

# **CHAPTER - IV**

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**4.1 Low Tension Billing**

**4.2 Short recovery of operation and maintenance charges**



## CHAPTER-IV

### Compliance Audit Paragraph relating to State Power Sector Undertakings

Important Audit findings emerging from test-check of transactions of the State Power Sector Companies is included in this Chapter.

#### Government Companies

#### Energy Department (Industries, Energy and Labour)

#### Maharashtra State Electricity Distribution Company Limited

#### 4.1 *Low Tension Billing*

##### 4.1.1 Introduction

Maharashtra State Electricity Distribution Company Limited (Company) distributes electricity in 44 Circles across the State of Maharashtra, except in Mumbai city and some parts of Mumbai suburbs. The Company supplied electricity to 2.66 crore consumers<sup>1</sup> under various categories and earned net revenue<sup>2</sup> of ₹ 72,749 crore. Low-tension (LT) consumers account for more than 90 *per cent* of the consumer base and around 50 *per cent* of the revenue share. The Company raises bills at the tariff rates approved from time to time by Maharashtra Electricity Regulatory Commission (MERC) for each category of consumers.

The billing system<sup>3</sup> of the Company has been developed by its in-house team and is managed centrally at its headquarters in Mumbai. However, varying profiles have been assigned to sub-divisions, and Circle authorities for the day-to-day activities like uploading of meter readings, printing of bills, etc. The Company has extended the online services (Web Self-Service) to consumers as well, wherein, the consumers can apply for new connection, change of name, lodge complaint about faulty meters, upload reading, pay bills etc.

##### 4.1.2 Scope of Audit and sampling

The present audit covers the Low Tension consumers of the Company during the period from 2016-17 to 2018-19. Nine Circles<sup>4</sup> out of 44 circles were selected from six strata (based on number of consumers in LT category) through Random Sampling technique using IDEA software.

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<sup>1</sup> As of 31 March 2019.

<sup>2</sup> For the period 2018-19.

<sup>3</sup> Front end: Java Spring Hibernate 1.0.7 and Back end: Sybase 16 sp03pl04 platform-hp Unix amendment version LTV4.0.8.

<sup>4</sup> Amravati, Aurangabad (Urban), Kolhapur, Nagpur (Rural), Nanded, Rastapeth, Thane, Vashi and Wardha.

#### 4.1.3 Audit Objectives

The audit objectives were:

- To assess whether the LT billing revenue is properly assessed, collected and accounted for;
- To assess whether internal controls are in place in the billing process; and
- To assess whether the Company has a system to manage the arrears.

#### 4.1.4 Audit Criteria

The audit findings were evaluated against audit criteria which were derived from the following:

- The Electricity Act, 2003;
- Tariff orders and directives/ instructions issued by MERC;
- MERC (Electricity Supply Code and other conditions of supply) Regulations, 2005;
- MERC (Standards of Performance of Distribution Licensees, Period for giving supply and determination of compensation) Regulations, 2014 (MERC Regulations, 2014); and
- Commercial circulars issued by the Company from time to time.

#### 4.1.5 Audit Methodology

Detailed analysis was made of records pertaining to 78.31 lakh LT consumers of nine selected circles. In case of LT consumers with Time of Day (TOD) meters, 100 *per cent* data was analysed. Data was obtained from the Company in '.csv' format and the audit was conducted using data analytic tool, KNIME<sup>5</sup>.

#### Audit Findings

##### 4.1.6 Security Deposit

The Company is entitled to recover Security Deposit (SD) from a person to whom electricity supply is sanctioned/released as per Clause 11 of MERC Regulations, 2005. Such security amount shall be equivalent of the average of three months of billing or the billing cycle period, whichever is less, in case of existing consumers. Further, as per clause 11.6 of the Regulation, the amount of SD shall be recalculated on the actual billing of the consumer once in each financial year and demands were raised accordingly from the consumer.

