

Section A (Part-I)
Chapter-I
Functioning of
Power Sector PSUs

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Functioning of Power Sector PSUs

1. Introduction

1.1 The Power Sector PSUs play an important role in the economy of the State. Apart from providing critical infrastructure required for development of the State's economy, the sector also adds significantly to the Gross Domestic Product of the State. A ratio of Power Sector PSUs turnover to Gross State Domestic Product (GSDP) shows the extent of their activities in the State economy. The table below provides the details of GSDP of Andhra Pradesh and turnover of the Power Sector PSUs as per their last finalised accounts for the period ending March 2018:

Table 1.1 – Details of turnover of Power Sector PSUs vis-a-vis GSDP of Andhra Pradesh

Particulars	(₹ in crore)			
	2014-15	2015-16	2016-17	2017-18
Turnover as per last finalised accounts during the year	28,609.13	35,703.27	38,996.27	37,786.45
Percentage change of turnover compared to previous year	--	24.80	9.22	(-)3.10
GSDP of Andhra Pradesh for the year	5,24,976.00	6,00,298.00	6,95,491.00	8,03,873.00
Percentage change of GSDP compared to previous year	--	14.35	15.86	15.58
Percentage of Turnover to GSDP	5.45	5.95	5.61	4.70

(Source: GSDP figures are as per Economic Survey Review 2017-18 of GoAP)

The turnover of Power Sector PSUs had increased at a compounded annual growth rate of 9.72 *per cent* while the GSDP of the State had increased at a compounded annual growth rate of 15.26¹⁶ *per cent* during the period from 2014-15 to 2017-18. As a result, the share of turnover of Power Sector PSUs in the GSDP reduced from 5.45 *per cent* in 2014-15 to 4.70 *per cent* in 2017-18.

1.2 Formation of Power Sector PSUs

The State Government enacted (January 2000) the Andhra Pradesh Electricity Reform Act, 1998 (APER 1999) which *inter alia* provided for re-organisation of electricity industry and preparation of a scheme for transferring the powers, duties and functions of Andhra Pradesh State Electricity Board (APSEB) to one or more Power Sector PSUs of the State Government. The State Government accordingly formulated (19 July 2000) the Andhra Pradesh Power Sector Reforms Transfer Scheme 2000 (APPSRT Scheme 2000) for unbundling of APSEB and transfer of assets, properties, liabilities, obligations, proceedings

¹⁶ Rate of Annual Compounded Growth $\{(Value\ of\ 2017-18/Value\ of\ 2014-15)^{(1/3\ years)} - 1\} * 100$, where turnover and GSDP for the year 2014-15 was ₹ 28,609.13 and ₹ 5,24,976.00 respectively and that for 2017-18 was ₹ 37,786.45 and ₹ 8,03,873.00 respectively. Thus CAGR = $\{(\text{₹ } 8,03,873 / \text{₹ } 5,24,976)^{1/3} - 1\} * 100$.

and personnel of APSEB in the first transfer scheme to two Power Sector PSUs viz., Andhra Pradesh Power Generation Corporation Limited (APGENCO) and Transmission Corporation of Andhra Pradesh Limited (APTRANSCO). These two Power Sector PSUs came into existence on 28 December 1998 and all the assets and liabilities of APSEB (including equity of ₹ 2,647.40 crore¹⁷) were distributed to these two Undertakings according to the provisions of the APPSRT Scheme 2000.

In the second transfer scheme, the assets and liabilities of APTRANSCO were distributed between APTRANSCO and four Power Distribution Companies (DISCOMs) viz., Eastern Power Distribution Company of Andhra Pradesh Limited (APEPDCL) and Southern Power Distribution Company of Andhra Pradesh Limited (APSPDCL), Central Power Distribution Company of Andhra Pradesh Limited (APCPDCL) and Northern Power Distribution Company of Andhra Pradesh Limited (APNPDCL). These four Power Sector PSUs came into existence w.e.f. 30 March 2000.

Apart from the above mentioned Power Sector PSUs formed upon unbundling of APSEB, the State Government had also incorporated (between 1969 and 2016) three other Power Sector PSUs i.e., New and Renewable Energy Development Corporation of Andhra Pradesh Limited (NREDCAP), Andhra Pradesh Tribal Power Corporation Limited and Andhra Pradesh State Energy Efficiency Development Corporation Limited (APSEEDCO) by infusing total equity of ₹ 0.37 crore as at the end of March 2018. Besides, one more Power Sector PSU viz., Andhra Pradesh Power Development Company Limited (APPDCL) was incorporated (3 January 2006) as subsidiary company of APGENCO.

Consequent on bifurcation of Andhra Pradesh State on 2 June 2014, APGENCO and APTRANSCO were demerged. Further, two out of four DISCOMs viz., APEPDCL and APSPDCL remained with residual Andhra Pradesh State and other two DISCOMs viz., APCPDCL and APNPDCL went to Telangana State as per the provisions of Andhra Pradesh Reorganisation Act, 2014. Thus, there were eight¹⁸ Power Sector PSUs in the State as on 31 March 2018.

Disinvestment, restructuring and privatisation of Power Sector PSUs

1.3 During the year 2017-18, no disinvestment, restructuring or privatisation was done by the State Government in the Power Sector PSUs.

Investment in Power Sector PSUs

1.4 The activity-wise summary of investment in the Power Sector PSUs as on 31 March 2018 is given in **Table 1.2**:

¹⁷ Andhra Pradesh Power Generation Corporation Limited (₹ 2,106.80 crore) and Transmission Corporation of Andhra Pradesh Limited (₹ 540.60 crore).

¹⁸ APPDCL, NREDCAP, APGENCO, APTRANSCO, APEPDCL, APSPDCL, APSEEDCO and APTPCL.

