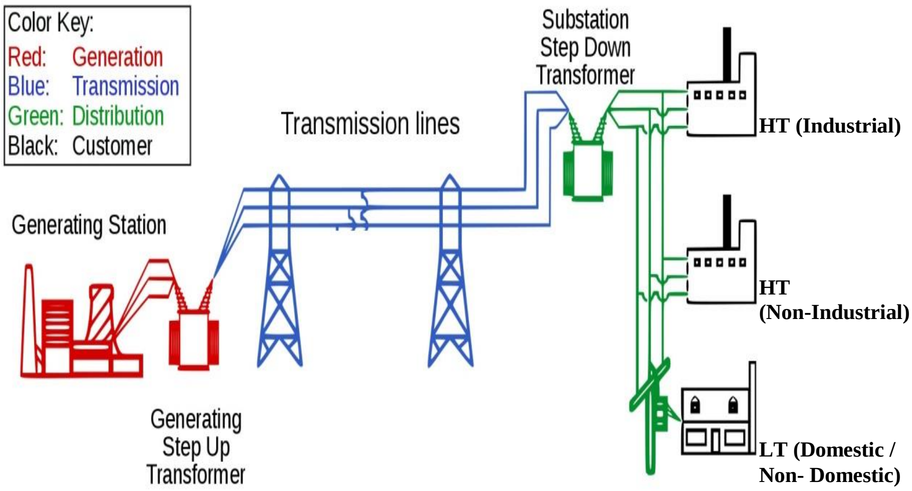
2.1 Introduction

Energy purchased by Transmission Companies from generating companies is distributed through Distribution Companies (DISCOMs). DISCOMs are the first point of contact with the consumers in the electricity sector (Chart 2.1). The objective of the distribution sector is supply of reliable and quality power in an efficient manner and at reasonable rates.

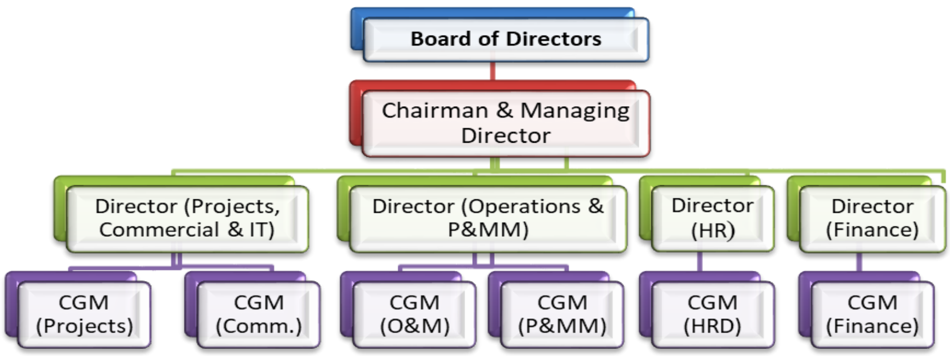
Chart 2.1: Flow of energy from Generation to Consumers



Power distribution in Telangana is carried out by two Distribution Companies[27]. Southern Power Distribution Company of Telangana Limited (TSSPDCL) is the license holder for 14 districts[28] of Telangana covered under ten Circles[29]. TSSPDCL (Company) functions under the administrative control of Department of Energy, Government of Telangana.

2.2 Organisation Chart

The Organisation structure of the Company is detailed below[30]:



[27] Southern Power Distribution Company of Telangana Limited (TSSPDCL) and Northern Power Distribution Company of Telangana Limited (TSNPDCL)

[28] Hyderabad, Jogulamba-Gadwal, Mahabubnagar, Medak, Medchal, Nagarkurnool, Nalgonda, Rangareddy, Sangareddy, Siddipet, Suryapet, Vikarabad, Wanaparthy and Yadadri-Bhuvanagiri districts

[29] Hyderabad (Central), Hyderabad (North), Hyderabad (South), Mahabubnagar, Medak, Nalgonda, Rangareddy (East), Rangareddy (North), Rangareddy (South) and Siddipet Circles

[30] CGM: Chief General Manager

2.3 Scope of Audit

The Audit covers the performance of the Company during the period 2012-17. The Audit was conducted during the months of February to June 2017. Out of ten circles, five circles[31] were selected in Audit for detailed examination. The Entry Conference was held with the Management and State Government on 20 February 2017 to discuss the audit objectives, criteria and methodology. Exit Conference was held on 25 October 2017 to discuss the audit findings, conclusions and recommendations thereon. The replies of the Government to the Audit findings were considered wherever necessary while finalising the Report.

2.4 Audit Objectives

Objectives of the Audit were to seek an assurance that:

- the distribution network was adequate and efficient;
- operations of the Company were financially viable;
- Government schemes were implemented economically, efficiently and effectively; and
- steps were taken to provide reliable and sustainable energy to all.

2.5 Audit Criteria

The sources of audit criterion considered for achievement of audit objectives were:

- Provisions of The Electricity Act, 2003, Companies Act, 2013, National Electricity Policy and the guidelines of the Schemes sponsored by Ministry of Power (MoP), Government of India.
- Guidelines and other directions issued by MoP, State Electricity Regulatory Commission (SERC) and State Government.
- Norms fixed by various agencies[32] with regard to operational activities.
- Agenda and minutes of the meetings of Board of Directors of the Company.
- Standard procedures for award of contracts with reference to principles of economy and effectiveness; norms of technical and non-technical losses.
- Industry Standards for IT infrastructure security.
- Energy Conservation Act, 2001.

Acknowledgement

Audit acknowledges and appreciates the co-operation and assistance extended by the officers and the Management of the Company at various stages of conducting the Performance Audit.

2.6 Audit Findings

The performance of the Company during the years 2012-17 is given in the Table 2.1 below:

---

[31] Hyderabad (North), Mahbubnagar, Medak, Nalgonda and Rangareddy (North)

[32] Central Electricity Regulatory Commission (CERC), SERC, MoP and the State Government

Table 2.1: Performance indicators

Particulars	2012-13	2013-14	2014-15	2015-16	2016-17
Financial Performance (₹ in crore)					
A. Liabilities					
Paid Up Capital	728.48	728.48	728.48	728.48	728.48
Reserves & surplus	(-)6038.30	(-)6681.74	(-)5742.01	(-)7901.11	(-)12424.86
Borrowings (Loan Funds)					
Secured	2708.88	4460.34	3181.10	4538.19	1327.94
Unsecured	62.72	2824.92	2830.31	2830.31	7619.67
Current Liabilities & Provisions	14720.17	10722.57	11603.90	14950.73	20052.04
Total	**12181.95**	**12054.57**	**12601.78**	**15146.60**	**17303.27**
B. Assets					
Gross Block	7642.87	8652.99	7806.40	9716.10	11264.81
Less: Depreciation	3501.16	4008.64	3572.51	4115.94	4782.70
Net Fixed Assets	4141.71	4644.35	4233.89	5600.16	6482.11
Capital Work-in-Progress	829.30	915.98	925.56	689.90	767.74
Investments	276.78	295.62	465.35	461.67	460.88
Current Assets, Loans & Advances	6934.16	6198.62	6976.98	8394.87	9592.54
Total	**12181.95**	**12054.57**	**12601.78**	**15146.60**	**17303.27**

Source: Annual Accounts

The following trends can be seen from the above:

- Current liabilities of the Company increased from ₹ 14,720 crore (2012-13) to ₹ 20,052 crore (2016-17). There was an increase in the liabilities despite restructuring of the Company by way of demerger of two out of the then existing 11 Circles (2014).
- The Company invested substantially in augmenting its infrastructure leading to 53 *per cent* increase in fixed assets during 2014-17. This was mainly due to implementation of the State government policy (2015-16) for nine-hour supply to agricultural consumers.

2.6.1 The Regulatory Framework in Supply of Electricity

The Distribution Companies (DISCOMs) file Aggregate Revenue Requirement (ARR) with State Electricity Regulatory Commission (SERC) for determination of tariff. The ARR projects the revenue requirements to meet the costs in a year which can be passed on to consumers by way of tariff. SERC reviews the ARR and issues Tariff Orders detailing the revenue requirement which can be passed on by the DISCOMs to the consumers, by way of tariff.

2.6.1.1 Compliance to Multi-Year Tariff Framework

SERC introduced Multi Year Tariff[33] (MYT) framework in 2005. According to this, ARR proposals are to be submitted to SERC for determination of tariff

[33] Multi-year tariff refers to tariffs proposed and fixed for more than one financial year and is generally for a control period which is normally five years

for Wheeling[34] and Retail sale of electricity for each control period[35]. The Company submitted multi-year proposals[36] for Wheeling tariff. However, the same was not done with respect to retail supply tariff[37] on the ground that reasonable projections could not be made. The Company attributed it to uncertainties surrounding lift irrigation schemes and other policies as well as uncertainty in estimation of power purchase costs. Accordingly, SERC allowed the Company to file ARRs[38] in two parts:

- retail supply tariff for both LT and HT consumers on annual basis projecting their expenditure on power purchase and operation & maintenance and;
- wheeling tariff for distribution business for the control period.

The Government (November 2017) accepted the Audit observation and stated that MYT proposals were not submitted for retail supply tariffs. Controls need to be put in place to ensure that the MYT framework is complied with.

2.6.1.2 Timeliness in filing of ARR

The ARR for a year is required to be filed 120 days before commencement of the respective financial year, i.e., by 30 November of the preceding year. Timely tariff fixation was mandatory under the Financial Restructuring Plan of the Government of India (GoI). This was also mandatory to receive continuous assistance under National Electricity Fund.

The SERC provided extensions of time on the request of the Company. However, the Company could not adhere to extended dates. The delays were particularly marked after the State re-organisation, being 69 days and 99 days in 2015-16 and 2016-17 respectively. The Company suffered a loss of revenue on this account, since during the pendency, the Tariff Order of the previous year was operated. ***In the year 2016-17, the old tariff was continued up to June 30, 2016 as the Tariff Order was issued only on 23 June 2016 due to delay in submission of ARR by the Company. This resulted in loss of revenue of ₹323.89 crore.***

The Government stated (November 2017) that the delay in filing for 2016-17 was due to uncertainties on power requirements for upcoming lift irrigation schemes and policy decisions of State Government. Government further stated that the losses suffered would be adjusted while truing-up[39] with SERC.

