

**Before the**  
**MAHARASHTRA ELECTRICITY REGULATORY COMMISSION**  
World Trade Centre, Centre No.1, 13th Floor, Cuffe Parade, Mumbai – 400 005  
Tel. No. 22163964/ 65/ 69 Fax: 22163976  
Email: [mercindia@mercindia.org.in](mailto:mercindia@mercindia.org.in)  
Website: [www.mercindia.org.in](http://www.mercindia.org.in)

**Case No. 34 of 2006**

**In the matter of**  
**Review of Determination of Annual Revenue Requirement (ARR) for FY 2006-07**  
**for Maharashtra State Power Generation Company Ltd. (MSPGCL).**

**Dr. Pramod Deo, Chairman**  
**Shri A. Velayutham, Member**  
**Shri S. B. Kulkarni, Member**

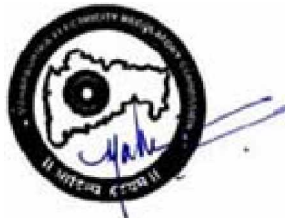
**ORDER**

**Dated: December 07, 2006**

Upon the directions from the Maharashtra Electricity Regulatory Commission (Commission), Maharashtra State Power Generating Company Limited (MSPGCL) submitted its application for approval of Annual Revenue Requirement and Tariff Petition for 2006-07, under affidavit dated 10<sup>th</sup> February 2006. The Commission, in exercise of the powers vested in it under Section 61 and Section 62 of the Electricity Act, 2003 (EA 2003) and all other powers enabling it on this behalf, and after an elaborate process of public participation and analysis, approved the ARR for FY 2005-06 and FY 2006-07 and determined the tariff for generation of electricity for FY 2006-07 for MSPGCL vide its detailed Order in Case No. 48 of 2005 dated 7<sup>th</sup> September 2006.

Subsequently, MSPGCL filed a Petition under affidavit (listing specific grounds on which it sought review) with the Commission vide its letter Ref. No. SE/RC/ARR/Review petition/14550 dated 19<sup>th</sup> October 2006 under the provisions of Regulation 85 (a) of the MERC (Conduct of Business) Regulations, 2004, reproduced below:

*“85. (a) Any person aggrieved by a direction, decision or order of the Commission, from which (i) no appeal has been preferred or (ii) from which no appeal is allowed, may, upon the discovery of new and important matter or evidence which, after the exercise of due diligence, was not within his knowledge or could not be produced by him at the time when the direction, decision or order was passed or on account of some mistake or error apparent from the face of the record, or for any other sufficient reasons, may apply for a review of such order, within forty-five (45) days of the date of the direction, decision or order, as the case may be, to the Commission.”*



The MSPGCL's Review Petition was heard for admission in presence of authorized consumer representatives on 7<sup>th</sup> November 2006 in the office of the Commission. In the admissibility hearing, MSPGCL was also permitted to make a presentation on various issues including merits.

Through this Order, the Commission's views and ruling on various issues are set out hereunder:

## **A. Review of Annual Revenue Requirement of FY 2005-06**

### **1. Fuel Costs**

#### **1.1. MSPGCL's Submission**

In the Order for Approval of ARR for FY 2005-06 and FY 2006-07 and determination of tariff for FY 2006-07 dated 7<sup>th</sup> September 2006, the Commission has approved a fuel cost of Rs. 4880 Crore as against Rs. 4989 Crore in the petition. MSPGCL has requested the Commission to review the approved fuel cost and approve the actual fuel cost of Rs. 5086 Crore which is inclusive of the other charges like lubricants, chemicals, water charges, etc., and is revised on the basis of limited review of accounts.

MSPGCL, in the Review Petition, has stated that this variation in the fuel cost is mainly due to two reasons, i.e., non-inclusion of other charges while determining the fuel cost, and on account of difference in actual performance parameters (mainly heat rate and transit loss) with respect to the normative parameters.

MSPGCL submitted that the variation in other charges like lubricants, chemicals, water charges, etc., were previously allowed as pass through to be recovered through FOCA. But after the issue of MERC (Terms and Conditions of Tariff) Regulations, 2005, the variation in the other charges is no longer allowed as pass through to be recovered through FAC from August 2005 onwards. MSPGCL stated that while approving the ARR for FY 2005-06, the Commission has allowed fuel cost of FY 2005-06 on the basis of the fuel cost approved under the FAC mechanism. As a consequence, the expenditure on lubricants, chemicals, water charges, etc., have been excluded from both the ARR and FAC. MSPGCL requested the Commission to include these costs under in the base cost of fuel and the variation in the same to be considered while approving the fuel cost under FAC.

MSPGCL has also submitted that it is inappropriate to allow the fuel cost based on normative performance parameters and quoted the provisions in the National Tariff Policy (NTP), which states that in case the actual performance is much less than the norms, then ARR should be determined based on relaxed levels.



MSPGCL has requested the Commission to consider the increase in fuel cost due to inclusion of other costs like lubricants, chemicals, water charges, etc., and on account of actual performance parameters like heat rate, transit loss, etc., under the provision “*error apparent*”.

