

**Consultative Paper on Multi Year  
Tariff Process for REL – G/T/D  
(GENERATION, TRANSMISSION &  
DISTRIBUTION)**

Submitted to

MAHARASHTRA ELECTRICITY REGULATORY  
COMMISSION

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March, 2007

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**A1: BACKGROUND**

- 1.1 Section 61 of the Electricity Act 2003 (hereinafter referred as “Act”) empowers the State Electricity Regulatory Commission to determine the terms and conditions for determination of tariff. Further, it also lists down certain guiding principles which have to be considered while determining the terms and conditions of tariff. One of the key guiding factor is:
- (a) The Commission shall adopt **Multi Year Tariff principles (MYT)** and other principles that reward efficiency in performance.
- 1.2 Clause 8.1 of the National Tariff Policy states that the implementation of the MYT framework should bring in reduction in risk for utility and consumers, promote efficiency, attract investments, and bring greater predictability in consumer tariffs. This framework should be applicable for both private and public utilities. Further it also states that first control period should have flexibility to incorporate any change during the control period.
- 1.3 Based on these principles, MERC issued the MERC (Terms and Conditions of Tariff) Regulation on August, 2005. In this regulation the Commission laid down the principles for MYT regulation and specified that MYT will be applicable in the State of Maharashtra from April, 2006. But the licensees in the State of Maharashtra approached MERC requesting postponement of the MYT filing dead line citing data unavailability, un-preparedness and, lack of clarity and capability in filing MYT Petition as the main reasons. Subsequently MERC directed all the licensees to submit their MYT filing for the first control period by December, 2006.
- 1.4 This document is prepared to bring out clarity about the concept and implementation of MYT framework, among various stakeholders.

## **A2: WHY MULTI YEAR TARIFFS**

### **Present Regime**

- 2.1 At present, the Commission is following a cost plus regime which is largely emanating from the erstwhile Sixth Schedule of Electricity Supply Act, 1948. In the present cost plus regime, Annual Revenue Requirement (ARR) and consequently the tariffs are set every year based on the reasonable costs and guaranteed return that would be allowed as part of revenue requirement. Further, the Commission has also made efforts to monitor the performance of the utilities through their regular ARR filing.
- 2.2 Further the cost plus regime, requires more stable structure with well defined trajectories to monitor the performance of the utility to incorporate incentives and penalties for the same.
- 2.3 In the current regime, the cost approvals and tariffs are set on an annual basis. This process would require more clarity and should have specific and well defined trajectories built in to bring about greater certainty as to the future tariff structure for the utilities as well as consumers.

### **Need for MYT Framework**

- 2.4 In the context of above discussed tariff regime, the objective for MYT framework is to bring in more clarity and stability in the tariff fixation process and the need for MYT framework is underlined as follows:
  - (a) Need for a robust tariff framework which can provide certainty in revenues. Given that the utilities are in restructuring stage with huge revenue deficits, the certainty in revenues could help them plan for the optimum investments;
  - (b) Need to address investors concern of regulatory risk arising from possibility of frequent changes in the principles of the Annual Review Process;
  - (c) Need to facilitate accelerated loss reduction by supportive regulation that provides reasonable timeframe and suitable incentive for improvement;

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- (d) Need to safeguard the interest of the utility by promising higher incentive for better information and capping downside risks;
- (e) Need to introduce transparency in the system by providing accurate information to the stakeholders;
- (f) Need to allocate risk between the stakeholders based on controllable and uncontrollable factors.

### **A3: MYT FRAMEWORK**

#### **What is an MYT framework**

- 3.1 MYT framework envisages the fixing of the ARR i.e. the operating cost, financing cost and returns for each year of the control period and the baseline Tariff. The road map for design of future tariff for recovery of the ARR for the future years based on the performance improvement brought about by the licensee is clearly indicated in the MYT order.
- 3.2 It is not possible to set the tariff for future years as the change in the input cost of tariff like the fuel cost, wages and salaries, material cost etc cannot be estimated accurately. However, the MYT regime gives an idea to various stakeholder, about how a change in the various input factors, may affect the tariff in future years. In a way it sets a definite guideline for tariff determination in future years.
- 3.3 A Multi Year Tariff Framework can be defined as a framework where the ARR is approved for more than one year subject to the truing up of the certain important uncontrollable deviations in the cost elements of the ARR after the actual audited figures for each financial year are made available.