##### 4.1.6.1 *Insufficient security deposit from live consumers*

As on 31 March 2019, there were 59,490 live consumers across nine circles selected for audit with no SD. These consumers had cumulative arrears of energy bills (principal) of ₹ 263.09 crore. The arrears had been allowed to accumulate in spite of the consumer not having deposited any security amount, defeating the basic objective of security deposit. Recovery of arrears from

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<sup>5</sup> KNIME – Konstanz Information Miner, is a free and open-source data analytics, reporting and integration platform.

such consumers, in the event of default in payment, is remote in the absence of SD.

The Company replied (January 2020) that those consumers had applied for connection under ‘Soubhagya scheme’ and were not required to submit any SD. Moreover, additional SD is demanded every year in the month of April. On non-payment of the same, it is shown as SD arrears after due date till March of following year.

The reply is not tenable as the SD arrears continued as NIL even for the previous year. Further, the depiction of SD due as arrears throughout the year and reversing the same in the month of April without efforts to collect the same did not serve the basic purpose for collection of SD. The reply that the connections were under Soubhagya scheme was also not correct as none of the cases pointed out by audit were of Soubhagya scheme.

#### **4.1.6.2 Insufficient security deposit from disconnected consumers**

In order to protect the financial interest of the Company, the sufficiency of SD and electricity dues should be monitored on a continuous basis. If the SD falls short of the dues, the Company should take prompt action either to collect the due SD/the arrears of electricity charges or it should disconnect the supply as per the provisions of section 56 of the Electricity Act, before allowing it to accumulate to an unmanageable amount.

As on 31 March 2019, there were 3,50,852 permanently disconnected (PD) consumers across nine Circles who had cumulative arrears (principal) of ₹ 426.78 crore even after adjusting the available SD as per the details below:

(Arrears in ₹ crore)

Circle	Upto five years		Six to 10 years		More than 10 years	
	No. of consumers	Arrears	No. of consumers	Arrears	No. of consumers	Arrears
Amravati	9,676	5.92	12,431	7.14	24,329	11.71
Aurangabad (Urban)	1,066	5.93	6,576	15.20	15,428	18.18
Kolhapur	1,561	0.60	5,780	2.03	6,831	2.96
Nagpur (Rural)	3,787	2.91	5,748	3.07	18,214	7.36
Nanded	17,993	12.24	28,125	18.24	30,147	15.00
Rastapeth	4,832	5.84	15,785	26.18	29,324	36.65
Thane	11,852	41.79	35,857	105.48	41,710	66.44
Vashi	1,250	1.80	2,450	3.18	4,164	3.94
Wardha	1,547	0.80	2,702	1.21	11,687	4.98
<b>TOTAL</b>	<b>53,564</b>	<b>77.83</b>	<b>1,15,454</b>	<b>181.73</b>	<b>1,81,834</b>	<b>167.22</b>

Failure on the part of the Company to monitor the sufficiency of SD with reference to the dues and failure in taking timely action by disconnecting the supply lead to irrecoverable electricity dues to the extent of ₹ 426.78 crore.

The Company accepted (January 2020) that there were PD consumers who had outstanding arrears of energy bills and arrears towards interest and the Company had adjusted the SD held at the time of disconnection against the principal arrears. Hence, SD of these PD consumers was Nil although they had arrears against them.

The Company further stated that after the implementation of Centralized billing, disconnection is monitored through the centralized system from corporate office. The disconnection list is given to field offices through dashboard and the same is closely monitored from corporate office. With this, timely disconnection of defaulted consumers is done and accumulation of arrears is avoided, henceforth.

The reply is not tenable due to the fact that the Company could have taken steps either to collect due SD or disconnect the supply line without waiting for the arrears to accumulate to the extent of ₹ 426.78 crore in the nine Circles selected for audit.