Table 1.2 – Activity-wise investment in Power Sector PSUs

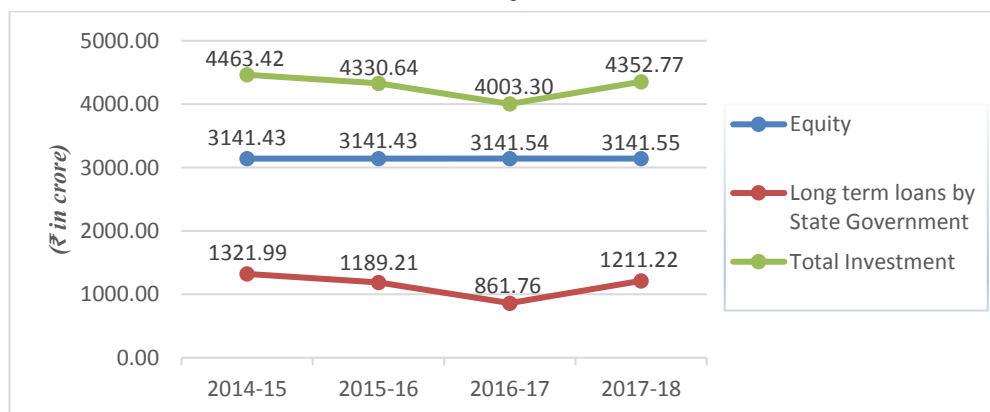
Activity	Number of Power Sector PSUs	Investment (₹ in crore)		
		Equity	Long term loans	Total
Generation of Power ¹⁹	3	4,201.64	25,688.19	29,889.83
Transmission of Power ²⁰	1	454.44	4,442.72	4,897.16
Distribution of Power ²¹	2	479.95	12,467.23	12,947.18
Other ²²	2	0.87	4.63	5.50
Total	8	5,136.90	42,602.77	47,739.67

(Source: Information received from the Power Sector PSUs)

As on 31 March 2018, the total investment (equity and long term loans) in eight Power Sector PSUs was ₹ 47,739.67 crore. Of this investment, 10.76 per cent comprised equity and 89.24 per cent comprised long-term loans.

The long-term loans advanced by the State Government constituted 2.84 per cent (₹ 1,211.22 crore), whereas 97.16 per cent (₹ 41,391.54 crore) of the total long term loans were availed from other financial institutions. During 2016-17, however, the State Government has taken over ₹ 8,256.01 crore (out of ₹ 8,892.46 crore as per MoU) of the total debts (₹ 14,720.50 crore) of the DISCOMs outstanding as on 30 September 2015 under Ujwal DISCOM Assurance Yojana²³ (UDAY) scheme.

The year-wise status of investment of GoAP in the form of equity and long term loans in the Power Sector PSUs during the period 2014-15 to 2017-18 is given in the chart below:

Chart 1.1: Total investment of GoAP in Power Sector PSUs

Budgetary support to Power Sector PSUs

1.5 The Government of Andhra Pradesh (GoAP) provides financial support to Power Sector PSUs in various forms through annual budget. The summarised details of budgetary outgo towards equity, loans, grants/subsidies,

¹⁹ Andhra Pradesh Generation Corporation Limited and Andhra Pradesh Power Development Company Limited and New and Renewable Energy Development Corporation of Andhra Pradesh Limited.

²⁰ Transmission Corporation of Andhra Pradesh Limited.

²¹ Eastern Power Distribution Company of Andhra Pradesh Limited and Southern Power Distribution Company of Andhra Pradesh Limited.

²² Andhra Pradesh Tribal Power Company Limited and Andhra Pradesh State Energy Efficiency Development Corporation Limited.

²³ Scheme launched by Ministry of Power, GoI for financial and operational turnaround of DISCOMs.

loans written off and loans converted into equity during the year in respect of Power Sector PSUs for the last three years ending 31 March 2018 are given in the following table:

Table 1.3 – Details of budgetary support to Power Sector PSUs for the period 2015-16 to 2017-18

(₹ in crore)

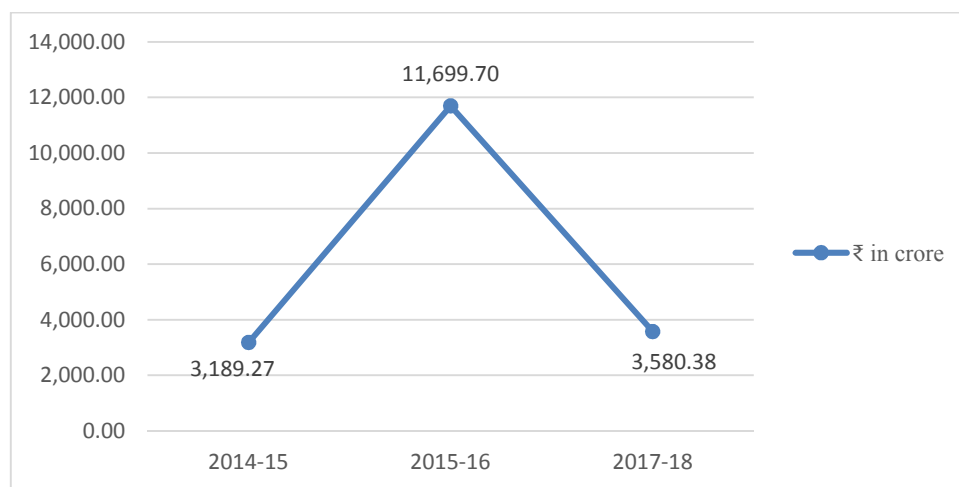
Particulars ²⁴	2015-16		2016-17		2017-18	
	Number of PSUs	Amount	Number of PSUs	Amount	Number of PSUs	Amount
(i) Equity Capital	0	0	0	0	--	--
(ii) Loans given	0	0	0	0	3	463.15
(iii) Grants/Subsidy*	3	3,189.27	5	11,699.70 ²⁵	6	3,117.23
Total Outgo (i+ii+iii)	3	3,189.27	5	11,699.70	7	3,580.38
Loan repayment written off	0	0	0	0	0	0
Loans converted into equity	0	0	0	0	0	0
Guarantees issued ²⁶	0	0	0	0	0	0
Guarantee Commitment ²⁷	3	75.56	3	2126.30	3	1,723.46

(Source: Compiled based on information received from Companies)

* GoAP had taken over loans of DISCOMs to that extent, which were adjusted as grants to the DISCOMs.

The details of budgetary support towards equity, loans and grants/ subsidies for the last three years ending March 2018 are given in the below chart:

Chart 1.2: Budgetary support towards Equity, Loans and Grants/Subsidies



The budgetary assistance received by the Power Sector PSUs ranged between ₹ 3,189.27 crore and ₹ 11,699.70 crore during 2015-16 to 2017-18. The budgetary assistance of ₹ 3,580.38 crore received during the year 2017-18 comprised ₹ 463.15 crore in the form of loan and ₹ 3,117.23 crore in the form of grants/subsidy. Besides, the Ministry of Power, Government of India also launched (20 November 2015) UDAY Scheme for operational and financial turnaround of State owned DISCOMs. The provisions of UDAY and status of

²⁴ Amount represents outgo from State Budget only.