## **1.2. Commission’s Observation and Ruling**

The Commission has determined the fuel cost for FY 2005–06 based on its FOCA Orders until August 2005 and FCA Orders for the balance period. These Orders were based on the data and information provided by MSPGCL/MSEDCL from time to time, which were vetted by the Commission.

The Commission in its MERC (Terms and Conditions of Tariff) Regulations, 2005, has replaced FOCA with FCA. Subsequently, in the Order for Approval of ARR for FY 2005–06 and FY 2006–07 and determination of tariff for FY 2006–07 dated 7<sup>th</sup> September 2006, the Commission under point 12 of Section 4 of Chapter 7 has defined “*Fuel*” as

*“the fuel cost for the purpose of computation of fuel adjustment charges shall mean the landed cost of fuel at power station battery limits and will include the following component:*

- (a) basic fuel price including statutory taxes, duties, royalty as applicable;*
- (b) transportation (freight), cost by rail/road/pipeline or any other means including transportation service charges for bringing fuel up to the power station boundary with a ceiling of “transportation service charges” at 2% of the freight charge;*
- (c) fuel treatment charges such as washing cleaning charges, sizing and crushing charges, fuel analysis charges etc, for making the fuel up to the required quality / grade;*
- (d) Fuel handling charges including that towards loading and unloading charges for bringing fuel to power station boundary;”*

This definition clearly states that lubricants, chemical and water charges cannot be included under fuel cost.

These other charges, viz., lubricants, chemical and water charges which were earlier getting included in fuel costs will have to be categorized under O&M expenses hereon and cannot be construed as “Fuel Cost” to be allowed through FCA mechanism. The Commission has approved Other Charges of Rs. 47.88 Crore for the period April 2005 to August 2005 as they have been vetted by the Commission and approved through FOCA Orders for respective months.



However, for the period September 2005 to March 2006, MSPGCL has even now only filed estimates and has not submitted the Audited details of Other Charges & Adjustments. The estimates for the period September 2005 to March 2006 sum up to Rs. 86.50 Crore indicating substantial increase against the Other Charges of Rs. 101.56 Crore approved for the entire FY 2004-05. Further, MSPGCL has also not provided complete details of Other Charges under the relevant heads, viz., water, lubricants, chemicals, etc., for all the stations. The Commission shall consider these charges for truing up in the next year's ARR based on the principles of previous Tariff Orders, subject to submission of audited actuals and justification for increase in these expenses.

As regards fuel expenses, the norms for the performance parameters have been set keeping in mind the operating condition of the generating stations with an element of improvement in overall performance levels and the same are bound to be different from the actuals. Therefore, any variations in actual fuel costs on account of inefficiency can neither be a reason for a review nor can be entertained, especially under the *cost plus* regime for tariff setting that is being followed.

Further, MSPGCL has revised its fuel expenses based on limited review of accounts and has requested the Commission to approve the "actual expenses". The Commission hereby makes it clear that there already exists a provision under MERC Tariff Regulations for truing up the expenses as per Audited actuals and on the basis of approved principles. It is MSPGCL's responsibility to make available accurate and complete Audited information and it is not correct to seek review on account of revised estimates. A change in the estimates, which are liable to be changed further, after the accounts are Audited, cannot qualify to be termed as new and important matter of evidence to be considered as valid grounds for review.

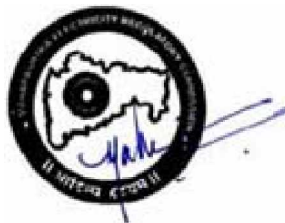
## **2. O&M Expense and Income Tax**

### **2.1. MSPGCL's Submission**

#### **a. Employee Expense**

MSPGCL has stated that the actual employee expense is Rs. 403.16 Crore based on the limited review as against the approved figure of Rs. 401 Crore. The actual figure was not submitted to the Commission during the filing of ARR and Tariff petition due to unavailability of data. Subsequently, MSPGCL submitted its limited review accounts.

MSPGCL requested the Commission to allow the actual employee expenditure of Rs. 403.16 Crore based on limited review as against the Commission approved figure of Rs. 401 Crore under the provision for "*discovery of new and important matter of evidence*".



b. A&G Expenses

MSPGCL has stated in the Review Petition that the actual A&G expense is Rs. 35.66 Crore based on the limited review as against the Commission approved expense of Rs. 23 Crore. Moreover, the actual capitalization is Rs. 3.12 Crore as against the Commission approved figure of Rs. 5.8 Crore. The actual A&G expenses were not available with MSPGCL at the time of ARR and Tariff filing. Subsequently, MSPGCL submitted its limited review accounts.

MSPGCL in its Review Petition had submitted that the variation in the A&G expenditure is mainly due to the variation under the heads like security and protection of generating stations, electricity charges, consultancy charges, rates and taxes, insurance of fixed assets and lease rent for Khaperkheda AHP, which contributes to nearly 50% of the A&G expense. Further, MSPGCL has also submitted that, in view of the security environment prevailing in India, it needs to enhance its security arrangement and therefore, requests the Commission to review the approved A&G expense and approve the actual A&G expense of Rs. 35.66 Crore under the provision of “*discovery of new and important matter of evidence*”.

c. Income Tax

MSPGCL, in its Review Petition, has submitted that at the time of filing of the ARR and the Tariff Petition, the actual income tax for FY 2005–06 was not available. MSPGCL has stated that its income tax expense is Rs.31 Crore as per the limited review of accounts and has requested the Commission to review the approved amount of Rs. 17 Crore, under the provision of “*discovery of new and important matter or evidence*”.

