



Maharashtra State Electricity Distribution Co. Ltd.

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REF. P.COM/ACCTS/**MRTDP/26426**

DATE: **June 21, 2007**

COMMERCIAL CIRCULAR No.56

Subject: Meter Reading through Digital Photography.

Background :-

The correct meter reading is the most crucial activity for any Electricity Utility since this decides the energy that is consumed by the consumer and also decides revenue associated with it. Thus, the correct meter reading and correct billing is the backbone for survival of any Electricity Utility.

In the past, the meter reading work has been outsourced in some areas and various methods like direct meter reading, spot billing, reading through RAM-CRAM machines etc. have been implemented. This outsourcing is done to ensure that the meters are read in time and the consumers are billed properly for the energy consumed by them.

In the past some cases were observed where the meter reading was not taken in time, incorrect readings, which resulted in loss of revenue as well as delayed revenue realization. In many cases, it was felt that the readings were entered by the agencies without going to the consumer's premises. This is a very serious issues from the point of view of credibility of MSEDCL and also from the point of view of adverse financial implications.

A meeting was held on 16th June, 2007 at Prakashgad to discuss this important issue and the said was attended by M.D., Director (Operations), Director (Finance), Executive Director, and Officers of Commercial, IT and Finance Sections. After thorough discussions and due deliberations on all the pros and cons of different methodology of meter reading, it was decided in the meeting to issue following instructions:

This circular is issued to ensure that MSEDCL is not deprived of its legitimate dues, the meters are read correctly in time and to ensure that the consumer is also satisfied about the correct meter reading for which he is billed.

In view of the above and as decided in the meeting dated 16-6-2007 following instructions are given which are to be implemented immediately.

1. All the meter readings shall be done by way of digital photography from 1st July, 2007.
2. In case of extreme difficulty, at least in those areas where LT losses are more than 30%, the meter reading shall be done mandatory through digital photography.
3. The meter reading work shall be divided into 3 activities as under:
 - a) Pre-printed stickers indicating consumer Number is to be pasted on the consumer's meter, consumer premises door and the meter box wherever necessary
 - b) Meter reading through digital photography and preparation of CD.
 - c) Data punching of the said readings
 - d) Bill distribution (Bill generation & printing will be done by MSEDCL).
4. The necessary software for data entry will be given by MSEDCL.
5. The field officers, at their discretion, may decide whether the orders are to be given either covering all 3 activities or by breaking the same into individual activities, as described at Sr.No.3 above.
6. The ceiling rate (cap) for the activities in different segments of works, to be carried out are as under:-

Sr. No.	Type of consumers	Work	Rate per consumer
A.	RCI consumers up to Taluka HQ (Urban & Semi-urban areas)	1. Meter reading through photography & creation of CD	Rs.03.00
		2. Data punching/entry	Rs.00.50
		3. Bill distribution	Rs.00.75

B.	RCI consumers in Rural areas (other than those covered in Sr.No.1 above)	1. Meter reading through photography & creation of CD	Rs.04.00
		2. Data punching/entry	Rs.00.50
		3. Bill distribution	Rs.00.75
C.	Metered Agricultural consumers + DTC + Feeders	1. Meter reading through photography & creation of CD	Rs.05.00
		2. Data punching/entry	Rs.00.50
		3. Bill distribution	Rs.00.75

As an interim measure, the above ceiling rates may be considered since switchover will require a transition time. Further, it may be possible that as stop gap arrangements, the agencies which are presently working on similar issues may give their services for the works mentioned at Sr. No.6 above.

However, it may be noted that the ceiling rate shall be adhered to and all efforts shall be taken by the field officers to further reduce the rates to competitive levels for this activity by tenderizing this process. Further, the sample of the photograph must be enclosed with the tender documents / must be provided with the order given to the agency. All the parameters such as meter reading, meter No., make of meter etc., terminal cover of the meter and some identifying part of the meter fixing arrangement (i.e. meter board) should be displayed by the photograph so that the consumer's premises where this meter is installed could be identified.

The above general guidelines are to be issued to the field officers directing them to take all necessary actions and implement meter reading through digital photography from 1st July, 2007 onwards.

These instructions supersede all earlier contrary instructions (if any).

The model of general scope of work (under different categories) is enclosed in Annexures "A", "B" & "C" and the details of meter status and list of exceptional reports is enclosed as Annexure "D"

Encl:- As above.

Director (Operations)

To:

- 1) The Chief Engineers of all O&M Zones, MSEDCL.
- 2) The Superintending Engineers of all O&M Circles, MSEDCL.
- 3) The Executive Engineers of all O&M Divisions, MSEDCL.
- 4) The Dy. Executive Engineers of all O&M Sub-Divisions, MSEDCL.
- 5) The Assistant Engineers of all O&M Sub-Divisions, MSEDCL.