#### **4.1.7 Non provision of new connections within stipulated time**

The Distribution Licensee shall, on an application by the owner/occupier of any premises, give supply of electricity to such premises, within one month after receipt of the completed application and payment of charges for requiring such supply, if the supply to an applicant is to be given from an existing network of the Distribution Licensee as per Regulation No. 4.7 of MERC Regulations, 2014. If the Distribution Licensee fails to provide connection within the prescribed time limit, it shall be liable to pay a penalty of ₹ 100/- per week or part thereof of delay.

In nine Circles selected for audit, it was observed that there were 1.11 lakh consumers awaiting connection for periods ranging from 2 months to 3 years as detailed below:

<b>Name of Circle</b>	<b>Upto six months</b>	<b>Six months to one year</b>	<b>Upto 2 years</b>	<b>2 -3 years</b>	<b>Total</b>
Amravati	4,869	7,992	335	2,950	16,146
Aurangabad (Urban)	1,654	78	1	47	1,780
Kolhapur	6,784	7,210	4	155	14,153
Nagpur (Rural)	3,706	5,037	19	967	9,729
Nanded	4,416	10,273	3	67	14,759
Rastapeth	24,107	2,252	376	300	27,035
Thane	13,007	1,297	149	590	15,043
Vashi	8,582	267	55	9	8,913
Wardha	1,804	2,071	-	27	3,902
<b>TOTAL</b>	<b>68,929</b>	<b>36,477</b>	<b>942</b>	<b>5,112</b>	<b>1,11,460</b>

Audit observed that the requests for new connections pending with the Company consisted of temporary connections including for religious purposes like Ganesh pandals *etc.*

The Company replied (January 2020) that in the recent past, application for new connection was made mandatory through online for all categories of urban and rural consumers including temporary religious connections. With Centralized billing system, additional validation would ensure billing of all such temporary connections in future.

While appreciating the corrective action taken by the Company, it is mentioned that there were many old cases existing in the system that need to be reconciled and disposed off. Action needs to be taken at sub-division level to identify and clear such cases so that the data shows the correct picture.

#### 4.1.8 Delay in issue of first bill

As per Regulation No. 14.3 of MERC (Electricity Supply Code and Other Conditions of Supply) Regulations, 2005, the authorised representative shall undertake meter readings at least once in every three months in the case of agricultural consumers and atleast once in every two months in case of all other consumers. Regulation No. 15.1.1 states that the Distribution Licensee shall issue bills to the consumer at intervals of atleast once in every two months in respect of consumers in towns and cities and atleast once in every three months in respect of all other consumers.

Audit observed delays in issuing the first bill in nine Circles selected for scrutiny, after releasing the connection to the consumers as under:

Circle	Delay (in months)				
	2 to 6	7 to 12	13 to 18	19 to 24	More than 24
Amravati	18,525	1,886	188	54	27
Aurangabad (Urban)	2,482	224	25	5	4
Kolhapur	21,153	1,048	151	29	68
Nagpur (Rural)	9,727	1,054	126	130	114
Nanded	17,511	849	76	18	3
Rastapeth	17,783	871	68	199	179
Thane	10,792	259	72	13	2
Vashi	6,149	228	29	9	5
Wardha	9,034	318	32	6	3
<b>TOTAL</b>	<b>113,156</b>	<b>6,737</b>	<b>767</b>	<b>463</b>	<b>405</b>

Delay in raising bills results in delay in collection of revenue and consequently finance costs in raising funds from other sources. Moreover, as per section 56(2) of the Electricity Act 2003, no sum due from any consumer under this section shall be recoverable after a period of two years from the date when such sum became first due unless such sum has been shown continuously as recoverable as arrears of charges for electricity supplied. There were 405 cases where the delay in issuing first bill was beyond two years.

The Company replied (January 2020) that from March 2019 onwards there will be no delay in issuing the first bill to new consumers as the Company commenced its Online New Connection System for releasing new connections.