---

[34] Wheeling charges are payable by third parties utilising the infrastructure of Discoms

[35] Control period is a multi-year period fixed by the Commission from time to time, usually five years, for which the principles of determination of revenue requirement will be fixed. 2nd Control period was from 2009-14; 3rd control period being from 2015-19

[36] For this, the Company includes multi-year projections for the investment required for creation of additional infrastructure (network strengthening, addition of substations, transformers etc.,) to meet the growth in demand

[37] Retail sale is direct distribution by the Company to end-users

[38] In 2014-15, the Company did not submit the ARR for the remaining period after the formation of the State (June 2014). As a result, the Company had to follow the Tariff Order of 2013-14 for 2014-15. The loss of the Company had increased from ₹ 811.24 crore during 2013-14 to ₹1170.74 crore during 2014-15, mainly due to non-revision of Tariff and adoption of Tariff Order of 2013-14 for 2014-15

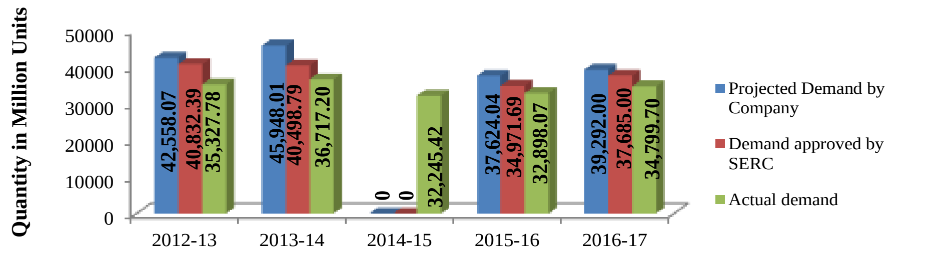
[39] Tariff Order is issued by the SERC before the commencement of the relevant period indicating the probable costs and tariff to recover the same. Subsequent to completion of the relevant period, the DISCOMs files for truing-up of tariff indicating the actual costs incurred and the revenue for that period. SERC verifies the same and identifies the deficit/ surplus to be passed on to the consumers in the ensuing Tariff Order

The fact remains that the Company sustained loss in the relevant financial years due to delay in submission of ARR proposals and consequent delay in issue of Tariff Order by SERC. Additionally, the Company did not complete the truing-up exercise despite the completion of the control period. Control should be put in place to ensure that ARR is filed in a timely manner.

2.6.1.3 Adherence to SERC approved ARR

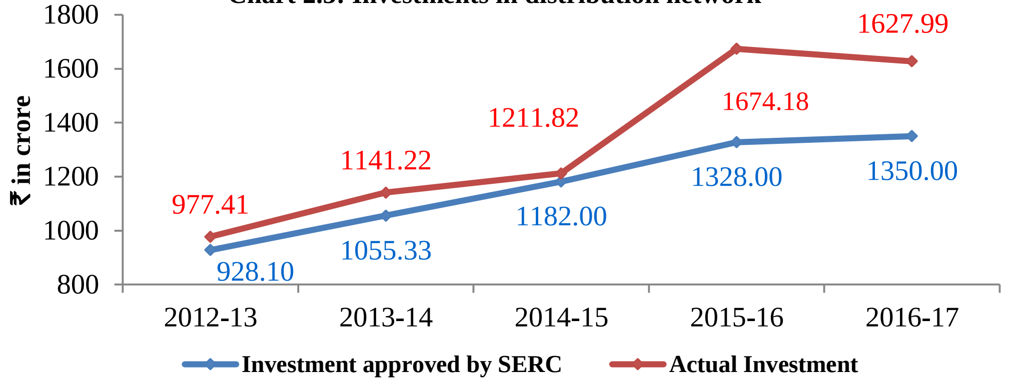
Audit found that the demand projected by the Company was always in excess of the actual demand (Chart 2.2[40]) ranged from 11.43 to 20.09 *per cent* (2012-17). SERC, while approving the Wheeling Tariff for second control period, i.e., 2009-2014, opined that the basis for capital investment for network expansion and strengthening was more based on arithmetic method and lacked technical study.

Chart 2.2: Demand projected by the Company, approved by SERC and the actual energy input into distribution system



The SERC approved ₹ 5843.43 crore (2012-17) towards creation and strengthening of infrastructure. The Company, however, spent (Chart 2.3) ₹ 6,632.62 crore, i.e., an excess of ₹ 789.19 crore (13.51 per cent). SERC allowed recovery of only the amounts approved in the ARR through tariff. The expenditure in excess of the approved amount was not allowed to be recovered through tariff. ***As a result, the Company was burdened with excess expenditure of ₹ 789.19 crore during the period 2012-17***.

Chart 2.3: Investments in distribution network



The Government stated (November 2017) that it made significant investments in augmenting the network to meet the increase in demand (25 *per cent* growth in demand during 2014-17). The investments were based on data gathered at different levels of the Distribution network. The Government also stated that

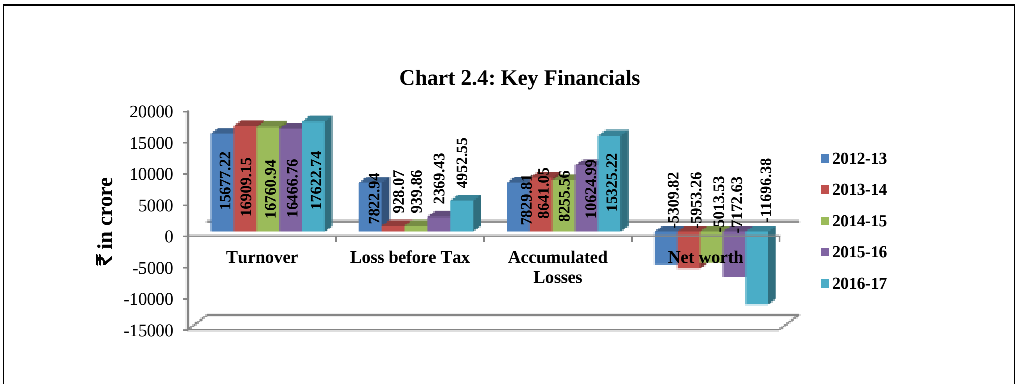
[40] In the absence of Tariff Order for 2014-15, the Company adopted the Tariff Order of 2013-14 for 2014-15 also. As the actual input was without demerged Circles viz., Kurnool and Anantapur Circles, Audit did not compare the same

while SERC made adverse comments on the basis for investments, such comment was not repeated in the 3rd control period. It hoped that excess investments would be absorbed during "truing-up".

The reply was not tenable, as Audit did not find a comprehensive technical study that could have formed the basis for augmentation of the network. The Company did approach SERC for in-principle approval for investments[41]. The SERC did not allow recovery of excess investments from tariff. It advised the Company to approach the State Government to fund the policy. However, the State Government did not accede to the request. Additionally, the Company did not complete the truing-up exercise despite the completion of the control period. It may also be noted that Audit found inefficiencies in procurement (Paragraph No. 2.6.6) which would also lead to excess expenditure in capital projects. The Company should develop a system to adhere to SERC approved norms and file timely truing-up to absorb excess investment.

2.6.2 Financial management

The turnover of the Company increased from ₹ 15,677.22 crore in 2012-13 to ₹ 17,622.74 crore in 2016-17, registering a growth of 12 *per cent* during the period 2012-17. The loss before taxes of the Company decreased during 2012-17. The cumulative loss of the Company, however, as at the end of March 2017 was ₹ 15,325.22 crore due to which the net worth showed a negative balance of ₹ 11,696.38 crore (Chart 2.4).



Audit analysis showed that the continued losses registered by the Company were mainly due to:

- High operating losses;
- High power purchase cost;
- Inability to claim subsidy from State Government; and
- Inability to recover dues from consumers.

The succeeding paragraphs contain detailed analysis:

2.6.2.1 Operating losses

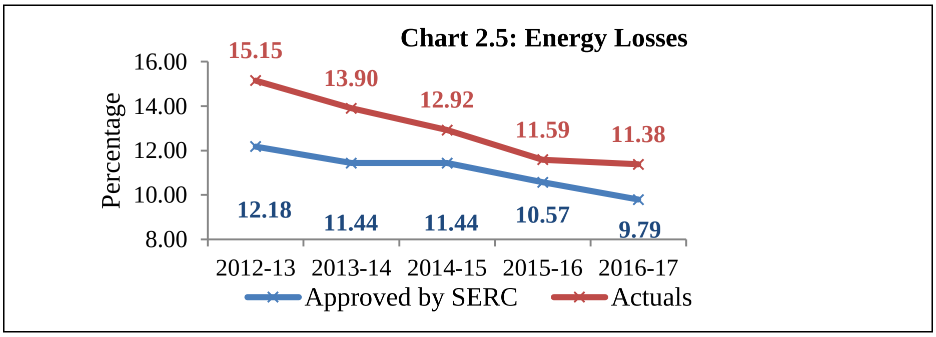
A) Distribution losses in excess of SERC norms

The losses at 33 kV stage are termed as sub-transmission losses while those at 11 kV and below are termed as distribution losses. Above losses may occur mainly on two accounts, i.e., technical losses and commercial losses.

[41] necessitated by the nine-hour free supply to agriculture

Technical losses occur due to inherent character of the equipment used for transmitting and distributing power and resistance in conductors through which energy is transmitted. On the other hand, commercial losses occur due to theft of energy, defective meters, unmetered supply etc.

SERC determined the permissible energy losses and applied them while fixing the distribution tariff for the respective year. Various incentives/ grants under centrally sponsored schemes were also based on achievement of specified reduction in energy losses. Thus, it was imperative for the company to keep energy losses below the level approved by the SERC.



The Company reported continuous reduction in energy losses during the period 2012-17. However, ***the losses were higher than the norm fixed by SERC in all the years (Chart 2.5). As a result, the Company was burdened with additional loss of ₹1306.76 crore (Annexure-2.1) during the period 2012-17.***

A further analysis revealed that Hyderabad South Circle, with losses above 40 *per cent* in all the years under review, was the major contributor to the losses of the Company.

SERC, while fixing the permissible energy losses, drills it down to voltage-wise losses. Audit found that while the Company could control the losses at 33 kV and at 11 kV voltages, the problem area was at the Low Tension (LT) level. While the SERC approved 5.50 *per cent* losses of 11 kV level in 2016-17, the actual losses were 7.92 *per cent*.

Audit further observed that the Company reported lesser energy losses by 2327.18 MU valuing at ₹ 1202.21 crore to the GoI funding agencies like Power Finance Corporation Ltd. (PFC) by adopting incorrect method. While calculating the losses, the purchase and sales should have been measured using the same unit of measurement, which was not done. The input energy (energy purchased) was in kWh and the energy sold was a combination of kWh and kVAh, which cannot be compared.