## 2.2. Commission’s Observation and Ruling

The Commission has approved the Employee expenses, A&G expenses and Income Tax based on the information provided in the ARR filings and the principles of determination of ARR & Tariff as enunciated in the Tariff Order for FY 2003-04. The figures filed by MSPGCL in the ARR petition were estimates for FY2005-06 and the Commission has considered the same in its analysis after MSPGCL expressed its inability to submit the Audited Accounts in the required time frame.

The Commission observes that MSPGCL has been submitting figures that are not validated as final under standard accounting procedures, to be accepted as actuals. It is observed that even on the date of hearing of review petition MSPGCL has not been in a position to submit the Audited Accounts. The figures submitted in the Review Petition cannot therefore be considered as actuals and can only be referred to as revised estimates. As such these do not qualify to be referred to as *new and important matter of evidence* for



the purpose of seeking Commission's Review under Regulation 85 (a) of the MERC (Conduct of Business) Regulations, 2004.

However, the Commission may consider the legitimate Employee expenses and Income Tax charges for FY 2005-06, while truing up in the next year's ARR based on Audited accounts and the principles of previous Tariff Order.

As regards A&G Expenses, the Commission in all its Tariff Orders has maintained that the A&G expenses can and should be controlled and has approved the expenses based on the principle of reasonable year-on-year increase. The A&G expenses are normative and cannot be passed on to consumers at actuals. Therefore, the details of actual A&G expenses submitted by MSPGCL cannot be qualified as "new and important matter of evidence" and A&G expenses will not be considered for truing up.

### **3. Interest Expenses & Other Finance Charges**

#### **3.1. MSPGCL's Submission**

##### a) Interest Expenses

MSPGCL has submitted in its Review Petition to review the methodology for determination of interest expenses on existing stations wherein, the Commission under paragraph 5.1 of the Order dated 7<sup>th</sup> September, 2006 (under the heading "Capital Expenditure & Opening Balances") has considered the projected new borrowing of Rs. 946.24 Crore for FY 2004-05 to be "substantially higher" than capital expenditure of Rs. 208.42 Crore for the year and disallowed borrowings exceeding the capital expenditure amount.

MSPGCL, submitted that the borrowings of Rs. 946.24 Crore for FY 2004-05 comprises of Rs.101.40 Crore borrowed from Indian Bank and Rs. 20 Crore borrowed from Bank of India that were borrowed towards prepayment of high cost borrowings. This was a part of Debt Restructuring exercise as per the directives of the Commission.

Further, MSPGCL has also submitted that the Commission has considered the loan repayment for FY 2004-05, which includes prepayment of Rs. 121.40 Crore as mentioned above while the corresponding borrowings from Indian Bank and Bank of India have been disallowed.

MSPGCL added that the Commission has approved the interest expenses for FY 2005-06 by applying the weighted average interest rate calculated on the average loan balance submitted in the ARR and Tariff Petition. However, MSPGCL submitted that the interest rate arrived at accordingly is not representative since a major portion of the loans were pertaining to ongoing projects (New Parli and Paras Expansion) which have not been allowed in the approved borrowings pending commissioning of these projects.



Taking into account the above exclusions for the ongoing project loans, it was submitted that the loan-wise interest projections should be calculated with the applicable interest rate for remaining loans. MSPGCL has also updated the Capital expenditure for FY 2005-06 to Rs. 138.67 Crore. Accordingly, the revised interest expenses for FY 2005-06 as per MSPGCL's submission are Rs. 91.99 Crore. After considering the approved capitalization, the net allowable interest expense for FY 2005-06 is Rs. 78.75 Crore, instead of Rs. 64.4 Crore as allowed by the Commission in its Order.

Hence, MSPGCL requested the Commission to reconsider the disallowance of borrowings taken for prepayment of loans and to review the interest expenses allowed in the Order under the provision "*some mistake or error apparent from the face of the record*".

b) Other Finance Charges

The Commission has determined the other finance charges in proportion to the interest expenses approved in the Tariff Order. MSPGCL submitted that the other Finance Charges are identifiable items and do not correspond in exact proportion to the interest expenses. They are detailed as Guarantee Fee payable to GoM, Lease Rent payable to SBI, Bank Remittance Charges, Bank Commission, etc. MPGCL added that the guarantee fee is payable only on the PFC loans which are part of the opening loan balances and approved borrowings. MSPGCL has therefore submitted that guarantee fee on loans already contracted should be allowed based on the actuals.

The guarantee fee for FY 2005-06 and FY 2006-07 works out to be Rs. 16.54 Crore and Rs. 22.07 Crore, respectively, and the total other finance charges are Rs. 23.66 Crore and Rs. 29.25 Crore, respectively.

