

MSEB Tariff Proposal for year 2003-04 - Affidavit

This order of MERC should focus on improving the accountability and implementation of MERC directives. The non-implementation should come to light quickly and corrective action should be initiated in time. Our objections are focused in this light.

1. Compliance of MERC order

1.1. DSM and fund for agricultural DSM

- 1.1.1. MSEB reports that GoM has nominated MEDA to carry out the DSM work (under Energy Conservation Act). But the correspondence indicates that no action was taken by MSEB in the early period – until questions were raised about this. MSEB was directed to have completed the work much earlier.
- 1.1.2. DSM plan for buildings – In response to MSEB, consumer representatives and some academic institutions gave detailed suggestions on how MSEB should go about implementing the demonstration projects. Despite MERC directive, MSEB has not implemented this. Moreover, the MSEB also did not bother to get back to the people who painstakingly gave suggestions to it.
- 1.1.3. Fund for agricultural and PWW DSM: The MSEB admits that it has not created the fund as directed by MERC. If MSEB had any problem with this directive, it should have come back to MERC.

1.2. Non application of “Reliability charge” on HT industries

MSEB has conveniently also not answered question raised by us during the technical validation, as to how much amount it would have received if it had started levying reliability charge as per MERC order. This would have been easily possible, by analysis of the ToD meter data of the HT consumers. In our estimate the loss to MSEB is in the range of Rs 200 crore p.a. (assuming the charge could be levied only on half of HT consumption). The MERC order had articulated it as charge for un-interrupted supply and has no mention of frequency or any other factor. **We urge the commission (1)** to fix the responsibility for loss of this revenue by MSEB. **(2)** MERC should take necessary steps to ensure implementation of its order.

1.3. Continued Average Billing:

Despite preventing MSEB from issuing bills based on average consumption, MSEB has continued to issue average bills, clearly violating the commission order. If the MSEB has any suggestions / request it should have been discussed clearly in the application to MERC. The excess money charged due to this method (especially for the very small rural residential consumers) should be immediately calculated and refunded by MSEB.

1.4. Express feeders and MIDC areas:

It is noteworthy that nearly 70 express feeders (of the total of around 200) have shown consistent problems for 4 out of 12 months. This is worrisome considering that MSEB is claiming for three years that it has been doing audit of express feeders and these small number of consumers account for a large share of its revenue. Somewhat better, but still similar is the case of MIDC areas.

1.5. Cost Audit of MSEB Generation plants

MSEB proposal vol. II contains discussion on the cost audit and how it is trying to fulfill the MERC directive. But despite this large time that has elapsed, MSEB has given only limited consultancy and actual cost audit is expected to start only by end of 2003.

This does not seem to be an external audit as expected. The MERC should take a note of this extended delay in implementing the directive.

We urge MERC

(1) To fix responsibility for non-compliance of MERC order by MSEB in general and especially for points 1.1 to 1.5.

(2) In the case of “Cost Audit” and other such cases, where utility has not taken timely action of carrying out required studies – the MERC should directly appoint consultant and ask the utility to pay for the costs. This or other such measures should be adopted by MERC to ensure that the said studies and its orders have relevance.

1.6. Load shedding and loss of sales data:

MSEB claims that a load shedding of 7836 MU was done last year. it further says that only 34% of this could be considered as actual loss of sales (as the remaining 66% was accounted for by shift in consumption at night time.) This is difficult to understand. Assuming that load shedding was in practice for say 250 day, and consumers shifted the consumption in the night 8 hours, it should have increased the load by about 2500 MW ! Some shift in load has certainly taken place, but such large increase in off-peak load is questionable. This implies that reliability of load shedding data is questionable (and this is also acknowledged by MSEB). To overcome this problem, we need to substantiate the load shedding data with supporting analysis of data from 11 KV (or 22/33 KV) feeders.

The hours of supply and quality of supply is going to be an important element soon. Hence electronic data storage meters for all 11 KV feeders will be critical. This will be all the more essential if the MERC is thinking about moving in the direction of open access. We have argued this in the past – and installing data storage meters would not cost only Rs 40 Crore – but would be able to eliminate several doubts and remove many inaccuracies even in EA data, load shedding and so on.