²⁵ This includes ₹ 8,256.01 crore grant received under UDAY scheme and the remaining ₹ 3,443.69 crore other grants.

²⁶ Government guarantee issued to the PSUs during the year.

²⁷ Guarantee Commitment is the balance of the loans remaining to be repaid by the PSUs for which the State Government has given guarantee.

implementation of the scheme by two DISCOMs are detailed in **Para 1.21** of this Chapter. Out of outstanding loans amounting to ₹ 8,892.46 crore to be taken over by GoAP, ₹ 8,256.01 crore was taken over by GoAP during 2016-17 under UDAY scheme and grants to that extent were given to the DISCOMs by GoAP.

Guarantee fee

State Government helps the Power Sector PSUs to raise loans from banks and Public Financial Institutions by giving guarantee for repayment of principal and interest. For this purpose, the State Government charges guarantee commission at the rate of half to two *per cent* consolidated for the entire guarantee period in case of loan availed by Power Sector PSUs from banks/financial institutions without any exception under the provisions of the guidelines issued in GO Ms.No.446 dated 29 September 2003. Outstanding guarantee commitments decreased by 18.95 *per cent*, from ₹ 2,126.30 crore in 2016-17 to ₹ 1,723.46 crore in 2017-18. During the year 2017-18, guarantee commission of ₹ 0.15 crore was paid by one Power Sector PSU viz., Southern Power Distribution Company of Andhra Pradesh Limited.

Reconciliation with Finance Accounts of Government of Andhra Pradesh

1.6 The figures of equity, loans and guarantees outstanding as per records of State PSUs should agree with the figures appearing in the Finance Accounts of the GoAP. In case the figures do not agree, the concerned PSUs and the Finance Department should carry out reconciliation of the differences. The position of differences in equity, loans and guarantees as on 31 March 2018 given in the below table:

Table 1.4 – Equity, Loans and Guarantees outstanding as per Finance Accounts vis-à-vis records of Power Sector PSUs

(₹ in crore)

Outstanding in respect of	No. of Power Sector PSUs with difference	Amount as per Finance Accounts	Amount as per records of Power Sector PSUs	Difference
Equity	6	2,262.99	934.76	1,328.23
Loans	5	1,636.11	1,244.32	391.79
Guarantees	3	3,044.31	1,712.37	1,331.94

(Source: Information received from Power Sector PSUs and O/o PAG (A&E), Andhra Pradesh)

The differences between the figures are persisting since last many years. The issue of reconciliation of differences was also taken up with the Power Sector PSUs/ Departments from time to time. We, therefore, recommend that the State Government and the Power Sector PSUs should reconcile the differences in a time-bound manner.

Submission of accounts by Power Sector PSUs

Timeliness in preparation of accounts by Power Sector PSUs

1.7 Section 96 (1) of the Companies Act, 2013 requires that the PSUs finalise their accounts within six months from the end of the relevant financial year, i.e., by September end. Failure to do so may attract penal provisions under Section 99

of the Companies Act, 2013. There were eight Power Sector PSUs under the audit purview of CAG as of 31 March 2018. Accounts for the year 2017-18 were submitted by five Power Sector PSUs by 30 September 2018 as per statutory requirement. Details of arrears in submission of accounts of Power Sector PSUs as on 30 September of each financial year for the last four years ending 31 March 2018 are given below:

Table 1.5 – Position relating to submission of accounts of Power Sector PSUs

Sl.No.	Particulars	2014-15	2015-16	2016-17	2017-18
1.	Number of PSUs	7	7	7	8
2.	Number of accounts submitted during current year	2	6	9	8
3.	Number of PSUs which finalised accounts for the current year	1	3	4	5
4.	Number of previous years' accounts finalised during current year	1	3	5	3
5.	Number of PSUs with arrears in accounts	6	4	3	3
6.	Number of accounts in arrears	6	7	13	8
7.	Extent of arrears	1 year	1 to 2 years	1 to 9 years	1 to 4 years

(Source: Compiled based on accounts of Power Sector PSUs received during the period October 2017 to September 2018)

Out of eight Power Sector PSUs, three PSUs²⁸ have not been prompt in submission of their annual accounts for 2017-18.

The Energy Department, Government of Andhra Pradesh is the Administrative Department of the Power Sector PSUs. It has the responsibility to oversee the activities of these entities. Therefore, it has to ensure that the accounts are finalised by the Power Sector PSUs and adopted by their respective Boards within the stipulated period. The arrears of accounts continue to exist though the Department concerned was being informed regularly.

Impact of non-finalisation of accounts

1.8 As pointed out in **Paragraph 1.7**, the delay in finalisation of accounts is in violation of the provisions of the relevant statutes and entails risk of fraud and leakage of public money. In view of the above state of arrears of accounts, the actual contribution of the State Power Sector PSUs to State GDP for the year 2017-18 could not be ascertained and their contribution to State exchequer was also not reported to the State Legislature.

It is, therefore, recommended that the Energy Department should strictly monitor and issue necessary directions to set targets for individual Power Sector PSUs and strictly monitor the clearance of arrears. The Government may also look into the constraints in preparing the accounts of the Power Sector PSUs and take steps to clear the arrears in accounts.

²⁸ Andhra Pradesh Tribal Power Company Limited, Andhra Pradesh State Energy Efficiency Development Corporation Limited and New and Renewal Energy Development Corporation of Andhra Pradesh.

Performance of Power Sector PSUs

1.9 The financial position and working results of Power Sector PSUs as per their latest finalised accounts as of 30 September 2018 are detailed in *Annexure-I*.

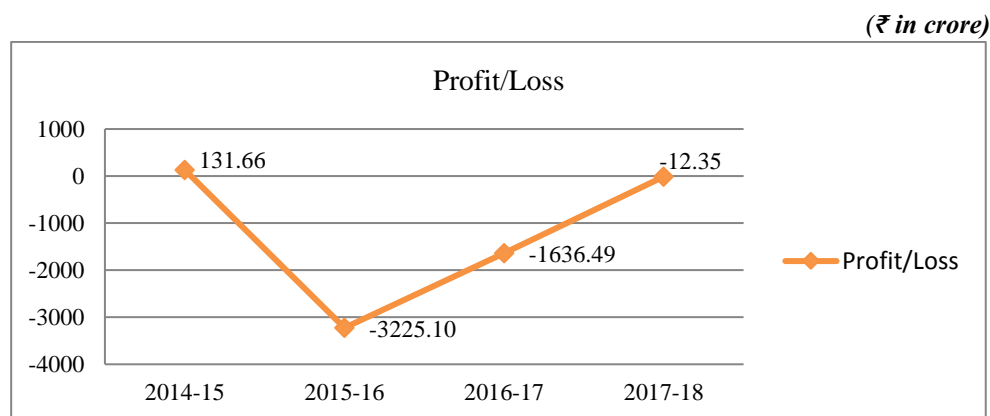
The Public Sector Undertakings are expected to yield reasonable return on investment made by Government. The total amount of investment in the eight Power Sector PSUs as on 31 March 2018 was ₹ 51,334.51 crore consisting of ₹ 5,136.90 crore as equity and ₹ 42,602.77 crore as long term loans and ₹ 3,594.84 crore as grants, subsidies for operational & management expense.