Hence, MSPGCL has requested the Commission to review the other finance charges allowed in its Order under the head, "*some mistake or error apparent from the face of the record*", and allow other finance charges for FY 2005-06, as mentioned above.

### **3.2. Commission's Observation and Ruling**

The Commission has approved the interest expenses based on the principle of the latest Tariff Order and MERC Tariff Regulations which state that the borrowings in a year have to be limited to the Capital Expenditure, only for the stations in operation. As per the principles the borrowings for day to day cash requirements and borrowings for capital expenditure on new stations which are not in operation are not to be considered for determination of interest expenses. Other finance charges are to be considered on actuals.



Accordingly, MSPGCL was required to submit station-wise loan portfolio and interest expenses & other finance charges details in its ARR petition. MSPGCL has expressed its inability to provide station-wise loan portfolio in the context of its first year of operation as MSPGCL and lack of accurate station wise trial balances and, has submitted aggregate balances only. In the absence of details of the borrowings and substantial information on loan portfolio, the Commission has considered the aggregate balances and weighted average interest rate for the determination of interest expenses and other finance charges. The Commission for this purpose has limited the borrowings to the total capital expenditure on stations in operation only.

MPSGCL is still not in a position to provide the station wise loan portfolio details which would be required to ascertain overall effect of loan restructuring and even though some details are now given in the Review Petition, they are only estimates and not from the audited accounts of the Company..

The Commission, therefore, rejects the plea of MSPGCL that the approach followed in determination of interest expenses qualifies as “*some mistake or error apparent from the face of record*”. However, the Commission may consider the legitimate interest expenses and other finance charges while truing up in the next year’s ARR based on complete *Audited* loan portfolio details that are made available.



## PART-II: ARR AND TARIFF DETERMINATION FOR FY 2006-07

### 1. Plant Load Factor

#### 1.1. MSPGCL's Submission

MSPGCL submitted that the Commission has increased the generation for Nashik, Koradi and Chandrapur Thermal Power stations in spite of the reasons provided for low PLF in the Petition.

MSPGCL mentioned that the approved PLF for various Power Plants are significantly higher than the PLF's given in the ARR petition. The difference between petition figures and approved figures are tabulated below:

Station	Petition (%)	Approved (%)	Variation (%)
Khaperkheda	83.45	84.24	0.79
Paras	80.70	81.09	0.39
Bhusawal	80.06	82.94	2.88
Nasik	77.36	81.66	4.30
Parli	85.37	85.37	0.00
Koradi	72.83	79.45	6.62
Chandrapur	73.18	74.26	1.08
Uran Gas	51.00	50.91	(0.09)

MSPGCL submitted that the Commission has increased the PLF of most stations, with significant increase in PLF in some cases, for example 6.62% for Koradi, 4.30% for Nashik, and 2.88% for Bhusawal. MSPGCL stated that it is not possible to increase the PLF by such an extent for any Station, and more so for its old stations.

MSPGCL has also submitted that it has initiated the process for derating its plants, based on the old age of the Units and the actual capacity available. MSPGCL has written to the CEA in this regard, and a copy of the same has been submitted to the Commission vide letter no. MZ/PST/10th R&M/Common/13560 dated 25 September, 2006.

MSPGCL submitted that it is not possible for MSPGCL to achieve the normative levels of performance as indicated by the Commission in its Order because of the following reasons:

#### Chandrapur:

- Due to prolonged outage of Unit no. 5 due to breakdown of turbine and is likely to be re-commissioned only in the first week of December.



- Due to prolonged outage of unit no. 7 due to damage to the Generator stator. This will affect the availability and hence the recovery of full fixed cost will not be achieved.

Koradi:

- Due to prolonged outage of unit no. 2 for Generator rotor insulation rewinding and Generator transformer rewinding.

Bhusawal:

- Due to prolonged outage of Unit no. 1 due to major R&M works on condenser and turbine.

MSPGCL submitted that these outages will affect the availability and hence, the recovery of full fixed cost will not be achieved

Due to unprecedented heavy rains and flooding of railway lines, yards, etc., and wet coal the generation was low in all thermal power stations. MSPGCL has also provided its revised PLF projections as tabulated below:

Station	Revised Projection for PLF (%)
Koradi	69.25
Nasik	74.02
Bhusawal	74.85
Parli	79.68
Chandrapur	63.96
Paras	80.89
Khaperkheda	84.24
Uran	51.25

Hence, MSPGCL requested the Commission to review the estimated PLFs in the Tariff Order under the provision, “*some mistake or error apparent on the face of the record.*”

**1.2. Commission’s Observation and Ruling**

MSPGCL has submitted in its ARR filing that its stations are available but not in a position to generate. Its projections for Availability and PLF were vastly different. The Commission is of the opinion that in an acute power deficit scenario where the available power is always dispatched, PLF should always be nearly equal to availability. MSPGCL cannot show higher availability while not contributing to generation as required for or deemed to be contracted for.



The problem of consistent loadability cited by MSPGCL cannot be a valid reason for significant variation between PLF and Availability. The Commission for this reason considers the availability figures submitted by MSPGCL to be misleading and shall revise them on the basis of ability to generate at the time of truing up. If the availability of plants does not meet the normative levels, it is bound to affect the recovery of fixed costs and the corresponding incentives.

