



Report

Actuarial Valuation of Gratuity, Pension & Leave Encashment Liability As at March 31, 2017

**Telangana State Southern Power
Distribution Company Ltd.
(TSSPDCL)**

July 31, 2017

Asia Pacific Actuarial Consultants

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Telangana State Southern Power Distribution Company Limited (TSSPDCL)

Actuarial Valuation of Staff Terminal Benefits

BACKGROUND

- I. The Government of Andhra Pradesh initiated reforms in power sector with the objective of ensuring efficient supply of electricity in terms of quality, cost and support economic and infrastructure development of the State. The road map of reforms also had set the direction to achieve financial discipline and become commercially viable. The implementation of Reform Process started with the enactment of Andhra Pradesh Electricity Reform Act, 1998, by the Government of Andhra Pradesh.

Under the power sector reform program, Andhra Pradesh State Electricity Board (APSEB) was corporatised and unbundled into the Power Generation Corporation of Andhra Pradesh Limited (APGENCO) and the Transmission Corporation of Andhra Pradesh Limited (APTRANCO) with effect from 1st February 1999. Further APTRANCO was unbundled into Transmission Company and four Distribution companies (DISCOMS) on 1st April, 2000.

The erstwhile APSEB since its formation in April 1959 has been making ad hoc provisions towards employees' terminal benefits; Pension and Gratuity. The provisions were grossly inadequate and were not cash funded. Payments of terminal payments as and when due was made from the current revenues.

APSEB ascertained the liabilities through an actuarial valuation as at 31st January 1999. This valuation was done with sample employee data.

Based on the said actuarial valuation the initial fund size for unfunded liabilities of pension and gratuity were estimated as under:

Rs. 1320.43 Crores for funding pension liability of pensioners. Pensioners are those employees, who retired on or before 31st January, 1999.

Rs. 2811.98 Crores for funding towards pension and Rs.254.54 crores towards gratuity in respect of serving employees that is employees who were on rolls as on 31st January 1999.

- II. In order to comply with legal, accounting and fiscal management requirements (Income Tax and Companies Act provisions) Trusts are set up to manage and administer Pension and Gratuity programs. Details of the Trusts are:

Master Trust	Managed / administered by all the 6 Companies
Units'/ Companies Trusts	Managed / Administered by the respective units/ Companies

Master Trust is created to meet the Pension and Gratuity liabilities of the following category of employees

1. 100% Pension liability of employees who have retired on or before 31st January 1999. This is backed with an investment of Rs. 1320.43 crores guaranteed by Government of Andhra Pradesh.
2. 74% of Pension and Gratuity liability in respect of employees who have continued in service beyond 31st January 1999. The sharing of 74% of the liability is backed with an investment of Rs.3066.52 Crores, guaranteed by Government of Andhra Pradesh.

Each of the 6 Units have created separate Trust Fund to meet Pension and Gratuity liabilities of the following employees

1. 26% of Pension and Gratuity liability in respect of employees who have continued in employment after 31st January 1999. This will also include the pension liability of those who retired between 31st January 1999 and 31 March 2017.
2. 100% of Gratuity liability in respect of employees in the respective units who have joined services on or after 1st February 1999.
3. Each of units' has made contributions to the respective Trusts and the funds are kept invested.

As per the Reforms Act a statutory authority called 'The Andhra Pradesh Electricity Regulatory Commission' has been constituted by the Govt. of Andhra Pradesh to oversee the functions of licensees including APTRANSCO, four distribution companies and fix the Power Tariffs to various categories of power consumers in the State.

Power tariffs are decided on the basis of costs and employee post retirement benefit obligation also is a constituent cost in deciding the tariffs as per APERC orders dated 15th March 2004 (paragraph 99 to 100)

INTRODUCTION

Asia Pacific Actuarial Consultants has been mandated by Telangana State Southern Power Distribution Company Limited (TSSPDCL) to determine liabilities through an Actuarial Valuation as at 01/06/2014.

PURPOSE OF THE VALUATION

To assess the liability of the accrued benefits in respect of the following

1. Pension Liability in respect of employees who retired on or before 31st January 1999
2. Accrued Pension and Gratuity Liability in respect of employees of TSSPDCL who have continued in service after 31st January 1999
3. Accrued Gratuity liability in respect of employees of the company who joined on or after 1st February 1999. These employees are not members of the pension scheme.
4. Allocation of liabilities for Pension and Gratuity between TSSPDCL and the Master Trust, in respect of employees who were on the rolls as on 31st January 1999 and continued in service beyond 31st January 1999, in the ratio of 26% to Unit Trust and 74% to Master Trust.
5. Determine the future contribution rates required as a percentage of the qualifying wage bill.
6. Leave encashment Liability for all the employees on the roll on the valuation date.

BENEFITS VALUED

Retirement benefit plans which have been valued are:

1. Pension
2. Gratuity
3. Leave encashment with Long Term Compensated Absences (LTCA)

The benefit formula has been evolved on the basis of rules of the schemes as provided in the published booklet - The Andhra Pradesh Revised Pension Rules, 1980.

VALUATION DATES

The valuation exercise has been carried out as on 31 March 2017.

DATA & ASSUMPTIONS

Given below is the summary of the membership information as at 31 March 2017

SUMMARY OF EMPLOYEE DATA AS ON 31 March 2017 – ACTIVES

Gratuity and Leave encashment

Joined before 31.1.99	Joined after 31.1.99	Total
3725	5470	9195

Pension – Active

Joined before 31.1.99	Joined after 31.1.99	Total
3724	2	3726

PENSIONERS

Pensioners	Family Pensioners	Total
3599	1989	5588

VALUATION METHOD

The Actuarial value of Past Service benefits is calculated in respect of accrued service of active employees basing the calculations on the projected salaries from the date of Valuation to the assumed date of exit of the members. (This method is usually termed as projected accrued benefit method / projected unit credit method)



As regards future service, an annual contribution rate as a percentage of pensionable salaries is estimated, which, if paid regularly, (together with existing fund) is expected to meet the benefits out go in respect of existing members of the scheme.

Actuarial valuation is a group concept and is performed by using the actuarial assumptions disclosed below on an aggregate level.

VALUATION ASSUMPTIONS

Rate of Interest / Discount	7.25% per annum
Rate of Salary growth	9% per annum
Rate of inflationary increases in pensions	4% per annum
Mortality – Active members	IALM (2006-08)
Mortality – Pensioners	LIC 96-98A
Withdrawal – Age specific	Up to 30 years - 1% 31 to 48 years - 0.5% Above 48 years - 2%
Rate of Commutation of Pension	40%
Restoration of Commutation	15 years from retirement
Retirement age	Class IV – 60 years, Others - 58 Years
Dependant benefits	As per provisions of the scheme

BIFURCATION OF LIABILITY BETWEEN TSSPDCL AND THE MASTER TRUST

The liability in respect of gratuity and pension has been bifurcated between TSSPDCL and Master Trust as per details given below:

Accrued Liability in respect of:	Liability allocation	
	Master Trust	Unit Trust
Gratuity for employees who continued on rolls beyond 31 st January 1999	74%	26%
Gratuity for employees who joined with the units on or after 1 st February 1999	Nil	100%
Pension for employees who continued on rolls beyond 31 st January 1999 (excluding those retired from 1 st Feb 1999 to 31 st March 2017)	74%	26%
Pension for employees who joined with the units on or after 1 st February 1999	Not eligible	Not eligible
Pension to the Pensioners who retired from employment on or before 31 st January 1999	100%	Nil
Pensioners who retired from employment between 1 st February 1999 and 31 st March 2017	74%	26%

FUTURE CONTRIBUTION RATES

MASTER TRUST

The entire liability of the Master Trust is to be met out of the bonds issued and any shortfall as explained above will be met through additional interest payments. As such there are no future contribution rates for Master Trust

TSSPDCL'S SHARE

TSSPDCL's share of total service liability will be met by existing fund, provided the contribution rates in the table below are maintained and that the demographic and economic assumptions are borne out. Total service liability assessment for units consist of the following

1. Pension liability in respect of those who retired between 1-2-1999 and the valuation date
2. Pension liability in respect of active employees who continued in service after 31.1.99
3. Gratuity liability in respect of active employees who continued in service after 31.1.99
4. Gratuity liability in respect of employees who are recruited after 31.1.99

The future contribution rate as a percentage of qualifying salary depends on various factors. These include average age, average past service and the funding status (i.e. Ratio of the current fund to the total accrued liability calculated on the basis of actual past service and estimated salary at the time of separation of each individual employee).

RESULTS OF THE VALUATION & CONTRIBUTION RATES REQUIRED

Results as on 31 March 2017 are given in Annexure A have been worked out on the following assumptions

- The fund will be paying the pensions and will not be purchasing annuities from LIC or any other insurance company
- The pensionable salary growth is at the rate of 9%
- Pension increases at the rate corresponding to an inflationary increase of 4%.
- All employees will commute the maximum allowable at 40%
- All survive, serve and retire on the normal retirement date

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Place: Mumbai
Date: 20 July 2017

Annexure A

PLAN-WISE LIABILITY

TSSPDCL	31-Mar-2017	
	Salary escalation - 9%	
BASIS Unit 26%, Master 74%		
31st March 2017		
	Accrued Liability	
Gratuity for employees on rolls on or Before 1-2-1999	UNIT	MASTER
Gratuity for employees who joined units on or after 1-2-1999	709,840,633	2,020,315,649
Pension : employees on rolls on 1-2-99 -excl. retirees from 1.2.99 to 31.3.17	1,148,595,507	-
Pension : employees joined between 1-2-99 & 31-8-04	5,232,443,036	14,892,337,872
Pension for employees who retired from 1.2.99 to 31.3.17	-	-
Pensioners/pre 01.02.99)and Family pensioners	10,125,748,261	28,819,437,360
Total Accrued Liability as at 31st March 17	17,216,627,438	45,732,090,881
Fund as on 31st March 17	5,564,186,682	
Deficit	11,652,440,756	45,732,090,881
Contribution Rate		
Gratuity		
Total Service Liability (Active as on 1-2-99)	719,374,851	2,047,451,500
Total Service Liability (post 31.1.99)	1,541,555,223	-
Sub Total 1	2,260,931,075	2,047,451,500
Pension:		
Total Pension :employees on rolls on 1-2-1999-excl. retirees from 1.2.99 to 31.3.17	6,329,398,054	18,014,440,615
Total Pension :employees joined after 1-2-1999	-	-
Total Pension :Those retired from 1.2.99 to 31.3.17	10,125,748,261	28,819,437,360
Pensioners/pre 01.02.99)and Family pensioners	-	-
Sub Total 2	16,455,146,315	46,833,877,975
Grand total	18,716,077,390	48,881,329,475
Fund as on 31st March 17	5,564,186,682	
Liability to be funded through future contributions	13,151,890,708	
Leave encashment Liability	6,586,435,786	

Annexure B

AS15(R) disclosure for Pension and Gratuity Trust

B.Revised AS-15 (2005) Disclosures - Pension & Gratuity Trust

Executive Summary	
Amounts in Balance Sheet at Period-End	31-Mar-2017
Projected Benefit Obligation (PBO)	16,068,031,931
Fair value of plan Assets	5,434,643,758
Funded Status - (Surplus)/Deficit	10,633,388,173
Unfunded Projected Benefit Obligation (PBO)	-
Past Service Cost not yet Recognised	-
Unrecognised Asset due to Limit in Para 58(B)	-
(Asset)/Liability Recognised in the Balance Sheet	10,633,388,173

Amounts Recognised in Statement of Profit & Loss at Period-End	01-Apr-16
	to
	31-Mar-17
Current Service Cost	317,588,809
Interest Cost	1,024,339,291
Expected Return on Plan Assets	(428,056,620)
Past Service Cost	220,890,649
Net Actuarial Losses/(Gains) recognised in the period	1,632,052,623
(Gain)/Loss due to Settlements/Curtailments/Terminations/Divestitures	-
Unrecognised Asset due to Limit in Para 58(B)	-
Total Expense/(Income) included in "Employee Benefit Expense"	2,766,814,752

Appendices

B.Revised AS-15 (2005) Disclosures - Pension & Gratuity Trust

Change in Present value of Benefit Obligation during the Period	01-Apr-16
	to
	31-Mar-17
Projected Benefit Obligation, Beginning of Period	13,603,867,736
Current Service Cost	317,588,809
Interest Cost	1,024,339,291
Actual Plan Participants' Contributions	-
Actuarial (Gains)/Losses	1,674,518,569
Changes in Foreign Currency Exchange Rates	-
Acquisition/Business Combination/Divestiture	-
Benefits Paid	(773,173,123)
Past Service Cost	220,890,649
Loss / (Gains) on Curtailments	-
Liabilities Extinguished on Settlements	-
Projected Benefit Obligation, End of Period	16,068,031,931

Change in Fair value of Plan Assets during the Period	01-Apr-16
	to
	31-Mar-17
Fair value of Plan Assets, Beginning of Period	5,737,294,315
Expected Return on Plan Assets	428,056,620
Actual Company Contributions	-
Actual Plan Participants' Contributions	-
Changes in Foreign Currency Exchange Rates	-
Actuarial Gains/(Losses)	42,465,946
Benefit Payments	(773,173,123)
Acquisition/Business Combination/Divestiture	-
Liabilities Extinguished on Settlements	-
Fair value of Plan Assets, End of Period	5,434,643,758

*Opening asset is the balance as on 1 April 2016 as given by the company

Current/Non Current Benefit Obligation *	31-Mar-17
Current	-
Non Current	10,633,388,173
Total	10,633,388,173

* The Current/non-current split is based on "Net liability"

APAC

Annexure C

AS15(R) disclosure for Gratuity – after 1.2.1999

**C.Revised AS-15 (2005) Disclosures - Gratuity after
1.2.1999**

Executive Summary	
Amounts in Balance Sheet at Period-End	31-Mar-2017
Projected Benefit Obligation (PBO)	1,148,595,507
Fair value of plan Assets	-
Funded Status - (Surplus)/Deficit	1,148,595,507
Unfunded Projected Benefit Obligation (PBO)	-
Past Service Cost not yet Recognised	-
Unrecognised Asset due to Limit in Para 58(B)	-
(Asset)/Liability Recognised in the Balance Sheet	1,148,595,507