The profitability of a company is traditionally assessed through return on investment, return on equity and return on capital employed. The Rate of Real Return on investment is the profit or loss made in a fixed year relating to the Present Value (PV) of the investment made over the years and is expressed as a *percentage* of profit to the PV of total investment. Investment for this purpose included equity, grants, subsidies for operational and management expense. Return on capital employed is a financial ratio that measures the company's profitability and the efficiency with which its capital is used and is calculated by dividing company's earnings before interest and taxes by capital employed. Return on Equity is a measure of performance calculated by dividing net profit after tax by shareholders' fund.

Rate of Real Return on Investment

1.10 Rate of Real Return on investment is the *percentage* of profit or loss to the Present Value (PV) of total investment. The overall position of Profit/losses²⁹ earned/incurred by the Power Sector PSUs during 2014-15 to 2017-18 is depicted in a Chart 1.3:

Chart 1.3: Profit/Losses earned/incurred by Power Sector PSUs



The total loss incurred by the eight Power Sector PSUs was ₹ 12.35 crore in 2017-18 against total profits of ₹ 131.66 crore earned in 2014-15. As per latest finalised accounts as on 30 September 2018, out of eight Power Sector PSUs,

²⁹ Figures are as per the latest finalised accounts during the respective years.

four PSUs³⁰ earned profit of ₹ 421.73 crore, three PSUs had incurred loss of ₹ 434.08 crore³¹ and one Company viz., Andhra Pradesh Tribal Power Company Limited had not submitted its first account since inception (*Annexure-I*). As per latest finalised accounts as on 30 September 2018, the top profit making Power Sector PSU was Andhra Pradesh Power Generation Corporation Limited (₹ 363.55 crore) while Andhra Pradesh Power Development Corporation Limited ((-) ₹427.03 crore) incurred substantial loss.

Position of Power Sector PSUs which earned/incurred profit/loss during 2014-15 to 2017-18 is given in the below table:

Table 1.6 – Power Sector PSUs which earned/incurred Profit/Loss

Financial year	Total PSUs in power sector	Number of PSUs which earned profits during the year	Number of PSUs which incurred loss during the year	No. of PSUs which did not earn/incur profit/loss	No. of PSUs which did not submit first accounts since inception
2014-15	7	3	2	2 ³²	0
2015-16	7	4	2	1 ³³	0
2016-17	7	3	3	0	1 ³⁴
2017-18	8	4	3	0	1 ³⁵

(Source: As per the Accounts of the Power Sector PSUs)

Note: Andhra Pradesh Tribal Power Company limited had not submitted its first account.

Rate of Real Return on the basis of historical cost of investment

1.11 Out of eight Power Sector PSUs one Company viz., APPDCL is a subsidiary of APGENCO. Equity in this Company is majorly contributed by the concerned holding company.

The Rate of Real Return on investment in the eight Power Sector PSUs has been calculated on the investment made by Government of Andhra Pradesh, Government of India and others in these Power Sector PSUs in the form of equity, grants and subsidies for operational & management expense minus disinvestments. Loans are not considered as investment for calculation of rate of real return as they are liable to be repaid as per terms and conditions of repayment.

The investment of GoAP, GoI and others as on 31 March 2018 in these eight Power Sector PSUs was ₹ 8731.74 crore consisting of equity of ₹ 5,136.90 crore and grants, subsidies of ₹ 3,594.84 crore.

³⁰ Eastern Power Distribution Company of Andhra Pradesh Limited (₹ 2.89 crore), New and Renewal Energy Development Corporation of Andhra Pradesh Limited (₹ 17.87 crore), Andhra Pradesh Power Generation Corporation Limited (₹ 363.55 crore) and Transmission Corporation of Andhra Pradesh Limited (₹ 37.42 crore).

³¹ Andhra Pradesh Power Development Company Limited ((-) ₹ 427.03 crore), Southern Power Distribution Company of Andhra Pradesh Limited ((-) ₹ 7.02 crore) and Andhra Pradesh State Energy Efficiency Development Corporation Limited ((-) ₹ 0.03 crore).

³² In 2014-15, Andhra Pradesh Power Development Company Limited had not earned profit or incurred loss and Andhra Pradesh Solar Power Corporation Private Limited had not prepared a Profit and Loss Account as it had not commenced operations.

³³ In 2015-16 Andhra Pradesh Solar Power Corporation Private Limited had not prepared a Profit and Loss Account as it had not commenced operations.

³⁴ In 2016-17 Andhra Pradesh Tribal Power Company Limited had not submitted its accounts.

³⁵ In 2017-18 Andhra Pradesh Tribal Power Company Limited had not submitted its accounts.

The Rate of Real Return on investment on historical cost basis for the period 2014-15 to 2017-18 is given in **Table 1.7**:

Table 1.7 – Rate of Real Return on Investment on historical cost basis

Financial year	Total Earnings/ Losses ³⁶ for the year (₹ in crore)	Investment by GoAP in form of Equity, Grants and Subsidies on historic cost basis (₹ in crore)	Investment by GoI and others in form of Equity, Grants, and Subsidies on historic cost basis (₹ in crore)	Total Investment in the form of equity Grants and subsidies on historic cost basis (₹ in crore)	Rate of Real RoI (in per cent)
2014-15	131.66	5,670.02	2,768.21	8,438.23	1.56
2015-16	(-) 3,225.10	6,330.70	2,446.92	8,777.62	(-)36.74
2016-17	(-)1,636.49	14,841.24	2,165.32	17,006.56	(-)9.62
2017-18	(-)12.35	6,258.78	2,472.96	8,731.74	(-)0.14

The Rate of Real Return on investment of the eight Power Sector PSUs was positive in the year 2014-15. However, the Rate of Real Return was negative during the period 2015-16 to 2017-18 due to huge losses incurred by two DISCOMs viz., APSPDCL and APEPDCL, even after Government taking over of the debt of the two DISCOMs under UDAY scheme reducing the interest burden.

