed NIL interest charges for FY 2013-14 on the basis of the revised capital cost.

Commission's Analysis

On the basis of the approved capital cost of Rs 146.45 Crores, the gross normative loan is Rs 102.52 Crores. The cumulative repayment up to the previous year is Rs 102.52 Crores and accordingly the net loan opening is NIL.

As per the CERC regulations for the tariff period 2009-14, the repayment shall be deemed to be equal to the depreciation amount. On a clarification from the Commission regarding the cumulative repayment considered for purposes of interest calculation, the Petitioner has responded that the cumulative depreciation recovered so far is higher than the gross normative loan, so the cumulative repayment has been considered equal to the gross normative loan. The submission of the Petitioner is found to be in order and accordingly the cumulative repayment has been limited to the gross normative loan amount.

The computation of the interest charges is as below.

Table 21: Interest Charges approved by the Commission for Review of FY 2013-14 (Rs Crores)

S. No.	Details	Petitioner's Submission	Approved
1.	Average Capital cost for the year	146.45	146.45
2.	Loan at 70% of average capital cost	102.52	102.52
3.	Cumulative repayment up to previous year	102.52	102.52
4.	Net loan opening	0.00	0.00
5.	Addition in loan for the year	0.00	0.00
6.	Repayment of loan for the year	0.00	0.00
7.	Net loan closing	0.00	0.00
8.	**Average net loan**	**0.00**	**0.00**
9.	**Rate of Interest**	**13.36%**	**13.36%**
10.	**Interest**	**0.00**	**0.00**

The Commission, therefore, approves the interest charges for the year as NIL for purposes of the revised fixed charges for FY 2013-14.

6.4.4 Interest on Working Capital

Petitioner's Submission

The Petitioner has claimed the interest on working capital at Rs. 3.27 Crores for FY 2013-14 as per CERC Regulations 18 (b) and JERC Regulations 29 and interest is considered as per CERC Regulations 18 (3), as per the petition filed for tariff determination of FY 2014-15.

The rate of interest of 14.45% has been considered by the Petitioner.

Commission's Analysis

As per CERC Regulation 18 (6), the working capital to the Gas Turbine Generating Station shall be considered as under:

i. Fuel cost of one month (Gas) at NAPAF

ii. Maintenance spares at 30% of O&M expenses specified in Regulation 19

iii. Receivables equivalent to two months of capacity and energy charges based on the NAPAF

iv. O&M expenses for one month

The interest on working capital has been considered at the rate of interest on normative basis as prime lending rate (PLR) of State Bank of India (SBI) considering the PLR rate as on April 1' 2013 i.e. 14.45% per annum. As per the CERC Regulations, the Commission has to consider the landed cost incurred and GCV of fuel as per actual for the three months preceding the first month for which tariff is to be determined for purposes of the fuel cost for arriving at the working capital of the Petitioner; therefore, the Commission has considered the average fuel cost from Jan'13 to March'13 for arriving at the one month fuel cost for purposes of working capital.

The energy charges considered while working out working capital are based on average actual fuel consumption and payments made from Jan'13 to March'13 (based on the actual available data as provided by the Petitioner and validated by the Commission) corresponding to generation at NAPAF of 85%.

During the technical validation session held at the Commission's office, the Commission had asked for the computation of the fuel cost of one month considered for working capital purposes from the Petitioner. The Petitioner subsequently admitted to a mistake in the computation of the fuel cost for one month and accordingly revised the submission on the interest on working capital to Rs 3.53 Crores from Rs 3.27 Crores submitted earlier.

The Commission has considered the working capital and interest thereon as per the regulations mentioned above at an interest rate of 14.45% per annum as below and arrived at the interest on working capital of Rs 3.12 Crores.

Table 22: Interest on working capital approved by the Commission for Review of FY 2013-14 (Rs Crores)

S. No.	Details	Petitioner's Submission in the petition	Revised Submission on Feb 17'14	Approved
1.	Cost of gas (one month)	5.09	5.67	4.75
2.	Maintenance spares (30% O&M expenses)	2.79	2.79	2.79

S. No.	Details	Petitioner's Submission in the petition	Revised Submission on Feb 17'14	Approved
3.	Receivables (two months)	13.99	15.19	13.30
4.	O&M expenses (one month)	0.77	0.77	0.77
5.	**Total working capital**	**22.65**	**24.43**	**21.62**
6.	**Rate of interest on working capital**	14.45%	14.45%	14.45%
7.	**Interest on working capital**	**3.27**	**3.53**	**3.12**

The Commission, therefore, approves the interest on working capital for the year at Rs 3.12 Crores for purposes of the revised fixed charges for FY 2013-14.

6.4.5 Operation and Maintenance Expense

Petitioner's Submission

The petitioner has claimed the O&M expenses at Rs. 9.30 Crores for FY 2013-14. The O&M expenses include employee cost, R&M expenses and A&G expenses.

The Petitioner has submitted that the O&M expenses have been taken as @ 22.90 lac/MW as specified by CERC for small gas turbine for FY 2009-10 and thereafter the O&M expenses for relevant year of tariff have been worked out considering escalation @ 5.72% p.a. over the base O&M charges of FY 2009-10, based on JERC Regulation 27 and applicable CERC Regulations.

Commission's Analysis

The Commission has examined the O&M expenses claimed by the Petitioner. The expenses claimed are in line with sub regulation (C) of regulation 19 of CERC regulations for determination of tariff, 2009-2014 and regulation no. 27 of JERC tariff regulations, 2009 for the 32.5MW gas turbine plant.

It is noted that since the O&M expenses are not dependent on the capital cost, therefore, there is no change in the O&M expenses from that approved earlier for the year as per the order dated March 28' 2013.

The O&M expenses approved for FY 2013-14 are as below.

Table 23: O&M expenses approved for Review of FY 2013-14 (Rs Crores)

S. No.	Financial Year	Approved
1.	2009-10	7.44
2.	2010-11	7.87
3.	2011-12	8.32
4.	2012-13	8.79
5.	**2013-14**	**9.30**

The Commission, therefore, approves the O&M expenses for the year at Rs 9.30 Crores for purposes of the revised fixed charges for FY 2013-14.

6.4.6 Return on Equity

Petitioner's Submission

The Petitioner has submitted that the entire capital cost of the project has been funded from its own resources and capital investment has been considered as 70% normative loan and 30% normative equity as per JERC Regulations. Regulations stipulate that if the equity employed is more than 30%, the amount of equity for determination of tariff is limited to 30% and the balance amount is to be considered as normative loan.

The Petitioner has submitted the pre-tax rate of return on equity as 23.481% (Base rate of return of 15.5% grossed up by the corporate tax rate of 33.99%) as per JERC Regulations 24 and CERC Regulations. The Petitioner has submitted that it does not have any tax holiday from FY 2010-11 and the tax holiday was applicable only up to FY 2009-10.

The Petitioner has claimed return on equity on 30% of the average capital cost submitted i.e. Rs. 146.45 Crores at the rate of 23.481% which works out to Rs. 10.32 Crores (23.481% of Rs. 43.94 Crores).

Commission's Analysis

The Commission has considered the pre-tax rate of return on equity as 23.481% (Base rate of return of 15.5% grossed up by the corporate tax rate of 33.99%) as per the JERC Regulations 24 and CERC Regulations. The tax holiday was applicable only upto FY 2009-10 and accordingly the Petitioner has been subject to the corporate tax rate.

The opening capital cost considered approved by the Commission is Rs 146.45 Crores with no additional capitalization for the year.

The return on equity on the approved average capital cost of Rs. 146.45 Crores on the normative equity capital base works out to Rs. 10.32 Crores. (23.481% on equity portion

(30%) of approved average capital cost of Rs. 146.45 Crores).

The Commission, therefore, approves the Return on Equity for the year at Rs 10.32 Crores for purposes of the revised fixed charges for FY 2013-14.

6.5 Differential Annual Fixed Charge (AFC) approved during Review of FY 2013-14

The revised Annual Fixed Charge (AFC) vis-à-vis that submitted by the Petitioner is as below for FY 2013-14.

Table 24: Revised Annual Fixed Charge approved for Review of FY 2013-14 (Rs Crores)

S. No.	Particulars	Petitioner's Submission in the petition	Revised Submission on Feb 17'14	Approved
1.	Depreciation	0.00	0.00	0.00
2.	Interest on loan	0.00	0.00	0.00
3.	Interest on working capital	3.27	3.53	3.12
4.	Operation and Maintenance Expenses	9.30	9.30	9.30
5.	Return on Equity	10.32	10.32	10.32
6.	**Revised Annual Fixed Charge**	**22.89**	**23.14**	**22.74**

The Commission, therefore, approves the revised Annual Fixed Charge at Rs. 22.74 Crores for FY 2013-14.