The Government stated (November 2017) that it was unable to achieve the stringent loss trajectory approved by SERC. It had been able to reduce the losses by adopting several technical[42] and commercial[43] loss reduction measures. The losses in Hyderabad South Circle were attributed to

[42] Replacing aged equipment with energy efficient equipment, load balancing of Distribution Transformers, bifurcation of overloaded feeders etc.

[43] Replacement of defective meters, sealing of meters, effective checks against unauthorised connections, effective revenue collection etc.

unauthorised loads, and intensive inspections were conducted to curb the theft. Further, it was stated that combination of kWh and kVAh was adopted as PFC requested for calculation of losses on the basis of billed units.

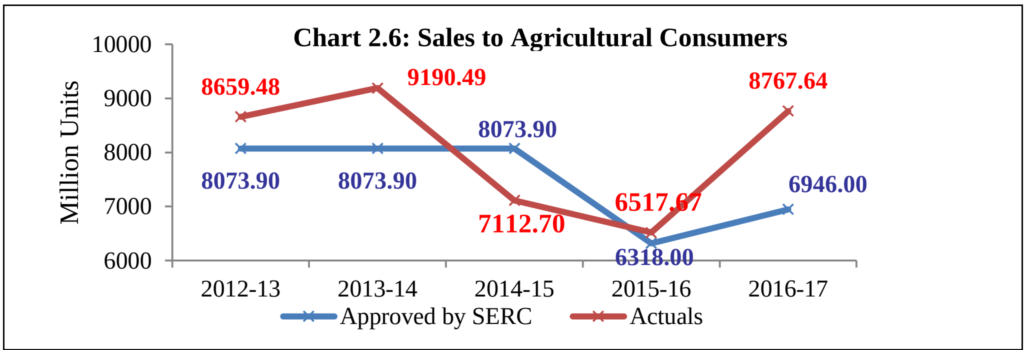
Audit accepts that the Company did undertake measures to reduce losses, however, the SERC norms could not be met. The losses in Hyderabad South Circle continued to be high at 42.02 *per cent* in 2016-17. Further, the Company did not produce any documents to support its contention that PFC requested to calculate Aggregate Technical and Commercial (AT&C) losses on the basis of billed units.

B) Supply of power to agricultural consumers

(i) Adherence to limits levied by SERC

While scrutinising ARR submitted by the Company, SERC fixes and communicates the quantum of supply for agricultural consumers to State Government for deciding subsidy. SERC stated (March 2015) that during the truing-up of the power purchase cost, agricultural sale quantum would be limited to actual consumption or the tariff order quantity, whichever is less. This was to avoid passing of excess power purchase costs due to increased agricultural sales to other consumers.

However, ***the power supply to agriculture exceeded the approved limits during 2012-17 (Chart 2.6). This resulted in additional burden of ₹1744.56 crore (Annexure-2.2) on the Company***.



The SERC objected (2012-13) to the practice of the DISCOMs to resorting to power cuts to other categories[44] in order to divert their energy volumes to agricultural consumers. Audit, observed that the Company, in 2012-13 and 2013-14, had diverted the sales, i.e., from other categories to agriculture consumers. This was evident from the increased sales to agricultural consumers and reduced sales to other categories.

The Government stated (November 2017) that increase in agricultural consumption was due to release of new connections on priority and supply of energy for nine hours in 2016-17. As such, the increase was a fall-out of implementation of State Government policies. Further, the increase would be adjusted during truing-up.

While accepting that the State government policies may have caused the excess supply to agriculture sector, it may be noted that the State Government

[44] like domestic, commercial and industrial

did not compensate the Company for the excess by way of subsidy. The fact remains that the Company had to bear additional burden of ₹ 1744.56 crore.

(ii) Estimation of agricultural consumption

The State Government was paying, every year, subsidy on account of free supply of electricity for agricultural consumption which was unmetered. State Government directed (November 2007) the Company to develop a robust methodology, in consultation with SERC. This methodology was to be used for estimating agricultural power consumption and calculate the subsidy element more accurately. Methodology developed by Indian Statistical Institute (ISI) in 2009 was approved (February 2010) by SERC for implementation from May 2010.

The ISI methodology envisaged a random sample size of 3000 Distribution Transformers (DTRs), stratified on their capacities, and the results to be extrapolated for all the DTRs. Each sampled DTR should be available for reading for the entire 12 months in the particular year in order to be a valid sample. The reliability of the estimates was based on the quality and authenticity of the base data, collected from these readings.

The Company adopted the ISI methodology only from December 2013 instead of May 2010. Further, from April 2014, the Company reduced the DTR sample size in view of demerger of the two Circles (Anantapur and Kurnool). SERC, though accepted the sample data in 2015-16, it was rejected in 2016-17. This was due to large discrepancies in the data like lack of continuous 12 months' readings of the same transformer etc.

Audit observed that the ISI methodology envisaged selection of a sample size based on the existing 1.27 lakh DTRs in 2009. The DTRs, though, increased to 3.55 lakh DTRs by the end of March 2017, the sample size was not increased. It was, instead, reduced on the grounds that two Circles were demerged. During 2012-17, proportion of supply to agriculture to the total supply increased from 22 *per cent* to 25 *per cent,* mainly due to the nine hours a day scheme of 2016-17. The number of connections had also increased from 8.28 lakh to 10.78 lakh during this period. The SERC advised (June 2014) to install new meters at freshly determined locations every quarter and not to release new agricultural services without energy meters. The Company, however, did not comply with the same.

As a result, the figures for consumption of electricity by agriculture were not reliable. This had several consequences. Accurate data for claiming subsidy from the Government was not available. Formulation of policies by the State Government and by the SERC was also impacted in the absence of reliable data. More important, the energy losses were calculated on the basis of total sales which included agriculture sales.

The Government accepted (November 2017) the fact and stated that the meters fixed to the DTRs were in the open fields and prone to getting defective. Meter readings over a continuous and long period, could not be achieved, due to this reason. However, it was assured that proposals to increase the sample size are under process. Further it stated that efforts are being made to develop a new methodology for estimation of agricultural consumption.

2.6.2.2 High power purchase cost

SERC allowed the Company to make short term power purchases (less than one year) within the quantum approved in the Tariff Orders and stipulated the maximum ceiling price per unit. ***Audit observed that the Company purchased short term power in excess of SERC limits and at rates higher than the maximum ceiling limits set by SERC. This resulted in an extra cost of ₹5,820.90 crore during 2012-17*** **(Table 2.2).**

Table 2.2: Statement showing the purchase of short term power

Year	As approved by SERC			Actual Purchases			Excess	
	Units (in MU)	Cost (₹ in crore)	Maximum Ceiling Price (₹/ kWh)	Units (in MU)	Purchase Cost (₹ in crore)	Average Cost (₹/ kWh)	Units (in MU)	Cost (₹ in crore)
(a)	(b)	(c)	(d)	(e)	(f)	(g)=(f)/(e)	(h)=(e)-(b)	(i)=((g)-(d))*(e)
2012-13	6117.39	2549.85	4.17	4439.74	2288.98	5.16	0.00	439.53
2013-14	4649.60	2789.76	6.11	7339.00	3933.41	5.36	2689.40	0.00
2014-15	4649.60	2789.76	6.00	7857.49	4222.09	5.37	3207.89	0.00
2015-16	0.00	0.00	0.00	9762.08	5230.26	5.36	9762.08	5230.26
2016-17[45]	291.33	125.00	4.30	3874.65	1816.48	4.69	3583.32	151.11
Total							**19242.69**	**5820.90**

Source: Power Procurement Committee records

Short term power purchases, though become unavoidable at times, they raise the total power purchase cost as the short term power is costly. This, in turn, burdens the Company and its consumers making the supply of power unreliable and expensive. The high purchase cost of power by the Company was also highlighted as a key concern by the PFC[46] (2016).

The Government accepted (November 2017) the audit observation. It attributed the higher power purchase costs to shortfall in hydel power, delay in commissioning of generation plants, increase in supply to agricultural consumers etc.

However, the Company did not approach SERC for review of the quantity and the rates of power purchase in view of the circumstances stated above.

2.6.2.3 Inability to claim subsidy from State Government

A) Receipt of Tariff Subsidy from State Government

SERC approves the ARR taking into account the subsidy to be released by the State Government, failing which rates contained the full cost recovery tariff[47] would be operative. The subsidy amount as indicated in the Tariff Order, must be paid by the State Government in monthly installments, in advance.

Audit observed from the records pertaining to subsidy claims and receipts maintained at the Corporate office and the Tariff Orders approved by the SERC that:

---

[45] Provisional

[46] in its Fifth Integrated Rating for State Power Utilities (2016)

[47] Under the Full Cost Recovery Tariff (FCRT), the tariff finalised by SERC is expected to recover the costs of distribution without taking into consideration any budgetary support from State Government

- The Company was entitled to claim ₹ 1074.27 crore towards subsidy in 2016-17 as approved by SERC in the Tariff Order 2016-17. ***The Company, however, claimed ₹ 1,033.40 crore only, resulting in short claim of ₹40.87 crore***.

  The Government attributed (November 2017) the short release of subsidy for 2016-17 to approval of Tariff Order for 2016-17 after the completion of Government Budgetary Process.

  The contention that subsidy was not released in full due to delayed approval of Tariff Order was not tenable as the subsidy was decided only with the approval of State Government.

- As against the claim of ₹ 3,766.66 crore made by the Company towards subsidy in the years 2012-13, 2014-15 and 2015-16, only ₹ 3,498.06 crore was received. The balance subsidy of ₹ 268.60 crore was not received from the Government. The Company, however, did not implement the full cost recovery tariff, which is allowed by the SERC in the event of the Government reneging on the release of subsidy.

  The Management stated (October 2017) that it is pursuing with State Government for release of differential subsidy. Government in its reply (November 2017) endorsed the same.

- The non-receipt of subsidy from the Government affected the working capital of the Company. The Company deferred the payments to the Power Generation Companies, resulting in payment of Delayed Payment Surcharge (DPS) at 15 to 18 *per cent per annum*. The Company paid ₹ 96.07 crore as DPS to the Generating Stations during 2015-16 and 2016-17.

  The Government accepted the Audit observation and stated (November 2017) that the DPS was paid to the generators due to lack of funds owing to delay in release of subsidy.

B) Realisation of non-tariff subsidy

The State Government decided (July/ September 2013) to provide free power to the Scheduled Caste/ Scheduled Tribe (SC/ST) beneficiaries residing in SC/ ST housing colonies. This benefit was only available to consumers with consumption of less than 50 units per month. The arrears of electricity charges as on 31 March 2013 was to be paid by State Government in two installments in 2013-14 and 2014-15. In respect of monthly payments, DISCOMs were to furnish detailed consumption particulars of each beneficiary in SC/ST colonies to Social Welfare Department.