Amounts Recognised in Statement of Profit & Loss at Period-End	01-Apr-16
	to
	31-Mar-17
Current Service Cost	65,063,589
Interest Cost	62,821,705
Expected Return on Plan Assets	-
Past Service Cost	113,411,429
Net Actuarial Losses/(Gains) recognised in the period	102,998,150
(Gain)/Loss due to Settlements/Curtailments/Terminations/Divestitures	-
Unrecognised Asset due to Limit in Para 58(B)	-
Total Expense/(Income) included in "Employee Benefit Expense"	344,294,874

Appendices

C.Revised AS-15 (2005) Disclosures - Gratuity after 1.2.1999

Change in Present value of Benefit Obligation during the Period	01-Apr-16
	to
	31-Mar-17
Projected Benefit Obligation, Beginning of Period	816,904,664
Current Service Cost	65,063,589
Interest Cost	62,821,705
Actual Plan Participants' Contributions	-
Actuarial (Gains)/Losses	102,998,150
Changes in Foreign Currency Exchange Rates	-
Acquisition/Business Combination/Divestiture	-
Benefits Paid	(12,604,031)
Past Service Cost	113,411,429
Loss / (Gains) on Curtailments	-
Liabilities Extinguished on Settlements	-
Projected Benefit Obligation, End of Period	1,148,595,507

Change in Fair value of Plan Assets during the Period	01-Apr-16
	to
	31-Mar-17
Fair value of Plan Assets, Beginning of Period	-
Expected Return on Plan Assets	-
Actual Company Contributions	-
Actual Plan Participants' Contributions	-
Changes in Foreign Currency Exchange Rates	-
Actuarial Gains/(Losses)	-
Benefit Payments	-
Acquisition/Business Combination/Divestiture	-
Liabilities Extinguished on Settlements	-
Fair value of Plan Assets, End of Period	-

Current/Non Current Benefit Obligation *	31-Mar-17
Current	21,142,424
Non Current	1,127,453,083
Total	1,148,595,507

* The Current/non-current split is based on "Net liability"

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Southern Power Distribution Company of Telangana Limited

Actuarial valuation report as per AS 15 (Revised 2005)

Defined benefit scheme	: Gratuity Benefits
Valuation period	: 01-Apr-2017 to 31-Mar-2018
Report date	: 04-Aug-2018

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1. Introduction and Objective of Valuation

I have been approached by the Company to value the Gratuity Benefits as at 31-Mar-2018 based on Accounting Standard (AS) 15 (Revised 2005) issued by the Institute of Chartered Accountants of India

The results set out in this Report and its annexures are based on requirements of AS 15 (Revised 2005) and its application to the Plan. They have been prepared for the specific requirements of AS 15 (Revised 2005) and should not be used for any other purpose. In particular this Report does not constitute a formal funding actuarial valuation of the Plan and does not present any recommendation of contributions or funding levels.

This report is provided solely for the Company's use and for the specific purposes indicated above. Except where I expressly agree in writing, it should not be disclosed or provided to any third party, other than as provided below. In the absence of such consent and an express assumption of responsibility, no responsibility whatsoever is accepted by me for any consequences arising from any third party relying on this Report or any advice relating to its contents. The Company may make a copy of this Report available to its auditors, but I make no representation as to the suitability of this Report for any purpose other than that for which it was originally provided and accept no responsibility or liability to the Company's auditors in this regard. The Company should draw the provisions of this paragraph to the attention of its auditors when passing this Report to them.

This report alongwith the annexure will form the basis of the balance-sheet and disclosures to be made by the Company in respect of the Plan as at valuation date.

2. Plan Features (Characteristics & Risks)

Characteristics Of Plan:

The benefits are governed by the Payment of Gratuity Act, 1972 or company scheme rules, whichever is higher. The key features are as under:

Table 1: Plan Features	
Benefits offered	$15/26 \times \text{Salary} \times \text{Duration of Service}$
Salary definition	Basic Salary including Dearness Allowance (if any)
Benefit ceiling	Benefit ceiling of Rs. 20,00,000 was applied
Vesting conditions	5 years of continuous service (Not applicable in case of death/disability)
Benefit eligibility	Upon Death or Resignation / Withdrawal or Retirement
Retirement age	60 & 58 Years

Changes in Inter-Valuation Period:

The benefit scheme has changed since the last valuation. The benefit ceiling has changed from Rs. 10,00,000 to Rs. 20,00,000.

There are no special events such as benefit improvements or curtailments or settlements during the inter-valuation period.

Major risk to the plan

I have outlined the following risks associated with the plan:

A. Actuarial Risk:

It is the risk that benefits will cost more than expected. This can arise due to one of the following reasons:

Adverse Salary Growth Experience: Salary hikes that are higher than the assumed salary escalation will result into an increase in Obligation at a rate that is higher than expected.

Variability in mortality rates: If actual mortality rates are higher than assumed mortality rate assumption than the Gratuity Benefits will be paid earlier than expected. Since there is no condition of vesting on the death benefit, the acceleration of cashflow will lead to an actuarial loss or gain depending on the relative values of the assumed salary growth and discount rate.

Variability in withdrawal rates: If actual withdrawal rates are higher than assumed withdrawal rate assumption than the Gratuity Benefits will be paid earlier than expected. The impact of this will depend on whether the benefits are vested as at the resignation date.

B. Investment Risk:

For funded plans that rely on insurers for managing the assets, the value of assets certified by the insurer may not be the fair value of instruments backing the liability. In such cases, the present value of the assets is independent of the future discount rate. This can result in wide fluctuations in the net liability or the funded status if there are significant changes in the discount rate during the inter-valuation period.

C. Liquidity Risk:

Employees with high salaries and long durations or those higher in hierarchy, accumulate significant level of benefits. If some of such employees resign/retire from the company there can be strain on the cashflows.

D. Market Risk:

Market risk is a collective term for risks that are related to the changes and fluctuations of the financial markets. One actuarial assumption that has a material effect is the discount rate. The discount rate reflects the time value of money. An increase in discount rate leads to decrease in Defined Benefit Obligation of the plan benefits & vice versa. This assumption depends on the yields on the corporate/government bonds and hence the valuation of liability is exposed to fluctuations in the yields as at the valuation date.

E. Legislative Risk:

Legislative risk is the risk of increase in the plan liabilities or reduction in the plan assets due to change in the legislation/regulation. The government may amend the Payment of Gratuity Act thus requiring the companies to pay higher benefits to the employees. This will directly affect the present value of the Defined Benefit Obligation and the same will have to be recognized immediately in the year when any such amendment is effective.

3. Valuation Data

I have received the data for the valuation from the Company. In preparing this Report I have relied on the completeness and accuracy of the information provided to us in writing by or on behalf of the Company and its advisors. I have not applied any detailed validation checks on the information provided. I have, however, carried out broad consistency checks.

The summary of the employee data used for valuation is as follows:

Table 2: Summary Data	
Particulars	31-Mar-2018
Number of Employees	5,490
Total Monthly Salary (Rs.)	22,26,85,071
Average Monthly Salary (Rs.)	40,562
Average Age (Years)	39.50
Average Duration (Years)	10.41
Average Future Duration (Years)	18.67
Average Outstanding Term of the Obligations (Years)	14.75

The value of discontinuance liability (if all the accrued benefits were to settle immediately) as at the valuation date is Rs. 1,44,61,59,314/-

4. Basis of Valuation (Assumptions)

I have outlined the key actuarial assumptions and the considerations in setting the same.

Discount Rate:

As per para 78 of AS 15 (Revised 2005), the discount rate used to value the post-employment benefit obligation (both funded & non-funded) should be determined by reference to market yields at the balance sheet date on government bonds. The currency and term of the government bonds should be consistent with the currency and estimated terms of the post-employment benefit obligation.

The estimated term of the Obligation is around 14.75 years. The yields on the government bonds as at the valuation date were 7.60%.

Salary Growth Rate:

This is Management's estimate of the increases in the salaries of the employees over the long term. Estimated future salary increases should take account of inflation, seniority, promotion and other relevant factors such as supply and demand in the employment market.

Expected Rate of Return :

This assumption is required only in case of funded plans. The level of returns would depend on the nature of assets and the prevailing economic scenario.

Mortality:

I have assumed the standard published mortality table without any adjustment. A snapshot of the same is given below.

Withdrawal Rates:

This is Management's estimate of the level of attrition in the company over the long term. Estimated withdrawal rates should take into account the broad economic outlook, type of sector the company operates in and measures taken by the management to retain/ relieve the employees.

The summary of the assumptions used in the valuations is given below:

Financial Assumptions:

Table 3: Financial Assumptions

Particulars	31-Mar-18	31-Mar-17
Discount Rate	7.60% p.a	N.A.
Salary Growth Rate	9.00% p.a	N.A.
Expected Rate of Return	Not Applicable	Not Applicable

Demographic Assumptions:

Withdrawal Rates (p.a.)

Table 4: Withdrawal Rates per annum

Age Band	31-Mar-18	31-Mar-17
30 & Below	1.00%	1.00%
31 to 48	0.50%	0.50%
48 to 100	2.00%	2.00%

Mortality Rates : Indian Assured Lives Mortality (2006-08) Table

Table 5: Sample Rates per annum of Indian Assured Lives Mortality

Age (in years)	31-Mar-18	31-Mar-17
20	0.09%	0.09%
30	0.11%	0.11%
40	0.18%	0.18%
50	0.49%	0.49%
60	1.15%	1.15%

Method of Valuation:

I have used Projected Unit Credit (PUC) method to value the Defined benefit obligation.

5. Accounting Policy

The Gratuity Benefits are classified as Post-Retirement Benefits as per AS 15 (Revised 2005) and the accounting policy is outlined as follows.

Actuarial gains and losses arise due to difference in the actual experience and the assumed parameters and also due to changes in the assumptions used for valuation. The Company recognizes these actuarial gains and losses immediately in the statement of profit and loss as income or expense.

When the benefits of the plan are changed, or when a plan is curtailed or settlement occurs, the portion of the changed benefit related to past service by employees, or the gain or loss on curtailment or settlement, is recognized immediately in the profit or loss account when the plan amendment or when a curtailment or settlement occurs.

6. Details of Asset-Liability Matching Strategy

It was informed by the company that Gratuity Benefits liabilities of the company are Unfunded.

There are no minimum funding requirements for a Gratuity Benefits plan in India and there is no compulsion on the part of the Company to fully or partially pre-fund the liabilities under the Plan.

Since the liabilities are unfunded, there is no Asset-Liability Matching strategy devised for the plan.

7. Valuation Results

The assumptions and methodology used in compiling this Report are consistent with the requirements of AS15 (revised 2005) and Guidance Note 26 issued by the Institute of Actuaries of India.

The results are particularly sensitive to some assumptions, such as the discount rate, level of salary inflation & level of assumed mortality.

The Actuarial Value of Defined Benefit Obligation calculated using the above stated assumptions is Rs. 1,22,37,72,626/-

Mr. Jenil Shah

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Southern Power Distribution Company of Telangana Limited

Actuarial Valuation of Gratuity Benefits as per AS 15 (Revised 2005)

Valuation period: 01-Apr-2017 to 31-Mar-2018

Annexure 1: Funded status of the plan

Particulars	31-Mar-2018 (12 months)	31-Mar-2017 (12 months)
	Rs.	Rs.
Present value of unfunded obligations	1,22,37,72,626	1,14,85,95,507
Present value of funded obligations	-	-
Fair value of plan assets	-	-
Net Liability (Asset)	1,22,37,72,626	1,14,85,95,507

Southern Power Distribution Company of Telangana Limited

Actuarial Valuation of Gratuity Benefits as per AS 15 (Revised 2005)

Valuation period: 01-Apr-2017 to 31-Mar-2018

Annexure 2: Profit and loss account for current period

Particulars	31-Mar-2018 (12 months)	31-Mar-2017 (12 months)
	Rs.	Rs.
Current service cost	10,74,06,979	6,50,63,589
Interest on obligation	8,32,73,174	6,28,21,705
Expected return on plan assets	-	-
Net actuarial loss/(gain)	(8,62,86,533)	10,29,98,150
Recognised Past Service Cost	-	11,34,11,429
Loss/(gain) on curtailments and settlement	-	-
Total included in 'Employee Benefit Expense'	10,43,93,620	34,42,94,873
Expenses deducted from the fund	-	-
Total Charge to P&L	10,43,93,620	34,42,94,873

The Past Service cost of Rs. is on account of change in Benefit ceiling from Rs. 10,00,000 to Rs. 20,00,000. The entire Unvested Past Service cost is recognised on grounds of Materiality.