Though Audit appreciates the efforts of the Company in minimizing delays through the online system introduced recently, it is recommended that such delays may be avoided to ensure timely billing and collection of revenue.

#### 4.1.9 Average billing in case of faulty meter and 'no meter'

##### 4.1.9.1 Faulty Meter

Faulty meters are those which are not working or working too fast or too slow or showing erratic reading. As per clause 7.3 of Maharashtra Electricity Regulatory Commission (Standards of Performance of Distribution Licensees, Period for Giving Supply and Determination of Compensation) Regulations, 2014, the Distribution Licensee shall carry out an inspection for faulty/non-working (stuck up, running slow /fast or creeping) meter within four days of the receipt of a complaint in Class-I cities, within seven days of the receipt of

a complaint in urban areas and within twelve days of the receipt of a complaint in rural areas and in case the meter is found faulty, the same shall be replaced before the end of subsequent billing cycle.

Further, as per clause 7.2 of the Regulations *ibid*, if for any reason, the Distribution Licensee fails to carry out the meter reading during billing cycle, it shall prepare and provide a provisional bill to the consumer, based on the average consumption of last three billing cycles wherein, the meter readings were carried out, provided further that normally provisional billing shall not continue for more than two billing cycles at a stretch. As per above regulations, the Company is liable to pay a penalty of ₹ 50/- per week or part thereof for delay in replacing the faulty meter within the prescribed time.

The Company vide circular dated 3 June 2017 directed its section officers in the sub-divisions to take active steps to eliminate average and faulty billing from the system. It also prescribed proactive steps to be undertaken for correction of meter status as average billing not only jeopardizes the Company's revenue but also increases consumer disputes.

Audit observed that 6.06 lakh consumers had faulty meters for months ranging from 1 to 34 months during the period of audit in the nine Circles selected for audit as under:

Sr. No.	Circle	No. of Billing Units	No. of consumers	No. of months meter was faulty <sup>6</sup>
1	Amravati	23	100,983	1 – 34
2	Aurangabad (Urban)	8	21,442	1 – 34
3	Kolhapur	30	87,408	1 – 34
4	Nagpur (Rural)	18	29,231	1 – 34
5	Nanded	16	64,792	1 – 34
6	Rastapeth	16	80,056	1 – 34
7	Thane	18	1,28,942	1 – 34
8	Vashi	10	67,283	1 – 34
9	Wardha	13	25,882	1 – 34
10	<b>TOTAL</b>		<b>6,06,019</b>	

The above consumers were billed at average consumption during the time the meter status was faulty resulting in incorrect/under billing.

#### 4.1.9.2 Non provision of meter leading to average billing

As per Clause 21.1.1 of the 'Conditions of Supply based on the Maharashtra Electricity Regulatory Commission (Electricity Supply Code & Other Conditions of Supply) Regulations, 2005, 'the Company shall not approve power supply/ release electric connection to any applicant/ consumer without meter of an appropriate rating, suitable to record all such parameters as may be necessary for billing the charges as per the specification laid down in CEA (Installation & Operation of Meters) Regulations, 2006'.

<sup>6</sup> Only those cases have been considered where the meter was faulty for atleast three months on conservative basis. The upper range is therefore limited to 34 months due to limitation of the period of three years data commencing from 1.4.2016.



Audit observed that in case of 1.13 lakh consumers across nine circles selected for audit, the status of meter showed 'No meter' for periods ranging from one to 29 months as detailed below:

<b>Circle</b>	<b>No. of billing units</b>	<b>No. of consumers</b>	<b>No. of months<sup>7</sup></b>
Amravati	23	7,387	1 – 21
Aurangabad (Urban)	8	10,725	1 – 29
Kolhapur	30	6,353	1 – 21
Nagpur (Rural)	17	4,754	1 – 25
Nanded	16	13,556	1 – 28
Rastapeth	16	19,838	1 – 29
Thane	17	34,292	1 – 24
Vashi	11	12,291	1 – 29
Wardha	12	4,179	1 – 26
<b>TOTAL</b>		<b>1,13,375</b>	

In the absence of meter, the said consumers were billed at average consumption which resulted in incorrect billing of these consumers. Therefore, in the best interest of the Company to avoid usage without correct billing, all the connections which are marked as 'No meter' may be reviewed by the Company and meters installed.