The dues relating to SC consumers were received from the State Government, however, the dues of ₹ 32.53 crore of ST consumers, were not received till date (March 2017). It resulted in blocking up of funds of the Company.

The Management stated (October 2017) that it was pursuing with State Government for release of pending arrears. Government in its reply (November 2017) endorsed the same.

C) Assuring funding before taking up works

The Company strengthened (2015-16) its existing infrastructure to meet the additional power demand to provide nine hours power supply to agriculture. As the approved Tariff Order did not include this expenditure, SERC directed (February 2016) the Company to get the scheme funded by the State Government by way of a special grant. However, the State Government refused to give any grant and asked the Company to meet the scheme expenditure from its own resources. Thus, by implementing the directions of the State Government, without ensuring the fund in advance, Company was forced to meet expenditure of ₹ 585.91 crore from its own funds. A loan of ₹ 527.33 crore was obtained from Rural Electrification Corporation Limited (REC) for these works and ₹ 26.50 crore was paid as interest thereon by the end of March 2017.

The Government accepted (November 2017) the Audit observation.

2.6.2.4 Recovery of electricity dues

A) Arrears of revenue

The performance of the Company showed a dip with regard to collection efficiency over the period 2012-17. The collection efficiency of 101 *per cent* in 2012-13 had reduced to 95 *per cent* in 2016-17. An amount of ₹ 3,645.56 crore[48] was pending recovery as on 31 March 2017 from consumers who defaulted in payment of dues. A detailed analysis showed a build-up of arrears in specific areas as detailed below:

- A sum of ₹ 2,123.72 crore, representing 58 per cent of the total arrears, pertained to Government Departments/ Local Bodies. ***Towards timely collection of dues from the Government/ Local Bodies, SERC advised (March 2012) the Company to install prepaid meters in Government Departments. No initiative was, however, taken (June 2017) by the Company in this regard***.

  The Government accepted (November 2017) the Audit observation and stated that the Company addressed letters to Government departments/ services to realise the arrears.

- There was an increase of 213 *per cent* in arrears from bill stopped[49] services during the period between March 2013 (₹ 152.99 crore) and March 2017 (₹ 478.57 crore). Similarly, arrears from disconnected services had increased from ₹ 227.72 crore (March 2013) to ₹ 253.68 crore (March 2017). Thus, a total of ₹ 732.25 crore which represents 20 *per cent* of the total arrears of revenue, remained unrecoverable (March 2017).

  The Government stated (November 2017) that continuous efforts were being made to realise the arrears.

- Test check was done of HT consumers with arrears of more than ₹ 10 lakh each as on 31 March 2017. In this category of consumers, there were arrears of ₹ 958.94 crore due from 288 HT consumers. Against these arrears, the Company was holding Security Deposit of ₹ 428.21 crore. There was no security for the balance amount of ₹ 530.73 crore as the

[48] LT consumers: ₹ 1830.05 crore and HT consumers: ₹ 1815.51 crore

[49] Services for which billing was stopped after three months from the date of disconnection for default of the consumers

Company had not periodically monitored the sufficiency of Security Deposit. The above consumers were under D-list (Disconnection list) for more than one year, however, supply was not disconnected.

The Government stated (November 2017) that disconnection was not done for Government Departments and consumers whose dues were under dispute in courts. The fact, however, remains that the balance amount of ₹ 530.73 crore was not covered by any Security Deposit.

- Out of ₹ 388.11 crore of Restriction and Control (R&C) penalties imposed during 2012-14 due to power shortage, 50 *per cent* was waived by SERC. This waiver was necessitated, *inter-alia*, due to failure of the Company in monitoring, erroneous interpretations and prolonged delays in levy of penalties. Out of the balance R&C charges of ₹ 194.05 crore, only ₹ 184.40 crore was recovered (March 2017) from the consumers. Out of the remaining ₹ 9.65 crore, an amount of ₹ 3.41 crore[50] was pending recovery from 92 live services since September 2013.

  The Government stated (November 2017) that steps have been taken for recovery of pending arrears.

B) Collection of Additional Consumption Deposit

The consumers should maintain Security Deposit with the Company for an amount equivalent to consumption charges[51] of two months or three months during the agreement period. The Security Deposit amount has to be reviewed on annual basis. After review, Additional Consumption Deposit (ACD) would be demanded by the Company in case of shortfall and refunded in case of excess.

The Company reviewed ACD requirement in all the years under review and had raised demand. During the year 2016-17**,** the Company raised a total demand of ₹ 432.15 crore, of which ₹ 299.30 crore was recovered. Audit observed that 32.19 *per cent* of the recoverable amount (₹ 42.77 crore) pertained to 250 HT consumers.

A detailed analysis of recovery of ACD from HT consumers revealed that 425 HT consumers did not pay the ACD demand during the entire three year period of 2014-17[52]. Apart from the above, another 390 HT consumers did not pay the ACD demanded in two out of the above three years. However, the Company did not conduct any analysis to identify consumers, who are in such continuous default.

The Government stated (November 2017) that ACD demand of previous financial years was not insisted for payment after review of ACD for the next financial year.

The reply was not tenable as the Audit observation was on consumers who were not remitting ACD demand continuously.

---

[50] After making deductions for cases which were beyond the control of the Company – bill stopped services (43 cases: ₹ 2.03 crore), terminated services (33 cases: ₹1.37 crore) and under legal dispute (8 cases: ₹ 2.84 crore)

[51] demand charges and energy charges etc., as applicable

[52] Data for 2012-13 and 2013-14 was not furnished by the Company

C) Vigilance on theft of energy

Vigilance team of the Company conducts raids on premises of all HT and LT consumers to detect theft/ pilferage of energy. The Superintending Engineers of the concerned Circles were required to prepare work plans to identify potential cases for conducting raids. Following the raid, additional demand of energy charges would be raised. In case of non-payment of the same, Disconnection Lists (D-lists) are issued to field offices for disconnection of services and follow up action is initiated. Due to ineffective implementation of D-Lists, the Company, however, could collect only 53 *per cent* of the demand and arrears accumulated to ₹ 36.23 crore (Table 2.3) as below:

Table 2.3: Assessment of theft / pilferage of energy

Year	Consumers at the end of year	Raids conducted	No. of cases booked	Assessed Amount	Amount Realised	Unrealised Amount	Percentage of unrealised amount
				₹ in crore			
2012-13	6107235	107305	29295	7.32	4.66	2.66	36
2013-14	6451421	92326	30310	9.75	6.20	3.55	36
2014-15	6783078	80865	35214	25.07	12.87	12.20	49
2015-16	7122118	76292	35702	13.34	6.58	6.76	51
2016-17	7854314	123787	57189	21.15	10.09	11.06	52
Total		**480575**	**187710**	**76.63**	**40.40**	**36.23**	**47**

Source: DPE wing of the Company

Audit further observed that the Company had set a monthly inspection target of 300 services for each officer of the Detection of Pilferage of Energy (DPE) wing from October 2015 only. The set targets cover only 1.4 *per cent* of the consumers in a year.

The Government stated (November 2017) that all the services were inspected by officers of the Company on regular basis.

Audit however observed that the number of raids conducted by DPE wing was low and given the continuing AT&C losses, in certain Circles, the targets would merit review. A mechanism to identify vulnerable areas, based on risk assessment, to carry out focused inspections should be put in place to avoid pilferage of energy.

2.6.3. Implementation of Schemes

2.6.3.1 National Electricity Fund (Interest subsidy) Scheme

Government of India introduced National Electricity Fund (Interest Subsidy) Scheme (NEF) (March 2012) to promote capital investment in distribution sector. The scheme provided for interest subsidy ranging from three to five *per cent* on the interest paid on loans taken for execution of various capital works taken up during 2012-14.

The Company would be entitled to interest subsidy based on the aggregate score as per the parameters of the scheme. The Company had to submit details of loan disbursement and actual interest paid for the approval of the Steering Committee in order to get interest subsidy. The interest subsidy received was to be explicitly indicated in the Aggregate Revenue Requirement (ARR) so as to pass on the benefits to the consumers.

As per the scheme guidelines, an interest subsidy of three *per cent* was allowed on the applicable interest rate on 34 different loans taken by the

Company. Accordingly, an amount of ₹ 97.88 lakh was approved (April 2016) as subsidy in 2013-14.

Audit observed the following shortcomings:

- Interest of ₹ 216.91 crore was paid during the period 2013-2017 on loans of ₹ 899.41 crore taken under NEF. The Company, however, claimed (up to March 2017) scheme benefits on only ₹ 4.01 crore of interest paid during the year 2013-14 instead of ₹ 216.91 crore paid during 2013-17. As a result, the consumers were deprived of the benefit of interest subsidy amounting to ₹ 51.97 crore[53].

  Government stated (November 2017) that the claims for 2014-16 were submitted belatedly in July 2017 due to the delay in finalising the financial statements for 2014-15 and 2015-16.

  The reply was incorrect as the financial statements for the years 2014-15 and 2015-16 were adopted by the Board in December 2015 and September 2016 respectively.

- The assets and liabilities pertaining to the demerged circles were transferred to Southern Power Distribution Company of Andhra Pradesh Limited (APSPDCL). The Company, however, paid interest of ₹ 42.63 crore during the period 2013-14 to 2016-17 on loans taken under NEF scheme for works in these demerged Circles. This included ₹ 3.37 crore paid in 2013-14. This was not considered by Rural Electrification Corporation Limited (REC).

  Thus, the Company did not get any benefit on payment of interest on loans pertaining to another Company, though it affected its working capital.

  The Government stated (November 2017) that APSPDCL was regularly pursued for reimbursement of the amounts paid on the loans of demerged Circles.

  The fact remains that the Company which was availing cash credit facilities for meeting its working capital needs, was further burdened with repayment of loans of another DISCOM (APSPDCL).

2.6.3.2 Schemes for long term viability of DISCOMs

The GoI formulated (October 2012) the Financial Restructuring Plan (FRP) to turn-around loss making State owned DISCOMs and to ensure their long term viability. The FRP, *inter-alia*, required the State Government to takeover 50 *per cent* of Short-Term Liabilities (STL) of Company as on 31 March 2012, which would be converted into bonds. The remaining 50 *per cent* of STL was to be rescheduled by the lenders with moratorium of three years on principal. The repayment of principal and interest would be guaranteed by the State Government.