Also, given the severe power deficit situation, MSPGCL is expected to maximize the generation by planning the outages meticulously and by restricting the forced outages to the minimum extent. On the contrary, MSPGCL in its Review Petition has revised station-wise PLFs to further lower levels as compared to their projection in the ARR petition on the grounds of prolonged outages. For e.g., Chandrapur TPS which was expected to commence operations from the end of October 2006 as per the ARR Petition is now stated to be available only from December 2006.

Considering that the normative availability is deemed to be contracted for and is warranted, the Commission cannot pass on the costs on this account to the consumers.

The Commission, hence, rejects the Petitioner's submission that the approach followed for estimating PLF and Availability qualifies as "*some mistake or error apparent from the face of record*". However, the Commission will again review the performance of MSPGCL in this regard, depending on the justification provided by MSPGCL at the time of truing up for the actual performance vis-à-vis targeted performance levels.

## **2. Heat Rate**

### **2.1. MSPGCL's Submission**

MSPGCL submitted that considering the age, poor loadability of the stations due to adverse quality of coal and deferment of its scheduled maintenance activities, it is not possible to achieve the normative levels of SHR as indicated by Commission in its Order. MSPGCL cited inadequate availability of funds for repairs and maintenance activities in the past as a reason for deferment of major maintenance work, which has affected the performance of various plants and equipment.

MSPGCL stated that due to ageing and deferment of scheduled maintenance activities, there has been deviation in operational parameters from the design value for the generating units, such as drop in vacuum, drop in M.S. temperature, increase in R.H. spray, increase in make-up water consumption, outage of HP heaters and operations on partial load conditions. This has led to increase in the Station Heat Rate from the design value for the generating stations.



MSPGCL also mentioned that the heat rate has already been reduced over the past three to four years and that considering the vintage of the units it is not possible to achieve the overall heat rate reduction of 1% every year. It is submitted that there will actually be deterioration in the heat rate with each passing year.

MSPGCL further revised its projections for station heat rate from those projected in its filings. MSPGCL submitted that earlier estimates cannot be achieved due to the major contributing factors mentioned below:

- i. It was envisaged to use imported coal in Nashik and Bhusawal but the delivery of imported coal had to be deferred due to high stock of Indian raw coal at TPS and unprecedented heavy rains.
- ii. The units had to be run at reduced load due to wet and muddy coal with the secondary fuel support.
- iii. For Gas turbines, increase of 1° C in ambient temperature corresponds to loss of 0.85 MW per Gas turbine Unit. The reduction of 1 Hz frequency corresponds to loss of 3.7 MW generation per Gas Turbine Unit.
- iv. Partial loading of the Gas turbine units due to non availability of Gas

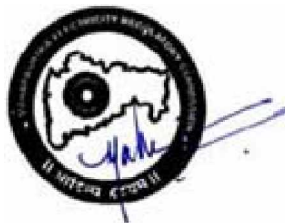
Hence, MSPGCL requested the Commission to review the approved station heat rates under the provision of “*some mistake or error apparent on the face of the record*”.

## **2.2. Commission’s Observation and Ruling**

The Commission has taken into consideration the age of the plants while approving the normative Station Heat Rate in its Tariff Order. The SHR for stations, which are less than 25 years of age, are approved on the basis of CEA standards for similar vintage stations. For stations, which are more than 25 years old, the Commission has further relaxed the norms to sufficiently accommodate the ground conditions on account of old age of stations. Accordingly, the SHRs for stations more than 25 year old are based on the improvement trajectory specified in the previous Tariff Order.

The targets in the previous Tariff Order have been set at relaxed levels for FY 2003-04 with a practical year-on-year improvement trajectory. Therefore, the targets for FY 2006-07 set on the basis of the above-mentioned improvement trajectory cannot be considered as abrupt or as seeking sudden and immediate improvements.

Besides, the Commission notices that the SHR estimates of MSPGCL are not accurate to be considered for any review. The SHRs as estimated by MSPGCL are derived figures and their accuracy is influenced by the accuracy in measurement of the quantum and quality of coal used. The Commission has already issued clear directives for



ensuring reliable and scientific measurement in this regard and has given sufficient time to MSPGCL. However, MSPGCL has failed to respond so far and the measurement of coal weight and calorific value continue to be simplistic and far from scientific.

The Commission, therefore, does not see any sufficient reason to consider a review of the approved SHRs.

However, in case of Bhusawal TPS, the Commission has approved the SHR on the basis of CEA norms. Considering the age of the plant, which is more than 25 years old, the Commission shall revise the SHR on the basis of the principles of previous Tariff Order. The Commission, therefore, shall true up the necessary variation on this account in the next year's ARR.

### **3. Transit Loss**

#### **3.1. MSPGCL's Submission**

MSPGCL has submitted that it is not possible for them to achieve the normative levels of transit losses as indicated by Commission in its Order.