#### **Benefits of MYT Framework**

- 3.4 The benefits of MYT framework are as follows:

##### **For Licensee**

- (a) It provides clarity about the principles that would be applied for tariff fixation for future years and thus facilitates the utilities to plan their finances and operations. This should ideally translate to improvement in quality of supply and customer service over the control period.
- (b) The incentive and penalty system encourages the utilities to bring in more efficiency in their system and thereby leads to improvement in the quality of their supply and services.

**For Consumers**

- (c) Successful implementation of the MYT framework would result in cost effective tariffs and improvement in quality of supply and services.

**Term of Control Period**

- 3.5 The Control Period mainly comprises of one or more financial year for which the projection of cost, returns and revenues are made for the purpose of planning for the said duration.
- 3.6 The term of the Control Period can be fixed for either 3 or 5 years as per the decision of the Commission. In case of State of Maharashtra, due to the various data issues in terms of data availability, data accuracy levels, un-metered consumptions etc., the Commission has decided that the term of the first control period shall be fixed as 3 years, which is in line with the National Tariff Policy. Further in Indian context, MYT is being implemented for the first time and hence a shorter period is chosen in many states.
- 3.7 Depending on the results of the first control period and refinement of the data and process, the Commission may revise the term of the second control period.

**Controllable & Uncontrollable Factors**

- 3.8 As per MERC (Terms and Conditions of Tariff) Regulation, the Commission has envisaged the categorisation of the deviation, in the actual performance vis-à-vis the Commission approved performance, in to those caused due to controllable and those caused by uncontrollable factors. The factors within the control of the licensee are controllable factors and those which are not within the control of the licensee are Uncontrollable factors.
- 3.9 Some of the Controllable factors as stated in the tariff regulation are variation in capital expenditure on the account of time and cost overruns, efficiencies in implementation, variation in technical & commercial loss, bad debts, variations in working capital etc.

- 3.10 Some of the Uncontrollable factors as stated in the Tariff regulation are variation in fuel cost and change in number or mix of consumers or quantities of electricity in case of existence of only one distribution licensee in the area of supply.

### **Process at the beginning of Control Period**

3.11 At the beginning of the first control period, it is important to decide about the method that needs to be adopted to implement MYT. At this stage it is important to study the nature of the licensee's business and decide on the key performance parameters, which need to be monitored on regular basis. Some of the important steps at the beginning of the control period are as follows:

- (a) Analysing and approving the various input parameters like the cost component of the aggregate revenue requirement, transmission loss level, distribution loss level etc. for the entire control period;
- (b) Setting up trajectory for the key performance parameters like availability for generating station and transmission lines, auxiliary consumption, station heat rate, transmission loss, distribution loss, reliability indices etc. during the control period;
- (c) Approach for dealing with the variance between the actual performance and the approved targeted level;
- (d) Deciding on incentives and penalties that will be levied in case of over and under performance;
- (e) Determining the methodology for sharing of gains / losses arising due to efficient / inefficient performance of the utilities;
- (f) Setting tariff for the first year of the control period and laying down the principle for determining tariff for consequent years during the control period.

### **Process during the Control Period**

3.12 As per the Tariff Regulation, annual performance review will be conducted at the end of each year of the control period. During this annual performance review the following steps will be taken:

- (a) Review the actual performance vis-à-vis the approved targeted performance;
- (b) Identify the reason for variance as controllable or uncontrollable;
- (c) Determining the incentives / penalties with regards to the deviation in the actual performance as against the approved targeted performance;
- (d) Sharing of gains / losses arising out of efficient / inefficient performance in line with the principle laid at the beginning of the control period;
- (e) Resetting of aggregate revenue requirement after duly incorporating the correction factors;
- (f) Setting of tariff for the next financial year, after incorporating correction factor, if any.