The Commission in its tariff order dated March 28' 2013 for determination of tariff for FY 2013-14 had approved Annual Fixed Charge of Rs 22.26 Crores on the basis of the provisional capital cost of Rs 137.77 Crores. The AFC has now got revised to Rs 22.74 Crores for FY 2013-14, on the basis of the approved capital cost of Rs 146.45 Crores.

The revised Annual Fixed Charge (AFC) approved by the Commission vis-à-vis approved earlier by the Commission for FY 2013-14 is as below.

Table 25: Annual Fixed Charge approved for FY 2013-14 (Rs Crores)

S. No.	Particulars	Order dated 28.03.2013	Approved during Review
1.	Depreciation	0.00	0.00
2.	Interest on loan	0.00	0.00
3.	Interest on working capital	3.26	3.12
4.	Operation and Maintenance Expenses	9.30	9.30
5.	Return on Equity	9.70	10.32
6.	**Annual Fixed Charge**	**22.26**	**22.74**

The difference in the Annual Fixed Charge i.e. Rs (22.74 - 22.26) = 0.48 Crores is approved by the Commission as part of the review exercise and the Petitioner is entitled to bill this amount separately as supplementary bill.

6.6 Review of Variable Charges for FY 2013-14

The Commission as per its order dated March 28' 2013 had approved the formula for recovery of variable charges for FY 2013-14 on the basis of defined parameters. The formula for the energy charge (per unit basis) accounts for the actual gas cost, actual gross calorific value of the gas, normative auxiliary consumption and normative gross station heat rate (normative parameters approved by the Commission for FY 2013-14).The Petitioner has been billing the variable charges for FY 2013-14 on the basis of this formula.

The Commission as part of its prudence check during the review for the year, has validated the fuel bills (as received from GAIL) and bills that have been raised to the beneficiary i.e. EDP for FY 2013-14 (from April'13 to Decemebr'13 as submitted by the Petitioner and validated by the Commission).The Commission has found the bills to be in order and as per the parameters approved by the Commission.

The Commission, therefore, does not find any amount due for the variable charges during the review exercise for the year.

7. Tariff Determination for FY 2014-15

7.1 PPCL Gas Power Station

The petitioner owns and operates one combined cycle gas power station generating 32.5 MW of Electricity (22.9 MW from gas turbine and 9.6 MW from Steam turbine) at Karaikal. The details of its capacity, commercial operation data etc. are given in the below table.

Table 26: Details of the PPCL Gas Power Station

S. No.	Subject	Particulars
1.	Capacity	
	a) Gas turbine	22.9 MW
	b) Steam turbine	9.6 MW
	TOTAL	**32.5 MW**
2.	Date of commercial operation	3rd January, 2000
3.	Type of fuel	Natural Gas
4.	Type of cooling system	Induced draft cooling tower
5.	Gas supplier	GAIL

7.2 Regulations

As per provisions of Clause 19 of the JERC (Terms and Conditions for Determination of Tariff) Regulations 2009, the Commission, while determining the cost of generation of each thermal/gas/hydro-electric generating stations located within the State, shall be guided, as far as feasible, by the principles and methodologies of CERC, as amended from time to time.

The Commission for the purpose of analysis of the tariff period FY 2014-15 has considered the newly notified CERC regulations for the period FY 2014-19 issued by CERC vide notification No.L-1/144/2013/CERC dated February 21’ 2014.

7.3 Operational Parameters

7.3.1 Normative Annual Plant Availability Factor (NAPAF)

Petitioner's Submission

The petitioner has submitted that the JERC Regulations for Generation stipulate that the Commission shall be guided by the principles and methodologies of CERC (Terms and Conditions of Tariff Determination) 2009-14 as amended from time to time. CERC has fixed the NAPAF at 85% for the period 2009-14 for recovery of full fixed charges for thermal generating stations.

The Petitioner has submitted that "The Tariff Regulations provide that the components of generation tariff shall be as laid by the Central Commission in the 2004 Tariff Regulations as amended from time to time. The 2009 Tariff Regulations have been made effective by the Central Commission with effect from 1.4.2009. According to the 2009 Regulations, Normative Plant Availability Factor (NAPF) is to be taken as 85% for thermal power stations".

The Petitioner has submitted that the Commission may please fix the norm-"Normative Annual Plant Availability Factor" NAPAF for the Karaikal station for recovery of full fixed charges in the FY 2014-15 at 85% as laid down in the terms and conditions of the determination of tariff issued by JERC.

Commission's Analysis

The Commission had approved NAPAF of 85% for FY 2013-14, in the last tariff order dated March 28' 2013. The relevant extract from the order dated March 28' 2013 is reproduced below for reference.

Quote

''The Commission in its tariff order for FY 2012-13 dated April 13' 2012 had approved a Normative Annual Plant Availability Factor (NAPAF) of 87% considering the actual plant availability factor (PAF) data submitted by the Petitioner from FY 2000-01 to 2009-10. The PAF for the years 2000-01 to 2009-10 was observed to vary from 91% to 98.84%. However, for FY 2010-11 PAF was 78.64% and PLF as 69% due to reduction in gas supply and major plant breakdown. For fixing the NAPAF, the abnormal value for the year FY 2010-11 i.e. PAF of 78.64% had not been considered. The data for FY 2010-11 was considered as a stray case as compared to continuous data from FY 2000-01 to 2009-10 which justified its performance. The Commission, therefore, had fixed the NAPAF at 87% for FY 2012-13, with a view to promote and maintain the efficiency level achieved for a continuous period of 10 years.

The Commission in the tariff order for FY 2011-12 dated August 6' 2011 had also done a similar analysis and approved the NAPAF at 87%. In the review order for FY 2011-12 dated November 3' 2011, the Commission found no merit in the plea of the Petitioner to relax the NAPAF for the year FY 2011-12.

The Petitioner had gone on appeal on fixing of the NAPAF norm, besides other issues as decided in the tariff order dated August 6' 2011 and further in the review order dated November 3' 2011. The Petitioner had said that the NAPAF should be fixed as per the CERC tariff regulations 2009-14 at 85%. The Hon'ble Aptel in appeal no. 41/2012 in its judgment dated November 21' 2012 on fixing of the NAPAF norm decided in favour of the Appellant. The relevant extract of the judgment is as -

Quote

'' As correctly pointed out by the Appellant, once the norms have been fixed, the same have to be followed and applied. When the norms and parameters have been prescribed by the Central Commission Regulations, the same have to be followed unless it is justified that it is not feasible to follow Regulations of the Central Commission. No such justification was made by the Joint Commission for rejecting the claim of the Appellant to apply the Central Commission Regulations.

That apart, the Regulation 19 relied upon by the learned Counsel for the Joint Commission would not apply to the present case as the said Regulation only deals with the tariff filing and not with reference to the manner of fixation of the norms. This manner of fixation of norms has been provided only in Regulation 36 which adopts the Central Commission Tariff Regulations 2004, as amended from time to time in toto.

Therefore, the finding on this issue fixing 87% is wrong as the Appellant's prayer that Normative Plant Availability Factor of 85% in terms of Regulation 36 of Regulations 2009 should be maintained. Hence, the Joint Commission is directed to pass consequential orders on this issue in favour of the Appellant. Thus, 2nd question also is answered accordingly.''

The Commission, therefore, in compliance of the Hon'ble Aptel's judgment approves the NAPAF at 85% for FY 2013-14.''

Unquote

The Commission has also perused the newly notified CERC regulations for the tariff period 2014-19 and found the Normative Annual Plant Availability Factor to be 85% and accordingly approves the same for FY 2014-15.

The same is as per the Regulation 36(A) (a) of the CERC Regulations for the tariff period 2014-19.

The Commission, therefore, approves the Normative Annual Plant Availability Factor (NAPAF) at 85% for FY 2014-15.

7.3.2 Auxiliary Power Consumption (APC)

Petitioner's Submission

The petitioner has submitted that the APC be considered as per actual based on period from 01.04.2013 to 30.09.2013 because the station has electric gas booster compressor pumps due to which APC is higher and CEA has also recommended higher APC for plants having electric gas booster compressor. Since Natural Gas is supplied at a lower pressure i.e. 3 to 5 kg/sq.cm, electric driven gas booster compressor is required to boost up the gas pressure to 17 kg/sq.cm resulting in increase of APC. Four electric driven Gas Booster Compressor of 300 kW each has to run to achieve full load. Further, the Petitioner has submitted that the Hon'ble Aptel has held in a number of judgments that the vintage of power plants has to be kept in mind before determining the various operating parameters for the power plant and accordingly the Petitioner has considered APC at 6% which is also less than the actual.