On the basis of Present Value of Investment

1.12 In view of the significant investment by the Government in the Power Sector PSUs, Rate of Real Return on such investment is essential. Traditional calculation of return based only on historical cost of investment may not be a correct indicator of the adequacy of the Rate of Real Return on the investment since such calculations ignore the present value of money. The present value of the investments has been computed to assess the Rate of Real Return on the present value of investments in the State Power Sector PSUs as compared to historical value of investments. In order to bring the historical cost of investments to its present value at the end of each year up to 31 March 2018, the past investments/ year-wise funds infused in the State Power Sector PSUs have been compounded at the year-wise average rate of interest on government borrowings which is considered as the minimum cost of funds for the concerned year. Therefore, Present value (PV) of the investment was computed where funds had been infused by the State Government, Central Government and others in the shape of equity, grants, subsidies for operational and management expenses since inception of these companies till 31 March 2018. The eight Power Sector PSUs, however, had a positive rate of real return on investment only during the year 2014-15. Therefore, for the year 2014-15, the rate of real return on investment has been calculated and depicted on the basis of PV.

The PV of the investment in Power Sector PSUs was computed on the basis of following assumptions:

- The equity infused minus disinvestment and funds made available in the form of the grants, subsidies for operational & management expenses have

³⁶ As per annual accounts of the respective years.

been reckoned as investment for calculating the Rate of Real Return on Investments.

- The average rate of interest on government borrowings for the concerned financial year³⁷ was adopted as compounded rate for arriving at Present value since they represent the cost incurred towards investment of funds for the year and therefore considered as the minimum expected Rate of Real Return on investments.

For the period 2015-16, 2016-17 and 2017-18 when the eight companies incurred overall loss, a more appropriate measure of performance is the erosion of net worth due to the losses. The erosion of net worth of the companies is commented upon in **Para 1.14**.

1.13 The total investment of the Government and others in these eight Power Sector PSUs at the end of the year 2017-18 was ₹ 8,731.74 crore consisting of equity ₹ 5,136.90 crore, grants/subsidies ₹ 3,594.84 crore. However, as during the year 2014-15 only, the Power Sector PSUs earned overall profit, RoI by Government and others at historical cost and at present value for the year is given in Table 1.8:

Table 1.8 – Real Rate of Return on total investment on Present Value

Financial year	Investment by GoAP in the form of Equity, Grants and Subsidies on historic cost basis (₹ in crore)	Investment by GoI and others in the form of Equity, Grants, and Subsidies on historic cost basis (₹ in crore)	Total Investment in the form of Equity, Grants and subsidies on historic cost basis (₹ in crore)	PV of the total investment at end of the year (₹ in crore)	Total Earnings/Losses ³⁸ for the year (₹ in crore)	Rate of Real RoI on historical cost basis (in per cent)	Rate of Real RoI considering PV of the investments (in per cent)
2014-15	5,670.02	2,768.21	8,438.23	8,936.93 ³⁹	131.66	1.56	1.47

It is evident from the table that the rate of real return on total investment computed on the present value is very low (1.47 per cent 2014-15) even when the eight Power Sector PSUs had overall positive earnings. A return of 1.56 per cent calculated on historical cost basis would therefore be a distortion and does not reflect the correct picture.

Erosion of Net worth

1.14 Net worth means the sum total of the paid-up capital and free reserves and surplus minus accumulated losses and deferred revenue expenditure. Essentially, it is a measure of what an entity is worth to the owners. The negative net worth indicates that the public money invested in these Power Sector PSUs had eroded completely. The overall accumulated losses of the four out of eight Power Sector PSUs during 2017-18 was ₹ 17,464.63 crore as against the capital investment of ₹ 5,136.85 crore resulting in negative net worth of ₹ 7,739.81 crore (**Annexure-1**).

³⁷ The average rate of interest on government borrowings was adopted from the Reports of the C&AG of India on State Finances (Government of Andhra Pradesh) for the concerned year wherein the average rate for interest paid = Interest Payment/ [(Amount of previous year's Fiscal Liabilities+Current year's Fiscal Liabilities)/2]*100.

³⁸ As per annual accounts of the respective years.

³⁹ {₹ 8,438.23*(100+5.91)}/100.

The Table 1.9 indicates paid up capital, accumulated profit/loss and net worth of the Power Sector PSUs during the period 2014-15 to 2017-18:

Table 1.9 – Net worth of Power Sector PSUs during 2014-15 to 2017-18

(₹ in crore)

Year	No. of Power Sector PSUs	Paid up Capital at end of the year	Free Reserves	Surplus	Accumulated Losses	Net worth
(1)	(2)	(3)	(4)	(5)	(6)	(7)=(3+4+5-6)
2014-15	7	5,170.66	524.80	2,015.87	(-)6,625.87	1,085.46
2015-16	7	5,434.57	524.80	2,019.34	(-)10,757.25	(-)2,778.54
2016-17	7	5,136.03	0.00	2,539.11	(-)17,112.23	(-)9,437.09
2017-18	8	5,136.85	1,635.86	2,952.11	(-)17,464.63	(-)7,739.81

(Source: As per the Annual Accounts of the Power Sector PSUs)

The State Government continued to provide financial support to the Power Sector PSUs by infusing substantial equity during the period 2014-18. Despite infusion of substantial capital, due to huge accumulated losses of these Power Sector PSUs the entire capital infused in these Power Sector PSUs had been eroded.

During 2017-18, out of eight Power Sector PSUs, net worth was negative in respect of two PSUs viz., Eastern Power Distribution Company of Andhra Pradesh Limited (₹ 3,019.70 crore) and Southern Power Distribution Company of Andhra Pradesh Limited (₹ 13,133.42 crore). Though five Power Sector PSUs had positive net worth, the negative net worth of the two DISCOMs contributed to the overall negative net worth of the Power Sector PSUs. One Power Sector PSU viz., Andhra Pradesh Tribal Power Company Limited did not submit any account since its inception.

Dividend Payout

1.15 As per the guidelines issued (2002) by Public Enterprises Department, GoAP, no dividend shall be declared or paid by a Company for any financial year except out of the profits of the Company for that year arrived at after providing for depreciation in accordance with provisions of Companies Act. The guidelines, however, did not prescribe any fixed rate of dividend to be paid by the Power Sector PSUs.