Loss/(gain) on obligation as per Annexure 3	(8,62,86,533)	10,29,98,151
Loss/(gain) on assets as per Annexure 4	-	-
Net actuarial loss/(gain)	(8,62,86,533)	10,29,98,151

Southern Power Distribution Company of Telangana Limited

Actuarial Valuation of Gratuity Benefits as per AS 15 (Revised 2005)

Valuation period: 01-Apr-2017 to 31-Mar-2018

Annexure 3: Reconciliation of defined benefit obligation

Particulars	31-Mar-2018 (12 months)	31-Mar-2017 (12 months)
	Rs.	Rs.
Opening Defined Benefit Obligation	1,14,85,95,507	81,69,04,664
Transfer in/(out) obligation	-	-
Current service cost	10,74,06,979	6,50,63,589
Interest cost	8,32,73,174	6,28,21,705
Actuarial loss (gain)	(8,62,86,533)	10,29,98,151
Past service cost	-	11,34,11,429
Loss (gain) on curtailments	-	-
Liabilities extinguished on settlements	-	-
Liabilities assumed in an amalgamation in the nature of purchase	-	-
Exchange differences on foreign plans	-	-
Benefits paid	(2,92,16,501)	(1,26,04,031)
Closing Defined Benefit Obligation	1,22,37,72,626	1,14,85,95,507

Southern Power Distribution Company of Telangana Limited

Actuarial Valuation of Gratuity Benefits as per AS 15 (Revised 2005)

Valuation period: 01-Apr-2017 to 31-Mar-2018

Annexure 4: Reconciliation of plan assets

Particulars	31-Mar-2018	31-Mar-2017
	(12 months)	(12 months)
	Rs.	Rs.
Opening value of plan assets	-	-
Transfer in/(out) plan assets	-	-
Expenses deducted from the fund	-	-
Expected return	-	-
Actuarial gain/(loss)	-	-
Assets distributed on settlements	-	-
Contributions by employer	-	-
Assets acquired in an amalgamation in the nature of purchase	-	-
Exchange differences on foreign plans	-	-
Benefits paid	-	-
Closing value of plan assets	-	-

Southern Power Distribution Company of Telangana Limited

Actuarial Valuation of Gratuity Benefits as per AS 15 (Revised 2005)

Valuation period: 01-Apr-2017 to 31-Mar-2018

Annexure 5: Reconciliation of net defined benefit liability

Particulars	31-Mar-2018 (12 months)	31-Mar-2017 (12 months)
	Rs.	Rs.
Net opening provision in books of accounts	1,14,85,95,507	81,69,04,664
Transfer in/(out) obligation	-	-
Transfer (in)/out plan assets	-	-
Employee Benefit Expense as per Annexure 2	10,43,93,620	34,42,94,873
	1,25,29,89,127	1,16,11,99,537
Benefits paid by the Company	(2,92,16,501)	(1,26,04,031)
Contributions to plan assets	-	-
	1,22,37,72,626	1,14,85,95,506

Southern Power Distribution Company of Telangana Limited

Actuarial Valuation of Gratuity Benefits as per AS 15 (Revised 2005)

Valuation period: 01-Apr-2017 to 31-Mar-2018

Annexure 6: Composition of the plan assets

Particulars	31-Mar-2018 (12 months)	31-Mar-2017 (12 months)
	%	%
Government of India Securities	0%	0%
State Government Securities	0%	0%
High quality corporate bonds	0%	0%
Equity shares of listed companies	0%	0%
Property	0%	0%
Special Deposit Scheme	0%	0%
Policy of insurance	0%	0%
Bank Balance	0%	0%
Other Investments	0%	0%
Total	0%	0%

Annexure 7: Bifurcation of liability as per schedule III

Particulars	31-Mar-2018 (12 months)	31-Mar-2017 (12 months)
	Rs.	Rs.
Current Liability*	2,74,02,649	2,11,42,424
Non-Current Liability	1,19,63,69,977	1,12,74,53,082
Net Liability	1,22,37,72,626	1,14,85,95,506

* The current liability is calculated as expected benefits for the next 12 months.

Southern Power Distribution Company of Telangana Limited

Actuarial Valuation of Gratuity Benefits as per AS 15 (Revised 2005)

Valuation period: 01-Apr-2017 to 31-Mar-2018

Annexure 8: Table of experience adjustments

Particulars	31-Mar-2018 (12 months)	31-Mar-2017 (12 months)
	Rs.	Rs.
Defined Benefit Obligation	1,22,37,72,626	1,14,85,95,507
Plan Assets	-	-
Surplus/(Deficit)	(1,22,37,72,626)	(1,14,85,95,507)
Experience adjustments on plan liabilities	(2,75,74,103)	10,29,98,151
Actuarial loss/(gain) due to change in financial assumptions	(5,87,12,430)	-
Actuarial loss/ (gain) due to change in demographic assumption	-	-
Experience adjustments on plan assets	-	-
Net actuarial loss/ (gain) for the year	(8,62,86,533)	10,29,98,151

Annexure 9: Principle actuarial assumptions

Particulars	31-Mar-2018 (12 months)	31-Mar-2017 (12 months)
Discount Rate	7.60%	7.25%
Expected Return on Plan Assets	Not Applicable	Not Applicable
Salary Growth Rate	9.00%	9.00%
Withdrawal Rates	1% at younger ages reducing to 0% at older ages	1% at younger ages reducing to 0% at older ages

Glossary of Terms

Actuarial Gain/Loss :	Actuarial Gain/Loss occurs due to the differences between the previous actuarial assumptions and actual experience and also due to changes in actuarial assumptions at the current valuation date compared to the previous valuation.
Curtailment :	The effect of plan amendments that reduce benefits for future service
Defined Benefit Obligation :	Discounted present value of the defined benefit as at the valuation date
Expected Rate of Return :	The expected return on plan asset over the accounting period, based on an assumed rate of return as at the start of the valuation period.
Interest on Obligation :	The increase the present value of a defined benefit obligation during the valuation period which arises because the benefits are one period closer to settlement.
Past Service Cost :	The change in the present value of the defined benefit obligation due to any change in the structure of benefits.
Current Service Cost :	The increase in the present value of the defined benefit obligation resulting from employee service in the current period.
Settlement :	A settlement occurs when an enterprise enters into a transaction that eliminates all further obligations for part or all of the benefits provided under a defined benefit plan.

Saurabh Kochrekar

B. Chem Engg., FIAI

Jenil Shah

B. Com, ACA, FIAI



Southern Power Distribution Company of Telangana Limited

Actuarial valuation report as per AS15 (revised 2005)

Defined benefit scheme : Leave benefits

Valuation period : 01-Apr-2017 to 31-Mar-2018

Report date : 04-Aug-2018

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1. Introduction and Objective of Valuation

I have been approached by the Company to value the Leave benefits as at 31-Mar-2018 based on Accounting Standard (AS) 15 (revised, 2005) issued by the Institute of Chartered Accountants of India.

The results set out in this Report and its annexures are based on requirements of AS15 (revised 2005) and its application to the Plan. They have been prepared for the specific requirements of AS15 (revised 2005) and should not be used for any other purpose. In particular this Report does not constitute a formal funding actuarial valuation of the Plan and does not present any recommendation of contributions or funding levels.

This report is provided solely for the Company's use and for the specific purposes indicated above. Except where I expressly agree in writing, it should not be disclosed or provided to any third party, other than as provided below. In the absence of such consent and an express assumption of responsibility, no responsibility whatsoever is accepted by me for any consequences arising from any third party relying on this Report or any advice relating to its contents. The Company may make a copy of this Report available to its auditors, but I make no representation as to the suitability of this Report for any purpose other than that for which it was originally provided and accept no responsibility or liability to the Company's auditors in this regard. The Company should draw the provisions of this paragraph to the attention of its auditors when passing this Report to them.

The objective of the valuation is to ascertain the liability on utilization of accumulated leave. The accumulated leave may also diminish on account of utilization if permissible in the course of employment. The effect of utilization will be reflected in year to year balance and the liability will be adjusted accordingly at every annual actuarial valuation. There is no separate accounting standard which lays down the actuarial method to be adopted for valuation of liability in respect of balances of accumulated leave. However general principles applicable to defined benefit retirement benefit have been applied.

2. Plan Features (Characteristics & Risks)

Characteristics Of Plan:

The benefits are governed by the Company's Leave Policy. The key provisions to best of my knowledge are given as under:

Table 1: Plan Features		
Salary for Encashment	Gross Salary	
Salary for Availment	Cost to company	
Benefit Payable on	Death or Resignation/Withdrawal or Retirement	
Maximum accumulation	Employee	300
Encashment Formula	$(\text{Leave Days}) \times (\text{Salary}) / (\text{Leave Denominator})$	
Leave Denominator	Employee	30
Leaves Credited Annually	Employee	30
Retirement Age	60 & 58 years Years	

Changes in Inter-Valuation Period:

There are no changes in the benefit scheme since the last valuation.

There are no special events such as benefit improvements or curtailments or settlements during the inter-valuation period.

Major Risk to the Plan

I have outlined the following risks associated with the plan:

A. Actuarial Risk:

It is the risk that benefits will cost more than expected. This can arise due to one of the following reasons:

Adverse Salary Growth Experience: Salary hikes that are higher than the assumed salary escalation will result into an increase in Obligation at a rate that is higher than expected.

Variability in mortality rates: If actual mortality rates are higher than assumed mortality rate assumption then the leave benefit will be paid earlier than expected. The acceleration of cashflow will lead to an actuarial loss or gain depending on the relative values of the assumed salary growth and discount rate.

Variability in withdrawal rates: If actual withdrawal rates are higher than assumed withdrawal rate assumption then the leave benefit will be paid earlier than expected. The impact of this will depend on the relative values of the assumed salary growth and discount rate.

Variability in availment rates: If actual availment rates are higher than assumed availment rate assumption then leave balances will be utilised earlier than expected. This will result in reduction in leave balances and Obligation.

B. Investment Risk:

For funded plans that rely on insurers for managing the assets, the value of assets certified by the insurer may not be the fair value of instruments backing the liability. In such cases, the present value of the assets is independent of the future discount rate. This can result in wide fluctuations in the net liability or the funded status if there are significant changes in the discount rate during the inter-valuation period.

C. Liquidity Risk:

Employees with high salaries and long durations or those higher in hierarchy, accumulate significant level of benefits. If some of such employees resign/retire from the company there can be strain on the cashflows.

D. Market Risk:

Market risk is a collective term for risks that are related to the changes and fluctuations of the financial markets. One actuarial assumption that has a material effect is the discount rate. The discount rate reflects the time value of money. An increase in discount rate leads to decrease in Defined Benefit Obligation of the plan benefits & vice versa. This assumption depends on the yields on the corporate/government bonds and hence the valuation of liability is exposed to fluctuations in the yields as at the valuation date.

3. Valuation Data

I have received the data for the valuation from the Company. In preparing this Report I have relied on the completeness and accuracy of the information provided to us in writing by or on behalf of the Company and its advisors. I have not applied any detailed validation checks on the information provided. I have, however, carried out broad consistency checks.

The summary of the employee data is as follows:

Table 2: Summary Data	
Particulars	31-Mar-2018
Number of Employees	8,823
Total Monthly Encashment Salary (Rs.)	70,21,17,442
Total Monthly Availment Salary (Rs.)	70,21,17,442
Average Age (Years)	43.89
Total Full-Leave Days	17,83,880
Total Half-Leave Days*	5,07,449

** Since Half-Leave days were unavailable at the time of valuation, we have assumed that the number of HPL accumulated by the employees would be 70% of the accumulated PL balances. The HPLs considered in the valuation and shown in the above table are after limiting the PL + HPL days to 300.*

The value of discontinuance liability (if all the accrued benefits were to settle immediately) as at the valuation date is Rs. 5,92,18,60,471/-

4. Basis of Valuation (Assumptions)

I have outlined the key actuarial assumptions and the considerations in setting the same.

Discount Rate:

As per para 78 of AS 15 (revised, 2005), the discount rate used to value other long term employee benefit obligation (both funded & non-funded) should be determined by reference to market yields at the balance sheet date on government bonds. The currency and term of the government bonds should be consistent with the currency and estimated terms of other long term employee benefit obligation.

Salary Growth Rate:

This is Management's estimate of the increases in the salaries of the employees over the long term. Estimated future salary increases should take account of inflation, seniority, promotion and other relevant factors such as supply and demand in the employment market.

Expected Rate of Return:

This assumption is required only in case of funded plans. The level of returns would depend on the nature of assets and the prevailing economic scenario.

Mortality:

I have assumed the standard published mortality table without any adjustment. A snapshot of the same is given below.

Withdrawal Rates:

This is Management's estimate of the level of attrition in the company over the long term. Estimated withdrawal rates should take into account the broad economic outlook, type of sector the company operates in and measures taken by the management to retain/ relieve the employees.

Leave Availment Rate:

Under the Last In First Out (LIFO) method, the leave utilized is first taken out from the current years' accretion and only if leave utilized is in excess of the number of leave days credited each year, such excess is taken out of accumulated balance. Cost of leave consumed out of current year's accretion will be debited under the head 'salary' and does not enter in my computation.

The summary of the assumptions used in the valuations is given below:

Financial Assumptions:

Table 3: Financial Assumptions

Particulars	31-Mar-2018	31-Mar-2017
Discount Rate (p.a.)	7.60%	7.25%
Salary Growth Rate (p.a.)	9.00%	9.00%
Expected Rate of Return (p.a.)	Not Applicable	Not Applicable

Demographic Assumptions:

Withdrawal Rates (p.a.)

Table 4: Withdrawal Rates per annum

Age Band	31-Mar-2018	31-Mar-2017
30 & Below	1.00%	1.00%
31 to 48	0.50%	0.50%
48 to 100	2.00%	2.00%

Mortality Rates : Indian Assured Lives Mortality (2006-08) Table

Table 5: Sample Rates of Indian Assured Lives Mortality

Age (in years)	31-Mar-2018	31-Mar-2017
20	0.09%	0.09%
30	0.11%	0.11%
40	0.18%	0.18%
50	0.49%	0.49%
60	1.15%	1.15%

Leave Availment & Encashment Rate:

Table 6: Availment & Encashment Rates

Particulars	31-Mar-2018	31-Mar-2017
Leave Availment Rate (p.a.)	5% p.a.	NA
Encashment in service (p.a.)	0% p.a.	NA

Method of Valuation

I have used Projected Unit Credit (PUC) method to value the Defined benefit obligation.

5. Accounting Policy

The Leave benefits are classified as Other Long-term employee benefits as per AS15 (revised 2005) and the accounting policy is outlined as follows.

Actuarial gains and losses arise due to difference in the actual experience and the assumed parameters and also due to changes in the assumptions used for valuation. The Company recognizes these actuarial gains and losses immediately in the statement of profit and loss as income or expense.

When the benefits of the plan are changed, or when a plan is curtailed or settlement occurs, the portion of the changed benefit related to past service by employees, or the gain or loss on curtailment or settlement, is recognized immediately in the profit or loss account when the plan amendment or when a curtailment or settlement occurs.

6. Details of Asset-Liability Matching Strategy

It was informed by the company that Leave benefits liabilities of the company are unfunded.

There are no minimum funding requirements for a Leave benefits plans in India and there is no compulsion on the part of the Company to fully pre fund the liability of the Plan.

Since the liabilities are unfunded, there is no Asset-Liability Matching strategy devised for the plan.

7. Valuation Results

The assumptions and methodology used in compiling this Report are consistent with the requirements of AS15 (revised 2005) and Guidance Note 26 issued by the Institute of Actuaries of India.