Commission's Analysis

The Commission has observed the submissions made by the Petitioner and considered the auxiliary consumption norms as mentioned in the CERC regulations and CEA guidelines. As per the newly notified CERC (Terms and Conditions for Determination of Tariff) Regulations for the tariff period 2014-19, the norm of auxiliary consumption for gas turbine generating stations is as below. The Regulation 36 (E) (c) of CERC Regulation 2014-19 has been referred to here.

1. Combined cycle 2.5%
2. Open cycle 1.0 %

As per CEA guidelines, in cases where electric driven gas booster compressors are part of the auxiliary plant, 2.5% extra auxiliary consumption can be allowed.

In view of the above norms mentioned in CERC regulations and CEA guidelines, the norm of 2.50% auxiliary consumption for the combined cycle plus additional APC limited to 2.5% for the electric driven gas booster compressor pumps is approved as part of the auxiliary consumption.

The Hon'ble Aptel in Appeal no. 41/2012 in its judgment dated November 21' 2012 has upheld the decision and analysis of the Commission on auxiliary consumption norm of the power plant. The relevant extract of the judgment is as –

Quote

"

We have carefully considered these submissions. As a matter of fact, this point has been taken into consideration by the Joint Commission in the tariff order dated 6.8.2011.

The Joint Commission referred to the said prayer and also considered the Auxiliary Consumption actuals for the previous year's 2000-01 to 2009-10 and for the projection for the year 2010-11 and 2011-12. It is specifically held by the Joint Commission in the said impugned order dated 6.8.2011 that Central Commission Regulations 2009 provided the norms of Auxiliary Consumption for gas turbine generating station as

(i) Combined cycle 3.0%

(ii) Open cycle 1%

The Joint Commission also referred to the CEA guidelines which provided that in cases where electric driven gas booster compressor are part of the Auxiliary Plant, 2.5% extra Auxiliary Consumption can be allowed. Taking into consideration of all these factors, the Auxiliary Consumption of 5.5% was approved by the Joint Commission for the financial year 2011-12 since the Appellants gas plant is having electric driven gas booster compressor.

Thus, it is clear that the Joint Commission followed the Central Commission Regulations as well as the CEA guidelines and correctly approved Auxiliary Power Consumption at 5.5% as there was no case made out for relaxation. This finding, in our view is perfectly justified.''

Unquote

Thus, the above judgment has upheld the analysis of the Commission that the auxiliary consumption should be approved as per the CERC regulations and CEA guidelines. The Commission in its analysis for FY 2014-15 has referred to the newly notified CERC regulations for the tariff period 2014-19 and accordingly approves the auxiliary consumption at 5.0% for FY 2014-15.

The Commission, therefore, approves Auxiliary Power Consumption at 2.5% for combined cycle plus additional power consumption limited to 2.5% for electric driven gas booster pumps. Thus, 5.0% auxiliary power consumption of gross power generation is approved for FY 2014-15.

7.3.3 Gross Station Heat Rate

Petitioner's Submission

The Petitioner has submitted that The Tariff Regulations of the Commission provides that the norms and parameters of the Central Commission's Tariff Regulations shall be applicable. The Central Commission's Regulations provide for determination of Station Heat Rate on the basis of Gross Calorific Value (GCV).

The station design net heat rate is 2291 kcal/kWh. A copy of the heat balance diagram for design heat rate has also been enclosed along with the petition. The gross heat design heat for net station design heat rate of 2291 kcal/kWh works out to (2291*1.1) 2520 kcal/kWh considering a conversion factor of 1.1 i.e. GCV = 110% of NCV. Further applying the degradation factor of 5 % as per the CERC regulations, the normative GSHR comes out to 2520 * 1.05 = 2646 kcal/kWh. The annual heat rate achieved vis-à-vis the generation has been submitted along as an annexure with the petition. It is submitted that the gross station heat rate achieved for the FY 2012-13 was 2846.47 kcal/kWh and for the six months of the financial year 2013-14 is 2664.24 kcal/kWh and PPCL is not able to recover the energy charges fully. The average monthly under recovery is Rs 17.77 lakhs per month. Further in the Commission's tariff order dated 28.03.2013 for PPCL vide para 4.3.3 it is mentioned "The Commission notes that though the normative calculation of the GSHR comes to 2646 kcal/kWh, the Commission has limited the approval of the GSHR to 2600 kcal/kWh as proposed by the Petitioner". Hence Commission is requested to grant gross design heat rate of 2646 kcal/kWh for FY 2014-15 as against 2600 kcal/kWh approved for the FY 2013-14. Since the machine of the instant station is already thirteen years old, the degradation factor of the machine at least the design heat rate may be granted.

Commission's Analysis

The Commission has considered the submission of the Petitioner. The Commission has also noted the submission of the Petitioner that the gross station heat rate achieved for FY 2012-13 is 2846.47 kcal/kWh and for the first six months of FY 2013-14 is 2664.24 kcal/kWh and that the Petitioner is not able to recover the energy charges fully. In this context, the relevant extract pertaining to the analysis of the gross station heat rate is reproduced below from the tariff order dated March 28' 2013.

Quote

''The Commission has considered the past performance of the power station from FY 2000-01 to 2011-12. The petitioner has furnished the following data in their petition for FY 2013-14.

Table 27: Station Heat Rate of the earlier years

Year	Station Heat Rate (kcal/kWh)
	Gross Station Heat Rate
2000-01	2645.92
2001-02	2621.53
2002-03	2496.35
2003-04	2480.86
2004-05	2473.94
2005-06	2511.98
2006-07	2513.46
2007-08	2497.12
2008-09	2526.33
2009-10	2653.16
2010-11	2647.07
2011-12	2694.09

In the tariff order for FY 2011-12, the Commission had approved Gross SHR as 2250 kcal/kWh which was revised to 2400 kcal/kWh as sought by the petitioner in the review tariff order for FY 2011-12 based on the fact that the petitioner had submitted data of SHR taking NCV. Further, in the tariff order for FY 2012-13, the Commission revised the approved value of the GSHR from 2400 kcal/kWh to 2475 kcal/kWh corresponding to the best achieved SHR value based on GCV as the value of the desired GSHR of 2400 kcal/kWh (as per the review order for FY 2011-12) could not be achieved based on actual. The Commission for FY 2012-13 had approved the value of the GSHR as 2475 kcal/kWh based on the actual best achieved for FY 2004-05.

The Commission has analyzed the data submitted by the Petitioner for the analysis of the Gross Station Heat Rate. The average heat rate on the basis of the past 12 years actual heat rate as submitted by the Petitioner comes to 2563 kcal/kWh. Further, the actual average heat rate from April to September 2012 is indicated as 2586.3 kCal/kWh.

The Commission has observed that the MOP notification has considered the heat rate of 2535 kcal/kWh; however, it is not clear from the notification whether calorific value of gas has been considered as GCV or NCV.

The JERC Tariff Regulations provide that the components of generation tariff shall be as laid by the Central Commission in the 2004 Tariff Regulations as amended from time to time. Thus, the CERC tariff regulations 2009-14 are applicable. The Commission has observed that CERC through order dated 07.06.2012 has revised the normative Gross Heat Rate of Assam and Agartala gas power projects as under:

Assam GPS: 2500 kcal/kWh (Combined Cycle)/3400 kcal/kWh (open cycle)
Agartala GPS: 3700 kcal/kWh (open cycle)

The above revision was done by the CERC accepting the NEEPCO’s mistake in calculating SHR on the basis of Net Calorific Value (NCV) of gas instead of Gross Calorific Value (GCV).

Further, the Commission has observed that though PPCL’s GT of 23.04 MW is similar to Agartala GPS GT of 21 MW, the two are not comparable as Agartala GPS is open cycle based gas power plant whereas PPCL GPS is combined cycle based gas power plant.

The petitioner has subsequently submitted the Performance Guarantee report of PPCL Gas Power Station. The guaranteed heat rate for PPCL gas power station on the basis of the design heat rate is 2291 kcal/kWh. This guaranteed heat rate is on the basis of the NCV of the gas; the same gets revised to 2291X1.1 = 2520 kCal/kWh considering the conversion factor of 1.1 i.e GCV = 110% of NCV. Further, applying the degradation factor of 5% as per the CERC regulations, the normative GSHR comes to 2520 X 1.05 = 2646 kCal/kWh.