Dividend payout relating to Power Sector PSUs where equity was infused by GoAP during the period 2014-15 to 2017-18 is shown in the below table:

Table 1.10 – Dividend Payout of Power Sector PSUs during 2014-15 to 2017-18

(₹ in crore)

Year	Total PSUs where equity infused by GoAP		PSUs which earned profit during the year		PSUs which declared/paid dividend during the year		Dividend Payout Ratio (%)
	Number of PSUs	Equity infused by GoAP	Number of PSUs	Equity infused by GoAP	Number of PSUs	Dividend declared/paid by PSUs	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)=(7/5*100)
2014-15	7	3,141.43	3	2,561.43	0	0	0
2015-16	7	3,141.43	4	2,661.43	0	0	0
2016-17	7	3,141.54	3	2,561.43	0	0	0
2017-18	8	3,141.55	4	2,682.66	0	0	0

During the period 2014-15 to 2017-18, the number of Power Sector PSUs which earned profits ranged between three and four. None of the Power Sector PSUs, however, had declared/paid dividend to GoAP.

Return on Equity

1.16 Return on Equity (RoE) is a measure of financial performance to assess how effectively management is using company's assets to create profits and is calculated by dividing net income (i.e. net profit after taxes) by shareholders' fund. It is expressed as a *percentage* and can be calculated for any company if net income and shareholders' fund are both positive numbers.

Shareholders' fund of a Company is calculated by adding paid up capital and free reserves net of accumulated losses and deferred revenue expenditure and reveals how much would be left for a company's stakeholders if all assets were sold and all debts paid. A positive shareholders' fund reveals that the company has enough assets to cover its liabilities while negative shareholders' fund means that liabilities exceed assets.

Return on Equity has been computed in respect of all Power Sector PSUs.

Table 1.11 – RoE relating to Power Sector PSUs

	Year	No. of Power Sector PSUs	Net Profit/Loss	Shareholders' fund	(ROE in per cent)
	1	2	3	4	5=3/4*100
			Amount (₹ in crore)		
Profit Earning	2014-15	3	670.63	5,426.91	12.36
	2015-16	4	674.10	7,498.66	8.99
	2016-17	3	706.72	5,100.57	13.86
	2017-18	4	421.73	4,022.49	10.48
Loss incurring	2014-15	2	(-)538.97	(-)6,145.92	-
	2015-16	2	(-)3,899.20	(-)10,277.30	-
	2016-17	3	(-)2,343.21	(-)14,537.66	-
	2017-18	3	(-)434.08	(-)11,762.30	-
Total	2014-15*	5	131.66	(-)719.01	-
	2015-16 ^{\$}	6	(-)3,225.10	(-)2,778.64	-
	2016-17 [#]	6	(-)1,636.49	(-)9,437.09	-
	2017-18 [#]	7	(-)12.35	(-)7,739.81	-

* For the year 2014-15, Andhra Pradesh Power Development Company Limited had not earned profit or incurred loss and Andhra Pradesh Solar Power Corporation Private Limited had not commenced operations.

^{\$} For the year 2015-16, one Company viz., Andhra Pradesh Solar Power Corporation Private Limited had not commenced operation.

[#] For the years 2016-17 and 2017-18, one Company viz., Andhra Pradesh Tribal Power Corporation had not submitted its first accounts since inception.

During 2017-18 out of seven Power Sector PSUs, three were loss making. Since the Net Income and Shareholders' fund were negative, the Return on Equity of loss making Power Sector PSUs could not be worked out. The negative shareholders' funds indicates that the public money invested in these Power Sector PSUs had eroded completely.

Return on Capital Employed

1.17 Return on Capital Employed (RoCE) is a ratio that measures a company's profitability and the efficiency with which its capital is employed.

RoCE is calculated by dividing a company's earnings before interest and taxes (EBIT) by the capital employed⁴⁰. The details of RoCE of the Power Sector PSUs during the period from 2014-15 to 2017-18 are given in the below table:

Table 1.12 – Return on Capital Employed

	Year	No. of Power Sector PSUs	EBIT	Capital employed	(ROCE in per cent)
(1)	(2)	(3)	(4)	(5)	(6)=(4/5*100)
			Amount (₹ in crore)		
Profit Earning	2014-15	3	3,485.58	16,253.14	21.45
	2015-16	4	3,556.42	26,857.10	13.24
	2016-17	3	3,326.54	26,552.85	12.53
	2017-18	4	2,586.96	22,589.70	11.45
Loss incurring	2014-15	2	43.21	3,317.52	1.30
	2015-16	2	(-)2,621.48	1,401.53	-
	2016-17	3	54.74	7,572.57	0.72
	2017-18	3	1,896.68	12,278.75	15.45
Total	2014-15*	5	3,528.79	19,570.66	18.03
	2015-16 ^{\$}	6	934.94	28,258.63	3.31
	2016-17 [#]	6	3,381.28	34,125.42	9.91
	2017-18 [#]	7	4,483.64	34,868.45	12.86

(Source: As per the Annual Accounts of the Power Sector PSUs)

*For the year 2014-15, Andhra Pradesh Power Development Company Limited had not earned profit or incurred loss and Andhra Pradesh Solar Power Corporation Private Limited had not commenced operations.

\$ For the year 2015-16, one Company viz., Andhra Pradesh Solar Power Corporation Private Limited had not commenced operation.

For the years 2016-17 and 2017-18, one Company viz., Andhra Pradesh Tribal Power Corporation had not submitted its first accounts since inception.

During 2017-18 out of seven Power Sector PSUs, three were loss making. The RoCE in respect of loss making Power Sector PSUs, however was 15.45 per cent as the Capital Employed and Earning Before Interest and Tax (EBIT) of these three PSUs were positive. RoCE substantially increased during the year 2017-18 in comparison to the previous years. One of the factors for the positive turnaround was the Government's taking over of the debts of DISCOMs under UDAY scheme (₹ 8,256.01 crore in 2016-17 and 2017-18) reducing the interest burden.

Analysis of long term loans of the Power Sector PSUs

1.18 The long term loans of the Power Sector PSUs were analysed to assess the ability of the Power Sector PSUs to service the debt owed by them to Government, banks and other financial institutions using Interest Coverage Ratio and Debt Turnover Ratio.

⁴⁰ Capital employed=Paid up share capital + free reserves and surplus + long term loans – accumulated losses - deferred revenue expenditure. Figures are as per the latest year for which accounts of the PSUs are finalised.