The results are particularly sensitive to some assumptions, such as the discount rate, level of salary inflation, & level of assumed mortality.

The Actuarial Value of Defined Benefit Obligation calculated using the above stated assumptions is Rs. 6,48,62,52,404/-

Mr. Jenil Shah
Fellow of Institute of Actuaries of India (ID: 5568)

Southern Power Distribution Company of Telangana Limited

Actuarial Valuation of Leave benefits as per AS 15 (Revised 2005)

Valuation period: 01-Apr-2017 to 31-Mar-2018

Annexure: Bifurcation of liability as per schedule III

Particulars	31-Mar-2018 (12 months)
	Rs.
Current Liability*	92,39,37,693
Non-Current Liability	5,56,23,14,711
Net Liability	6,48,62,52,404

* The current liability is calculated as expected benefits for the next 12 months.

Glossary of Terms

Actuarial Gain/Losses:	Actuarial Gain/Losses occurs due to the differences between the previous actuarial assumptions and actual experience and also due to changes in actuarial assumptions at the current valuation date compared to the previous valuation.
Curtailment:	The effect of plan amendments that reduce benefits for future service
Defined Benefit Obligation:	Discounted present value of the defined benefit as at the valuation date
Interest on Obligation:	The increase the present value of a defined benefit obligation during the valuation period which arises because the benefits are one period closer to settlement.
Expected Return on Plan Assets:	The expected return on plan assets over the accounting period, based on an assumed rate of return as at the start of the valuation period.
Past Service Cost:	The change in the present value of the defined benefit obligation due to any changes in the structure of benefits.
Current Service Cost:	The increase in the present value of the defined benefit obligation resulting from employee service in the current period.
Settlement:	A settlement occurs when an enterprise enters into a transaction that eliminates all further obligations for part or all of the benefits provided under a defined benefit plan.

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Actuaries & Consultants

Southern Power Distribution Company Of Telangana Limited

Actuarial valuation report as per AS 15 (revised 2005)

Defined benefit scheme	: Pension & Gratuity benefits
Valuation period	: 01-Apr-2018 to 31-Mar-2019
Report date	: 08-Aug-2019

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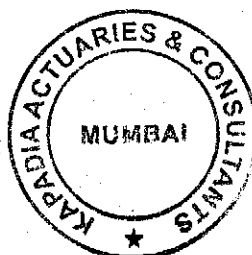
1. Introduction and Objective of Valuation

I have been approached by the Company to value the Gratuity & Pension & Gratuity benefits as at 31-Mar-2019 based on Accounting Standard (AS) 15 (Revised 2005) issued by the Institute of Chartered Accountants of India.

The results set out in this Report and its annexures are based on requirements of AS 15 (Revised 2005) and its application to the Plan. They have been prepared for the specific requirements of AS 15 (Revised 2005) and should not be used for any other purpose. In particular this Report does not constitute a formal funding actuarial valuation of the Plan and does not present any recommendation of contributions or funding levels.

This report is provided solely for the Company's use and for the specific purposes indicated above. Except where I expressly agree in writing, it should not be disclosed or provided to any third party, other than as provided below. In the absence of such consent and an express assumption of responsibility, no responsibility whatsoever is accepted by me for any consequences arising from any third party relying on this Report or any advice relating to its contents. The Company may make a copy of this Report available to its auditors, but I make no representation as to the suitability of this Report for any purpose other than that for which it was originally provided and accept no responsibility or liability to the Company's auditors in this regard. The Company should draw the provisions of this paragraph to the attention of its auditors when passing this Report to them.

This report alongwith the annexure will form the basis of the balance-sheet and disclosures to be made by the Company in respect of the Plan as at valuation date.





2. Background

The Government of Andhra Pradesh initiated reforms in power sector with the objective of ensuring efficient supply of electricity in terms of quality, cost and support economic and infrastructure development of the State. The road map of reforms also had set the direction to achieve financial discipline and become commercially viable. The implementation of Reform Process started with the enactment of Andhra Pradesh Electricity Reform Act, 1998, by the Government of Andhra Pradesh.

Under the power sector reform program, Andhra Pradesh State Electricity Board (APSEB) was corporatised and unbundled into the Power Generation Corporation of Andhra Pradesh Limited (APGENCO) and the Transmission Corporation of Andhra Pradesh Limited (APTRANCO) with effect from 1st February 1999. Further APTRANCO was unbundled into Transmission Company and four Distribution companies (DISCOMS) on 1st April 2000.

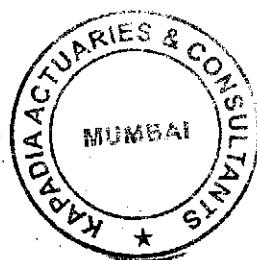
The erstwhile APSEB since its formation in April 1959 has been making ad hoc provisions towards employees terminal benefits; Pension and Gratuity. The provisions were grossly inadequate and were not cash funded. Payments of terminal payments as and when due was made from the current revenues.

APSEB ascertained the liabilities through an actuarial valuation as at 31st January 1999. This valuation was done with sample employee data.

Based on the said actuarial valuation the initial fund size for the then unfunded liabilities of pension and gratuity were estimated as under:

Rs. 1320.43 Crores for funding pension liability of pensioners. Pensioners are those employees who retired on or before 31st January 1999

Rs. 2811.98 Crores for funding towards pension and Rs.254.54 crores towards gratuity in respect of serving employees that is employees who were on rolls as on 31st January 1999.





In order to comply with legal, accounting and fiscal management requirements (Income Tax and Companies Act provisions) Trusts are set up to manage and administer Pension and Gratuity programs. Details of the Trusts are:

Master Trust	Managed administered by all the 6 Companies
Units/Companies Trusts	Managed Administered by the respective Units/Companies

Master Trust is created to meet the Pension and Gratuity liabilities of the following category of employees:

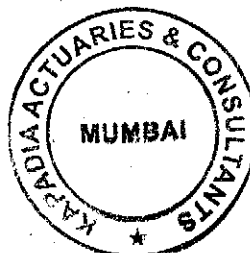
1. 100% Pension liability of employees who have retired on or before 31st January 1999. This is backed with an investment of Rs. 1320.43 crores guaranteed by Government of Andhra Pradesh.
2. 74% of Pension and Gratuity liability in respect of employees who have continued in service beyond 31st January 1999. The sharing of 74% of the liability is backed with an investment of Rs.3066.52 Crores, guaranteed by Government of Andhra Pradesh.

Each of the 6 Units have created separate Trust Fund to meet Pension and Gratuity liabilities of the following employees:

1. 26% of Pension and Gratuity liability in respect of employees who have continued in employment after 31st January 1999. This will also include the pension Liability of those who retired between 31st January 1999 and 31 March 2019.
2. 100% of Gratuity liability in respect of employees in the respective units who have joined services on or after 1st February 1999.
3. Each of the units has made contributions to the respective Trusts and the funds are kept invested.

As per the Reforms Act a statutory authority called 'The Andhra Pradesh Electricity Regulatory Commission' has been constituted by the Govt. of Andhra Pradesh to oversee the functions of licensees including APTRANSCO, four distribution companies and fix the Power Tariffs to various categories of power consumers in the State.

Power tariffs are decided on the basis of costs and employee post retirement benefit obligation also is a constituent cost in deciding the tariffs as per APERC orders dated 15th March 2004 (paragraph 99 to 100)





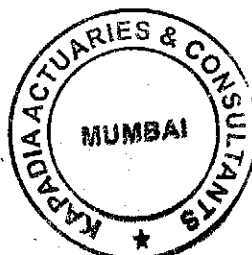
3. Plan Features (Characteristics & Risks)

Characteristics Of Plan:

The key points of benefits are highlighted hereunder:

Table 1: Plan Features

Gratuity		
Benefits offered	Retirement	$0.5 \times \text{Salary} \times \text{Duration of Service}$
	Death	
	Duration of Service	Rate
	Less than 1 year	$1.5 \times \text{Salary}$
	Less than 5 years	$4.5 \times \text{Salary}$
	20 years & Above	9 x Salary subject to maximum of 33 times Last drawn salaries
Salary definition	Basic Salary including Dearness Allowance (if any)	
Benefit ceiling	Benefit ceiling of Rs. 2,000,000 & 16.5 month's Last drawn salaries whichever is lower was applied	
Vesting conditions	5 years of continuous service (Not applicable in case of death/disability)	
Benefit eligibility	Upon Death or Retirement	
Retirement age	58 or 60 Years As Applicable	
Pension for Existing Employees		
Pension for Existing Employees: 50% of the the pay last drawn subject to completion of minimum pensionable service of 10 years. The pensionable salary used for calculations includes DA at current rate of 19.26%		
No Pension benefits accrue on exits before normal retirement age (except in case of approved Voluntary Retirement.)		





Family Pension on death during service

Family Pension on death during service: Family Pension is payable to the spouse of the deceased employee / pensioner or other eligible family members at a uniform rate of 30% of pay last drawn.

Family Pension at the enhance rate of 50% of the pay last drawn is payable for a period of 7 years or till the employee/pensioner would have attended the age of 65 years whichever is earlier.

Commutation of Pension

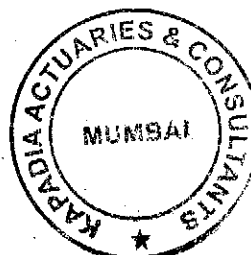
Commutation of Pension: A fraction of pension can be commuted for lump sum. The amount is determined according to the Table of Commutation Values prescribed by the Company.

Restoration of Commuted Portion of Pension is admissible on the expiry of 15 years from the date of Commutation. (Additional liability arising on account of restoration of commuted portion is provided on appropriate basis).

Changes in Inter-Valuation Period:

There are no changes in the benefit scheme since the last valuation.

There are no special events such as benefit improvements or curtailments or settlements during the inter-valuation period.





Major risk to the plan

I have outlined the following risks associated with the plan:

A. Actuarial Risk:

It is the risk that benefits will cost more than expected. This can arise due to one of the following reasons:

Adverse Salary growth or Pension increase Experience: Salary or increase in pension hikes that are higher than the assumed salary or pension escalation will result into an increase in Obligation at a rate that is higher than expected.

Variability in mortality rates: If actual mortality rates are lower than assumed mortality rate assumption than the Pension & Gratuity benefits will be paid for longer period than expected. This will lead to an actuarial loss on obligations.

Variability in withdrawal rates: If actual withdrawal rates are higher than assumed withdrawal rate assumption than the Pension & Gratuity benefits will be paid earlier than expected. The impact of this will depend on whether the benefits are vested as at the resignation date.

B. Investment Risk:

For funded plans that rely on insurers for managing the assets, the value of assets certified by the insurer may not be the fair value of instruments backing the liability. In such cases, the present value of the assets is independent of the future discount rate. This can result in wide fluctuations in the net liability or the funded status if there are significant changes in the discount rate during the inter-valuation period.





C. Liquidity Risk:

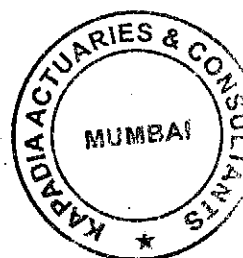
Employees with high salaries and long durations or those higher in hierarchy, accumulate significant level of benefits. If some of such employees resign/retire from the company there can be strain on the cashflows.

D. Market Risk:

Market risk is a collective term for risks that are related to the changes and fluctuations of the financial markets. One actuarial assumption that has a material effect is the discount rate. The discount rate reflects the time value of money. An increase in discount rate leads to decrease in Defined Benefit Obligation of the plan benefits & vice versa. This assumption depends on the yields on the corporate/government bonds and hence the valuation of liability is exposed to fluctuations in the yields as at the valuation date.

E. Legislative Risk:

Legislative risk is the risk of increase in the plan liabilities or reduction in the plan assets due to change in the legislation/regulation. The government may amend the pension rules thus requiring the companies to pay higher benefits to the employees. This will directly affect the present value of the Defined Benefit Obligation and the same will have to be recognized immediately in the year when any such amendment is effective.





4. Valuation Data

I have received the data for the valuation from the Company. In preparing this Report I have relied on the completeness and accuracy of the information provided to us orally and in writing by or on behalf of the Company and its advisers. I have not applied any detailed validation checks on the information provided. I have, however, carried out broad consistency checks.

The summary of the employee data used for valuation is as follows:

Table 2: Summary Data - Gratuity	
Particulars	
Number of Employees	2,974
Total Monthly Salary (Rs.)	42,76,68,154
Average Monthly Salary (Rs.)	1,43,802
Average Age (Years)	51.48
Average Duration (Years)	26.81

Table 2: Summary Data - Pension			
Particulars	Existing Employees	Pensioners	Family Pensioners
Number of Employees	2,974	3,328	2,156
Total Monthly Basic Salary (Rs.)	42,29,09,458	24,31,22,057	7,38,03,659
Average Monthly Basic Salary (Rs.)	1,42,202	73,054	34,232
Average Age (Years)	51.14	67.91	60.72
Average Duration (Years)	26.33	N.A.	N.A.





5. Basis of Valuation (Assumptions)

I have outlined the key actuarial assumptions and the considerations in setting the same.

Discount Rate:

As per para 78 of AS 15 (Revised 2005), the discount rate used to value the post-employment benefit obligation (both funded & non-funded) should be determined by reference to market yields at the balance sheet date on government bonds. The currency and term of the government bonds should be consistent with the currency and estimated terms of the post-employment benefit obligation.

Salary Growth Rate:

This is Management's estimate of the increases in the salaries of the employees over the long term. Estimated future salary increases should take account of inflation, seniority, promotion and other relevant factors such as supply and demand in the employment market.

Expected Rate of Return:

This assumption is required only in case of funded plans. The level of returns would depend on the nature of assets and the prevailing economic scenario.

Mortality:

I have assumed the standard published mortality table without any adjustment. A snapshot of the same is given below.

Withdrawal Rates:

This is Management's estimate of the level of attrition in the company over the long term. Estimated withdrawal rates should take into account the broad economic outlook, type of sector the company operates in and measures taken by the management to retain/ relieve the employees. Voluntary retirement rates are included in withdrawal rates.