The Commission notes that though the normative calculation of the GSHR comes to 2646 kcal/kWh, the Commission has limited the approval of the GSHR to 2600 kcal/kWh as proposed by the Petitioner.’’ **Unquote**

The Commission on the basis of the analysis carried out last year i.e. FY 2013-14 and on the basis of the submission of the Performance Guarantee Report of PPCL gas power station for the guaranteed heat rate of 2291 kcal/kWh (on the basis of the NCV of the gas), approves the gross station heat rate at 2646 kcal/kWh for FY 2014-15.

The Commission, therefore, approves the Gross Station Heat Rate for the PPCL gas station at 2646 kcal/kWh for FY 2014-15.

7.3.4 Performance Parameters approved for FY 2014-15

Based on the above analysis, the performance parameters as approved for the PPCL gas power station for FY 2014-15 are listed in the table below.

Table 28: Performance Parameters approved for FY 2014-15

S. No.	Parameter	Projected by the petitioner	Approved by the Commission
1.	Normative Plant Availability Factor (%)	85%	85%
2.	Auxiliary Power Consumption (%)	6.00%	5.00%
3.	Gross Station Heat Rate (kcal/kWh)	2646	2646

7.4 Variable Cost Parameters

The Commission has prescribed a formula, in line with the CERC formula, for calculating Energy (Variable) charges on month to month basis for billing purpose. However, in the following paras, variable charges have been computed to workout cost of gas (one month) and receivable for two months (energy charge component) which are used for calculation of the working capital requirement.

The details of Wt. Av. GCV of gas and price of gas as submitted by PPCL and the Commission's analysis are discussed below.

7.4.1 Weighted Average Gross Calorific Value of Gas

Petitioner's Submission

The Petitioner has submitted the weighted average Gross Calorific Value 10123.34 kcal/scm for FY 2014-15 based on the landed cost of gas for the months of July'13, August'13 and September'13. This has been considered to calculate the fuel cost for working out the interest on working capital. The Commission is requested to allow weighted average GCV of gas for the months of July'13, August'13 and September'13.

Commission's Analysis

The CERC Regulations state that for calculating working capital requirement, the *landed cost incurred (taking into account normative transit and handling losses) by the generating company and gross calorific value of the fuel as per actual for the three months preceding the first month for which tariff is to be determined shall be considered and no fuel price escalation shall be provided during the tariff period.* In line with the CERC Regulations, the Commission had asked PPCL to submit the latest data of the fuel cost and GCV.

Accordingly, PPCL made additional submission on January 27' 2014 furnishing the following details:

Table 29: GCV gas details submitted by Petitioner for FY 2014-15

S. No.	Parameter	Unit	Oct'13 Gas	Nov'13 Gas	Dec'13 Gas
1.	Quantity of gas supplied by GAIL	Cu.m	5800023	5430084	5758829
2.	Adjustment(+/-) in quantity supplied made by GAIL	Cu.m	-	-	-
3.	Gas supplied by GAIL (1+2)	Cu.m	5,800,023	5,430,084	5,758,829
4.	Normative Transit & Handling Losses	Cu.m	-	-	-
5.	Net Gas Supplied (3-4)	Cu.m	5,800,023	5,430,084	5,758,829
6.	Amount charged by the Gas Company	(Rs)	65525555	60041758	65176387
7.	Adjustment(+/-) in amount charged made by Gas Company	(Rs)	-	-	-
8.	Total amount charged (6+7)	(Rs)	65,525,555	60,041,758	65,176,387
9.	Transportation charges by rail / ship / road transport	(Rs)	-	-	-
10.	Adjustment (+/-) in amount charged made by Railways/Transport Company	(Rs)	-	-	-
11.	Demurrage Charges, if any	(Rs)	-	-	-
12.	Cost of diesel in transporting gas through other system, if applicable	(Rs)	-	-	-
13.	Total Transportation Charges (9+/-10-11+12)	(Rs)	-	-	-
14.	Total amount Charged for fuel supplied including Transportation (8+13)	(Rs)	65,525,555	60,041,758	65,176,387
15.	Weighted average GCV of Gas as fired	(kCal/Cu.m)	10202.46	10064.96	10127.99
16.	Weighted average rate of Fuel/1000 Cu.m	Rs/1000 Cu.m	11,297.46	11,057.24	11,317.65

The Commission has validated the fuel details submitted by the Petitioner from the fuel bills submitted alongside and found the above submission as regards the quantity of gas, cost of fuel and weighted average GCV of gas in order.

The Commission has considered weighted average GCV of gas for the period Oct'13, Nov'13 and Dec'13 in its analysis of the GCV. The Commission has computed the GCV of gas weighted by the quantity of gas procured for these months to arrive at the weighted average GCV of gas for the period from Oct'13 to Dec'13.

Table 30: Weighted average GCV (kcal/scm) considered by Commission for FY 2014-15

S. No.	Parameter	Oct'13	Nov'13	Dec'13
1.	Average GCV of gas for the month (kcal/scm)	10202.46	10064.96	10127.99
2.	Weighted average GCV of gas considered by the Commission for FY 2014-15 (kcal/scm)	10133.27		

The Commission, therefore, considers it appropriate to take GCV 10133.27 kcal/scm for the computation of energy (variable) charges, based on the additional submission of the Petitioner.

Accordingly, the Commission considers the Gross Calorific Value of Gas 10133.27 kcal/scm for the purpose of computation of the fuel cost in working capital computation for FY 2014-15.

7.4.2 Weighted Average Price of Gas

Petitioner's Submission

The Petitioner has considered the weighted average landed cost of gas for the months of July'13, August'13 and September'13 instead of landed cost of the gas for the months of Jan'13, Feb'13 and March'13 as per JERC / CERC Regulations. This has been considered to arrive at the fuel cost in a realistic manner, for working out the interest on working capital. The Petitioner has considered the weighted average price of gas Rs. 10652.40 per 1000 scm for FY 2014-15 based on the months of July'13, August'13 and September'13.

Commission's Analysis

As the CERC Regulations provide for the landed cost of fuel to be considered for the three months preceding the first month for which tariff is to be determined, the Commission asked PPCL to furnish the latest bills and accordingly PPCL furnished the following details:

Table 31: Fuel details submitted by Petitioner for FY 2014-15

S. No.	Parameter	Unit	Oct'13	Nov'13	Dec'13
			Gas	Gas	Gas
1.	Quantity of gas supplied by GAIL	**Cu.m**	5800023	5430084	5758829
2.	Adjustment(+/-) in quantity supplied made by GAIL	**Cu.m**	-	-	-
3.	Gas supplied by GAIL (1+2)	**Cu.m**	5,800,023	5,430,084	5,758,829
4.	Normative Transit & Handling Losses	**Cu.m**	-	-	-

5.	Net Gas Supplied (3-4)	**Cu.m**	5,800,023	5,430,084	5,758,829
6.	Amount charged by the Gas Company	**(Rs)**	65525555	60041758	65176387
7.	Adjustment(+/-) in amount charged made by Gas Company	**(Rs)**	-	-	-
8.	Total amount charged (6+7)	**(Rs)**	65,525,555	60,041,758	65,176,387
9.	Transportation charges by rail / ship / road transport	**(Rs)**	-	-	-
10.	Adjustment (+/-) in amount charged made by Railways/Transport Company	**(Rs)**	-	-	-
11.	Demurrage Charges, if any	**(Rs)**	-	-	-
12.	Cost of diesel in transporting gas through other system, if applicable	**(Rs)**	-	-	-
13.	Total Transportation Charges (9+/-10-11+12)	**(Rs)**	-	-	-
14.	Total amount Charged for fuel supplied including Transportation (8+13)	**(Rs)**	65,525,555	60,041,758	65,176,387
15.	Weighted average GCV of Gas as fired	**(kCal/ Cu.m)**	10202.46	10064.96	10127.99
16.	Weighted average rate of Fuel/1000 Cu.m	**Rs/1000 Cu.m**	11,297.46	11,057.24	11,317.65

The Commission has validated the fuel details submitted by the Petitioner from the fuel bills submitted alongside and found the above submission to be in order.

The Commission in its analysis has considered the weighted average (weighted by the quantity procured during the period) to arrive at Rs. 11227.52 per 1000 scm rate for the fuel.

Table 32: Weighted Average Cost of Gas (Rs/1000 scm) considered for FY 2014-15

S. No.	Parameter	Oct'13	Nov'13	Dec'13
1.	Weighted average cost of gas as fired (Rs /1000 scm) for the month	11,297.46	11,057.24	11,317.65
2.	Weighted average cost of gas (Rs/1000 scm) considered by the Commission for FY 2014-15		11,227.52	

The Commission in its analysis considers it appropriate to allow the weighted average price of gas Rs 11227.52 per 1000 scm to arrive at the weighted average cost of gas for the period from Oct'13 to Dec'13.