### **Process after Control Period**

3.13 At the end of the control period the effectiveness of MYT framework will be comprehensively reviewed. This review will include:

- (a) Whether the regulation has met the desired objectives and to find the lacunae that needs to be taken care of during the next control period;
- (b) Whether the methodology for incentives/ penalties and sharing of gains and losses is robust enough to cater to the interests of both the licensee and the consumers.

## **A4: CRITICAL ISSUES**

4.1 The critical issues in the MYT Process are as follows:

- (a) Identifying the key performance parameters;
- (b) Principles for setting trajectories;
- (c) Structuring of Incentives and Penalties;
- (d) Sharing of gains and losses;
- (e) Tariff linked to the Quality of Supply

### **Identifying the Key Performance Parameters**

4.2 The nature of the licensee business will determine the key performance parameters viz. Station Heat Rate, Auxiliary Consumption, PLF etc., for a Generation Utility, Transmission Losses, and System Availability etc., for a Transmission utility and Distribution Loss etc., for a Distribution utility.

4.3 The key performance parameters will be determined keeping in mind the following important features:

- (a) Contribution of the parameters in terms of cost to the total Aggregate Revenue requirement.
- (b) Impact of variation in the parameters on the Retail Tariff.
- (c) Impact of variation in the parameters to the licensee's business.

### **Principles for setting Trajectories**

- 4.4 After the identification of the key performance parameters, the Commission will set reasonable improvement trajectory for the parameters during the control period, keeping in mind the time required by the licensee to bring in such improvement under efficient conditions and interest of the consumers.
- 4.5 These trajectories will be monitored by the Commission during the annual performance review.

### **Structuring Incentives and Penalties**

- 4.6 The structuring of the incentives and penalties is very important as it needs to balance the interest of the consumers as well as the interest of the licensee. The incentives must be high enough to motivate the licensee to bring in the improvement by performing above the targeted level and at the same time should not be very high to impose tariff burden to the consumers.
- 4.7 In the Tariff Regulation, the Commission has already factored in certain incentives for higher availability of generating station and transmission.
- 4.8 In the MYT order, the Commission may consider introducing incentives and penalties for transmission and distribution loss reduction, quality of supply depending on the data availability, O&M cost, promoting efficient consumption i.e. energy efficiency or DSM measures etc.

### **Sharing of gains and losses**

- 4.9 The Commission has clearly stated the principle for sharing the gain / loss arising out of controllable and uncontrollable factors in its Tariff Regulation.
- 4.10** In case of variation due to **Uncontrollable factors**, the approved aggregate gains / losses arising out of the same, will be passed through to the consumers as an adjustment in the tariff, for the period as specified by the Commission. Eg:- Fuel Adjustment Charges levied due to variation in the fuel cost of generation / power purchase.

**4.11** In case of variation due to **Controllable Factors**, the approved aggregate gains and losses will be shared between the consumers and the generating company or the licensee in the following manner;

- (a) The approved aggregated gain will be shared in the following manner:
  - (i) 1/3<sup>rd</sup> shall be passed through to the consumers as a rebate in the Tariff;
  - (ii) 1/3<sup>rd</sup> shall be retained as special reserve for absorbing the impact of any future losses arising out of controllable factors;
  - (iii) 1/3<sup>rd</sup> shall be used by the generating company or the licensee in its own discretion.
- (b) The approved aggregated losses will be shared in the following manner:
  - (i) 1/3<sup>rd</sup> shall be passed through to the consumers as an additional charge in the Tariff;
  - (ii) Balance shall be absorbed by the generating company or the Licensee.

### **Tariff Linked to Quality of Supply**

4.12 One of the idealistic objectives of an MYT Framework would be to design tariff linked to quality of supply and services i.e. the Tariff during the control period need to be linked to continuity, quality and reliability of supply.