The summary of the assumptions used in the valuations is given below:

Financial Assumptions:

Discount Rate : For Gratuity 7.65% p.a
: For Pension 7.75% p.a
Salary Growth Rate : 9.00% p.a
Pension Increase Rate : 4.00% p.a
Expected Rate of Return : 7.60% p.a

Demographic Assumptions:

Withdrawal Rates (p.a.)

Table 3: Withdrawal Rates per annum

Age Band	Rate per annum
30 & Below	1.00%
31 to 48	0.50%
48 to 100	2.00%

Mortality Rates in Service : Indian Assured Lives Mortality (2006-08) Table

Table 4: Sample Rates of Indian Assured Lives Mortality (2006-08)

Age (in years)	Rate per annum
20	0.09%
30	0.11%
40	0.18%
50	0.49%
60	1.15%

Mortality Rates in : LIC Annuitants' Lives Mortality (1996-98) ultimate

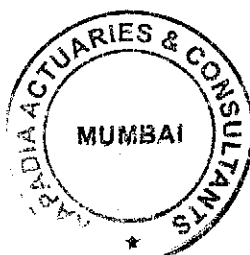


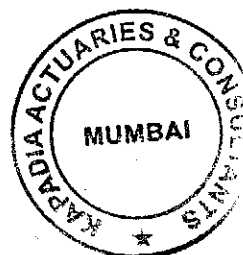


Table 5: Sample Rates of LIC Annuitants' Lives Mortality (1996-98) ultimate

Age (in years)	Rate per annum
60	1.09%
70	2.43%
80	7.08%
90	15.15%
100	26.65%

Method of Valuation:

I have used Projected Unit Credit (PUC) method to value the Defined benefit obligation.





6. Accounting Policy

The Gratuity & Pension & Gratuity benefits are classified as Post-Retirement Benefits as per AS 15 (Revised 2005) and the accounting policy is outlined as follows.

Actuarial gains and losses arise due to difference in the actual experience and the assumed parameters and also due to changes in the assumptions used for valuation. The Company recognizes these actuarial gains and losses immediately in the statement of profit and loss as income or expense.

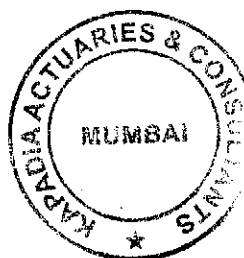
When the benefits of the plan are changed, or when a plan is curtailed or settlement occurs, the portion of the changed benefit related to past service by employees, or the gain or loss on curtailment or settlement, is recognized immediately in the profit or loss account when the plan amendment or when a curtailment or settlement occurs.

7. Details of Asset-Liability Matching Strategy

It was informed by the company that Pension & Gratuity benefits liabilities of the company are Funded.

There are no minimum funding requirements for Gratuity & Pension & Gratuity benefits plan in India and there is no compulsion on the part of the Company to fully or partially pre-fund the liabilities under the Plan.

The trustees manages the funds of the plan as per the mandate provided to them by the trustees and the asset allocation which is within the permissible limits prescribed in the insurance regulations. Due to the restrictions in the type of investments that can be held by the fund, it may not be possible to explicitly follow an asset-liability matching strategy to manage risk actively in a conventional fund.





8. Valuation Results

The assumptions and methodology used in compiling this Report are consistent with the requirements of AS15 (Revised 2005) and Guidance Note 26 issued by the Institute of Actuaries of India.

The results are particularly sensitive to some assumptions, such as the discount rate, level of salary inflation, & level of assumed mortality.

The Actuarial Value of Defined Benefit Obligation calculated using the above stated assumptions is Rs. 23,38,46,97,709/-

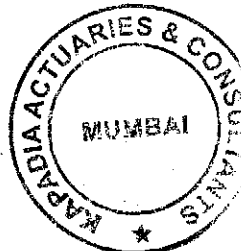
The Fair Value of plan assets is Rs. 10,86,24,32,395/-

DBO bifurcation	Unit trust 26% (Crore Rs.)	Master trust 74% (Crore Rs.)
Gratuity Active Emp.	91,20,37,537	2,59,57,99,142
Pensioners Active Emp.	9,63,76,14,422	27,43,01,33,355
Pensioners	9,72,69,22,496	27,68,43,17,872
Family Pensioners	3,10,81,23,255	8,84,61,96,957
Total	23,38,46,97,709	63,96,06,48,184

Mr. Jenil Shah

Mr. Jenil Shah

Fellow of Institute of Actuaries of India (ID: 5568)





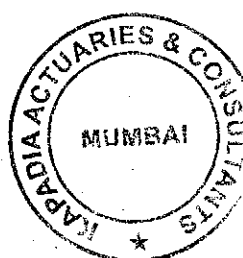
Southern Power Distribution Company of Telangana Limited

Actuarial Valuation of Pension & Gratuity benefits as per AS 15 (Revised 2005)

Valuation period: 01-Apr-2018 to 31-Mar-2019

Annexure 1: Funded status of the plan

Particulars	31-Mar-2019	31-Mar-2018
	Rs.	Rs.
Present value of unfunded obligations	-	-
Present value of funded obligations	23,38,46,97,709	17,71,45,05,823
Fair value of plan assets	10,86,24,32,395	7,26,29,53,145
Net Liability (Asset)	12,52,22,65,314	10,45,15,52,678





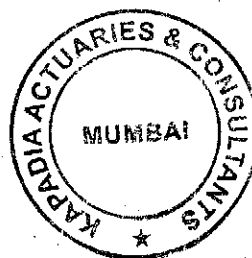
Southern Power Distribution Company of Telangana Limited

Actuarial Valuation of Pension & Gratuity benefits as per AS 15 (Revised 2005)

Valuation period: 01-Apr-2018 to 31-Mar-2019

Annexure 2: Profit and loss account for current period

Particulars	31-Mar-2019	31-Mar-2018
	Rs.	Rs.
Current service cost	18,67,29,869	22,51,77,284
Interest on obligation	1,34,63,02,443	1,16,49,32,315
Expected return on plan assets	(55,19,84,439)	(39,40,11,672)
Net actuarial loss/(gain)	3,93,95,89,302	32,20,66,578
Past service cost	-	-
Loss/(gain) on curtailments and settlement	-	-
Total included in 'Employee Benefit Expense'	4,92,06,37,175	1,31,81,64,505
Expenses deducted from the fund	-	-
Total Charge to P&L	4,92,06,37,175	1,31,81,64,505
Loss/(Gain) on obligation as per Annexure 3	5,35,70,84,113	1,09,80,23,646
Loss/(Gain) on assets as per Annexure 4	(1,41,74,94,811)	(77,59,57,068)
Net actuarial Loss/(Gain)	3,93,95,89,302	32,20,66,578



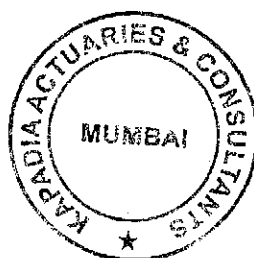


Southern Power Distribution Company of Telangana Limited
Actuarial Valuation of Pension & Gratuity benefits as per AS 15 (Revised 2005)
Valuation period: 01-Apr-2018 to 31-Mar-2019

Annexure 3: Reconciliation of defined benefit obligation

Particulars	31-Mar-2019	31-Mar-2018
	Rs.	Rs.
Opening Defined Benefit Obligation	17,71,45,05,823	16,06,80,31,931
Current service cost	18,67,29,869	22,51,77,284
Interest cost	1,34,63,02,443	1,16,49,32,315
Actuarial loss (gain)	5,35,70,84,113	1,09,80,23,646
Past service cost	-	-
Loss (gain) on curtailments	-	-
Liabilities extinguished on settlements	-	-
Liabilities assumed in an amalgamation in the nature of purchase	-	-
Exchange differences on foreign plans	-	-
Benefits paid	(1,21,99,24,539)	(84,16,59,353)
Benefits payable	-	-
Closing Defined Benefit Obligation	23,38,46,97,709	17,71,45,05,823

* Actuarial Loss is on account of the wage revisions implemented during the inter-valuation period.



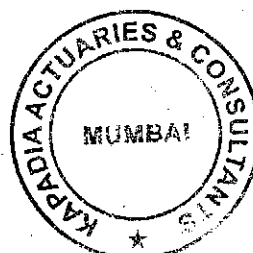


Southern Power Distribution Company of Telangana Limited
Actuarial Valuation of Pension & Gratuity benefits as per AS 15 (Revised 2005)
Valuation period: 01-Apr-2018 to 31-Mar-2019

Annexure 4: Reconciliation of plan assets

Particulars	31-Mar-2019	31-Mar-2018
	Rs.	Rs.
Opening value of plan assets	7,26,29,53,145	5,43,46,43,758
Transfer in/(out) plan assets	-	-
Expenses deducted from the fund	-	-
Expected return	55,19,84,439	39,40,11,672
Actuarial gain and (loss)	1,41,74,94,811	77,59,57,068
Assets distributed on settlements	-	-
Contributions by employer	1,63,00,00,000	1,50,00,00,000
Assets acquired in an amalgamation in the nature of purchase	-	-
Exchange differences on foreign plans	-	-
Benefits paid	-	(84,16,59,353)
Closing value of plan assets	10,86,24,32,395	7,26,29,53,145

The actual return on the assets is Rs. 63,30,18,214. There was a difference in the Opening Value of Plan Assets as provided by the Company and the one given in the previous valuation report. The said difference of Rs. 2,55,80,20,096 has been included in the interest income.

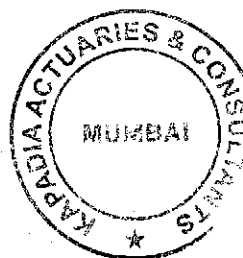




Southern Power Distribution Company of Telangana Limited
Actuarial Valuation of Pension & Gratuity benefits as per AS 15 (Revised 2005)
Valuation period: 01-Apr-2018 to 31-Mar-2019

Annexure 5: Reconciliation of net defined benefit liability

Particulars	31-Mar-2019	31-Mar-2018
	Rs.	Rs.
Net opening provision in books of accounts	10,45,15,52,678	10,63,33,88,173
Transfer in/(out) plan assets	-	-
Employee benefit expense as per Annexure 2	4,92,06,37,175	1,31,81,64,505
	15,37,21,89,853	11,95,15,52,678
Benefits paid by the Company	(1,21,99,24,539)	-
Amounts transferred to 'payable account'	-	-
Contributions to plan assets	(1,63,00,00,000)	(1,50,00,00,000)
Closing provision in books of accounts	12,52,22,65,314	10,45,15,52,678





Southern Power Distribution Company of Telangana Limited
Actuarial Valuation of Pension & Gratuity benefits as per AS 15 (Revised 2005)
Valuation period: 01-Apr-2018 to 31-Mar-2019

Annexure 6: Composition of the plan assets

Particulars	31-Mar-2019	31-Mar-2018
	%	%
Government of India Securities	0%	0%
State Government Securities	0%	0%
High quality corporate bonds	0%	0%
Equity shares of listed companies	0%	0%
Property	0%	0%
Special Deposit Scheme	0%	0%
Policy of insurance	100%	100%
Bank Balance	0%	0%
Other Investments	0%	0%
Total	100%	100%

Annexure 7: Bifurcation of liability as per schedule III

Particulars	31-Mar-2019	31-Mar-2018
	Rs.	Rs.
Current Liability*	62,14,34,887	65,21,28,774
Non-Current Liability	11,90,08,30,427	9,79,94,23,904
Net Liability	12,52,22,65,314	10,45,15,52,678

* The current liability is calculated as expected contributions for the next 12 months.





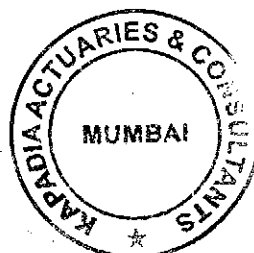
Southern Power Distribution Company of Telangana Limited
Actuarial Valuation of Pension & Gratuity benefits as per AS 15 (Revised 2005)
Valuation period: 01-Apr-2018 to 31-Mar-2019

Annexure 8: Table of experience adjustments

Particulars	31-Mar-2019	31-Mar-2018
	Rs.	Rs.
Defined Benefit Obligation	23,38,46,97,709	17,71,45,05,823
Plan Assets	10,86,24,32,395	7,26,29,53,145
Surplus/(Deficit)	(12,52,22,65,314)	(10,45,15,52,678)
Experience adjustments on plan liabilities	40,16,30,402	1,81,27,61,822
Actuarial loss/ (gain) due to change in demographic assumption	40,47,213	40,47,213
Actuarial loss/(gain) due to change in financial assumptions	4,95,14,06,498	(71,87,85,389)
Experience adjustments on plan assets	(1,41,74,94,811)	(77,59,57,068)
Net actuarial loss/ (gain) for the year	3,93,95,89,302	32,20,66,578

Annexure 9: Principle actuarial assumptions

Particulars	31-Mar-2019	31-Mar-2018
	: For Gratuity 7.65%	
Discount Rate	p.a	7.60%
	: For Pension 7.75%	
Expected Return on Plan Assets	p.a	
	7.60% p.a	7.60%
Salary Growth Rate	9.00%	9.00%
Pension Growth Rate	4.00%	4.00%



Glossary of Terms

Actuarial Gain/Loss :	Actuarial Gain/Loss occurs due to the differences between the previous actuarial assumptions and actual experience and also due to changes in actuarial assumptions at the current valuation date compared to the previous valuation.
Curtailment :	The effect of plan amendments that reduce benefits for future service
Defined Benefit Obligation :	Discounted present value of the defined benefit as at the valuation date
Expected Return on Plan Assets :	The expected return on plan assets over the accounting period, based on an assumed rate of return as at the start of the valuation period.
Interest on Obligation :	The increase the present value of a defined benefit obligation during the valuation period which arises because the benefits are one period closer to settlement.
Past Service Cost :	The change in the present value of the defined benefit obligation due to any change in the structure of benefits.
Current Service Cost :	The increase in the present value of the defined benefit obligation resulting from employee service in the current period.
Settlement :	A settlement occurs when an enterprise enters into a transaction that eliminates all further obligations for part or all of the benefits provided under a defined benefit plan.