Accordingly, the Commission considers the weighted average cost of gas as Rs 11227.52 per 1000 scm for the purpose of computation of the fuel cost in working capital computation for FY 2014-15.

7.5 Energy (Variable) Charges for working capital for FY 2014-15

Based on the performance and cost parameters approved, the fuel cost of PPCL gas station for FY 2014-15 at 85% NAPAF, is worked out as given in the table below:

Table 33: Variable Charges for working capital for FY 2014-15

S. No.	Items	Unit	Approved
1.	Station Heat Rate	kcal/kWh	2646
2.	Gross Calorific value of Gas	kcal/scm	10133.27
3.	Price of Gas	Rs/1000 scm	11227.52
4.	Fuel Cost /Gross units	Rs/kWh	2.932
5.	**Fuel Cost/Net units**	**Rs/kWh**	**3.086**

7.6 Capacity Charges/ Annual Fixed Charges for FY 2014-15

Petitioner's Submission

The petitioner has submitted the projections of the capacity charges (fixed) comprising the following components for FY 2014-15.

1. Depreciation
2. Interest charges
3. Return on equity
4. O&M expenses
5. Interest on working capital

The components of fixed charges mentioned above are discussed in detail in the following paragraphs.

7.6.1 Capital Cost for FY 2014-15

Petitioner's Submission

The Petitioner has submitted that the tariff for FY 2014-15 has been arrived at by considering the capital cost of Rs 146.45 Crores as opening capital cost (as per the Commission's order dt.29.04.13 by implementing ATE judgment dt.21.11.2012) plus proposed additional cost on R.O. Plant of Rs 4.29 Crores. The RO Plant project has been completed and till date Rs 3.32 Crores has been paid. Further, the total Capital Cost of Rs 148.12 Crores is up to 31.03.2013, as per the audited financial statement pertaining to the FY 2012-13. The Petitioner has submitted that Rs 148.12 Crores (as on 31.03.2013) includes an amount of Rs 1.55 Crores incurred towards capitalization of mandatory spares of Gas Turbine in the total additions of FY 2010-11 and additions to Furniture & Fittings, Office Equipment, Computers of 2011-12 and 2012-13, which have been kept out of the cost of determination of tariff (as per Commission's order dated April 29' 2013).

The Petitioner has submitted that it is implementing Reverse Osmosis Plant amounting to Rs. 4.29 Crores which is nearing completion for which the Petitioner has obtained approval from the competent authority i.e. Govt. of Puducherry and a copy of the same has been enclosed along with the petition. This is likely to be capitalised in 2014-15. As such, the Petitioner may be permitted to include the proposed capital cost in the total capital cost of the FY 2014-15 on estimated basis which may be subject to adjustment based on actual during subsequent tariff period (or) at the time of filing of truing up petition.

The Petitioner has submitted that there will be, from time to time, capital expenditure of different nature incurred which will be necessary for efficient operation of the generating station during its life time. **The Raw water received for Plant purpose has high Total Dissolved solids (TDS). Due to this high TDS, Corrosion and scaling of pipelines and structures occur at a faster pace, which cannot be fully controlled by painting and water treatment. The above problems result in down time loss and Material replacement loss. In order to avoid the above problems, the TDS of incoming water has to be reduced for which the Reverse Osmosis Plant is proposed and its erection is under progress**.

Further, the Petitioner has submitted that-

''No generating station can operate on a sustainable basis to achieve the level of performance parameters specified by the Hon'ble Commission without incurring capital expenditure on various items from time to time. The expenditure on capital assets to be incurred by the generating stations are, therefore, a necessity for the proper and effective working of the generating station and, therefore, are beneficial to the respondents. The incurring of additional capital expenditure from time to time towards replacement / refurbishment of old assets has been absolutely necessary to maintain the higher level of

performance on a sustainable basis and is in the larger public interest. The significant improvements in the performance which the generating stations have been able to achieve were because of the investment made from time to time in the replacement/ refurbishing of the assets which have served for many years.''

The Petitioner has requested the Commission to allow the capital cost of Rs 146.45 Crores as approved in the order dated 29.04.2013 plus proposed capitalization amount of Rs 3.32 Crores so for paid towards R.O. Plant i.e. Rs 149.77 Crores for FY 2014-15. The Petitioner has requested the Commission to consider this add cap for successful & efficient operation of the plant as per CERC Regulation, 9(2)(iv). Further, it is also submitted that the capital cost does not include the cost of capitalization of spares amounting to Rs.1.55 Crores made during FY 2010-11 and the amount incurred towards purchase of Computers, Furniture & Fittings, and Office Equipment during FY 2011-12 & FY 2012-13**.**

Commission's Analysis

In the light of observations and findings of the Hon'ble Aptel in appeal no. 41/2012, the petition for tariff determination for FY 2011-12 (petition no. 18/2010) and review petition (petition no. 45/2011) were restored by the Commission vide its order dated December 19' 2012, as also discussed in para 2.1 of this order.

The Commission carried out detailed proceedings in this matter and subsequently vide its order dated April 29' 2013, approved capital cost of Rs 146.45 Crores against the earlier approved capital cost of Rs 137.77 Crores. This capital cost as also discussed in the section on capital cost for FY 2013-14 (para 6.4.1 of this order) has been considered by the Commission has the opening capital cost for FY 2014-15.

The Commission, therefore, as per the order dated April 29' 2013 approves the opening capital cost of Rs 146.45 Crores for FY 2014-15.

The Petitioner has requested the Commission to allow Rs 3.32 Crores towards the capitalization of the Reverse Osmosis plant for FY 2014-15. The Petitioner has submitted to consider this additional capitalization for successful and efficient operation of the plant. The Petitioner has submitted that it is implementing the RO plant amounting to Rs 4.29 Crores which is nearing completion for which the Petitioner has obtained approval from the competent authority i.e. Government of Puducherry and the copy of the same has also been submitted to the Commission. The Petitioner has further submitted that it is only claiming the cost of Rs 3.32 Crores, which has already been paid towards the RO plant for inclusion in the capital cost for FY 2014-15.

The Commission has made note of the submission of the Petitioner that the RO plant would help reduce the Total Dissolved Solids (TDS) content of the incoming raw water, which would help minimize the corrosion and scaling of pipelines and structures, which cannot be fully controlled by painting and water treatment. This would further help minimize the down time loss and material replacement loss of the power plant.

The Commission during the technical validation session, asked for further details from the Petitioner regarding its support of claim of the inclusion of the RO plant in the capital cost. The details sought pertained to conceptualization of the plant, Board approval, award of contract, start of construction of the plant etc. The Petitioner vide its additional submission dated February 15’ 2014 submitted additional details as follows.

i. Copy of PPCL’s initial Board approval to consider and approve erection of the Reverse Osmosis plant vide Resolution no. 54.10 in the Board meeting held on September 23’ 2002

   - Directed the Corporation to go for open tender for the proposed erection of the RO plant after availing consultancy services for the formulation of Technical Specification

   - Necessary proposal be submitted to the Deputy Secretary to Government (Power) for obtaining approval of the Lt. Governor as required under Clause 86 of the Articles of Association of the Corporation

ii. Copy of the Government approval on erection of the RO plant dated February 4’ 2003 and Corrigendum dated March 3’ 2003.