Interest Coverage Ratio

1.19 Interest Coverage Ratio is used to determine the ability of a company to pay interest on outstanding debt and is calculated by dividing a company's earnings before interest and taxes (EBIT) by interest expenses of the same period. The lower the ratio, the lesser the ability of the company to pay interest on debt. An interest coverage ratio of below one indicates that the company was not generating sufficient revenues to meet its expenses on interest. The details of interest coverage ratio in those Power Sector PSUs which had interest burden during the period from 2014-15 to 2017-18 are given in the below table:

Table 1.13 – Interest coverage ratio

Year	Interest (₹ in crore)	Earnings before interest and tax (EBIT) (₹ in crore)	Number of PSUs having interest Expense and liability of loans from Government/ Banks/ Other financial institutions	Number of companies having interest coverage ratio more than 1	Number of companies having interest coverage ratio less than 1
2014-15	2,950.12	3,514.04	4	2	2
2015-16	3,716.23	919.93	5	3	2
2016-17	5184.40	3,366.27	5	2	3
2017-18	4,146.90	4,483.67	6	4	2

(Source: As per the Annual Accounts of the Power Sector PSUs)

During 2017-18, 2 out of 6 Power Sector PSUs could not generate sufficient revenues even to meet their expenses of interest liabilities.

Debt-Turnover Ratio

1.20 During the last four years, the turnover of the Power Sector PSUs recorded compounded annual growth of 9.72 per cent and while the compounded annual growth of debt was 15.50 per cent, due to which the Debt-Turnover Ratio deteriorated from 0.97 in 2014-15 to 1.13 in 2017-18 as given in the below table:

Table 1.14 – Debt Turnover Ratio relating to the Power Sector PSUs

(₹ in crore)

Particulars	2014-15	2015-16	2016-17	2017-18
Debt from Government / Banks and Financial Institutions	27,651.11	31,037.27	43,562.51	42,608.26
Turnover	28,609.13	35,703.27	38,996.27	37,786.45
Debt-Turnover Ratio	0.97:1	0.87:1	1.12:1	1.13:1

(Source: As per the Annual Accounts of the Power Sector PSUs)

Assistance under Ujwal DISCOM Assurance Yojana

1.21 The Ministry of Power (MoP), Government of India launched (20 November 2015) Ujwal DISCOM Assurance Yojana (UDAY) Scheme for operational and financial turnaround of State owned Power Distribution Companies (DISCOMs). As per provisions of UDAY Scheme, the participating States were required to undertake following measures for operational and financial turnaround of DISCOMs:

Scheme for improving operational efficiency

1.21.1 The participating States were required to undertake various targeted activities like compulsory feeder and distribution transformer (DT) metering, consumer indexing and GIS mapping of losses, upgrading or changing transformers and meters, smart metering of all consumers consuming above 200 units per month, Demand Side Management (DSM) through energy efficient equipment, quarterly revision of tariff, comprehensive International Electrotechnical Commission(IEC) campaign to check theft of power, assure increased power supply in areas where the AT&C losses have been reduced for improving the operational efficiencies. The timeline prescribed for these targeted activities were also required to be followed so as to ensure achievement of the targeted benefits *viz.* ability to track losses at feeder and DT level, identification of loss making areas, reduce technical losses and minimize outages, reduce power theft and enhance public participation for reducing the theft, reduce peak load and energy consumption *etc.* The outcomes of operational improvements were to be measured through indicators *viz.*, reduction of AT&C losses to 5.44 *per cent* (APEPDCL) and 10.89 *per cent* (APSPDCL) in 2018-19 as per loss reduction trajectory finalised by the MoP and States, reduction in gap between average cost of supply and average revenue realised to zero by 2018-19.

Scheme for financial turnaround

1.21.2 The participating States were required to take over 75 *per cent* of DISCOMs debt by 30 September 2018, i.e., 50 *per cent* in 2015-16 and 25 *per cent* in 2016-17. The scheme for financial turnaround *inter alia* provided that:

- State will issue ‘*Non Statutory Liquidity Ratio Bonds*’ and the proceeds realized from issue of such bonds shall be transferred to the DISCOMs which in turn shall discharge the corresponding amount of Banks/FIs debt. The bonds so issued will have a maturity period of 10-15 years with a moratorium on repayment of principal upto 5 years.
- Debt of DISCOM will be taken over in the priority of debt already due, followed by debt with higher cost.
- The transfer to the DISCOM by the State in 2016-17 will be as a grant to DISCOMs.

Implementation of the UDAY Scheme

1.21.3 The status of implementation of the UDAY Scheme is detailed below:

A. *Achievement of operational parameters*

The achievements *vis-a-vis* targets under UDAY Scheme regarding different operational parameters relating to the two State DISCOMs were as under:

Table 1.15 – Parameter wise achievements vis-a-vis targets of operational performance

Parameter of UDAY Scheme	Target under UDAY Scheme	Progress under UDAY Scheme	Achievement (per cent)	Position as on
Feeder metering (in Nos.)	11,728	11,728	100	Mar-2019
Metering at Distribution Transformers (in Nos.)				
Urban	31,098	31,098	100	
Rural	4,00,059	65,775	16.44	
Feeder Segregation (in Nos.)	5,878	5,878	100	
Rural Feeder Audit (in Nos.)	1783	1,509	84.63	2018-19
Electricity to unconnected household (in lakh Nos.)	5.36	3.72	69.40	
Smart metering (in Nos.)	5,48,043	2,583	0.47	Dec-2018
Distribution of LED UJALA (in lakh Nos.)	85.72	86.40	100	Mar-2019
AT&C Losses (in per cent)				Feb-2019
APEPDCL	5.44	8.93	---	
APSPDCL	10.89	11.30	---	
ACS-ARR Gap (₹ per unit)	0.05	0.42	840	Dec-2018
Net Income or Profit/(-)Loss including subsidy (₹ in crore)				2017-18
APEPDCL	(-)18.58	2.89	---	
APSPDCL	(-)5.22	(-)4.50	---	

(Source: Information furnished by the Companies)

The State has performed poorly in metering at DTs in rural areas and smart metering, whereas the performance has been good in terms of feeder metering, feeder segregation and distribution of LEDs. Further, the State will find it difficult to achieve the most important target of reduction of AT&C loss as targeted by 2018-19 since APEPDCL has significant AT&C losses. According to the Ministry of Power, the Government of India, the State of Andhra Pradesh stood 16th amongst all the States on the basis of overall achievements made by the two State DISCOMs under UDAY Scheme upto 30 March 2019.