MSPGCL mentioned that in an attempt to control transit losses, it has initiated the following measures for reducing the transit losses:

- a) Calibration of the weigh bridges at Power Stations on regular basis.
- b) Strict surveillance kept on weighment of coal at loading end through a team of engineers by surprise checks.
- c) Coal companies asked to recalibrate weighbridges at their end in case of any doubts / discrepancies. However, maintenance and subsequent recalibration of weighbridges at loading end takes considerable time. This is because these weigh bridges are the property and in the custody of coal companies and it is difficult for MSPGCL to supervise their working.
- d) To avoid pilferage from coal rakes en-route, the Zonal Railway Protection Force in charge were contacted and surprise raids were conducted at various locations. This problem was also communicated to the Railway Board.
- e) To arrive at net weight of coal supplied, the actual weight of the loaded coal wagon less the painted tare weight of the wagon is considered as per Fuel Supply Agreements with the Coal Companies.

MSPGCL stated that it has been able to reduce the transit loss to some extent by the above mentioned measures. However, MSPGCL submitted that is not possible to reduce the transit losses further, to the extent considered by the Commission in its Order, as these losses are extraneous in nature.



Hence, it has requested the Commission to review the approved transit losses under the provision of, “*some mistake or error apparent on the face of the record*”.

### **3.2. Commission’s Observation and Ruling**

The Commission has defined the transit loss based on the MERC (Terms and Conditions of Tariff) Regulations, 2005. However, while deciding on the norms, the Commission has also considered the principles of the previous Tariff Orders. The Commission has set an improvement trajectory for transit loss in the Tariff Order for FY 2003-04. It is observed that the desired transit loss figures for FY 2006-07 as per the trajectory specified are in line with the norms specified in MERC Regulations, and accordingly the Commission has set the norms as per MERC Regulations.

MSPGCL has referred to the National Tariff Policy, while stating that “*improvement trajectories should be recognized at “relaxed” levels and not at “desired” levels.*” It is to be noted that the Commission has in the *same spirit* specified the improvement trajectory at relaxed levels in FY 2003-04 through its Tariff Order for FY 2003-04. The normative targets set in the Tariff Order for FY 2006-07 are therefore neither abrupt nor erroneous.

The Commission, therefore, rejects the submission of MSPGCL to review the transit loss level under the provision of “*apparent error*”.

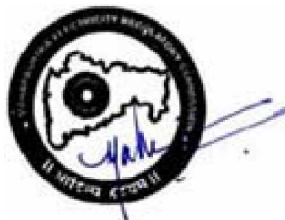
## **4. Interest Expenses & Other Finance Charges**

### **4.1. MSPGCL’s Submission**

#### a) Interest Expenses

MSPGCL submitted that the weighted average interest rate considered by the Commission is not a correct representation of actual interest rates. The loan-wise interest projections for FY 2006-07 based on applicable rate of interest are available for approved loans. Accordingly, the revised interest expenses have been reworked for FY 2006-07 to be Rs. 95.38 Crore and considering the approved capitalization, the net interest expense allowable in FY 2006-07 works out to Rs. 80.5 Crore, as against Rs. 36 Crore allowed by the Commission.

Hence, MSPGCL requested the Commission to review the approved interest expenses under the provision “*some mistake or error apparent from the face of the record*”.



b) Other Finance Charges

MSPGCL has reiterated its submission that Other Finance Charges are identifiable items and should not be determined on the basis of interest expenses. The guarantee fee and SBI lease rent for FY 2006-07 works out to be Rs. 22.07 Crore and Rs. 6.52 Crore, respectively; with the total other finance charges for FY 2006-07 as Rs. 29.25 Crore.

MSPGCL requested the Commission to review the approved Other Finance Charges under the provision, “*some mistake or error apparent from the face of the record*” and approve actual charges as identified.

#### **4.2. Commission’s Observation and Ruling**

The Commission having stated the principles adopted while determining interest expenses and the requirements for filings in 3.2 of Part A of this Order, clarifies that the legitimate interest expenses and other finance charges shall be trued up in the next year’s ARR based on the figures available in the audited accounts and the complete *Audited* loan portfolio details there in.

### **5. Hydel Stations – Interest on Working Capital**

#### **5.1. MSPGCL’s Submission**

MSPGCL has determined the cost of spares as 1% of GFA while arriving at the working capital requirement. MERC Tariff Regulations specify that the cost of spares be determined as 1 % of historical cost. MSPGCL mentioned that it has considered the book value of GFA instead of historical cost due to non-availability of complete details at the time of preparation of the ARR & Tariff Petition.

MSPGCL has submitted that the historical cost details of hydel stations (Koyna, Tillari, Vaitarna, Bhira) are now available and it amounts to Rs. 3,334.9 Crore.

MSPGCL has accordingly revised the amount to be considered under spares and thereby the estimated working capital and interest on working capital for Hydel Stations for FY 2006-07 works out to Rs. 6.05 Crore as against Rs. 2.61 Crore approved by the Commission.

Hence, MSPGCL requested the Commission to review the approved Interest on Working Capital for Hydro Stations under the provision “*for any other sufficient reasons*”.



## 5.2. Commission Observation and Ruling

The interest on working capital for the Hydel station was determined based on the MERC (Terms and Conditions of Tariff) Regulations, 2005 and on the basis of information submitted by MSPGCL. The Regulations specify that the cost of maintenance spares to be included in working capital as 1% of the historical cost. The Commission going by the information submitted in the petition has considered the book value of GFA as the historical cost.