#### **4.1.10 Manual intervention in the 'Previous Reading' field**

One of the main yardsticks to judge the reliability of any system is the extent of manual intervention. With the objective of examining the extent of manual intervention, Audit compared the figures of 'previous reading' which must be equal to the figures of 'current reading' of the previous bill of the same consumer.

The consumption quantity to be billed being the difference between the current meter reading and the previous meter reading, both the previous and current reading figures assume paramount importance. It was observed that in 20.04 lakh bills, the figures of previous reading were at variance with the figures of current reading of the corresponding previous bills, leading to discrepancies as under:

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<sup>7</sup> Lower range of one month is calculated from commencement date of 1.4.2016 as the data from that date was analysed.

Name of Circle	Total No. of bills with discrepancies	Cases where Previous reading is zero	Cases where Previous reading is more than Current reading of previous month
Amravati	2,27,273	65,535	1,32,470
Aurangabad (Urban)	1,03,711	43,711	48,150
Kolhapur	2,48,413	72,495	1,32,649
Nagpur (Rural)	1,21,651	49,993	60,576
Nanded	1,97,575	61,053	1,21,426
Rastapeth	2,82,664	83,701	1,16,990
Thane	3,83,183	1,39,929	1,84,192
Vashi	3,25,057	93,532	1,67,151
Wardha	1,14,512	47,845	58,832
<b>Total</b>	<b>20,04,039</b>	<b>6,57,794</b>	<b>10,22,436</b>

In all the above cases, the meter status was shown as 'normal' and there was no change in meter number. This indicated that the previous reading was not drawn directly from the database and could have been altered manually. In cases where the previous reading noted in current bill was on higher side, the consumption billed to the consumer is less than actual, leading to revenue loss.

#### **4.1.11 Absence of data validation**

##### **4.1.11.1 Inconsistencies in Supply date**

'Supply date' refers to the date when electricity connection was actually granted to the consumers. It was observed that there were discrepancies in the 'supply date' column. The said column contained dates which were beyond the current date in case of 367 consumers in nine Circles selected for audit, which indicated deficiencies in data validation of the date entered in this field.

The Company replied (January 2020) that the date mentioned were in dd-mm-yy format on bill and that all the future dates pointed out by audit were of 20<sup>th</sup> century.

The reply is not tenable as some of the dates were of the year 20, 21, 39 etc. The contention of the Company that these are 1920, 1921, 1939 is incorrect as even the erstwhile MSEB came into existence only in 1960.

##### **4.1.11.2 Receipts generated without/ incorrect cheque number and MICR**

On scrutiny of 2.71 crore records (of Receipts) pertaining to Thane Circle, the following discrepancies were observed:

- Eleven rows existed with receipt amount as Zero.
- The column length for Cheque number was not predefined as 6-digit string. The column RCPT\_CHEQUE\_NUMBER should always be a six digit numeric number. Audit observed that 5,35,309 rows were having cheque numbers with less than six digits.
- If the mode of payment is cheque, then cheque number should be a mandatory field. Audit observed that the data validation checks were not properly defined and hence it was possible to enter cheque receipt data even without entering cheque number.

- Missing MICR (Magnetic Ink Character Recognition technology) number: Audit observed that there were 67,761 rows wherein the MICR code was missing and 10,570 rows where MICR code was mentioned as '000000000'.
- Audit also observed that a single cheque number associated with unique MICR and unique Indian Financial System Code (IFSC) was used to generate multiple receipts ranging from two to 1,405 receipts per cheque number.