1.7. Need for authentic reporting and streamlining reporting

1.7.1. All submissions by MSEB should be on affidavits and the changes in the numbers should be taken up seriously by MERC.

1.7.2. We request the commission to refer to our submission in the tariff process of MSEB tariff in 1999-2000. Prayas had requested the commission to direct MSEB to submit progress reports in specific formats, which would improve the information with MERC and public. We request the commission to re-visit the issue and our submission in 1999.

2. T&D losses, Energy Audit and Agricultural consumption

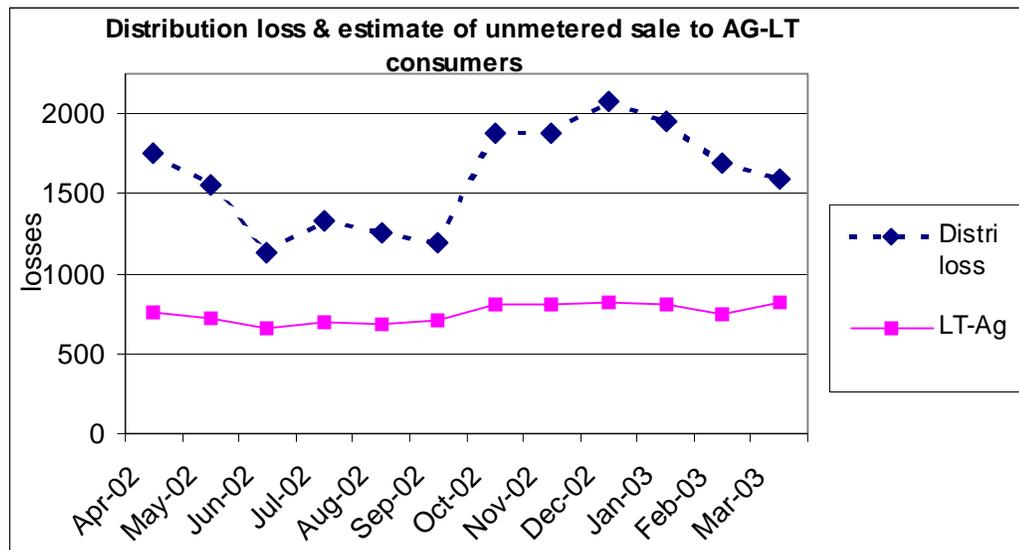
Contradictions in MSEB proposal

On one hand MSEB says that the high T&D losses are due to improper tariff structure and only way to check them (rather accurately know them) is to complete the metering. It adds that after the expanded sample of Agricultural DT meters the T&D loss is now 39.12% (instead of earlier MERC estimate of 39.49%).

We wish to make several points in this regard.

- (1) Starting from a small sample of 192 DTs to now 1,351 DTs the hours of pump usage have not significantly changed.¹ Implying merit in the methodology. It is but natural that as we progress, the sample should grow and methodology should be refined.
- (2) There is no escape from doing this. In any benchmark / target, energy sold (billed units) remains an important input. And till the time all pumps are metered, such estimate based on sample DTs (or improved method of estimation) is essential.
- (3) As per MSEB proposal the pump usage hours for year 2002-03 are nearly 1,576 against 1,476 in the previous year. And despite this increase in agricultural consumption norm the T&D loss level has not come down.
- (4) We had requested the MSEB, that while DT based sample is expanded it should collect information about the crops being irrigated and water source in the sample area. MSEB had promised to do this and also sought formats for collecting data. This would give us a fairly decent idea if the sample is representative. We wish to know if the MSEB has done this. If so, the said data should be submitted to MERC. We feel that the sample as well as meter reading frequency needs improvement. Following graph indicates that as per MSEB estimate the agricultural consumption has not decreased much in monsoon, where as the distribution loss has come down. This is not logical! In fact, Vol II page 4 (point 7) says that the agricultural consumption goes up from Oct hence the D losses go up. This is expected but is not reflected in the data reported.

Figure 1: Agricultural unmetered consumption and distribution loss by month



We had requested MERC to commission a census of agricultural pumps in the state. We request to consider it again.

We urge MERC to direct MSEB to

- (1) Collect data on crops and water source in the sample areas under this limited number of (only 5,000) DTs. This will substantially improve the estimates.