   - Approval of the Lt. Governor was hereby granted under Clause 86 of the Articles of Association of Puducherry Power Corporation Limited (PPCL) towards the erection of the RO plant at an estimated cost not exceeding Rs 3,60,00,000/- at the plant site of PPCL

iii. Consequently, Central Electricity Authority (CEA) was made the consultant for the project. The specification and the tender documents for the RO plant were prepared by CEA. Based on the tender documents prepared by CEA open tender was floated and six concerns responded to the tender. The evaluation of the tender was carried out by CEA. The evaluation was put up to the PPCL’s Board and in the meeting of the Board of Directors held on 11.11.2005, a sub-committee of 4 members was formed (one nominee from Central Electricity Authority, Superintendent Engineer – I (PED), Director of Accounts & Treasuries (GOP) and Managing Director, PPCL) to examine various issues regarding bid evaluation. The sub-committee recommended that the components such as gravity filter, activated carbon filter, side stream filter and cascade aerator needed inclusion in the plant to avoid deteriorating input water quality and large scale corrosion due to which the cost would exceed the earlier approved estimated cost of Rs 3.60 Crores. The sub-committee submitted the Bid Evaluation Report and comparative study of tender bids and recommended M/S Doshi Ion Exchange & Chemical Industries Ltd., Chennai as the contractor, having bid the lowest price of Rs 4,29,17,609/- (inclusive of all taxes and duties). The Board of Directors approved the recommendations of the sub-committee in the meeting held on 20.09.2006 and accordingly approval of the Lt. Governor was accorded under Clause 86 of the Articles of Association of the Corporation towards the erection of the RO plant at the total cost not exceeding Rs 4,29,17,609/- (inclusive of all taxes) to M/S Doshi Ion Exchange & Chemical Industries Ltd., Chennai vide G.O. no. 35 dated 15.12.2006. Copy of the Government approval dated 15.12.2006 on erection of the RO plant has been annexed along with the petition.

iv. Copy of the purchase order dated 09.02.2007 to M/S Doshi Ion Exchange & Chemical Industries Ltd., Chennai for award of work.

v. Petitioner has further submitted that the amount incurred upto 31.03.2013 on R.O. plant has been exhibited under the head capital work-in-progress in the audited accounts submitted for FY 2012-13. Payment so far made towards civil works is Rs 1.45 Crores and towards supply of machinery, spare etc. is Rs 1.91 Crores. However, the Corporation is claiming Rs 3.32 Crores towards additional capitalization in FY 2014-15.

The Commission has made note of all the submissions of the Petitioner for allowing additional capitalization of Rs 3.32 Crores towards the erection of the R.O. Plant in FY 2014-15. The Commission has observed that deliberations and proceedings related to this have been going on from year 2002. The Commission has perused all documents related to the submission of the Petitioner on the RO plant. Further, the Commission has also observed that the award of contract for completion of the RO plant was given to M/S Doshi Ion Exchange & Chemical Industries Ltd., Chennai vide purchase order dated 09.02.2007 and there has been delay on part of the contractor to complete the work.

The Commission in light of the newly notified CERC regulations for the tariff period 2014-19 allows the additional capital expenditure incurred towards the RO plant after the cut-off date of the plant. The Commission has further made note of the fact that the plant achieved COD on 03.03.2000 and there were no CERC regulations in place at that time for the reference of the Petitioner. The Commission has also made note that the first application for determination of tariff was filed before the JERC for FY 2011-12 and the process of pursuance of the capitalization of the RO plant has been going on since 2002. Regulation 14 (3) has been referred to here.

The Commission has taken a considerate view in regard to the submission of the Petitioner to allow the cost incurred till date and allows Rs 3.32 Crores towards the capitalization of the RO plant in FY 2014-15.

The Commission, therefore, approves the opening capital cost at Rs. 146.45 Crores and additional capitalization towards the RO plant of Rs 3.32 Crores for FY 2014-15.

7.6.2 Depreciation for FY 2014-15

Petitioner's Submission

The Petitioner has projected the depreciation charge for the year at Rs. 0.27 Crores. The Petitioner has restricted the accumulated depreciation of the asset to 90% of the capitalized value of the asset. The rate of depreciation has been considered as per JERC Regulations 26 and applicable CERC Regulations 2009.

The Petitioner has claimed depreciation on the closing capital cost of Rs. 149.77 Crores, which excludes the cost of the freehold land of Rs 7.93 Crores; the cumulative depreciation claimed upto FY 2013-14 is Rs. 124.67 Crores. The capital cost of the RO plant of Rs 3.32 Crores has been claimed to be addition in the capital cost of Rs 146.45 Crores, resulting in a closing capital cost of Rs 149.77 Crores. The cap on depreciation for the year i.e. 90% of the capitalized value of the asset has been considered as Rs 127.66 Crores.

Since the plant has already completed 12 years of operation and would be in its 14th year of operation in FY 2014-15, the Petitioner has considered the remaining depreciable value of the asset i.e. Rs (127.66-124.67) 2.99 Crores to be shared equally over the remaining life of the asset i.e. 11 years and accordingly claimed depreciation of Rs 0.27 Crores for FY 2014-15.

The Petitioner has claimed the depreciation amount of Rs 0.27 Crores for FY 2014-15.

Commission's Analysis

The Commission has considered the opening capital cost of Rs 146.45 Crores for FY 2014-15, and additional capitalization of Rs 3.32 Crores for the year, for purposes of tariff determination. The cost of the freehold land of Rs 7.93 Crores has been excluded for depreciation purpose. The cumulative depreciation recovered up to FY 2013-14 is Rs 124.67 Crores (as approved in the section on depreciation for FY 2013-14). It is noted that the plant is in its 14th year of operation. Since the plant has already completed 12 years from the date of commercial operation, the remaining depreciable value of the asset has been spread over the balance useful life of the asset (i.e. 11 years) as per the CERC regulations. Relevant extract of the regulation is reproduced below.

As per CERC regulation for tariff period 2014-19, Regulation 27(5):

Quote

'' Provided that the remaining depreciable value as on 31st March of the year closing after a period of 12 years from the effective date of commercial operation of the station shall be spread over the balance useful life of the assets.''

Unquote

The depreciable value of the asset has been capped at 90% of the capital cost of the asset as per the applicable CERC regulations and accordingly the depreciation for the year is approved at Rs 0.27 Crores.

Table 34 : Depreciation approved by the Commission for FY 2014-15 (Rs Crores)

S. No.	Details	Petitioner's Submission	Approved
1	Capital cost	149.77	149.77
2	Less cost of Freehold Land	7.93	7.93
3	Capital cost excl FH Land	141.84	141.84
4	Cumulative depreciation up to previous year	124.67	124.67
5	Depreciation for the year	0.27	0.27
6	Cap on depreciation	127.66	127.66
7	**Depreciation for the year**	**0.27**	**0.27**

The Commission, therefore, approves the depreciation at Rs 0.27 Crores for FY 2014-15.

7.6.3 Interest Charges on Loan for FY 2014-15

Petitioner's Submission

The Petitioner has submitted that the entire capital cost of the project has been funded from its own resources and capital investment has been considered at 70% normative loan and 30% normative equity as per the JERC Regulations.

The Petitioner has considered the opening capital cost of Rs 146.45 Crores, with the addition in capital cost of Rs 3.32 Crores, resulting in closing capital cost of Rs 149.77 Crores. The Petitioner has considered the gross loan of Rs 103.68 Crores, with cumulative repayment of Rs 103.68 Crores, resulting in NIL net opening loans.

The rate of interest has been considered at 13.36%. The Petitioner has considered NIL interest charges for the year.

Commission's Analysis

CERC Regulation 26 for the tariff period 2014-19 has been referred to here for the computation of the interest on normative loan.

On the basis of the approved average capital cost of Rs 148.11 Crores, the gross normative loan amount is Rs 103.68 Crores. As per the CERC regulations, the repayment shall be deemed to be equal to the depreciation amount. On a clarification from the Commission regarding the cumulative repayment considered for purposes of interest calculation, the Petitioner has submitted that the cumulative depreciation recovered so far is higher than the gross normative loan, so the cumulative repayment has been considered limited to the gross normative loan. The submission of the Petitioner has been found to be in order, as elaborated below.

It is observed that the cumulative depreciation so far recovered (upto FY 2013-14) is Rs 124.67 Crores as also reflected in para 7.6.2 above. The gross normative loan for FY 2014-15 on the basis of the approved average capital cost of Rs 148.11 Crores is Rs 103.68 Crores. It is seen that the cumulative depreciation so far recovered is higher than the gross normative loan amount and accordingly there is no loan outstanding for the year. In the absence of any outstanding loan amount, the interest charges for the year are approved as NIL.

The computation of the interest charges is as below.

Table 35: Interest Charges approved by the Commission for FY 2014-15 (Rs Crores)

S. No.	Details	Petitioner's Submission	Approved
1.	Average Capital cost for the year	148.11	148.11
2.	Loan at 70% of average capital cost	103.68	103.68
3.	Cumulative repayment upto current year	103.68	103.68
4.	**Average net loan outstanding**	**0.00**	**0.00**
5.	**Rate of Interest**	**13.36%**	**13.36%**
6.	**Interest**	**0.00**	**0.00**

The Commission, therefore, approves the interest charges for the year as NIL for FY 2014-15.

7.6.4 Interest on Working Capital

Petitioner's Submission

The Petitioner has claimed the interest on working capital at Rs. 3.20 Crores for FY 2014-15 as per CERC Regulations 18 (b) and JERC Regulations 29 and interest is considered as per CERC Regulations 18 (3). CERC Regulations 2009-14 have been referred to by the Petitioner.