The State Government agreed (November 2013) to assume liability as on 31 March 2013, which accumulated due to procurement of power beyond SERC approved quantities. The FRP, though, was to be implemented by July

[53] Benefit of ₹ 97.88 lakh on interest of ₹ 4.01 crore (24.41 *per cent)* extrapolated to interest of ₹ 216.91 crore paid -March 2017

2013, the State Government approved the scheme in November 2013, thus delaying the implementation of the scheme. Due to delay, the coupon rate (interest rates) on the bonds increased from 9.30 *per cent* (estimated in June 2013) to 9.95/ 10.00 *per cent* in March 2014. This resulted in additional expenditure of ₹ 18.94 crore[54] per annum (as interest) to the State Government.

As per the guidelines of FRP, the Plan was to be approved by the SERC. The Company, however, did not approach the SERC. As a result, SERC did not allow the Company to recover interest of ₹ 140.74 crore[55] on rescheduled loans for 2015-16 (with private lenders) through tariff.

However, the State Government did not honour its commitment under the FRP to take over the principal amount of the bonds. Further, the Company had also written off receivables of ₹ 4779.04 crore from State Government. These pertained to the commitments of the State Government on short term purchase of power during the years prior to 2012-13.

The Government stated (November 2017) that receivables of ₹ 4779.04 crore were written off to arrive at losses incurred by the Company to the extent felt reasonable by Government. The reply of the Government was silent on the issues of additional expenditure due to delay in issue of bonds and failure to take approval of SERC for the FRP.

In November 2015, the GoI introduced the Ujwal Discom Assurance Yojana (UDAY) scheme to improve the operational and financial efficiency of the State DISCOMs. The State Government would take over 75 *per cent* of the debt of DISCOMs as on 30 September 2015 including the bonds issued under FRP over a period of two years[56]. The balance 25 *per cent* would be converted by the banks/ Financial Institutions into loans or bonds with interest rate not more than the bank's base rate plus 0.1 *per cent*.

A tripartite MoU was signed by Ministry of Power (MoP) with the State Government and the Company in January 2017. As per the MoU, 75 *per cent* of the debt of ₹ 7391.80 crore as on 30 September 2015, i.e., ₹ 5550.21 crore was agreed to be taken over by State Government during the years 2016-18.

Under the UDAY scheme, the DISCOMs were required to ensure 100 per cent metering of distribution transformers and feeders by June 2017. Audit, however, observed that though all 11 kV feeders were metered, only 56.57 per cent of the DTRs were metered by August 2017.

The Government stated (November 2017) that 87 *per cent* of the funds committed under UDAY scheme were already released. It also stated that balance meters would be provided to DTRs in phased manner. Company should evolve a monitoring mechanism to ensure prompt metering of all DTRs to identify energy losses.

2.6.4 Operational performance

The energy received at high voltage from transmission sub-stations is transformed to lower voltage for supply to the end-consumers.

[54] Difference of 0.65 *per cent* on ₹1460.00 crore and 0.70 *per cent* on ₹1349.75 crore

[55] Loans restructured under FRP (1 April 2014) was ₹1223.80 crore. Interest at 11.50 *per cent* thereon for the year worked out to ₹140.74 crore

[56] 50 *per cent* in 2015-16 and 25 *per cent* in 2016-17

2.6.4.1 Installation of capacitor banks

A key parameter to be monitored in a distribution network in relation to operational efficiency is the power factor[57]. If the power factor is less than one, the network has to supply more power to the user for a given amount of power to be consumed, thus leading to more line losses.

As per the guidelines of Central Electricity Authority, Power Factor (PF) of the distribution system and bulk consumers[58] should not be less than 0.95. The power factor is achieved by installation of capacitor banks at the substations. By reducing line losses, capacitor banks reduce the capital investment per Megawatt of the load and also help in strengthening of distribution system. Thus, the capacitor banks enhance the security/ reliability of the power systems.

Audit analysed PF at 104, 136 and 167 33 kV feeders originating from Extra High Tension (EHT)[59] sub-stations, i.e., Transmission-Distribution (T-D) boundary points for the period 2014-15, 2015-16 and 2016-17 respectively. It was revealed that the PF (ranging from 0.94 to 0.03) continued to be less than the norm of 0.95 at 75, 72 and 106 33 kV source feeders for more than six months in 2014-15, 2015-16 and 2016-17 respectively. Further, 42, 25 and 19 feeders lagged behind the norm for the entire year during the above period with corresponding adverse impact on the technical losses. This was due to not utilising the available capacitor banks for the minimum required 80 *per cent* duration as well as due to defective capacitor banks.

The major augmentation of the distribution network happened in 2015-16 while implementing the nine hour per day power supply scheme for agriculture. While preparing for this augmentation, the Company did not provide for capacitor banks, though its counterpart TSNPDCL had made such exercise in 2015-16.

A scheme was belatedly prepared (January 2017) to install capacitor banks at 33/11 kV substations, where the PF was less than 0.90[60] during November 2015 to October 2016. Under the scheme, 247 capacitor banks of 446 MVAR[61] capacity were proposed at a cost of ₹ 28.13 crore (an average cost of ₹ 6.30 lakh per MVAR).

In the absence of any cost-benefit analysis by the Company, Audit used as a criterion, the payback period (23 months) assessed (September 2015) by TSNPDCL for capacitor banks. On this basis, Audit assessed that the Company lost ₹ 14.05 crore[62] per annum on the above 446 MVAR capacitor banks due to delay in installation of capacitor banks.

The Government stated (November 2017) that 203 capacitor banks were installed during 2015-17. It was further stated that capacitor banks were kept in off position during low load periods like lighting (residential) load periods

[57] Power Factor = (Active power (kW)*100)/ Apparent power (kVA)

[58] Like Railways

[59] Voltage exceeding 33 kV

[60] SERC Grid Code, 2014

[61] Mega Volt Ampere Reactive

[62] Total cost of capacitor banks/ Capacity in MVAR/ 2 years= ₹ 3.15 lakh per MVAR *p.a.* * 446 MVAR

in rural areas and during the off season in Agriculture period. The Government did not agree with the audit contention that ₹ 14.05 crore could have been saved but stated that there would be definite savings.

The reply was not correct as the Company had not installed the capacitor banks while taking up the network augmentation works.

2.6.4.2 Performance of Distribution Transformers

Distribution Transformers (DTRs) play a crucial role in power distribution network. Failure of DTRs results in interruption of power supply to consumers, expenditure on repairs and loss of revenue to the Company.

Audit found that the norm of 12 *per cent* followed by the Company for the permissible failure rate of DTR, was fixed in 2003-04. Even this outdated norm could not be achieved in two (2013-14 and 2014-15) out of five years under review. The DTR failures, though reduced in the year 2015-16, had again increased in the year 2016-17.

The Company achieved its norms in the three years 2012-13, 2015-16 and 2016-17, however, the rate of failure of DTRs was on higher side in three Circles[63]. The rate of failures ranged from 12.85 to 21.44 *per cent* in Mahabubnagar, 9.26 to 15.26 *per cent in* Medak and 10.64 to 14.46 *per cent* in Nalgonda during the period 2012-13 to 2016-17.

The failure of the DTRs was due to illegal connections/ tapping, line faults, lengthy lines and overloading of DTRs and unbalanced loads on three phases.

The Company incurred an expenditure of ₹147.48 crore on repairs of the DTRs which failed during the above period. Out of this, 35.14 *per cent*, 27.21 *per cent* and 18.57 *per cent* were spent on repairs in Mahabubnagar, Nalgonda and Medak Circles respectively. These three Circles, thus, accounted for 81 *per cent* of the total expenditure on repairs.

The cost of repairs of DTRs could be decreased by reducing the loss of transformer oil (which acts as a coolant in the DTR) during handling of the failed DTRs. During the monthly review meetings, the officers of the Company were instructed to reduce the loss of transformer oil to 10 litres per DTR. Audit, however, observed that the average loss was 28.54 litres per DTR during the period under review. This resulted in loss of ₹ 21.09 crore.

The Government attributed (November 2017) the higher oil shortage to tank burnt cases and disasters where DTRs fell to ground. Further it stated that the oil shortage had gradually reduced due to addition of DTRs to reduce the loads and that the norm for oil shortage per DTR was 25 litres. However, the Company did not produce any supporting document regarding the fixation of norm as 25 litres.

2.6.4.3 Procurement of Distribution Transformers

A) Procurement of DTRs of non-standard ratings (15 kVA)

The Standard Ratings[64] of single phase DTRs were 5, 10, 16 and 25 kilo Volt Ampere (kVA). Audit observed that the Company had procured

[63] Mahabubnagar, Medak (including newly formed Siddipet Circle) and Nalgonda Circles

[64] As per the specifications of Bureau of Indian Standards, Central Electricity Authority and REC

4171 non-standard 15 kVA capacity DTRs (2012-13 and 2014-15).

These DTRs with maximum full load losses of 275 watts which was higher than the maximum limit allowed (230 watts) for 16 kVA transformers. The permissible energy loss additionally allowed on these 4171 DTRs of 15 kVA worked out to 1.64 MU[65] per annum (i.e., ₹ 76.48 lakh[66]) and resulted in higher distribution losses.

The Government stated (November 2017) that these 15 kVA DTRs were procured for works sanctioned under RGGVY[67] scheme. It further stated it had stopped procuring these 15 kVA DTRs since 2013 and instead is procuring 25 kVA DTRs.

The reply is incorrect as the Company procured 1140 DTRs of 15 kVA capacity in 2014-15. Further, the fact, remains that the Company would continue to incur the excess distribution losses during the entire estimated lifetime of 25 years of these non-standard DTRs procured and installed.

B) Procurement of three star rated DTRs instead of five star rated DTRs

Central Electricity Authority had issued specifications on energy efficient outdoor type three phase and single phase distribution transformers (DTRs) in August 2008. As per these specifications, the quantum of energy conserved would increase with higher energy efficiency level/ star rating[68].

Audit found that the Company continued to buy three star DTRs in its jurisdiction. ***Audit analysis showed that the Company could save 701 to 20586 watts per DTR on various capacities of 5 star 3-phase DTRs instead of 3 star DTRs. This would have enabled the Company to conserve energy of ₹ 2,220.49 crore (Annexure-2.3)*** over the 25 years' lifetime of 5 star DTRs. Audit also noted that its counterpart DISCOM in Andhra Pradesh, APEPDCL[69] was installing 5 star DTRs in its jurisdiction.

The Government stated (November 2017) that cost of DTRs with 5 star rating was more than 3 star rated DTRs. Vendors for repair for 5 star rated DTRs were also less in number than that of 3 star DTRs. It was further stated that full load losses in 3 star DTRs could be reduced to the extent of that of 5 star DTRs.