¹ The change in pump usage hours, between estimate of year 2000-01 and 2001-02 was largely due to MSEB assumption that 15% of DT consumption should be treated as distribution loss and not agricultural consumption. The base consumption per Hp/yr has shown small change.

(2) Ensure monthly readings of all the DTs being sampled for agricultural estimate. If MSEB cannot even do this, it has little justification in claiming that complete metering will solve the T&D loss problem.

Target of Metering v/s T&D loss reduction

(5) Complete metering is desirable and good policy. But it cannot be a target for performance. Even in urban areas with complete metering, the distribution losses are not in the acceptable level, proving that only metering targets cannot suffice.

With the present and planned rate of metering, MSEB will need over 5 years to complete metering of all consumers. After that it will have to ensure that all meters are read and are in working order. Even as of now 22% of commercial and 15% of LT industry meters are not read or are faulty. After all meters are in working order and are read, the MSEB would be able to perfectly estimate the T&D losses. This is a long process, and targets would have to be set for the interim period – for which the present method of setting T&D loss targets seems ideal, especially when we are not in as bad a situation as in DESU (Delhi Electricity Supply Utility), which neither had complete computerization of billing or could explain how it estimates its revenue.

Difference between EA data and Tariff Proposal

(6) There exists a large variation in the T as well as D losses as given in the EA reports submitted to MERC from time to time, and the losses given in tariff application. In volume II MSEB has attempted to explain the difference on account of incorrect mapping of two interstate feeders for Oct. But as seen in table below the difference in T losses (wrt EA data) is larger than explained by MSEB and goes on either side of zero. This is a serious issue considering that the policy makers are discussing allowing open access – where such inefficiencies would have large financial implications for the transmission utility and also the end consumer. MSEB should urgently try to resolve the problem – without which move towards open access would be difficult.

Table 1: Transmission loss as per MSEB Proposal and the difference w.r.t. Transmission loss mentioned in periodic EA reports (in MU)

	Apr-02	May-02	Jun-02	Jul-02	Aug-02	Sep-02	Oct-02	Nov-02	Dec-02	Jan-03	Feb-03	Mar-03
Proposal	391	378	365	425	427	353	530	454	429	404	314	595
Difference	-69	-60	33	51	74	87	-58	-111	-138	-109	-92	58

(7) Reporting of EA data: The format of the monthly EA report submitted to MERC has been changing, making a comparison difficult. MSEB should freeze a format for the report.

During the last year, MSEB decided formats for putting up the T&D loss data on its web site. On request of MSEB we had suggested format for the same. One of the key aspects was actual billing (in Rs) and revenue receipts (in Rs) which has not been incorporated by MSEB.

(8) Some time ago, MSEB admitted to MERC that the T&D losses had come down by 5% based on the EA data submitted at that time, the MERC removed the TDL charge for certain areas. We wonder, what happens now, when the T&D loss mentioned in MSEB recent application are in variance with the earlier submission. If the present data is to be

considered reliable, then the revenue decision made earlier was on the based on wrong data submitted to MERC.

(9) We request MERC to rework the TDL charge and make the revenue neutrality (or lack of it) explicit in the order. We would support the graded TDL charge as per the losses in the area. But the maximum TDL charge should not exceed Rs 0.50 per unit.

WE URGE MERC –

(1) To direct MSEB, that the periodic submissions it does, should be on affidavit – this should include the monthly EA reports, billing and revenue reports.

(2) To initiate an independent audit of the EA system of MSEB. A sample check should be carried out by MERC consultant for two urban and two non-urban circles. This would familiarize MERC about the ground realities and also validate MSEB data. Such regulatory checks using external agency is an international prudent practice. The regulatory scrutiny should also include things such as billing software.

Billing and Metering

(10) MSEB should identify the reasons that lead to credit billing in case of LT consumers. And specify the amount of credit bills as of now for all LT consumers in each zone.

(11) The temporary customers such as construction meters are highly problematic and are likely to be responsible for a large revenue loss. MSEB should immediately (1) explore ways of giving only pre-paid meters to such customers, (2) allow the meter to be installed / connection given only for a period when other associated permissions (such as corporation permission for construction) are obtained by the applicant of such temporary connection.