B. Implementation of Financial Turnaround

A tripartite Memorandum of Understanding (MoU) was signed (24 June 2016) between the MoP, the GoAP and Andhra Pradesh DISCOMs. As per provisions of the UDAY Scheme and tripartite MoU, out of total outstanding debt (₹ 14,720.50 crore) pertaining to DISCOMs as on 30 September 2015, the GoAP was to take over ₹ 8,892.46 crore. Against this, as on 31 March 2018, the GoAP took over total debt of ₹ 8,256.01 crore (during 2016-17) by providing grant to that extent.

Comments on Accounts of Power Sector PSUs

1.22 Seven Power Sector PSUs forwarded their eight⁴¹ audited accounts to the Principal Accountant General during 1 October 2017 to 30 September 2018 and all eight accounts were selected for supplementary audit. The Audit Reports of Statutory Auditors and supplementary audit conducted by the CAG indicated that the quality of accounts needs to be improved substantially. The details of aggregate money value of the comments of Statutory Auditors and

⁴¹ APGENCO (2017-18), APTRANSCO (2016-17 & 2017-18), APEPDCL (2017-18), APSPDCL (2017-18), APPDCL (2017-18), NREDCAP (2014-15), APSEEDCO (2016-17)

the CAG on the accounts of Power Sector PSUs are as follows:

Table 1.16 – Impact of audit comments on Power Sector PSUs

(₹ in crore)

Sl. No.	Particulars	2016-17		2017-18	
		No. of accounts	Amount	No. of accounts	Amount
1.	Decrease in profit	2	96.55	3	6,751.94
2.	Increase in profit	2	25.10	2	24.41
3.	Increase in loss	3	3,520.47	2	11,492.30
4.	Decrease in loss	1	5,261.08	1	26.61
5.	Non-disclosure of material facts	6	1,839.61	4	1,419.22
6.	Errors of classification	1	5,257.02	2	150.94

(Source: Comments of the Statutory Auditors/ C&AG in respect of Power Sector PSUs)

During the year 2017-18, the Statutory Auditors had issued qualified certificates in respect of seven accounts.

Performance Audit and Compliance Audit Paragraphs

1.23 For Part-I of the Report of the Comptroller and Auditor General of India for the year ended 31 March 2018, three Compliance Audit Paragraphs relating to Power Sector PSUs were issued to the Principal Secretary of Energy Department, GoAP with request to furnish replies within two weeks. Replies to two Compliance Audit Paragraphs have been received (December 2018) from the State Government and suitably incorporated in this Report. The total financial impact of the Compliance Audit Paragraphs relating to Power Sector PSUs was ₹ 90.40 crore.

Follow up action on Audit Reports

Replies outstanding

1.24 The Report of the Comptroller and Auditor General of India is the product of audit scrutiny. It is, therefore, necessary that they elicit appropriate and timely response from the executive. The Finance Department, Government of Andhra Pradesh issued (June 2004) instructions to all Administrative Departments to submit replies/ Explanatory Notes (ENs) to Paragraphs/ Performance Audits included in the Reports of the CAG of India within a period of three months after their presentation to the Legislature, in the prescribed format, without waiting for any questionnaires from the Committee on Public Undertakings (COPU).

Table 1.17 – Position of Explanatory Notes on Audit Report Paragraphs related to Power Sector PSUs as on 30 September 2018)

Year of the Audit Report (Commercial / PSUs)	Date of placement of Audit Report in the State Legislature	Total PAs and Paragraphs in the Audit Report		Number of PAs/Paragraphs for which ENs were not received			
				Exclusive to State		Common ⁴²	
		PAs	Paragraphs	PAs	Paragraphs	PAs	Paragraphs
Upto 2013-14		42	148	0	1	7	14
2014-15	30-03-2016	0	1	0	1	0	0
2015-16	31-03-2017	1	2	1	2	0	0
2016-17	06-04-2018	0	1	0	1	0	0
Total		43	152	1	5	7	14

(Source: Compiled by O/o PAG (Audit), Andhra Pradesh)

⁴² PAs and Paragraphs which deal with issues relating to both Andhra Pradesh and Telangana.

Discussion of Audit Reports by COPU

1.25 The status of discussion of Performance Audits and Paragraphs related to Power Sector PSUs that appeared in Audit Reports (PSUs) by the COPU as on 30 September 2018 was as given in the below table:

Table 1.18 – PAs/Paragraphs related to Power Sector PSUs that appeared in Audit Reports vis-a-vis discussed as on 30 September 2018

Year of the Audit Report (Commercial/ PSU)	Number of PAs/Paragraphs					
	Appeared in Audit [^] Report		Discussed [#]		Pending discussion [#]	
	PAs	Paragraphs	PAs	Paragraphs	Pas	Paragraphs
Upto 2013-14	42	148	8	64	25	47
2014-15	0	1	0	0	0	1
2015-16	1	2	0	0	1	2
2016-17	0	1	0	0	0	1
Total	43	152	8	64	26	51

Source : As compiled by office of PAG (Audit), Andhra Pradesh.

[^] Include paras which are exclusive to Andhra Pradesh, exclusive to Telangana as well as common to both Andhra Pradesh and Telangana.

[#] Includes paras either exclusive to Andhra Pradesh or common to Andhra Pradesh and Telangana.

Compliance to Reports of COPU

1.26 Action Taken Notes (ATNs) on 15 Paragraphs pertaining to 12 Reports of the COPU presented in the State Legislature between April 1983 and March 2007 had not been received (September 2018). The details are as given in below table:

Table 1.19 – Compliance to COPU Reports

Year of the COPU Report	Total number of COPU Reports	Total no. of recommendations in COPU Reports	No. of recommendations where ATNs not received
Upto 1998-99	3	24	2
2000-01	3	21	0
2004-05	5	43	0
2006-07	1	13	13
Total	12	101	15

(Source: As compiled by office of PAG (Audit), Andhra Pradesh)

Note 1: The above information pertaining to erstwhile composite State of Andhra Pradesh.

Note 2: After 2006-07, no Report was issued by the COPU.

It is recommended that the Government may ensure (a) submission of ENs to IRs/ Draft Paragraphs/ PAs and ATNs on the recommendations of COPU as per the prescribed time schedule (b) recovery of loss/outstanding advances/over payments within the prescribed period and (c) revamping of the system of responding to audit observations.