Saurabh Kochrekar
B. Chem Engg., FIAI

Jenil Shah
B. Com, ACA, FIAI



Southern Power Distribution Company of Telangana Limited

Actuarial valuation report as per AS 15 (Revised 2005)

Defined benefit scheme	: Gratuity Benefits Employees joined after 31.1.1999
Valuation period	: 01-Apr-2018 to 31-Mar-2019
Report date	: 07-Aug-2019

Kapadia Actuaries and Consultants

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T: +91 22 4016 1446 E-mail: saurabh@kacindia.com / jenil@kacindia.com



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1 Executive Summary

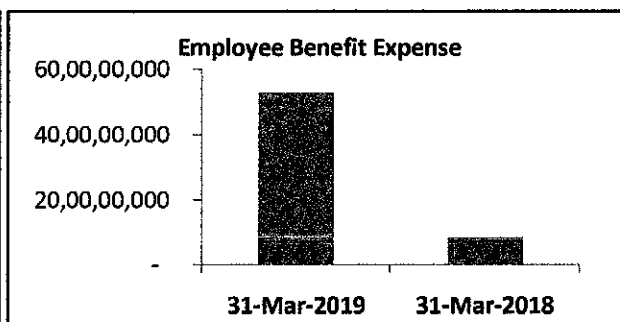
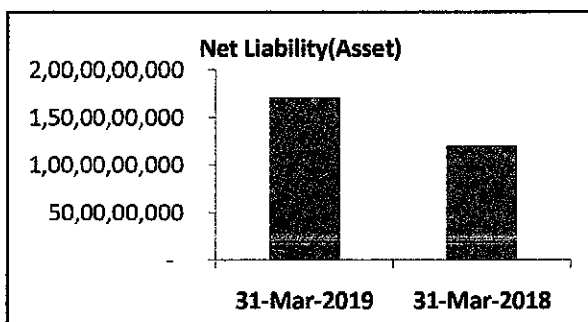
The valuation results as at 31-03-2019 are summarised in the tables given below:

Table 1: Assets and Liabilities		
Particulars	31-Mar-2019	31-Mar-2018
Defined Benefit Obligation	1,71,62,61,496	1,20,72,21,098
Fair Value Of Plan Assets	-	-
Unrecognised Past Service Cost	-	-
Net Liability(Asset)	1,71,62,61,496	1,20,72,21,098

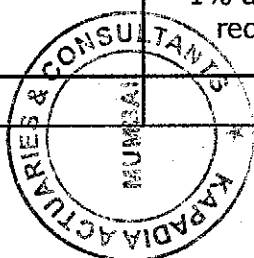
The total accrued liability is Rs. 2,40,40,42,287/-. Out of which the value of discontinuance liability (if all the accrued benefits were to settle immediately) as at the valuation date is Rs. 2,35,84,57,407/-

Table 2: Bifurcation Of Liability		
Particulars	31-Mar-2019	31-Mar-2018
Current Liability	5,41,29,611	2,71,89,257
Non-Current Liability	1,66,21,31,885	1,18,00,31,841
Net Liability(Asset)	1,71,62,61,496	1,20,72,21,098

Table 3: Income/Expenses Recognized during the period		
Particulars	31-Mar-2019	31-Mar-2018
Employee Benefit Expense	52,92,67,075	8,78,42,092



Key Assumptions		
Particulars	31-Mar-2019	31-Mar-2018
Discount Rate	7.65% p.a	7.60% p.a
Withdrawal Rates	1% at younger ages reducing to 2% at older ages	1% at younger ages reducing to 2% at older ages
Salary Growth Rate	9.00% p.a	9.00% p.a



1.1 Introduction and Objective of Valuation

I have been approached by the Company to value the Gratuity Benefits as at 31-Mar-2019 based on Accounting Standard (AS) 15 (Revised 2005) issued by the Institute of Chartered Accountants of India

The results set out in this Report and its annexures are based on requirements of AS 15 (Revised 2005) and its application to the Plan. They have been prepared for the specific requirements of AS 15 (Revised 2005) and should not be used for any other purpose. In particular this Report does not constitute a formal funding actuarial valuation of the Plan and does not present any recommendation of contributions or funding levels.

This report is provided solely for the Company's use and for the specific purposes indicated above. Except where I expressly agree in writing, it should not be disclosed or provided to any third party, other than as provided below. In the absence of such consent and an express assumption of responsibility, no responsibility whatsoever is accepted by me for any consequences arising from any third party relying on this Report or any advice relating to its contents. The Company may make a copy of this Report available to its auditors, but I make no representation as to the suitability of this Report for any purpose other than that for which it was originally provided and accept no responsibility or liability to the Company's auditors in this regard. The Company should draw the provisions of this paragraph to the attention of its auditors when passing this Report to them.





1.2 Plan Features (Characteristics & Risks)

Characteristics Of Plan:

The benefits are governed by the Payment of Gratuity Act, 1972 or company scheme rules, whichever is higher. The key features are as under:

Table 1: Plan Features		Refer Para 120b of AS 15(R)
Benefits offered	15/ 26 × Salary × Duration of Service	
Salary definition	Basic Salary including Dearness Allowance (if any)	
Benefit ceiling	Benefit ceiling of Rs. 20,00,000 was applied	
Vesting conditions	5 years of continuous service (Not applicable in case of death/disability)	
Benefit eligibility	Upon Death or Resignation / Withdrawal or Retirement	
Retirement age	60 & 58 Years	

Changes in Inter-Valuation Period:

There are no changes in the benefit scheme since the last valuation.

There are no special events such as benefit improvements or curtailments or settlements during the inter-valuation period.

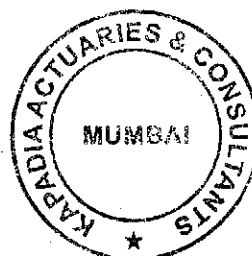
Major risk to the plan

I have outlined the following risks associated with the plan:

A. Actuarial Risk:

It is the risk that benefits will cost more than expected. This can arise due to one of the following reasons:

Adverse Salary Growth Experience: Salary hikes that are higher than the assumed salary escalation will result into an increase in Obligation at a rate that is higher than expected.





Variability in mortality rates: If actual mortality rates are higher than assumed mortality rate assumption than the Gratuity Benefits will be paid earlier than expected. Since there is no condition of vesting on the death benefit, the acceleration of cashflow will lead to an actuarial loss or gain depending on the relative values of the assumed salary growth and discount rate.

Variability in withdrawal rates: If actual withdrawal rates are higher than assumed withdrawal rate assumption than the Gratuity Benefits will be paid earlier than expected. The impact of this will depend on whether the benefits are vested as at the resignation date.

B. Investment Risk:

For funded plans that rely on insurers for managing the assets, the value of assets certified by the insurer may not be the fair value of instruments backing the liability. In such cases, the present value of the assets is independent of the future discount rate. This can result in wide fluctuations in the net liability or the funded status if there are significant changes in the discount rate during the inter-valuation period.

C. Liquidity Risk:

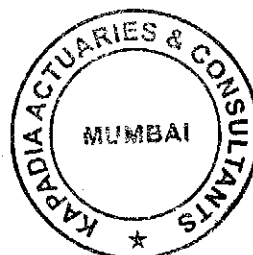
Employees with high salaries and long durations or those higher in hierarchy, accumulate significant level of benefits. If some of such employees resign/retire from the company there can be strain on the cashflows.

D. Market Risk:

Market risk is a collective term for risks that are related to the changes and fluctuations of the financial markets. One actuarial assumption that has a material effect is the discount rate. The discount rate reflects the time value of money. An increase in discount rate leads to decrease in Defined Benefit Obligation of the plan benefits & vice versa. This assumption depends on the yields on the corporate/government bonds and hence the valuation of liability is exposed to fluctuations in the yields as at the valuation date.

E. Legislative Risk:

Legislative risk is the risk of increase in the plan liabilities or reduction in the plan assets due to change in the legislation/regulation. The government may amend the Payment of Gratuity Act thus requiring the companies to pay higher benefits to the employees. This will directly affect the present value of the Defined Benefit Obligation and the same will have to be recognized immediately in the year when any such amendment is effective.



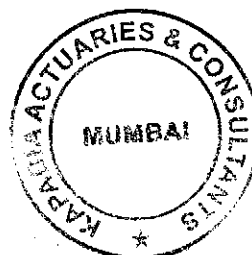


1.3 Valuation Data

I have received the data for the valuation from the Company. In preparing this Report I have relied on the completeness and accuracy of the information provided to us in writing by or on behalf of the Company and its advisors. I have not applied any detailed validation checks on the information provided. I have, however, carried out broad consistency checks.

The summary of the employee data used for valuation is as follows:

Table 2: Summary Data			
Particulars	31-Mar-2019	31-Mar-2018	% Change
Number of Employees	5,771	5,436	6.16%
Total Monthly Salary (Rs.)	35,24,18,833	21,92,79,176	60.72%
Average Monthly Salary (Rs.)	61,067	40,338	51.39%
Average Age (Years)	39.31	39.50	-0.47%
Average Past Service (Years)	10.80	10.40	3.87%
Average Future Service (Years)	18.83	18.67	0.86%
Average Outstanding Term of the Obligations (Years)	13.45	14.74	-8.79%





1.4 Basis of Valuation (Assumptions)

I have outlined the key actuarial assumptions and the considerations in setting the same.

Discount Rate:

The discount rate used to value the post-employment benefit obligation (both funded & non-funded) should be determined by reference to market yields at the balance sheet date on government bonds. The currency and term of the government bonds should be consistent with the currency and estimated terms of the post-employment benefit obligation.

The estimated term of the Obligation is around 13.45 years. The yields on the government bonds as at the valuation date were 7.65%.

Salary Growth Rate:

This is Management's estimate of the increases in the salaries of the employees over the long term. Estimated future salary increases should take account of inflation, seniority, promotion and other relevant factors such as supply and demand in the employment market.

Expected Rate of Return :

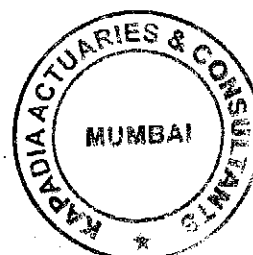
This assumption is required only in case of funded plans. The level of returns would depend on the nature of assets and the prevailing economic scenario.

Mortality:

I have assumed the standard published mortality table without any adjustment. A snapshot of the same is given below.

Withdrawal Rates:

This is Management's estimate of the level of attrition in the company over the long term. Estimated withdrawal rates should take into account the broad economic outlook, type of sector the company operates in and measures taken by the management to retain/relieve the employees.





The summary of the assumptions used in the valuations is given below:

Financial Assumptions:

Refer para 120 I of AS 15 (Revised 2005)

Table 3: Financial Assumptions		
Particulars	31-Mar-19	31-Mar-18
Discount Rate	7.65% p.a	7.60% p.a
Salary Growth Rate	9.00% p.a	9.00% p.a
Expected Rate of Return	Not Applicable	Not Applicable

Demographic Assumptions:

Withdrawal Rates (p.a.)

Table 4: Withdrawal Rates per annum		
Age Band	31-Mar-19	31-Mar-18
30 & Below	1.00%	1.00%
31 to 48	0.50%	0.50%
49 to 100	2.00%	2.00%

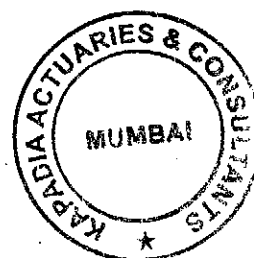
Mortality Rates

: Indian Assured Lives Mortality (2006-08) Table

Table 5: Sample Rates per annum of Indian Assured Lives Mortality		
Age (in years)	31-Mar-19	31-Mar-18
20	0.09%	0.09%
30	0.11%	0.11%
40	0.18%	0.18%
50	0.49%	0.49%
60	1.15%	1.15%

Method of Valuation:

I have used Projected Unit Credit (PUC) method to value the Defined benefit obligation.





1.5 Accounting Policy

The Gratuity Benefits are classified as Post-Retirement Benefits as per AS 15 (Revised 2005) and the accounting policy is outlined as follows.

Actuarial gains and losses arise due to difference in the actual experience and the assumed parameters and also due to changes in the assumptions used for valuation. The Company recognizes these actuarial gains and losses immediately in the statement of profit and loss as income or expense.

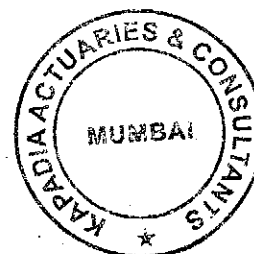
When the benefits of the plan are changed, or when a plan is curtailed or settlement occurs, the portion of the changed benefit related to past service by employees, or the gain or loss on curtailment or settlement, is recognized immediately in the profit or loss account when the plan amendment or when a curtailment or settlement occurs.

1.6 Details of Asset-Liability Matching Strategy

It was informed by the company that Gratuity Benefits liabilities of the company are Unfunded.

There are no minimum funding requirements for a Gratuity Benefits plan in India and there is no compulsion on the part of the Company to fully or partially pre-fund the liabilities under the Plan.

Since the liabilities are unfunded, there is no Asset-Liability Matching strategy devised for the plan.





1.7 Valuation Results

The assumptions and methodology used in compiling this Report are consistent with the requirements of AS15 (revised 2005) and Guidance Note 26 issued by the Institute of Actuaries of India.

The results are particularly sensitive to some assumptions, such as the discount rate, level of salary inflation & level of assumed mortality.