(12) MSEB should be directed to follow MERC order regarding average billing.

(13) The B-80 billing seems to be very large in some selected areas such as Pune (U). It is over Rs 80 Cr, which is much higher than most other areas. The reasons for this needs to be analyzed by MSEB. At what stage does this reduced billing reflect in MSEB balance sheet – more specifically, whether it reflects in the revenue for year 2002-03 (claimed in the proposal).

3. Arrears by Government and local bodies

MSEB arrears are Rs 8,700 Cr. If these were at the level of 5 month billing (as suggested by MERC) then the saving would have been significant, reducing the revenue gap by Rs 200 crore (just from interest payment). Moreover, the “Aging analysis” of arrears shows those close to 40% arrears are of more than 3 year old (about Rs 3300 Cr). This is not a viable position.

It is clear that arrears with government and public bodies are high and a problematic issue (Rs 865 Cr). It is argued that they cannot be disconnected, being public service. Hence, the MERC should direct Government of Maharashtra to pay the electricity bills of local bodies directly to MSEB rather than giving money to these bodies to be paid to MSEB. This will not just avoid delay and unnecessary money transfers but will also ensure that MSEB arrears are not increasing.

Similarly, GoM policies and actions have effect on arrears of Agricultural and power-loom consumers. The arrears from these consumers are increasing and now are at Rs 3,300 Cr. (a) When the GoM gives a directive not to disconnect supply to a set of consumers, and later MSEB is not able to recover the bill from these consumers who should be held responsible for the potential loss of revenue? (b) GoM has not decided on the concessions to be given to agricultural and power-loom consumers.

The TEC and Mula-Prawra arrears are at Rs 850 Cr.

For all these arrears the MSEB manpower also needs support of other authorities. The MERC should clearly direct MSEB in terms of what action it should take in respect of these customers.

The arrears of several of the top 20 HT consumers seems to have increased in the last year. This implies that they are not even paying their current bill fully. In this light, MSEB should clarify how it is fulfilling order of Nagpur High-court ?

We urge MERC to

- (1) seek clear decision from GoM regarding payment of dues by local bodies, and action that MSEB should take if the GoM is not willing to pay the money directly to MSEB.
- (2) seek clear decision from GoM regarding payment of subsidy (and quantum of subsidy it is willing to pay) for agricultural and power-loom consumers for year 2002-03 along with schedule of payment.
- (3) get clear decision from GoM on subsidy it is willing to pay to agricultural and power-loom consumers for year 2003-04.
- (4) Seek clarification from MSEB as to why arrears are increasing of some of the large consumers.

4. Investments by MSEB

The investments by MSEB are one of the key drivers to the quality of supply as well as tariff. In the coming year major investment decisions are being taken by MSEB. Hence, the commission needs to be extremely watchful about these.

- 1) **Generation Expansion:** The generation expansion plan for Parali and Paras for example involve a large cost. The cost of nearly **Rs 5 crore /MW** proposed by MSEB is simply too high for an expansion plan. The commission ought to ensure that the decision about type of plant and location is best suited and comes at reasonable cost. For this MERC should take timely actions. Competitive processes are maintained.
 - (a) MERC should ensure that the plant citing and capacity is optimum. It seems very awkward that MSEB is planning expansion of coal plant at a site like Parali where the variable cost of coal is the highest. We wonder if it has evaluated the option of citing plant on Konkan shore and using imported coal. This would also relieve already overloaded transmission lines.
 - (b) MSEB should give information as to how it plans to ensure continued water supply and other such services for this plant. Does it have a firm assurance in this regard?
 - (b) MERC should obtain detailed information from MSEB regarding (1) cost break-up; and whether the cost includes interest during construction? (2) Basis on which MSEB has estimated the cost, (3) has MSEB called for competitive bidding for EPC contract.
 - (c) If construction by MSEB is expected to be so high, it should clearly go for international competitive bidding BT (Build and Transfer) contract. The MERC should advice MSEB to follow proper procedure. Moreover, the MERC has to approve the

investments under the E Act 2003. In any case, the “usefulness” and “prudence” test will be applicable for such investments.