The reply was not tenable as the capacity to reduce the losses is less in 3 star DTRs whereas capacity to reduce the losses is more in 5 star DTRs.

2.6.5 Consumer Satisfaction and Redressal of Grievances

One of the key elements of the Power Sector Reforms was to protect the interests of the consumers and ensure better service to them.

Regulations require the Company to furnish reliability/ outage indices

[65] {(275-230) watts *24 hours* 365 days * number of DTRs}/1000 and then converted to MU works out to 1.06 MU for 2693 DTRs (2012-13), 0.13 MU for 338 DTRs (2013-14) and 0.45 MU for 1140 DTRs (2014-15)

[66] Average Cost of Supply (ACoS) of ₹ 4.37 per unit (2012-13) and ₹ 5.20 per unit (2013-15)

[67] Rajiv Gandhi Grameen Vidyutikaran Yojana – a Government of India scheme

[68] Energy efficiency levels, i.e., Level 1, Level 2 and Level 3 corresponding to 3 star, 4 star and 5 star ratings

[69] Eastern Power Distribution Company of Andhra Pradesh Limited

viz., (a) System Average Interruption Frequency Index[70] (SAIFI), (b) System Average Interruption Duration Index[71] (SAIDI) and (c) Momentary Average Interruption Frequency Index[72] (MAIFI) to SERC from 2002-03 onwards. Audit, however, observed that while data for MAIFI was not maintained by the Company, SAIFI and SAIDI were calculated from December 2015 only. A review of the SAIFI and SAIDI for 2016-17 revealed that the power was disrupted only 10.17 times for a total duration of 198.30 minutes on an average for each consumer during the year.

2.6.5.1 Addressing complaints: Timelines

SERC Regulation No. 7 of 2004[73] on “Licensees’ Standards of Performance”, *inter-alia*, prescribed that the Company has to redress the complaints of its consumers. The complaints are to be redressed within the time limits specified therein. In case of non-compliance with the standards, compensation is payable by way of adjustment in consumer bills, within 90 days from the date of violation of the standard. Further, an overall performance standard of 90 *per cent* to 99 *per cent*, depending on the nature of complaint, was contemplated.

A review of the complaints received by the Company and the resolutions thereof during the period under review was as detailed below (Table 2.4):

Table 2.4: Statement of complaints

<table>
<tr><th rowspan="3">Sl. No.</th><th rowspan="3">Mode of Complaint</th><th colspan="9">No. of Complaints</th></tr>
<tr><th rowspan="2">Pending as on 1 April 2012</th><th rowspan="2">Received</th><th colspan="3">Resolved</th><th rowspan="2">Rejected</th><th colspan="3">Pending as on 31 March 2017</th></tr>
<tr><th>Total</th><th>In time</th><th>Beyond time limit</th><th>Total</th><th>Within Service Level</th><th>Beyond Service Level</th></tr>
<tr><td>1</td><td>Web</td><td>0</td><td>14726</td><td>12261</td><td>10720</td><td>1541</td><td>2218</td><td>247</td><td>145</td><td>102</td></tr>
<tr><td>2</td><td>R-APDRP</td><td>4585</td><td>555033</td><td>556265</td><td>516552</td><td>39713</td><td>0</td><td>3353</td><td rowspan="2">3118</td><td rowspan="2">3607</td></tr>
<tr><td>3</td><td>Others</td><td>2064</td><td>263035</td><td>238023</td><td>149684</td><td>88339</td><td>23704</td><td>3372</td></tr>
<tr><td></td><td>Total</td><td>6649</td><td>832794</td><td>806549</td><td>676956</td><td>129593</td><td>25922</td><td>6972</td><td>3263</td><td>3709</td></tr>
</table>

Source: Data from Company Dashboard

As can be seen from above, 1.30 lakh complaints (15.5 *per cent*) out of the total 8.39 lakh complaints were resolved beyond the time limits prescribed by SERC. Further, another 53.20 *per cent* of the pending complaints remained pending beyond the time limits. The overall resolutions within time limits were less than the minimum 90 *per cent* prescribed. This indicates that the Company could not achieve the minimum standards of service set by the SERC. Audit also observed that the Company did not pay any compensation to the consumers towards delay in resolving the complaints within service levels as set by SERC.

The Government accepted (November 2017) the Audit observation and stated that the overall performance would be improved by addressing the complaints pending beyond service level. The Company should review its system of addressing complaints to minimize compensation payments to the consumers towards delay in settlement of the complaints.

[70] Measures the number of interruptions each longer than 5 minutes

[71] Measures the total duration of all interruptions

[72] Measures the number of interruptions each less than or equal to 5 minutes

[73] Revised vide Regulation No. 5 of 2016

2.6.5.2 Redressal of complaints from Consumers in Forums

The Company has a Consumer Care Centre (CCC) facility for resolving the complaints of the consumers. In cases where complaints were not resolved by CCC, the consumers can approach Consumer Grievance Redressal Forum (CGRF). The decision of the CGRF is final as far as the Company is concerned. However, the complainant may make an appeal against the order of the Forum to the Vidyut Ombudsman within 30 days of the receipt of the order of the Forum. The Company has to comply with the orders of the Vidyut Ombudsman which are final and binding on them under SERC Regulation No. 3 of 2015.

Audit observed that the number of complaints registered at CGRF and Vidyut Ombudsman had increased from 962 to 1211 and from 28 to 65 respectively during 2012-13 to 2016-17. Further, compensation/ penalty of ₹ 27.19 lakh were awarded (2012-17) by CGRF and Ombudsman for non-resolving the grievances to the satisfaction of consumers.

The Government accepted (November 2017) the Audit observation and stated that there was delay in redressal of complaints due to shortage of staff. Further it was stated that the increase in number of complaints was due to increased consumer awareness. Grievance redressal mechanism should be invigorated to resolve the grievances to the consumer satisfaction.

2.6.5.3 Supply of power as promised

The proposals in ARR for agricultural consumption, cost of supply and subsidy payable by the State Government were based on the assumption of seven hours supply during 2012-16.

Audit observed that during public hearings on tariff proposals, stakeholders expressed concern regarding non-supply of electricity for seven hours throughout the year.

A test check for the months of January to March each year in three[74] out of the four circles[75], showed that actual supply was less than the promised seven hours during 2012-16 (Table 2.5). This resulted in excess claim of subsidy of ₹ 243.93 crore from the State Government besides non-compliance with the directions of State Government. Audit, however, found that during the year 2016-17, the Company had provided supply for nine hours to all agricultural services as per the policy of the State Government.

Table 2.5: Supply of power to feeders

Circle	2012-13		2013-14		2014-15		2015-16	
	Agricultural feeders (Nos.)	Feeders with less than seven hour supply	Agricultural feeders (Nos.)	Feeders with less than seven hour supply	Agricultural feeders (Nos.)	Feeders with less than seven hour supply	Agricultural feeders (Nos.)	Feeders with less than seven hour supply
Mahabubnagar	664	22	702	65	761	761	796	796
Medak	600	600	613	613	645	645	683	683
Nalgonda	728	5 to 205	728	1 to 728	735	735	972	972

Source: Records of the Circles

[74] Except Hyderabad North Circle where there were no agricultural services

[75] Hyderabad North, Medak, Mahabubnagar and Nalgonda

The Government stated (November 2017) that wherever the agricultural feeders were supplied for less than seven hours, the same was compensated.

The reply was not correct as the feeder-wise data indicated that the supply was always less than seven hours, during the test checked months of January to March of 2012-16.

2.6.5.4 Implementation of Safety Measures

Several consumers had expressed concern in public hearings conducted by SERC on issues relating to poor maintenance of network, leading to loss of human and animal lives.

SERC provided ₹ 5 crore per year as special appropriation expenses in the Multi-Year Tariff (MYT) for 2nd Control period 2009-14. These funds were to be utilised to improve safety in distribution network especially in rural areas and to avoid accidents involving human beings and animals. Similarly, for the years 2014-15, 2015-16 and 2016-17, amounts of ₹ 30 crore, ₹ 35 crore and ₹ 40 crore respectively were provided (3rd control period 2014-19).

The above provisions, however, were subject to the direction (March 2009) by the SERC that the Company should prepare safety improvement plan for the 2nd control period. This report should be filed with the Commission by 31 August 2009 for approval, failing which the amounts would be clawed back with carrying cost. For the 3rd control period, similar plan was to be filed by 31 August 2015. However, the Company had not prepared any such plan either in the second or third control period for submission to SERC.

The SERC while approving the tariff for 2016-17, observed that some of the accidents could be avoided by attending to the defects in the system. This signifies the failure of the Company in preparing and adhering to proper safety plans.

An amount of ₹ 158.13 crore was spent by the Company on safety measures during the period under review. However, the number of accidents was showing an increasing trend (Table 2.6):

Table 2.6: Fatal accidents and payment of ex-gratia

Year	Fatal Accidents		Ex-Gratia paid (₹ in crore)
	Human (No.)	Animals(No.)	
2012-13	66	31	0.57
2013-14	125	144	1.12
2014-15	162	55	2.17
2015-16	232	282	5.97
2016-17	119	330	6.14
Total	**704**	**842**	**15.97**

Source: Company records

The Government stated (November 2017) that safety improvement plan was submitted to TSERC. Further it was stated that Distribution Network Renovation Drive was taken up to rectify the defects in the distribution system at a cost of ₹ 135 crore.

The reply of the Government was not correct. The SERC had called for safety improvement plan after approving the special appropriation amounts in the

Tariff Orders. Audit, however, observed that the Company had not submitted any plan after such appropriations. Company should review its safety measures periodically to reduce the accidents.

2.6.6 Contract Management

The Company procures materials for works executed departmentally or on partial turnkey basis from various suppliers. An efficient contract management will result in timely provision of contracted supplies/ services and also ensures economy in purchases. Audit examined contract management in respect of these three parameters.

2.6.6.1 Imposition of penalties: For timeliness in supplies

As per the Purchase Manual of the Company, liquidated damages are to be levied for delay in supply of materials. This was subject to *force majeure* clause and the supplier submitting necessary evidence within 10 days of its occurrence.

Audit observed that penalty of ₹ 29.74 crore during the period under review, though withheld, were subsequently released based on the representations of the vendors. Audit noticed that apart from few *force majeure* cases, the Company released penalties without proper verification including cases where representations were submitted belatedly.

The Government stated (November 2017) that the penalties were waived off due to delay in release of payments to the vendors by the Company and for various other *force majeure* conditions[76]. The manufacturers had requested for waiver of penalties only after completion of the supplies. It was further stated that the Director of the Company could condone delays up to six months after which approval of concerned Director and Director (Finance) was necessary.