4.13 Currently the deficit situation in the State of Maharashtra forces the utility to purchase additional power from costly sources to meet the demand-supply gap. The Commission has introduced the concept of additional supply charges so as to enable the licensee to recover the high cost of power. As per this, after the equitable allocation of the power from non-costly sources among all the consumer categories, the additional power procured from costly sources are allocated to those consumer categories who have the willingness to pay for the same.

4.14 But for addressing these objectives comprehensively requires availability of accurate and timely data. Given the existing issues like data unavailability, data inaccuracies etc. the Commission may introduce tariff linked to Quality of supply in a phased manner, during subsequent control periods.

## **A5: SUMMARISED POSITION OF THE RELIANCE ENERGY LIMITED**

5.1 Reliance Energy Limited (REL) has filed its MYT petition for the first control period i.e. FY 2007 – 08 to FY 2009 -10 for its three functions i.e. Generation, Transmission and Distribution separately. This petition shall be reviewed based on the provisions for MYT in the MERC (Terms and Conditions of Tariff), Regulation 2005.

### **Approach & Methodology**

#### **Approving ARR and Setting Trajectories**

5.2 The ARR and performance parameters for the Base Year of the Control Period i.e. FY 2007 – 08 for all the three functions of REL will be determined based on relevant orders by the Commission. the past audited accounts available and best estimate for the relevant years after considering various factors affecting the cost component like inflation, input drivers etc.

5.3 Similarly for the subsequent years of the control period, the ARR and the performance parameters are projected based on the base year figures and keeping in mind the efficiency improvements and economic indicators.

5.4 The Commission will set targets for important Cost elements of the ARR and the performance parameters for the base year and subsequent years of the control period.

5.5 Given below are the details of variables and their respective trajectories over the control period as proposed by the Licensee for each of the functions of REL.

- (a) REL – Generation – The key performance parameters for Generation business may be Auxiliary Energy Consumption, Heat Rate, Specific Fuel Consumption and Transit Loss. Further, The trajectories proposed by the REL are as follows:

<b>Particulars</b>	<b>FY 07</b>	<b>FY 08</b>	<b>FY 09</b>	<b>FY10</b>
PLF (%)	94.25	94.26	94.25	94.25
Auxiliary Consumption (%)	7.80	8.50	8.50	8.50
Gross SHR (kCal / kWh)	2350	2500	2500	2500
Normative Secondary Fuel Consumption (ml/kWh)	0.8	2.0	2.0	2.0
Transit Loss	1.79%	0.8%	0.8%	0.8%

- (b) REL – Transmission - The key performance parameter for transmission business may be Availability of Transmission system and Transmission loss. The trajectory for the above parameters as proposed by the REL is as follows:

<b>Particulars</b>	<b>FY 07</b>	<b>FY 08</b>	<b>FY 09</b>	<b>FY10</b>
Availability for 220 kV	99%	99%	99%	99%
Transmission Loss*	4.85%	4.85%	4.85%	4.85%

(\*) – REL has considered the intra-state transmission losses as set by the Commission in its MSETCL ARR Order for FY 2006-07.

- (c) REL – Distribution - The key performance parameter for distribution business may be Distribution loss. The trajectory for the above parameters as proposed by the REL is as follows:

<b>Particulars</b>	<b>FY 07</b>	<b>FY 08</b>	<b>FY 09</b>	<b>FY10</b>
Distribution Loss	12.10%	12.10%	12.10%	12.10%
Capital Expenditure (Rs Cr.)		530	500	524

### **Truing Up**

- 5.6 The ARR is trued up at the end of the financial year and the reasons for deviations are categorized as controllable and uncontrollable. The categorization controllable and uncontrollable factor is done by the Commission as per the provisions in its MERC (Terms and Conditions of Tariff) Regulations, 2005.

### **Sharing of gains and losses**

- 5.7 The Gain and Losses arising due to variation in the cost or performance parameters either due to controllable or uncontrollable factors will be shared between the licensee and the consumers as stated above in point no 4.8, 4.9 and 4.10.