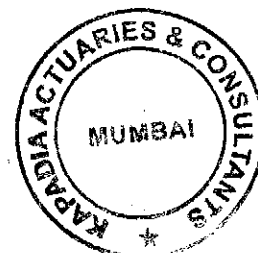
The Actuarial Value of Defined Benefit Obligation calculated using the above stated assumptions is Rs. 1,71,62,61,496/-

The amount to be provided in the Balance Sheet as 'Provision towards Gratuity Benefits Liability' as at 31-Mar-2019 is Rs. 1,71,62,61,496/-

The Charge to Profit and Loss Account for the period 01-Apr-2018 to 31-Mar-2019 works out to Rs. 52,92,67,075/-

Mr. Jenil Shah

Fellow of Institute of Actuaries of India (ID: 5568)



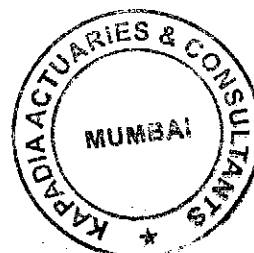


Southern Power Distribution Company of Telangana Limited

Actuarial Valuation of Gratuity Benefits as per AS 15 (Revised 2005)

Valuation period: 01-Apr-2018 to 31-Mar-2019

Annexure 1: Funded status of the plan		(Refer Para 120n)
Particulars	31-Mar-2019 (12 months)	31-Mar-2018 (12 months)
	Rs.	Rs.
Present value of unfunded obligations	1,71,62,61,496	1,20,72,21,098
Present value of funded obligations	-	-
Fair value of plan assets	-	-
Unrecognised Past Service Cost	-	-
Net Liability (Asset)	1,71,62,61,496	1,20,72,21,098





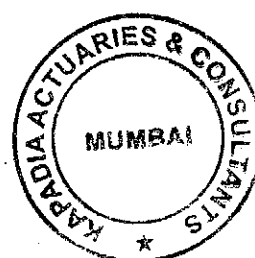
Southern Power Distribution Company of Telangana Limited

Actuarial Valuation of Gratuity Benefits as per AS 15 (Revised 2005)

Valuation period: 01-Apr-2018 to 31-Mar-2019

Annexure 2: Profit and loss account for the period		(Refer Para 120g)
Particulars	31-Mar-2019 (12 months)	31-Mar-2018 (12 months)
	Rs.	Rs.
Current service cost	11,55,46,378	10,61,31,684
Interest on obligation	9,17,48,803	8,32,73,174
Expected return on plan assets	-	-
Net actuarial loss/(gain)	32,19,71,894	(10,15,62,766)
Recognised Past Service Cost-Vested	-	-
Loss/(gain) on curtailments and settlement	-	-
Total included in 'Employee Benefit Expense'	52,92,67,075	8,78,42,092
Total Charge to P&L	52,92,67,075	8,78,42,092

Loss/(gain) on obligation as per Annexure 3	32,19,71,894	(10,15,62,766)
Loss/(gain) on assets as per Annexure 4	-	-
Net actuarial loss/(gain)	32,19,71,894	(10,15,62,766)



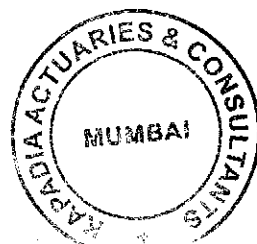


Southern Power Distribution Company of Telangana Limited

Actuarial Valuation of Gratuity Benefits as per AS 15 (Revised 2005)

Valuation period: 01-Apr-2018 to 31-Mar-2019

Annexure 3: Reconciliation of defined benefit obligation		(Refer Para 120c)
Particulars	31-Mar-2019 (12 months)	31-Mar-2018 (12 months)
	Rs.	Rs.
Opening Defined Benefit Obligation	1,20,72,21,098	1,14,85,95,507
Transfer in/(out) obligation	-	-
Current service cost	11,55,46,378	10,61,31,684
Interest cost	9,17,48,803	8,32,73,174
Actuarial loss (gain)	32,19,71,894	(10,15,62,766)
Past service cost	-	-
Loss (gain) on curtailments	-	-
Liabilities extinguished on settlements	-	-
Liabilities assumed in an amalgamation in the nature of purchase	-	-
Exchange differences on foreign plans	-	-
Benefits paid	(2,02,26,677)	(2,92,16,501)
Closing Defined Benefit Obligation	1,71,62,61,496	1,20,72,21,098



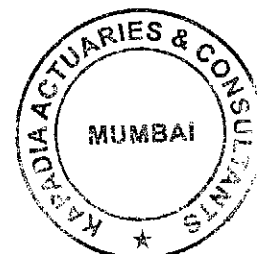


Southern Power Distribution Company of Telangana Limited

Actuarial Valuation of Gratuity Benefits as per AS 15 (Revised 2005)

Valuation period: 01-Apr-2018 to 31-Mar-2019

Annexure 4: Reconciliation of plan assets		(Refer Para 120e)	
Particulars	31-Mar-2019 (12 months)	31-Mar-2018 (12 months)	
	Rs.	Rs.	
Opening value of plan assets	-	-	
Transfer in/(out) plan assets	-	-	
Expenses deducted from the fund	-	-	
Expected return	-	-	
Actuarial gain/(loss)	-	-	
Assets distributed on settlements	-	-	
Contributions by employer	-	-	
Assets acquired in an amalgamation in the nature of purchase	-	-	
Exchange differences on foreign plans	-	-	
Benefits paid	-	-	
Closing value of plan assets	-	-	





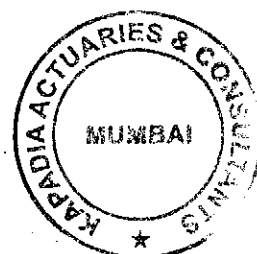
Southern Power Distribution Company of Telangana Limited

Actuarial Valuation of Gratuity Benefits as per AS 15 (Revised 2005)

Valuation period: 01-Apr-2018 to 31-Mar-2019

Annexure 5: Reconciliation of net defined benefit liability

Particulars	31-Mar-2019 (12 months)	31-Mar-2018 (12 months)
	Rs.	Rs.
Net opening provision in books of accounts	1,20,72,21,098	1,14,85,95,507
Transfer in/(out) obligation	-	-
Transfer (in)/out plan assets	-	-
Employee Benefit Expense as per Annexure 2	52,92,67,075	8,78,42,092
	1,73,64,88,173	1,23,64,37,599
Benefits paid by the Company	(2,02,26,677)	(2,92,16,501)
Contributions to plan assets	-	-
Closing provision in books of accounts	1,71,62,61,496	1,20,72,21,098



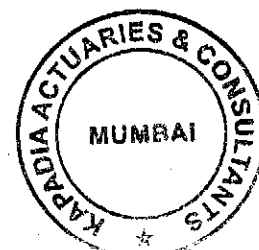


Southern Power Distribution Company of Telangana Limited

Actuarial Valuation of Gratuity Benefits as per AS 15 (Revised 2005)

Valuation period: 01-Apr-2018 to 31-Mar-2019

Annexure 6: Composition of the plan assets		(Refer Para 120h)
Particulars	31-Mar-2019 (12 months)	31-Mar-2018 (12 months)
	%	%
Government of India Securities	0%	0%
State Government Securities	0%	0%
High quality corporate bonds	0%	0%
Equity shares of listed companies	0%	0%
Property	0%	0%
Special Deposit Scheme	0%	0%
Policy of insurance	0%	0%
Bank Balance	0%	0%
Other Investments	0%	0%
Total	0%	0%





Southern Power Distribution Company of Telangana Limited
Actuarial Valuation of Gratuity Benefits as per AS 15 (Revised 2005)

Valuation period: 01-Apr-2018 to 31-Mar-2019

Annexure 7: Bifurcation of liability as per schedule III		
Particulars	31-Mar-2019 (12 months)	31-Mar-2018 (12 months)
	Rs.	Rs.
Current Liability*	5,41,29,611	2,71,89,257
Non-Current Liability	1,66,21,31,885	1,18,00,31,841
Net Liability	1,71,62,61,496	1,20,72,21,098

* The current liability is calculated as expected benefits for the next 12 months.



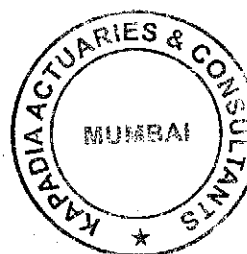


Southern Power Distribution Company of Telangana Limited

Actuarial Valuation of Gratuity Benefits as per AS 15 (Revised 2005)

Valuation period: 01-Apr-2018 to 31-Mar-2019

Annexure 8: Table of experience adjustments		(Refer Para 120n)
Particulars	31-Mar-2019 (12 months)	31-Mar-2018 (12 months)
	Rs.	Rs.
Defined Benefit Obligation	1,71,62,61,496	1,20,72,21,098
Plan Assets	-	-
Surplus/(Deficit)	(1,71,62,61,496)	(1,20,72,21,098)
Experience adjustments on plan liabilities	33,24,90,929	(4,36,46,114)
Actuarial loss/(gain) due to change in financial assumptions	(1,05,19,035)	(5,79,16,652)
Actuarial loss/ (gain) due to change in demographic assumption	-	-
Experience adjustments on plan assets	-	-
Net actuarial loss/ (gain) for the year	32,19,71,894	(10,15,62,766)



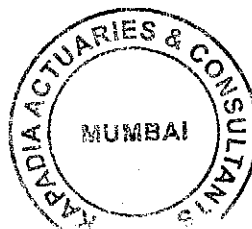


Southern Power Distribution Company of Telangana Limited

Actuarial Valuation of Gratuity Benefits as per AS 15 (Revised 2005)

Valuation period: 01-Apr-2018 to 31-Mar-2019

Annexure 9: Principle actuarial assumptions		
Particulars	31-Mar-2019 (12 months)	31-Mar-2018 (12 months)
Discount Rate	7.65% p.a	7.60% p.a
Expected Return on Plan Assets	Not Applicable	Not Applicable
Salary Growth Rate	9.00% p.a	9.00% p.a
Withdrawal Rates	1% at younger ages reducing to 2% at older ages	1% at younger ages reducing to 2% at older ages





Glossary of Terms

Actuarial Gain/Loss :	Actuarial Gain/Loss occurs due to the differences between the previous actuarial assumptions and actual experience and also due to changes in actuarial assumptions at the current valuation date compared to the previous valuation.
Curtailment :	The effect of plan amendments that reduce benefits for future service
Defined Benefit Obligation :	Discounted present value of the defined benefit as at the valuation date
Expected Rate of Return :	The expected return on plan assets over the accounting period, based on an assumed rate of return as at the start of the valuation period.
Interest on Obligation :	The increase in the present value of a defined benefit obligation during the valuation period which arises because the benefits are one period closer to settlement.
Past Service Cost :	The change in the present value of the defined benefit obligation due to any change in the structure of benefits.
Current Service Cost :	The increase in the present value of the defined benefit obligation resulting from employee service in the current period.
Settlement :	A settlement occurs when an enterprise enters into a transaction that eliminates all further obligations for part or all of the benefits provided under a defined benefit plan.

Saurabh Kochrekar

B. Chem Engg., FIAI

Jenil Shah

B. Com, ACA, FIAI



Southern Power Distribution Company of Telangana Limited

Actuarial valuation report as per AS15 (revised 2005)

Defined benefit scheme	: Leave benefits
Valuation period	: 01-Apr-2018 to 31-Mar-2019
Report date	: 22-Jul-2019

Kapadia Actuarial and Consultants

1205, Gold Crest Business Center, Opp. LT Road, Borivali West, Mumbai – 400 092

T: +91 22 4016 1446 E-mail: saurabh@kacindia.com / jenil@kacindia.com

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Glossary Of Terms	

1. Introduction and Objective of Valuation

I have been approached by the Company to value the Leave benefits as at 31-Mar-2019 based on Accounting Standard (AS) 15 (revised, 2005) issued by the Institute of Chartered Accountants of India.

The results set out in this Report and its annexures are based on requirements of AS15 (revised 2005) and its application to the Plan. They have been prepared for the specific requirements of AS15 (revised 2005) and should not be used for any other purpose. In particular this Report does not constitute a formal funding actuarial valuation of the Plan and does not present any recommendation of contributions or funding levels.

This report is provided solely for the Company's use and for the specific purposes indicated above. Except where I expressly agree in writing, it should not be disclosed or provided to any third party, other than as provided below. In the absence of such consent and an express assumption of responsibility, no responsibility whatsoever is accepted by me for any consequences arising from any third party relying on this Report or any advice relating to its contents. The Company may make a copy of this Report available to its auditors, but I make no representation as to the suitability of this Report for any purpose other than that for which it was originally provided and accept no responsibility or liability to the Company's auditors in this regard. The Company should draw the provisions of this paragraph to the attention of its auditors when passing this Report to them.

This report alongwith the annexure will form the basis of the balance-sheet and

disclosures to be made by the Company in respect of the Plan as at valuation date.

The objective of the valuation is to ascertain the liability on utilization of accumulated leave. The accumulated leave may also diminish on account of utilization if permissible in the course of employment. The effect of utilization will be reflected in year to year balance and the liability will be adjusted accordingly at every annual actuarial valuation. There is no separate accounting standard which lays down the actuarial method to be adopted for valuation of liability in respect of balances of accumulated leave. However general principles applicable to defined benefit retirement benefit have been applied.

2. Plan Features (Characteristics & Risks)

Characteristics Of Plan:

The benefits are governed by the Company's Leave Policy. The key provisions to best of my knowledge are given as under:

Table 1: Plan Features

Salary for Encashment	Gross Salary	
Salary for Availment	Cost to company	
Benefit Payable on	Death or Resignation/Withdrawal or Retirement	
Maximum accumulation	Employee	300
Encashment Formula	$(\text{Leave Days}) \times (\text{Salary}) / (\text{Leave Denominator})$	
Leave Denominator	Employee	30
Leaves Credited Annually	Employee	30
Retirement Age	60 & 58 years Years	

Changes in Inter-Valuation Period:

There are no changes in the benefit scheme since the last valuation.

There are no special events such as benefit improvements or curtailments or settlements during the inter-valuation period.

Major Risk to the Plan

I have outlined the following risks associated with the plan:

A. Actuarial Risk:

It is the risk that benefits will cost more than expected. This can arise due to one of the following reasons:

Adverse Salary Growth Experience: Salary hikes that are higher than the assumed salary escalation will result into an increase in Obligation at a rate that is higher than expected.

Variability in mortality rates: If actual mortality rates are higher than assumed mortality rate assumption than the leave benefit will be paid earlier than expected. The acceleration of cashflow will lead to an actuarial loss or gain depending on the relative values of the assumed salary growth and discount rate.

Variability in withdrawal rates: If actual withdrawal rates are higher than assumed withdrawal rate assumption than the leave benefit will be paid earlier than expected. The impact of this will depend on the relative values of the assumed salary growth and discount rate.