However, in case of MSPGCL's Hydro Stations the GFA in books does not reflect the historical cost of the assets as the assets are taken under lease from GoM. The Commission directs MSPGCL to submit all the details of historical cost and the Commission after exercising due diligence shall true up the appropriate variations in interest on working capital on account of change in cost of maintenance spares.

Hence, the Commission directs MSPGCL to put forth this issue during the truing up exercise for FY 2006-07.

## 6. Peaking Tariff for Hydro Generation

### 6.1. MSPGCL's Submission

The Commission in its Tariff Order has outlined the details of operation of Hydel plants with the objective of maximising the utilisation of Hydel plants during peak hours. MSPGCL submitted that peaking hours defined in this regard in Item 2 of Section B of Chapter 6 of Tariff Order for MSPGCL (Case No. 48 of 2005), change from season to season and year to year and has requested the Commission to redefine the peaking hours for the purpose of implementation of differential hydro peaking tariff.

MSPGCL has also requested the Commission to review the principle of not truing up variations on account of differences in generation during peak hours and MSPGCL.

MSPGCL stated that it has already rationalized the generation from hydro stations during peak hours to meet peak power requirement and that generation from Hydel stations during peak hours has increased during the period of April 2006-September 2006 over the same period in FY 2005-06. MSPGCL has submitted that it however would not be possible to meet the target of 89% generation in peak hours as specified by the Commission.

MSPGCL stated that it is taking steps to achieve higher hydel generation during peak hours. MSPGCL expressed the opinion that though the framework suggested by the Commission is very progressive, it is also very stringent. It stated that the peak power generation of 2872 MU is not achievable in FY 2006-07, as half the year is over, and only 46% generation has been achieved during peak hours in this period.



Further, it is submitted that during monsoon period the hydel plants are run throughout the day on many occasions, which also serve as a flood control mechanism. In addition, sometimes the hydel stations have to be operated in order to maintain grid stability. Hence, MSPGCL submitted that unless truing up is allowed, it would adversely affect its viability.

MSPGCL submitted that under the current mechanism proposed by the Commission, there is no incentive for higher generation during peak hours, as the additional revenue has to be returned entirely to MSEDCL, through reduction in the monthly bill. In fact, there is only a risk to MSPGCL that it will under-recover revenue, due to lesser generation during peak hours.

MSPGCL stated that it would approach the Commission with the plan to optimize the hydro generation during peak hours for FY 2007-08 based on actual performance and considering the other operational constraints. However, for FY 2006-07, it is requested that the truing up for variations be allowed.

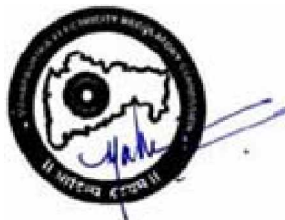
Hence, MSPGCL requested the Commission to review the Hydro generation rationing targets projected by Commission in its Order under the provision, "*some mistake or error apparent from the face of the record*".

## **6.2. Commission Observation and Ruling**

The Commission has for the first time implemented peaking tariff for hydro generation to send a signal for economic use of hydro resources. Accordingly the Commission has estimated generation during peak hours and non-peak hours and has approved differential tariffs. The basis for estimating the generation during peak hours is that Koyna is to be used only during the peak time and during the non-peak hours it has to be used only for the requirements of grid stability.

The Commission is aware that the generation from Koyna in this year before the issue of the Order will skew the target generation during peak hours for the entire year. The issue therefore needs clarification and not review. The Commission in this regard clarifies that variations on account of hydro generation prior to the date of the Tariff Order shall qualify to be on account of uncontrollable factors and shall be considered for truing up.

The Commission also clarifies that any factor beyond the control of MSPGCL, viz., grid stability, shall qualify to be on account of uncontrollable factors after due inquiry and analysis. The principle of not allowing truing up on account of variations in generation during peak hours and because of factors within control of MSPGCL, cannot be revised as the intention of providing such a signal shall not be served.



Regarding the definition of peak hours for the purpose of differential peaking tariff, it is to be noted that the definitions hold only until 31<sup>st</sup> March 2007. The Commission has given necessary directives to MSPGCL in its Tariff Order to propose peaking tariff for Hydro Plants in its next tariff petition. The directive regarding definition of peak hours is to be read thus

*“Assign weights to various periods of the demand, both by the time of the day (day / night – peak / non-peak) and also by season, based on the value of energy at that particular time.”* (Tariff Order for MSPGCL for FY 2006-07, Section IV, Chapter 7, point (iv) under Hydro Peaking Tariff)

## **7. Tariff for Small Hydro Generation**

### **7.1. MSPGCL’s Submission**

The Commission, in its Order, has approved the tariff of Rs. 1.65/kWh (equivalent to off peak tariff) for Small Hydel Stations. MSPGCL mentioned that the Commission in the month of November 2005, has issued a separate Order on Case 25 of 2004 dated 09-11-2005 on Tariff Determination of Small Hydel Projects under which the Commission has approved a tariff of Rs. 2.84/kWh for first year and a levelised tariff of Rs. 3/kWh for Small Hydel Projects. Further, this Order stipulates that “the Order shall be applicable for supply of electricity from all small hydro projects (up to 25MW) to the Distribution Licensees in the State of Maharashtra.”