For computing the Interest on Working Capital (IWC), the rate of interest considered is SBI Base Rate as on 01.4.2013 as per CERC Regulations 2009 para 18(3). The rate of interest of 14.75% has been considered by the Petitioner. The energy charges considered while working out IWC are based on average actual fuel consumption and payments made pertaining to the period commencing from July'13, August'13 and September'13.

Commission's Analysis

As per CERC Regulation for tariff period 2014-19, Regulation 28 (b): the working capital to the Gas Turbine Generating Station shall be considered as under,

i. Fuel cost of one month (Gas) at NAPAF

ii. Maintenance spares at 30% of O&M expenses specified in Regulation 19

iii. Receivables equivalent to two months of capacity and energy charges based on the NAPAF

iv. O&M expenses for one month

The applicable rate of interest as per the Regulation 28 (3) is as:

Quote'' *Rate of interest on working capital shall be on normative basis and shall be considered as the bank rate as on 1.4.2014 or as on 1st April of the year during the tariff period 2014-15 to 2018-19 in which the generating station or a unit thereof or the transmission system including communication system or element thereof, as the case may be, is declared under commercial operation, whichever is later.''* **Unquote**

The bank rate has been defined in the regulations as follows:

Quote *''Bank Rate means the base rate of interest as specified by the State Bank of India from time to time or any replacement thereof for the time being in effect plus 350 basis points''* **Unquote**

Accordingly, the Commission has considered the latest available base rate of 10.00% (notified by the SBI as on 07.11.2013) and arrived at the bank rate of 13.50% (10.00% + 3.50%) for computation of the interest on working capital for FY 2014-15.

The energy charges considered while working out WC are based on average actual fuel consumption and payments made for the months of October'13, November'13 and December'13, as discussed in section 7.4 of this order. The weighted average GCV and weighted average cost of gas for calculating the fuel requirement/cost is as discussed in section 7.4 of this order. Energy charges for working capital purposes have been worked out corresponding to generation at NAPAF of 85%.

During the technical validation session held at the Commission's office, the Commission had asked for the computation of the fuel cost of one month considered for working capital purposes from the Petitioner. The Petitioner subsequently admitted to a mistake in the computation of the fuel cost for one month and accordingly revised the submission on the interest on working capital from Rs 3.20 Crores to Rs 3.79 Crores.

The Commission considers the working capital and interest thereon as per the regulations mentioned above at an interest rate of 13.50% per annum as below and arrived at the interest on working capital of Rs 3.52 Crores.

Table 36: Interest on working capital approved by the Commission for FY 2014-15 (Rs Crores)

S. No.	Details	Petitioner's Submission	Revised Submission on Feb 17'14	Approved
1.	Cost of gas (one month) at NAPAF	4.66	5.96	5.91
2.	Maintenance spares (30% O&M expenses)	2.95	2.95	3.26
3.	Receivables (two months) at NAPAF	13.29	15.99	16.01
4.	O&M expenses (one month)	0.82	0.82	0.91
5.	**Total working capital**	**21.71**	**25.72**	**26.08**
6.	**Rate of interest on working capital**	**14.75%**	**14.75%**	**13.50%**
7.	**Interest on working capital**	**3.20**	**3.79**	**3.52**

The Commission, therefore, approves Rs. 3.52 Crores as the interest on working capital for FY 2014-15.

7.6.5 Operation and Maintenance Expenses

Petitioner's Submission

The petitioner has claimed the O&M expenses at Rs. 9.83 Crores for FY 2014-15. The O&M expenses include employee cost, R&M expenses and A&G expenses.

The Petitioner has submitted that the O&M expenses have been taken as @ 22.90 lac/MW as specified by CERC for small gas turbine for FY 2009-10 and thereafter the O&M expenses for relevant year of tariff have been worked out considering escalation @ 5.72% p.a. over the base O&M charges of FY 2009-10, based on JERC Regulation 27 and applicable CERC Regulations of tariff period 2009-14.

Commission's Analysis

The Commission has examined the O&M expenses claimed by the Petitioner. The Commission has considered the CERC tariff regulations for the tariff period 2014-19. As per the CERC Regulation 29 (c), the O&M expenses for small gas turbine power generating plants for the tariff period FY 2014-15 are to be considered as Rs 33.43 lakhs/MW. Accordingly, the O&M expenses for the 32.5 MW gas plant for FY 2014-15 have been worked out as (33.43*32.5/100 = 10.86) Rs 10.86 Crores.

Table 37: O&M expenses approved for FY 2014-15 (Rs Crores)

S. No.	Financial Year	Approved
1.	2009-10	7.44
2.	2010-11	7.87
3.	2011-12	8.32
4.	2012-13	8.79
5.	2013-14	9.30
6.	**2014-15**	**10.86**

The Commission, therefore, approves the Operation & Maintenance charges at Rs 10.86 Crores for FY 2014-15.

7.6.6 Return on Equity

Petitioner's Submission

The Petitioner has submitted that the entire capital cost of the project has been funded from its own resources and capital investment has been considered as 70% normative loan and 30% normative equity as per JERC Regulations. Regulations stipulate that if the equity employed is more than 30%, the amount of equity for determination of tariff is limited to 30% and the balance amount is to be considered as normative loan.

The Petitioner has submitted the pre-tax rate of return on equity as 23.481% (Base rate of return of 15.5% grossed up by the corporate tax rate of 33.99%) as per JERC Regulations 24 and CERC Regulations. The Petitioner has submitted that it does not have any tax holiday from the financial year 2010-11 and the tax holiday was applicable only up to FY 2009-10.

The Petitioner has claimed return on equity on 30% of the average capital cost submitted i.e. Rs. 148.11 Crores at the rate of 23.481% which works out to Rs. 10.43 Crores (23.481% of Rs. 44.43 Crores).

Commission's Analysis

The Commission has considered the pre-tax rate of return on equity as 23.481% (Base rate of return of 15.5% grossed up by the corporate tax rate of 33.99%) as per the JERC Regulations 24 and applicable CERC Regulations. The tax holiday was applicable only upto FY 2009-10 and accordingly the Petitioner has been subject to the corporate tax rate. The Commission for purposes of the tax on return on equity has kept in mind the newly notified CERC Regulations for 2014-19.

Relevant extract of the CERC Regulation 25(1) is as:

Quote *''the base rate of return on equity as allowed by the Commission under Regulation 24 shall be grossed up with the effective tax rate of the respective financial year. For this purpose, the effective tax rate shall be considered on the basis of actual tax paid in the respect of the financial year in line with the provisions of the relevant Finance Acts by the concerned generating company or the transmission licensee, as the case may be. The actual tax income on other income stream (i.e., income of non-generation or non transmission business, as the case may be) shall not be considered for the calculation of "effective tax rate".''* **Unquote**

Further, Regulation 25 (3) talks about the truing up of the grossing up of the rate on return on equity. Relevant extract is as:

Quote ''*The generating company or the transmission licensee, as the case may be, shall true up the grossed up rate of return on equity at the end of every financial year based on actual tax paid together with any additional tax demand including interest thereon, duly adjusted for any refund of tax including interest received from the income tax authorities pertaining to the tariff period 2014-15 to 2018-19 on actual gross income of any financial year…''* **Unquote**

For the purpose of analysis of the Return on Equity component for FY 2014-15, the Commission has assumed that for FY 2014-15 the Corporation would be subject to the corporate tax rate. The same would be re-visited at the time of true-up based on the actual tax paid and duly supported by relevant documents. Further, the Commission highlights that the other income stream (i.e. income of non-generation or non transmission business, as the case may be) shall not be considered for the calculation of "effective tax rate'' in terms of the relevant regulations during the true-up. **The Commission directs the Petitioner to provide actual tax details along with supporting documents during the true-up of FY 2014-15.**

The opening capital cost considered by the Commission is Rs 146.45 Crores, addition in capital cost of Rs 3.32 Crores and thereby the closing capital cost of Rs 149.77 Crores for FY 2014-15.

The return on equity on the approved average capital cost of Rs. 148.11 Crores on the normative equity capital base works out to Rs. 10.43 Crores. (23.481% on equity portion (30%) of approved average capital cost of Rs. 148.11 Crores).

Therefore, the Commission approves the return on equity at Rs. 10.43 Crores for FY 2014-15.

7.7 Annual Fixed Charge (AFC) approved for FY 2014-15

The Annual Fixed Charge (AFC) vis-à-vis that submitted by the Petitioner is as below for FY 2014-15.