Variability in availment rates: If actual availment rates are higher than assumed availment rate assumption then leave balances will be utilised earlier than expected. This will result in reduction in leave balances and Obligation.

B. Investment Risk:

For funded plans that rely on insurers for managing the assets, the value of assets certified by the insurer may not be the fair value of instruments backing the liability. In such cases, the present value of the assets is independent of the future discount rate. This can result in wide fluctuations in the net liability or the funded status if there are significant changes in the discount rate during the inter-valuation period.

C. Liquidity Risk:

Employees with high salaries and long durations or those higher in hierarchy, accumulate significant level of benefits. If some of such employees resign/retire from the company there can be strain on the cashflows.

D. Market Risk:

Market risk is a collective term for risks that are related to the changes and fluctuations of the financial markets. One actuarial assumption that has a material effect is the discount rate. The discount rate reflects the time value of money. An increase in discount rate leads to decrease in Defined Benefit Obligation of the plan benefits & vice versa. This assumption depends on the yields on the corporate/government bonds and hence the valuation of liability is exposed to fluctuations in the yields as at the valuation date.

3. Valuation Data

I have received the data for the valuation from the Company. In preparing this Report I have relied on the completeness and accuracy of the information provided to us in writing by or on behalf of the Company and its advisors. I have not applied any detailed validation checks on the information provided. I have, however, carried out broad consistency checks.

The summary of the employee data is as follows:

Table 2: Summary Data		
Particulars	31-Mar-2019	31-Mar-2018
Number of Employees	8,745	8,735
Total Monthly Encashment Salary (Rs.)	96,76,31,469	67,90,40,768
Total Monthly Availment Salary (Rs.)	96,76,31,469	67,90,40,768
Average Age (Years)	43.36	43.89
Total Full-Leave Days	21,72,991	17,65,619

The value of discontinuance liability (if all the accrued benefits were to settle immediately) as at the valuation date is Rs. 7,94,79,25,438/-

4. Basis of Valuation (Assumptions)

I have outlined the key actuarial assumptions and the considerations in setting the same.

Discount Rate:

As per para 78 of AS 15 (revised, 2005), the discount rate used to value other long term employee benefit obligation (both funded & non-funded) should be determined by reference to market yields at the balance sheet date on government bonds. The currency and term of the government bonds should be consistent with the currency and estimated terms of other long term employee benefit obligation.

Salary Growth Rate:

This is Management's estimate of the increases in the salaries of the employees over the long term. Estimated future salary increases should take account of inflation, seniority, promotion and other relevant factors such as supply and demand in the employment market.

Expected Rate of Return:

This assumption is required only in case of funded plans. The level of returns would depend on the nature of assets and the prevailing economic scenario.

Mortality:

I have assumed the standard published mortality table without any adjustment. A snapshot of the same is given below.

Withdrawal Rates:

This is Management's estimate of the level of attrition in the company over the long term. Estimated withdrawal rates should take into account the broad economic outlook, type of sector the company operates in and measures taken by the management to retain/ relieve the employees.

Leave Availment Rate:

Under the Last In First Out (LIFO) method, the leave utilized is first taken out from the current years' accretion and only if leave utilized is in excess of the number of leave days credited each year, such excess is taken out of accumulated balance. Cost of leave consumed out of current year's accretion will be debited under the head 'salary' and does not enter in my computation.

The summary of the assumptions used in the valuations is given below:

Financial Assumptions:

Table 3: Financial Assumptions

Particulars	31-Mar-2019	31-Mar-2018
Discount Rate (p.a.)	7.65%	7.60%
Salary Growth Rate (p.a.)	9.00%	9.00%
Expected Rate of Return (p.a.)	Not Applicable	Not Applicable

Demographic Assumptions:

Withdrawal Rates (p.a.)

Table 4: Withdrawal Rates per annum

Age Band	31-Mar-2019	31-Mar-2018
30 & Below	1.00%	1.00%
31 to 48	0.50%	0.50%
48 to 100	2.00%	2.00%

Mortality Rates : Indian Assured Lives Mortality (2006-08) Table

Table 5: Sample Rates of Indian Assured Lives Mortality

Age (in years)	31-Mar-2019	31-Mar-2018
20	0.09%	0.09%
30	0.11%	0.11%
40	0.18%	0.18%
50	0.49%	0.49%
60	1.15%	1.15%

Leave Availment & Encashment Rate:

Table 6: Availment & Encashment Rates

Particulars	31-Mar-2019	31-Mar-2018
Leave Availment Rate (p.a.)	5% p.a.	5% p.a.
Encashment in service (p.a.)	0% p.a.	0% p.a.

Method of Valuation

I have used Projected Unit Credit (PUC) method to value the Defined benefit obligation.

5. Accounting Policy

The Leave benefits are classified as Other Long-term employee benefits as per AS15 (revised 2005) and the accounting policy is outlined as follows.

Actuarial gains and losses arise due to difference in the actual experience and the assumed parameters and also due to changes in the assumptions used for valuation. The Company recognizes these actuarial gains and losses immediately in the statement of profit and loss as income or expense.

When the benefits of the plan are changed, or when a plan is curtailed or settlement occurs, the portion of the changed benefit related to past service by employees, or the gain or loss on curtailment or settlement, is recognized immediately in the profit or loss account when the plan amendment or when a curtailment or settlement occurs.

6. Details of Asset-Liability Matching Strategy

It was informed by the company that Leave benefits liabilities of the company are unfunded.

There are no minimum funding requirements for a Leave benefits plans in India and there is no compulsion on the part of the Company to fully pre fund the liability of the Plan.

Since the liabilities are unfunded, there is no Asset-Liability Matching strategy devised for the plan.

7. Valuation Results

The assumptions and methodology used in compiling this Report are consistent with the requirements of AS15 (revised 2005) and Guidance Note 26 issued by the Institute of Actuaries of India.

The results are particularly sensitive to some assumptions, such as the discount rate, level of salary inflation, & level of assumed mortality.

The Actuarial Value of Defined Benefit Obligation calculated using the above stated assumptions is Rs. 8,71,84,79,966/-

The Charge to Profit and Loss Account for the period 01-Apr-2018 to 31-Mar-2019 works out to Rs. 3,42,60,17,274/-

Mr. Jenil Shah
Fellow of Institute of Actuaries of India (ID: 5568)

Southern Power Distribution Company of Telangana Limited

Actuarial Valuation of Leave benefits as per AS 15 (Revised 2005)

Valuation period: 01-Apr-2018 to 31-Mar-2019

Annexure 1: Funded status of the plan

Particulars	31-Mar-2019 (12 months)	31-Mar-2018 (12 months)
	Rs.	Rs.
Present value of unfunded obligations	8,71,84,79,966	5,68,75,52,270
Present value of funded obligations	-	-
Fair value of plan assets	-	-
Net Liability (Asset)	8,71,84,79,966	5,68,75,52,270

Southern Power Distribution Company of Telangana Limited

Actuarial Valuation of Leave benefits as per AS 15 (Revised 2005)

Valuation period: 01-Apr-2018 to 31-Mar-2019

Annexure 2: Profit and loss account for current period

Particulars	31-Mar-2019 (12 months)	31-Mar-2018 (12 months)
	Rs.	Rs.
Current service cost	34,38,56,343	23,20,54,533
Interest on obligation	40,32,47,673	47,75,16,594
Expected return on plan assets	-	-
Net actuarial loss/(gain)	2,67,89,13,258	(1,28,50,18,443)
Past service cost	-	-
Losses/(gains) on curtailments and settlement	-	-
Total included in 'Employee Benefit Expense'	3,42,60,17,274	(57,54,47,316)
<hr/>		
Total Charge to P&L	3,42,60,17,274	(57,54,47,316)
<hr/>		
Loss/(Gain) on obligation as per annexure 3	2,67,89,13,258	(1,28,50,18,443)
Loss/(Gain) on assets as per annexure 4	-	-
Net actuarial Loss/(Gain)	2,67,89,13,258	(1,28,50,18,443)

Southern Power Distribution Company of Telangana Limited

Actuarial Valuation of Leave benefits as per AS 15 (Revised 2005)

Valuation period: 01-Apr-2018 to 31-Mar-2019

Annexure 3: Reconciliation of defined benefit obligation

Particulars	31-Mar-2019 (12 months)	31-Mar-2018 (12 months)
	Rs.	Rs.
Opening Defined Benefit Obligation	5,68,75,52,270	6,58,64,35,786
Transfer in/(out) obligation	-	-
Current service cost	34,38,56,343	23,20,54,533
Interest cost	40,32,47,673	47,75,16,594
Actuarial losses/ (gains)	2,67,89,13,258	(1,28,50,18,443)
Past service cost	-	-
Losses (gains) on curtailments	-	-
Liabilities extinguished on settlements	-	-
Liabilities assumed in an amalgamation in the nature of purchase	-	-
Exchange differences on foreign plans	-	-
Benefits Paid	(39,50,89,578)	(32,34,36,200)
Closing Defined Benefit Obligation	8,71,84,79,966	5,68,75,52,270

Southern Power Distribution Company of Telangana Limited

Actuarial Valuation of Leave benefits as per AS 15 (Revised 2005)

Valuation period: 01-Apr-2018 to 31-Mar-2019

Annexure 4: Reconciliation of plan assets

Particulars	31-Mar-2019 (12 months)	31-Mar-2018 (12 months)
	Rs.	Rs.
Opening value of plan assets	-	-
Transfer in/(out) plan assets	-	-
Expected return	-	-
Actuarial gains and (losses)	-	-
Assets distributed on settlements	-	-
Contributions by employer	-	-
Assets acquired in an amalgamation in the nature of purchase	-	-
Exchange differences on foreign plans	-	-
Benefits paid	-	-
Closing Value of Plan Assets	-	-

Southern Power Distribution Company of Telangana Limited

Actuarial Valuation of Leave benefits as per AS 15 (Revised 2005)

Valuation period: 01-Apr-2018 to 31-Mar-2019

Annexure 5: Reconciliation of net defined benefit liability

Particulars	31-Mar-2019 (12 months)	31-Mar-2018 (12 months)
	Rs.	Rs.
Net opening provision in books of accounts	5,68,75,52,270	6,58,64,35,786
Transfer in/(out) obligation	-	-
Transfer (in)/out plan assets	-	-
Employee benefit expense as per annexure 2	3,42,60,17,274	(57,54,47,316)
	9,11,35,69,544	6,01,09,88,470
Benefits paid by the company	(39,50,89,578)	(32,34,36,200)
Contributions to plan assets	-	-
	8,71,84,79,966	5,68,75,52,270
Closing provision in books of accounts	8,71,84,79,966	5,68,75,52,270

Southern Power Distribution Company of Telangana Limited

Actuarial Valuation of Leave benefits as per AS 15 (Revised 2005)

Valuation period: 01-Apr-2018 to 31-Mar-2019

Annexure 6: Composition of the plan assets

Particulars	31-Mar-2019 (12 months)	31-Mar-2018 (12 months)
	%	%
Government of India Securities	0%	0%
State Government Securities	0%	0%
High quality corporate bonds	0%	0%
Equity shares of listed companies	0%	0%
Property	0%	0%
Special Deposit Scheme	0%	0%
Policy of insurance	0%	0%
Bank Balance	0%	0%
Other Investments	0%	0%
Total	0%	0%

Annexure 7: Bifurcation of liability as per schedule III

Particulars	31-Mar-2019 (12 months)	31-Mar-2018 (12 months)
	Rs.	Rs.
Current Liability*	1,17,04,91,505	76,33,23,663
Non-Current Liability	7,54,79,88,461	4,92,42,28,607
Net Liability	8,71,84,79,966	5,68,75,52,270

* The current liability is calculated as expected benefits for the next 12 months.

Southern Power Distribution Company of Telangana Limited

Actuarial Valuation of Leave benefits as per AS 15 (Revised 2005)

Valuation period: 01-Apr-2018 to 31-Mar-2019

Annexure 8: Table of experience adjustments

Particulars	31-Mar-2019 (12 months)	31-Mar-2018 (12 months)
	Rs.	Rs.
Defined Benefit Obligation	8,71,84,79,966	5,68,75,52,270
Plan Assets	-	-
Surplus/(Deficit)	(8,71,84,79,966)	(5,68,75,52,270)
Experience adjustments on plan liabilities	2,71,20,59,076	(1,15,06,11,493)
Actuarial loss/(gain) due to change in financial assumptions	(3,31,45,818)	(13,44,06,950)
Actuarial loss/ (gain) due to change in demographic assumption	-	-
Experience adjustments on plan assets	-	-
Net actuarial loss/ (gain) for the year	2,67,89,13,258	(1,28,50,18,443)

Annexure 9: Principle actuarial assumptions

Particulars	31-Mar-2019 (12 months)	31-Mar-2018 (12 months)
Discount Rate	7.65%	7.60%
Expected Return on Plan Assets	Not Applicable	Not Applicable
Salary Growth Rate	9.00%	9.00%
Withdrawal Rates	1% at younger ages reducing to 0% at older ages	1% at younger ages reducing to 0% at older ages
Leave Availment Rate	5% p.a.	5% p.a.
Leave Encashment Rate	0% p.a.	0% p.a.

Glossary of Terms

Actuarial Gain/Losses:	Actuarial Gain/Losses occurs due to the differences between the previous actuarial assumptions and actual experience and also due to changes in actuarial assumptions at the current valuation date compared to the previous valuation.
Curtailment:	The effect of plan amendments that reduce benefits for future service
Defined Benefit Obligation:	Discounted present value of the defined benefit as at the valuation date
Interest on Obligation:	The increase the present value of a defined benefit obligation during the valuation period which arises because the benefits are one period closer to settlement.
Expected Return on Plan Assets:	The expected return on plan assets over the accounting period, based on an assumed rate of return as at the start of the valuation period.
Past Service Cost:	The change in the present value of the defined benefit obligation due to any changes in the structure of benefits.
Current Service Cost:	The increase in the present value of the defined benefit obligation resulting from employee service in the current period.
Settlement:	A settlement occurs when an enterprise enters into a transaction that eliminates all further obligations for part or all of the benefits provided under a defined benefit plan.