In short it is MERC’s responsibility to ensure that the consumers are protected from high cost or improper investment decisions. **We urge MERC** to ensure that it takes timely action to ensure that consumers are protected and bad investments are avoided.

- 2) **EHV investments**: The new investments planned in EHV area are also large. MERC should get details of (a) loading of the EHV substations and lines and (b) availability of these equipment (in % time). This information should be sought for all new EHV investments in last 3 years. The “prudence” and “usefulness” test should be applied for the same. The information given for EHV investment under the heading of Prudence is inadequate and simply narrates the intended benefit (that too in general terms). MSEB should given information such as annual average loading of commissioned EHV substations.

Some of the new EHV substations are said to be highly under-loaded and could be imprudent decisions. Similar may be the case with some of the EHV lines. MERC should investigate this and ensure consumer interests are protected – by disallowing capitalization a part of such investment.

5. **O&M Costs**: The maintenance of generation plants or transmission assets is critical for power supply and also overall economics. We request commission to take this into consideration while allowing the O&M costs. But the MERC should also seek compliance from MSEB that it actually spends that amount on the said head. Such earmarking the amount for key categories may be essential for a small time.

Similarly, MSEB collects sizable amount of money through SLC charges for new connections. This collection represents the growth areas. Hence, with consultation with MSEB, the commission may suggest that at least a part of this money should be spent in the circle from where the money is received – this will ensure maintenance of service quality in the area where growth is taking place.²

6. Miscellaneous Issues

1. **Guarantee fee and interest rates**: The table 5.5 shows the interest and guarantee fees for some of the debts of MSEB. For SPA Bank and Private Bonds the interest and guarantee fee comes out to be 17 and 32% of the principle amount. The data may need more clarification / investigation. We urge MERC to look into it.
2. **Interest on DPC Bonds**: MSEB argues that government had directed MSEB to invest in Dabhol Power Company, hence all expenditure associated with it should be considered as reasonable expenditure. This is not acceptable under the ERC Act or the E Act 2003. The Commission is free to judge the prudence and usefulness of expenses and it is MERC duty to do so. We urge MERC to disallow

² We are aware that the MSEB investments are taking place from a number of sources (not linked to SLC charge collection) and area part of larger system improvement plan. Hence, not all amounts collected under this heading can be directed for local system improvement. But in cases where system improvement plan is not exactly in tandem with actual growth, this provision can be of help to maintain some service quality.

the interest on DPC bonds. Similarly, MERC should not consider if there are any profits from this investment.

3. PF and other incentives: It is a prudent practice that the incentives have to be reduced and eliminated once their purpose is achieved. From this principle, the reduction in PF incentive seems justified.

Prayer to the Commission

1. MERC should fix the responsibility for non-compliance of issues such as mentioned in point 1.1 to 1.5.
2. MERC should take action to ensure implementation of its directives in the past and address issues mentioned in point 1.1. to 1.5. Especially implementation of Reliability charge, discontinuing average billing, and urgently conducting cost-audit as directed by it.
3. Direct MSEB or outside agency to collect data on crops and water source in the sample areas under 5,000 DTs, so as to improve the estimates of agricultural consumption.
4. Direct MSEB to ensure monthly readings of all DTs being sampled for agricultural estimate.
5. To direct MSEB, to submit all periodic reports on affidavit –including the monthly EA reports, billing and revenue reports.
6. MERC should initiate an independent audit of the EA system of MSEB for a sample of two urban and two non-urban circles, so as to familiarize MERC with the ground realities and validate MSEB data. Such regulatory checks are international prudent practice. The regulatory scrutiny should also include things such as billing software.
7. MERC should get a clear decision from GoM in respect of FY 02-03 and 03-04 subsidies as well as about payment of bills of local bodies.
8. MERC should ask MSEB to take MERC's permission before going ahead with proposed plan of capacity addition. And seek more information about its plans – what options it has studied, and how it has encouraged competition during this process.
9. Check prudence of the EHV investments for last three years.
10. Reduce the incentives that have delivered their purpose.
11. Disallow the interest cost of investment for Dabhol Project.

We also urge the commission to institute a process of quarterly meeting to discuss the MSEB performance and compliance. This full-day meeting should discuss achievement (or lack of it) and the reasons / actions in light of this.

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