Table 38: Annual Fixed Charge approved for FY 2014-15 (Rs Crores)

S. No.	Particulars	Petitioner's Submission in the petition	Revised Submission on Feb 17'14	Approved
1.	Depreciation	0.27	0.27	0.27
2.	Interest on loan	0.00	0.00	0.00
3.	Interest on working capital	3.20	3.79	3.52
4.	Operation and Maintenance Expenses	9.83	9.83	10.86
5.	Return on Equity	10.43	10.43	10.43
6.	**Annual Fixed Charge**	**23.80**	**24.39**	**25.09**

The Commission, therefore, approves the Annual Fixed Charge at Rs. 25.09 Crores for FY 2014-15.

7.8 Energy /Variable Charge (Net)

The Commission approves the computation of energy charges for payment purpose for FY 2014-15 on the basis of the following formula:

$$ECR= GHR \times LGP \times 100/\{GCV \times (100 – APC)\}$$

Where

ECR= Energy Charge Rate, in Rs. per kWh sent out upto three decimal places
GHR= Normative Gross Station Heat Rate in kcal/kWh
LGP= Weighted average landed price of gas in Rs/scm, during the calendar month
GCV= Gross Calorific Value of gas, in kcal per scm during the calendar month
APC= Normative Auxiliary Power Consumption in percentage

As the energy charges shall be computed and billed based on the above formula, there will be no need for any adjustment in true-up on this account.

An illustrative example is as shown below:

Assuming,

GHR = Normative Gross Station Heat Rate i.e. Rs 2646 kcal/kWh for FY 2014-15
LGP = Rs 9.5/scm
GCV = 9900 kcal/scm

APC= Normative Auxiliary power consumption, at 5.00% for FY 2014-15
ECR = 2646X9.5X100/ ((9900 X (100-5.0)) = Rs 2.673/kWh

So, as can be observed from the above example the energy charges for the month work out to be Rs. 2.673 /kWh assuming the above mentioned parameters.

7.9 Annual Fixed Charge and other charges approved by the Commission for FY 2014-15

- The Commission approves the Annual Fixed Charge (AFC) at Rs. 25.09 Crores for FY 2014-15.
- **The capacity charges (fixed cost) per month to be billed shall be calculated as per the newly notified CERC regulations for tariff period FY 2014-19. The payment of capacity charges shall be as per the Regulation 30 of the CERC regulations for tariff period FY 2014-19.**
- The Incentive shall be governed as per Regulation 30 (4) which is reproduced here below.

  ''Incentive to a generating station or unit thereof shall be payable at a flat rate of 50 paise/kWh for ex-bus scheduled energy corresponding to scheduled generation in excess of ex-bus energy corresponding to Normative Annual Plant Load Factor (NAPLF) as specified in regulation 36 (B).''

  Further, the Commission approves the Normative Annual Plant Load Factor (NAPLF) of 85% for purposes of the incentive calculation as per Regulation 36 (B) (a) of the CERC regulations for the tariff period for FY 2014-19.
- The Energy Charges (net) to be billed per month shall be based on the unit energy rate calculated on the basis of the formula provided in Section 7.8 of this Order
- In addition to the charges approved above, the Commission also allows recovery of filing fees paid to the Commission and publication expenses for FY 2014-15 from the beneficiary in twelve equal monthly installments

8. Directives

The following are the Commission's observations on the pending compliance of directives, as mentioned in the tariff order for FY 2013-14 dated March 28' 2013.

8.1 Metering of the power consumption of electric gas booster compressor

The directive as given in the tariff order dated April 13' 2012 is as -

Quote

In the last tariff order for FY 2011-12 dated 6th August 2011, the Commission had directed PPCL to install a separate meter for recording the power consumption of electricity by gas booster compressor so as to measure actual power consumption. PPCL have submitted that the procurement process of the meters is under progress and the meters will be installed during the plant shut down. The Commission directs PPCL to expedite installation of meters and commence recording of actual power consumption immediately thereafter.

The auxiliary consumption will be allowed at 3% plus the actual power consumption limited to 2.5% towards the gas booster compressor pumps.

Unquote

Compliance/Action taken as per order dated March 28' 2013

Petitioner's Submission

The Petitioner in its additional submission dated March 6' 2013 to the Commission has submitted that the meters have been installed in the individual GBC's and recording has been commenced from Nov'12. The details of the consumption have been submitted alongside the annexure to the Commission.

Commission's Comments

The Commission appreciates the efforts made by the Petitioner in installation of meters to record the actual energy consumption of the gas booster compressors. It is observed that for the period from November' 12 to February'13, the GBC consumption has been greater than 3% and the overall auxiliary consumption has been greater than 6% as per the submitted annexure. The Commission has fixed the norm of auxiliary consumption at 3% plus the actual power consumption limited to 2.5% towards the gas booster compressor pumps. The Commission would like the Petitioner to reduce the consumption of energy of the gas booster compressor pumps so that the normative norm is adhered to.

Compliance/Action taken as per the latest submission for this tariff order

Petitioner's Submission

The Petitioner has submitted the following before the Commission:

Quote

''It is submitted that the consumption of GBC was 650 kW (approximately) in the initial stage against the present power consumption of 967 kW which is normally due to ageing of plant as it completed more than 12 years of its life and higher capital investment will also be required to replace the GBC. As a result of ageing and capital investment, it is now proposed to have a target of auxiliary consumption at 6% and necessary steps are also being taken to explore possibilities- to reduce auxiliary consumption wherever possible in the other operating areas, besides this area.''

Unquote

Commission's Comments

The Commission has made note of the submissions of the Petitioner regarding fixing higher auxiliary consumption in view of the degradation and ageing of the plant. The Commission has fixed the norm of auxiliary consumption at 2.50% plus the actual power consumption limited to 2.5% towards the electric driven gas booster compressor pumps, as per the CERC regulations and CEA guidelines for FY 2014-15. Further, the Aptel in appeal no. 41/2012 in its judgment dated November 21' 2012 has upheld the decision and analysis of the Commission on the auxiliary consumption norm of the power plant.

8.2 Outstanding dues from ED-Puducherry to PPCL

The directive as given in the tariff order for FY 2013-14 dated March 28' 2013 is as -

Quote

''The Commission has noted that there are outstanding dues of Rs 68.27 Crores from the ED, Puducherry to Puducherry Power Corporation Limited. PPCL is directed to expedite its collection from the Department and ensure that there are no arrears due. The supporting details as received from PPCL are attached as Annexure 6.

The status on the same should be reported to the Commission every quarter from the issuance of this order.''

Unquote

Compliance/Action taken as per the latest submission for this tariff order

Petitioner's Submission

The Petitioner on a query regarding the status of collection of outstanding dues from ED-Puducherry to PPCL has submitted that Rs 71.50 Crores are outstanding towards sale of power made to EDP from FY 2008-09 to till date including variable charges, revision of tariff as per JERC order, true-up for FY 2011-12 and re-imbursement of filing fees for FY 2011-12, FY 2012-13 and FY 2013-14. The details of the outstanding amount have been submitted by the Petitioner. Further, EDP is required to pay a surcharge of 1.50% per month as per the PPA on the outstanding amount.

Commission's Comments

The Commission has made note of the repeated requests of the Petitioner regarding its pending claims from ED-Puducherry. The Petitioner has made repeated requests to EDP vide its letters dated December 23' 2013 and July 29' 2013. Further, no payment out of these outstanding dues has so far been received by the Petitioner. The Commission has made note of the submissions of the Petitioner and the efforts of the Petitioner in this regard. The Petitioner should provide the status of the same by September 30' 2014.

9. Conclusion

The Commission approves the capacity (fixed) charges and energy charges for FY 2014-15 and other charges of PPCL Gas Power Station at Karaikal as given below:

1. Annual Fixed Charges for FY 2014-15 at Rs 25.09 Crores; amount of Rs 1.30 Crores is allowed to be recovered as part of the true-up exercise for FY 2011-12, amount of Rs 0.50 Crores as part of the true-up exercise for FY 2012-13 and amount of Rs 0.48 Crores as part of the Review exercise for FY 2013-14
2. Energy Charges (net) for FY 2014-15 – to be calculated in accordance with the formula given in Section 7.8 of this Order
3. In addition to the charges approved above, the Commission also allows recovery of filing fees paid to the Commission and publication expenses for FY 2014-15 from the beneficiary in twelve equal monthly installments
4. Copy of this order may be sent to Petitioner, CEA and Electricity Department, Puducherry. It shall be placed on the website of the Commission.

The order shall come into force from 01.04.2014 and shall remain effective till 31.03.2015.

Sd/-
(S. K. Chaturvedi)
Chairman

Place: Gurgaon
Date: April 25' 2014

Certified Copy

(Rajeev Amit)
Secretary