#### **4.1.11.3 'Authority Code'**

The column 'Authority code' in billing data contains specific code for different types of consumers. On scrutiny of records pertaining to Rastapeth Circle for the period 2016-2019, it was observed that the authority code '8' for 'Railways', '9' for 'Military', '1' for 'Central Government', '2' for 'State Government', '19' for 'Home Department State' contained consumers who do not belong to the stated type of category. Further, there were 3,275 records where there was no authority master. Audit also observed that Authority code, '50' was allotted to a consumer, though it did not exist in the master table.

This indicated that the data entered has either not been verified before entry or the validation of the above columns was inadequate/ incorrect.

#### **Conclusion**

Insufficient collection of security deposit (SD) in respect of live as well as disconnected consumers was observed as they had arrears of energy bills even after adjusting the available SD. Consumers were billed at average consumption due to faulty meters. The figures of previous reading were at variance with the figures of current reading of the corresponding previous bills. Instances of absence of data validation like inconsistencies in supply date and generation of receipts without capturing complete details were observed.

The billing system supports all the consumers of the Company. It is therefore essential that the system should run smoothly and effectively.

Efforts need to be taken to attend to faulty meters noticed as continued billing of consumers at average rate results in incorrect reflection of revenue due to the Company. Timely disconnection of supply of electricity needs to be done to avoid loss of revenue from defaulting consumers

The matter was reported to the Company/Government (May 2020); their reply was awaited (June 2020).

**Maharashtra State Electricity Transmission Company Limited**

**4.2 Short recovery of operation and maintenance charges**

**The Company did not recover operation and maintenance charges as determined by MERC resulting in short recovery of ₹ 184.11 crore**

Multi Year Tariff (MYT) determined by Maharashtra Electricity Regulatory Commission (MERC) *inter alia* stipulated the Operation and Maintenance (O&M) expenses for the transmission licensee for a particular control period. MERC issued (October 2011 and December 2015) MYT Regulations, 2011 and 2015 effective for the period 2011-16 and 2016-20 respectively. As per the Regulations, different yearly rates have been specified for O&M expenses for transmission lines based on the circuit kilometres and voltage level for bays in the sub-stations. Transmission Licensees whose bays are installed in the premises of and maintained by another transmission licensee, the O & M expenses for such assets shall be allowed in accordance with the norms applicable for the Transmission Licensee who performs the O & M of such assets.

Audit observed that the O&M of 27 bays of six parties in three zones<sup>8</sup> was entrusted to Maharashtra State Electricity Transmission Company Limited (Company). The Company had entered into/renewed Memorandum of Understandings (MoUs) with these six parties during September 1993 to January 2019 which specified that the O&M charges were to be recovered at the rate of one *per cent* per annum of the cost of the bays with yearly escalation at the rate of 10 *per cent*. The Company continued to recover O&M charges at the rate of one *per cent* per annum of the cost of the bays instead of recovery on the basis of circuit kilometre and number of bays in the sub-station of the transmission licensee as per the MYT Regulations of 2011 and 2015.

Consequently, against the O&M charges of ₹ 197.01 crore to be recovered as per the MYT Regulations of 2011 and 2015, the Company recovered ₹ 12.90 crore resulting in short recovery of ₹ 184.11 crore for the period from April 2011 to March 2019.

The Company in its reply accepted (July 2019) the audit contention and stated that (May 2019) they had issued (May and July 2019) demand notices to these six parties for payment of O&M charges of ₹ 184.11 crore in respect of 27 bays. Further, the Company also stated that directions were issued to the field offices for executing/renewing the MoUs and levy of O&M charges as per MYT Regulations of 2011 and 2015.

The fact remains that the Company did not recover O&M charges as determined by MERC resulting in short recovery of ₹ 184.11 crore.

The matter was reported to the Government (October 2019); their reply was awaited (March 2020).

<sup>8</sup> Amravati-Nine bays, Aurangabad-Six bays and Nagpur- 12 bays.