Audit, however, observed that reasons quoted by Company as basis for releasing penalties (except freight embargo) were not *force majeure* conditions. It was also evident from the reply that the Company was unable to enforce the clauses relating to penalties due to their inefficiencies in release of payments.

2.6.6.2 Admitting Price Variations

As per the Purchase Manual of the Company, whenever prices quoted were not firm, they would be subject to adjustment as per specific variation formula. This variation would be based on prices of major raw materials/ components at which the vendors actually purchase from their principal suppliers. Further, the Company could call upon the suppliers to submit documentary evidence regarding the price variations claimed on the raw materials used in their finished products.

Audit observed that ₹ 51.10 crore was paid during the years 2012-17 towards price variations. The Company, however, did not call for any documentary evidence. It relied upon the monthly IEEMA[77] circulars, which list out the base prices of the raw materials as on the first day of each month.

[76] Like shortage of raw material, unscheduled power cuts, labour problems, freight embargoes, difficulties in getting reliable transport facility, long distance between the suppliers and Company etc.

[77] Indian Electrical and Electronics Manufacturers Association

The Government stated (November 2017) that calling for documentary evidence from the suppliers was not mandatory. It also stated that price variations were allowed based on IEEMA circulars since many years.

The reply was not acceptable as financial prudence requires the Company to ensure that the price variations claimed were genuine. This would help the Company ensure that the vendors had indeed procured the materials at the higher rates as claimed by them.

2.6.6.3 Closure of work orders: Timelines

As per the provisions of Electricity Department Manual, all work orders completed or in-progress should be closed by 31 March. Fresh work orders should be issued for capital-works-in-progress and maintenance works for next year.

Audit observed that the work orders issued for execution of various works in the Company were not being closed at the end of the year. The work orders, including those of capital nature, were kept open for long periods extending even up to seven years. These were mainly due to a) non-completion of works within scheduled period, b) delay in returning of balance unused materials to stores by staff, c) right of way problems in the field and d) non-availability of materials in the stores.

This resulted in non-closure of 82,028 work orders of ₹ 2203.25 crore as at the end of March 2017. Out of these work orders, 21,730 work orders of ₹ 673.09 crore were pending for periods exceeding one year (Table 2.7).

Table 2.7: Age-wise analysis of work orders

(Amount ₹ in crore)

Pendency Period	Capital Works		Service Connections		O&M and Shifting		Total	
	No.	Amount	No.	Amount	No.	Amount	No.	Amount
12-18 months	631	82.07	927	22.40	4566	36.28	6124	140.75
18-24 months	313	47.82	476	17.44	3003	63.87	3792	129.13
> 24 months	2403	165.33	2078	124.62	7333	113.26	11814	403.21
Total	**3347**	**295.22**	**3481**	**164.46**	**14902**	**213.41**	**21730**	**673.09**

Source: Data from IT wing and O&M wings of the Company

Delay in closure of work orders resulted in non-capitalisation of the assets, and hence non-charging of depreciation thereon. The Company could thus not recover depreciation of ₹ 12.96 crore[78] per annum by including the same in the ARR. Further, the Company had not completed the work on 3481 service connections for more than one year due to which it lost the opportunity to realise revenue from these connections.

Audit observed that the Company, in cases where work orders were not closed for long period, was closing the work orders at Nil value. This was done by

[78] At 7.84 *per cent* applicable to plant and machinery, lines, cables and network on Straight line method basis on 2403 capital work orders of value ₹ 165.33 crore pending closure for more than two years

transferring the value of the materials drawn to the personal accounts[79]. Audit further observed that an amount of ₹ 8.59 crore was recoverable from the personal accounts of employees, as at the end of March 2017, with some amounts as old as 17 years. Directions were given from the Audit Committee (8 February 2007) for effecting the recoveries from the salaries. Further directions were also given to create employee as a vendor in SAP, so that all temporary advances given to an employee could be tracked. Action was, however, not taken by the Company.

The Government stated (November 2017) that plan of action was called for from the Superintending Engineers for closure of work orders prior to 2013-14 within 3 months.

However, the fact remains that the action was not taken by the Company to close the work orders even after lapse of 10 years of the directions of Audit Committee. The Company should develop a monitoring mechanism to track timely closure of work orders.

2.6.7 Information Technology Security

Information security keeps corporate information safe. Policies address the requirement to protect information from disclosure, unauthorised access, loss, corruption and interference. Information security can be defined in terms of Confidentiality[80], Integrity[81] and Availability[82].

The Company uses various Information Technology (IT) applications like (i) Energy Billing System (EBS) for billing, (ii) SAP-ERP for accounting, material management and project management, (iii) R-APDRP project. In this context, Audit observed the following discrepancies:

- As per the guidelines issued (August 2008) by State Government, the Company was required to develop an IT vision and a road map[83]. The Company, however, did not frame road map to guide the development of IT assets (June 2017). Absence of a formal IT policy and a long/ medium-term IT strategy[84] indicated lack of strategic planning.

  The Company did not have Board approved Information Security Policy for protection of its applications/ database as well as the data residing therein.

  The Company did not have an approved password policy. It also did not enforce any restrictions on password usage by the users/ administrators, for its IT applications except R-APDRP modules. Therefore, there was a risk of unauthorized access and data modifications.

[79] The amounts in Personal accounts refer to the value of the materials, drawn on the work orders which were not completed/ accounted for long periods, and kept for recovery from the concerned employee considering it as misappropriation

[80] Information must not be made available or disclosed to unauthorised individuals, entities, or processes

[81] Data must not be altered or destroyed in an unauthorised manner, and accuracy and consistency must be preserved regardless of changes

[82] Information must be accessible and useable on demand by authorised entities

[83] Identifying various objectives and services to be provided, milestones to be achieved etc., within a fixed time frame

[84] A strategy incorporating the time frame, key performance indicators and cost benefit analysis for developing various IT applications

- The Company did not have any policy for Change Management[85] and data security for any IT application except R-APDRP. Further, the Company did not have any policy for allowing/ restricting the usage of third party applications on computers used for accessing the IT applications. This increased the risk of failure at user end.
- A business continuity plan outlines the action to be undertaken immediately after a disaster, to ensure that information processing capability can be resumed at the earliest. Audit observed that the Company did not have a business continuity plan for its critical billing systems. Further, it did not also have a disaster recovery plan[86].

  The Company had not prepared System Requirement Specifications and User Requirement Specifications for its in-house developed software. These software include Energy Billing System used for billing of HT, LT and agricultural services. Non-preparation of these blueprints would pose a hindrance in making systematic changes in the software as and when needed.

  The Government stated (November 2017) that approved policies, i.e., Backup Policy, Password Policy, Change Management Policy, Business Continuity and Disaster Recovery Plan and Data Security Policy were implemented. Further, Energy Billing System (EBS) was running successfully for more than a decade with huge changes. The reply was not acceptable as in-house developed applications require more robust change management policies. In the Exit conference, the Company had accepted that they did not have any policy as such.
- The Company had several IT Applications, of which some like EBS, SAP ERP etc., were critical in nature. The Company, however, did not take any initiative to get these IT systems as well as IT infrastructure audited by qualified IT Auditors. This would help in ensuring their robustness, accuracy and adherence to business rules.

  The Government stated (November 2017) that audit had been conducted for the IT systems.

  The reply was not acceptable as the audit certificates produced by the Company were for Energy Billing System and the Company website, which were accessible over intranet/ internet. The certificates only stated that these were free from Open Web Application Security Project vulnerabilities which was safe for hosting with read only permission. The fact remained that all the critical IT assets were not audited in terms of Confidentiality, Integrity and Availability.

The Government stated (November 2017) that policies implemented in the R-APDRP servers were implemented in all legacy systems. In the Exit conference, the Government, however, accepted that they did not have any policies as several of the IT systems were developed in-house. Information Technology security system should be comprehensively reviewed by competent professional.

[85] Managing the changes in IT hardware / software and other changes necessitated due to changes in policies of the Government and the Company etc.

[86] A disaster recovery plan outlines identities of personnel, their roles/ responsibilities and plan/procedure to support critical IT systems in the event of their failure

2.6.8 Internal Control and Monitoring System

Internal control comprises all the methods and procedures adopted by the management of an entity, which assists in achieving management's objectives.

2.6.8.1 Internal Audit

Internal Audit is one of the constituents of the internal control mechanism. The Company outsourced its Internal Audit function to Chartered Accountant (CA) firms. During the period under review, Audit observed that:

- The Company did not have an Internal Audit Manual indicating the scope and coverage of internal audit. Only checklists were prepared for the guidance of Auditors.

  The Government stated (November 2017) that audit checklists prepared by Corporate office team were followed. The reply was not tenable as a properly approved Internal Audit Manual is more exhaustive and authentic than unapproved checklists.

- The Company had not prepared annual audit plans during 2012-17 and the audits were arranged on *ad hoc* basis.

  The Government stated (November 2017) that monthly audit plans were drawn in such a way that all accounting units of the Company were covered at least twice in a year. The reply was not tenable as the Company did not cover all its accounting units even once in each year under review.

- The Internal Audit Reports were to be received from Internal Auditors within 15 days of completion of Audit. The same was, however, not received within the stipulated period. Further, Internal Audit Reports for 2012-13 to January 2016 were placed before the Committee with delays ranging up to 10 months. Internal Audit Reports subsequent to January 2016 were not placed (June 2017) before the Audit Committee though 17 months had been lapsed since completion of Audits.

  The Government stated (November 2017) that Audit Reports were delayed due to delay in receipt of reply from the auditee offices. The reply was not tenable as delay in receipt of replies could not be a valid reason for delaying reports by Internal Auditors and the Company should insist on their timely submission.

  Top Management should take responsibility for establishing and effective operation of Internal Audit System.

2.6.8.2 Internal Audit of Power Co-ordination Committee

Subsequent to unbundling (April 2000) of transmission and distribution activities in the State, Power Co-ordination Committee (PCC) was formed (June 2005) by Government. PCC comprised of (i) Chairman and Managing Director (CMD), Director (Finance) and Director (Commercial) of Transmission Corporation of Telangana Limited (TSTRANSCO) and (ii) CMDs of the two DISCOMs in the State of Telangana. The Committee is entrusted with the responsibility of (i) power procurement and (ii) energy accounting and billing. The main objective of the PCC was to ensure optimum utilisation of resources for the benefit of State in a coordinated manner. TSTRANSCO outsourced the internal audit of PCC to a private Chartered

Accountant (CA) firm. An analysis of the Internal Audit reports revealed the following:

- Internal Audit reports on the activities of PCC were to be presented to the Audit Committee of the DISCOM as the expenditure pertained to the Company. The same were, however, not presented to the Audit Committee.