Annexure "A"

Scope for Meter Reading through Digital Camera & Data Entry thereof.

The successful bidder / agency will follow following sequence of operations while taking the Meter Reading:

1. The representatives of Agency will paste pre-printed sticker containing consumer no, billing unit no. & DTC Code on each meter, meter board as well as on the door of Consumer premises. This will be a one time job.
2. The representative of Agency will take photograph of the meter in such a way that the Meter Reading, Meter Manufacture's No., and Consumer Nos' sticker is visible in the photograph/image along with day and time stamp.
3. The Camera to be used for this operation should be 3.0 Mega Pixel or above.
4. The data entry software will be provided by MSEDCL to load these images and to do the data entry work. After completion of the data entry the software will generate the necessary B30 document from the data entered.
5. The data validation software also will be provided by MSEDCL to validate the B30 document generated by the data entry software referred at Sr.No.4 above.
6. Suitable training will be given by the local IT Centers to the representatives of Agency for operation of data entry software and data validation software.
7. While entering the data the Agency's data entry operator will enter proper Meter Status codes by referring the image of Meter. The Meter Status list is attached herewith at Annexure "D".
8. The duly validated B30 data should be handed over to the respective Billing Unit office along with images of the photographs duly indexed with consumer no. on CD.
9. The exceptional report, a list of which is attached herewith at Annexure "D" is also to be generated and handed over to the Billing Unit Office.
10. A separate list is to be generated for Tampered Meters and should be handed over to Billing Unit office on daily basis along with photograph/image

Annexure "B"

Scope for only Meter Reading through Digital Camera.

The successful bidder / agency will follow following sequence of operations while taking the Meter Reading:

1. The representatives of Agency will paste pre-printed sticker containing consumer no, billing unit no. & DTC Code on each meter, meter board as well as on the door of Consumer premises. This will be a one time job.
2. The representative of Agency will take photograph of the meter in such a way that the Meter Reading, Meter Manufacture's No., and Consumer Nos' sticker is visible in the photograph/image along with day and time stamp.
3. The Camera to be used for this operation should be 3.0 Mega Pixel or above.
4. The Agency will prepare a CD by down loading the data and will handover the same to the Billing Unit and the end of every day.

ANNEXURE “C”

a) Scope for only Data Entry by referring Photographs taken with Digital Camera.

The successful bidder / agency will follow following sequence of operations while doing data entry:

1. The CD of photographs will be handed over to the Data Entry Agency by the Billing Unit Office.
2. The data entry software will be provided by MSEDCL to load these images and to do the data entry work. After completion of the data entry the software will generate the necessary B30 document from the data entered.
3. The data validation software also will be provided by MSEDCL to validate the B30 document generated by the data entry software referred at Sr.No.2 above.
4. Suitable training will be given by the local IT Centers to the representatives of Agency for operation of data entry software and data validation software.
5. While entering the data the Agency’s data entry operator will enter proper Meter Status codes by referring the image of Meter. The Meter Status list is attached herewith at Annexure “D”.
6. The duly validated B30 data should be handed over to the respective Billing Unit office along with images of the photographs duly indexed with consumer no. on CD.
7. The exceptional report, a list of which is attached herewith at Annexure “D” is also to be generated and handed over to the Billing Unit Office.
8. A separate list is to be generated for Tampered Meters and should be handed over to Billing Unit office on daily basis along with photograph/image

b) Scope for only Bill Distribution.

The successful bidder / agency will follow following sequence of operations while distributing the bills:

The Agency will collect the printed bills from the Billing Unit Office and will distribute the same to the consumer at his premises / address as printed on the Bill.

ANNEXURE "D"

Meter Status

0 or Space	Normal Meter Reading
1	Faulty Meter, Reading is required to be entered
2	Lock
3	Overflow
4	Meter Change
5	Meter Inaccessible, Glass broken, burnt etc.
7	No Meter
9	Tampered Meter

List of Exceptional Reports

1. List of Consumers having Excessive Consumption.
2. List of Consumers having Abnormal Consumption.
3. List of Consumers having zero Consumption.
4. List of Consumers having 1 to 30 Units consumption in a month.
5. List of Tampered Consumers.
6. List of Consumers having 25% variation in consumption.
7. List of Consumers whose meter is changed.
8. List of Consumers whose meter is not read with reason.
9. Statistics for Total No. of Consumers, Consumers Read, Consumers not read.
10. Statistics of Meter Status wise No. of Consumers.