Hence, MSPGCL requested the Commission to approve the tariff of Rs. 2.84/kWh for Small Hydel Projects of MSPGCL for FY 2006-07.

### **7.2. Commission Observation and Ruling**

The Commission has determined the tariffs for Small Hydro Projects (SHP) under Maha Genco on the basis of MERC (Terms and Conditions of Tariff) Regulation, 2005 and Hydro Peaking Tariff principles. The Commission has also issued an Order for Tariff determination for Small Hydel Project (SHP) dated 9<sup>th</sup> November 2005. However, this Order is primarily for new projects with the intention to promote setting up of additional SHPs. This Order was based on the cost details of 42 SHPs yet to be set up or in the process of being set up in the State and does not include the already existing SHPs of MSPGCL. Thus, it is clarified that the SHPs under MSPGCL do not fall under the ambit of SHPs referred by the Order dated 9<sup>th</sup> November 2005.

As such, not considering the SHPs of MSPGCL under Commission’s Order dated 9<sup>th</sup> November, 2005 is not an “error” and the Commission rejects the request of MSPGCL to review the tariff for SHPs.



## **PART III - REVIEW OF COMMISSION'S DIRECTIVES**

### **1. Installation and Maintenance of Weightometers / Gravimetric Coal Feeders and Cost Benefit Analysis of Usage of Imported Coal**

#### **1.1. MSPGCL's Submission**

In the context of usage of imported coal by MSPGCL units, MSPGCL has increased the usage of imported coal in accordance with the periodic directives of the Commission towards usage of imported coal. MSPGCL mentioned that given the design of the old stations, it is not possible to install weightometers/gravimetric coal feeders in the place of existing volumetric coal feeders. Further, MSPGCL submitted that the systematic measurement of GCV of coal by taking periodic samples of coal being fired is already in force in MSPGCL in their own laboratories. MSPGCL mentioned that proven technology of on-line meters to enable measurement of GCV of coal on "as fired basis" is not available.

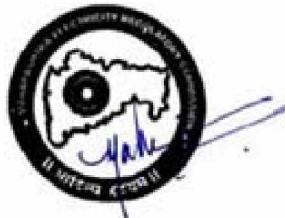
Hence, MSPGCL submitted that the directives given under Section IV Chapter 7 Sr. No. 14 &15 of Tariff Order cannot be satisfied.

#### **1.2. Commission Observation and Ruling**

The Commission has directed MSPGCL to install and maintain weightometers / gravimetric coal feeders in place of volumetric coal feeders so that MSPGCL can have accurate measurement of GCV for coal and which will further help them to judge the benefit of imported coal with respect to its cost.

MSPGCL should understand that accurate measurement of GCV would enable efficient monitoring of the quality of coal supply and would also help in quantifying the benefits of the usage of expensive imported coal. MSPGCL must find and adopt scientific and technically suitable process for this purpose. The Commission holds that measuring current flow from the belt to measure the weight of the coal is not an accurate methodology as current flow in itself does not reflect the equivalent true power consumption due to involvement of power factor.

In a cost plus regime where eligible fuel costs are completely passed on to the consumers, the Commission is not satisfied with the level of efforts undertaken by MSPGCL in this regard. The Commission, therefore, directs MSPGCL to execute practical and accurate methods to measure coal quantum and quality, on the lines of best practices in plants with similar vintage.



## 2. Incentive Mechanism

### 2.1. MSPGCL's Submission

The Commission, in its Order, allowed the incentive mechanism for both thermal and hydel stations. MSPGCL submitted that the Commission has allowed the recovery of incentive on semi-annual basis for thermal stations and on annual basis for hydel stations. MSPGCL requested that the Commission should allow recovery of incentive on monthly basis based on the PLF for thermal stations and capacity index for hydel stations as approved by the Commission. Further, any variation in incentive billed on account of actual performance with respect to projected performance should be trued up at the end of the year.

MSPGCL has requested the Commission to allow recovery of incentive on monthly basis so as to smoothen the impact of incentive on MSEDCL and facilitate MSPGCL's cash flow.

### 2.2. Commission Observation and Ruling

The Commission has allowed the recovery of incentives on semi-annual basis for TPSs and on annual basis for HPSs. The Commission has revised the recovery basis for TPSs from annual basis to semi annual basis to facilitate cash flow.

In fact, the payment of incentives being a commercial transaction issue between MSPGCL and MSEDCL should be a matter to be settled through appropriate PPAs. However, in the absence of the PPAs, the Commission has indicated the methodology till the PPAs are finalized between the parties and approved by the Commission.

With the above observations and directions, the Commission disposes of the Petitions filed by MSPGCL.

Sd/-  
(S.B. Kulkarni)  
Member

Sd/-  
(A. Velayutham)  
Member

Sd/-  
(Dr Pramod Deo)  
Chairman



(Smt. Malini Shankar)  
Secretary, MERC