  The Government accepted (November 2017) and stated that the Internal Audit reports would be placed in ensuing Audit Committee Meetings.

- Audit observed from the scope, broad terms and conditions of the agreement with Internal Auditors that:

  - The Auditors were entrusted with audit of energy purchases, however, they did not audit the purchases made through Power Exchanges.

    The Government stated (November 2017) that the auditors verify and pass remarks in the Indian Energy Exchange (IEX) purchase file itself instead of in the Internal Audit report.

    The reply was incorrect as there were no remarks of Internal Auditors in the test checked IEX purchase files. Further, the remarks, if any, should also be given in the Internal Audit Report to enable the authorities to take corrective action.

  - The scope of work of the Auditors, *inter-alia,* included review of billing of generators. Internal Audit Reports were, however, prepared with focus on only one generator[87] each month though energy is purchased from various sources[88]. As a result, in-depth analysis was not done on transactions with all generators at least once in a year.

    The Government stated (November 2017) that the scope of audit and terms of reference were given by the DISCOM.

    The reply was factually incorrect as the scope of Audit was given by the TSTRANSCO and not by DISCOM**.**

  - The CA firm was contracted for the years 2011-13; however, the services were continued by PCC till date (June 2017) without inviting new tenders.

    The Government stated (November 2017) that the Internal Audit firm was continued in view of their experience in power sector.

    The reply could not be accepted as periodic tendering for professional services is a good practice. PCC should ensure compliance for the scope, terms and condition of the agreement by Internal Auditor.

2.6.8.3 Review of payment of Electricity Duty

As per the provisions of Andhra Pradesh Electricity Duty Act, 1939, the

[87] For instance, Telangana State Power Generation Corporation Limited

[88] State/ Central Generating Stations, Individual Power Producers (IPPs), Renewable Energy sources, short term power and through Power Exchanges (more than 100 generators in total)

Company has to pay Electricity Duty (ED) to State Government every month. As per the provisions, ED was payable at the rate of six paisa per unit on all its energy sales, other than to Railways and Central Government. The ED is levied by the State Government to fulfil its social obligations in providing assistance to power sector.

Audit noticed that there was no periodical review and reconciliation of ED paid to State Government with ED demanded and collected from consumers. This had resulted in overpayment/ short-payment during the years 2012-2017 as detailed below (Table 2.8):

Table 2.8: Payment of Electricity Duty

(₹ in crore)

Year	ED included in demand	ED realised from consumers	ED paid to Government	Over payment (-) / short payment (+)
2012-13	129.38	128.42	133.27	(-) 3.89
2013-14	132.97	132.22	143.56	(-) 10.59
2014-15	128.46	127.66	20.65	107.81
2015-16	133.64	133.08	17.72	115.92
2016-17	131.56	131.02	311.46	(-) 179.90
Total	**656.01**	**652.40**	**626.66**	**29.35**

Source: Records from Finance wing of the Company

As seen above, the Company paid ED in excess of the amounts realised from consumers in 2012-13, 2013-14 and 2016-17, while it remitted lesser amounts in 2014-15 and 2015-16. These indicate that there was no periodical review and reconciliation, thus defeating the objectives of enacting the ED Act by State Government, to enable it to fulfil its social obligations.

The Government accepted (November 2017) the audit observation.

2.6.8.4 Material Management

The Company, as a part of its annual physical verification process, segregated its materials held in stores into various categories based on their pattern of usage by field offices. A scrutiny of these reports revealed that the Company is holding huge quantities of non-moving, obsolete and slow moving materials and scrap at its stores. The value of these materials in all stores except Mahabubnagar registered an increase (from 2012-17) ranging between 206 *per cent* (Nalgonda) and 2100 *per cent* (Rangareddy). Similarly, scrap materials had also registered increase in all stores ranging between 28 *per cent* (Nalgonda) and 55 *per cent* (Medak and Siddipet).

Audit observed that though Audit Committee had directed (February 2014) to dispose of the obsolete stocks immediately, the Company had not taken any action as of June 2017. The Company, thus, continued to incur carrying costs on materials of ₹ 33.86 crore due to non-compliance to the directions of Audit Committee.

The Government accepted (November 2017) the Audit observation and stated that the Operation Circles had initiated the process of disposing the non-moving/ obsolete materials. Company needs to review its material management system and dispose of obsolete stock in time.

2.6.9 Access to Reliable and Sustainable Energy

Sustainable energy is energy that meets the needs of the present generations without compromising the ability of future generations to meet their own needs. An analysis of the efforts of the Company to meet the renewable energy requirements set by SERC is as detailed in the following Paragraphs:

2.6.9.1 Achieving Renewable Power Purchase Obligation targets

As per Electricity Act 2003, the responsibility for promotion of Renewable Energy (RE) is on the SERC. The National Tariff Policy, 2006 requires the SERC to fix a minimum percentage of power to be purchased from RE sources. Fixation should take into account availability of such resources in the region and its impact on retail tariffs.

The SERC thus stipulated (March 2012) Renewable Power Purchase Obligation (RPPO) for the Company. Accordingly, the Company should purchase a minimum of 5 *per cent* of its energy requirement through Non-Conventional Energy (NCE) sources during 2012-13 to 2016-17. Out of this, a minimum of 0.25 *per cent* should be procured from solar based generation. The details of total energy purchased and RE purchased during 2012-17 are given below (Table 2.9):

Table 2.9: Total energy purchases and RE purchases

Sl. No.	Particulars	2012-13	2013-14	2014-15	2015-16	2016-17
1	Total Energy purchased (in MU)	37733	39317	33443	35202	36050
2	RE Purchases (in MU)	1451	1056	344	514	1723
3	Percentage of RE to total	3.85	2.69	1.03	1.46	4.78
4	Shortfall against norm of 5 *per cent* (in Percentage)	1.15	2.31	3.97	3.54	0.22

Sources: Records of Power Coordination Committee

Further, Audit observed that the Company's purchased energy from solar based generators exceeded the stipulated minimum of 0.25 *per cent* in all years except 2014-15. However, it did not achieve the RPPO in 2012-16 (Table 2.9). The shortfall was also not fulfilled by purchase of Renewable Energy Certificates (RECs) as stipulated by SERC in its Regulation. However, it improved the position significantly in 2016-17.

The Government stated (November 2017) that the approved RPPO trajectory was not met due to absence of RE policies and higher tariffs for power from RE sources. It was also stated that in view of the solar power policy of the State Government and SERC approved tariffs for RE sources, approved RPPO trajectory would be met in the future. The Government had also stated that several Power Purchase Agreements were concluded with various Solar, Municipal Solid Waste (MSW) and Wind energy generators.

2.6.9.2 Power for All

Power for All (24x7 PFA) was a Joint Initiative of the GoI and State Governments. The objective was to provide 24x7 power to all consumer categories (excluding agriculture) by FY 2018-19. For agriculture, power supply would be 9 hours as per the State Government policy. Investments to the tune of ₹ 23,817 crore were planned in the distribution sector across the

State of Telangana. Out of the above investments, ₹ 9,973 crore was towards Integrated Power Development Scheme (IPDS) and Deendayal Upadhyaya Gram Jyoti Yojana (DDUGJY). The key priority in the above Schemes was connecting the unconnected by formulating a plan for electrifying all the unelectrified households in the State by FY 2017-18. This was in addition to improve operational efficiency.

Audit observed from the progress report of PFA scheme that almost all categories of works were lagging behind except capacity augmentation of 33 kV lines. One of the reason for the lag was delay in award of IPDS and DDUGJY works as detailed below:

The GoI sanctioned (December 2014) IPDS and DDUGJY for urban and rural areas respectively. Power Finance Corporation Limited (PFC) and Rural Electrification Corporation Limited were appointed as nodal agencies for implementation of IPDS and DDUGJY respectively. The in-principle approval from Monitoring Committees for IPDS and DDUGJY were received in March 2016 and April 2016 respectively.

The guidelines stipulated that the works were to be awarded within six months from the date of sanction of the scheme. The Power Ministers' Conference envisaged (October 2016) that IPDS works should be awarded by December 2016. Audit, however, observed that works were not awarded to the end of March 2017 for IPDS and DDUGJY due to delay in finalisation of tenders.

Project Management Assistance (PMA) agreement was entered with REC Power Distribution Company Limited (RECPDCL) for both IPDS (February 2016) and DDUGJY (May 2016). The guidelines provided for 0.5 *per cent* of DPR costs only, however, the PMA agreements provided for one *per cent* of each scheme DPR cost. This would result in an additional burden of ₹ 3.93 crore (₹ 2.25 crore-IPDS and ₹ 1.68 crore for DDUGJY) on the Company.

The Government stated (November 2017) that award of the works was delayed due to several time extensions owing to poor response and issue of amendments to tenders. Letter of Awards (LoAs) for DDUGJY and IPDS were awarded in April/ May 2017. Further, it was stated that the PMA agreement concluded with RECPDCL is similar to the agreement concluded with another power distribution Company of Andhra Pradesh.

However, the fact remains that there were delays in award of works and the Company had to absorb the additional burden due to increased PMA costs.

Conclusion

The Company spent more than the SERC approved amount on creation and strengthening the distribution network. Distribution losses during the period were more than the standards fixed by the State Electricity Regulatory Commission (SERC). As a result, energy losses of ₹ 1,306.76 crore could not be recovered by way of tariff. Short term purchase of power at levels higher than SERC approvals pushed up the average input cost. The State Government's policy for nine hour free supply of power to agriculture was not supported by subsidies from the State Government. Waiver of penalties coupled with allowing of price variations to the vendors led to unnecessary burden of ₹ 80.84 crore. Various IT applications were developed and put to use in the Company. But it did not have an IT policy or a strategy to guide the IT activities. Further, policies pertaining to change management, business continuity and disaster recovery plan etc., were not framed for all critical applications.

Recommendations

The Company should

- ***ensure submission of ARRs to SERC in time to avoid losses due to continuation of previous years' tariff. The Company should prepare a plan, with the approval of SERC, for system improvements including reduction of energy losses;***
- ***adhere to the approved methodology to assess the consumption of power in agriculture which can aid accurate calculation of subsidy as well as planning for augmentation of distribution network;***
- ***review and revise the norms for DTR failure and ensure the compliance thereof at Circle level;***
- ***use contractual clauses that protect its interests by way of timeliness and economies in purchases;***
- ***review and implement a comprehensive security policy to safeguard IT assets and devise a plan to strengthen the IT security.***