



Telangana State Electricity Regulatory Commission
5th Floor, Singareni Bhavan, Red Hills, Lakdi-ka-Pul, Hyderabad 500004

ORDER

ON

**AGGREGATE REVENUE REQUIREMENT (ARR) AND
WHEELING TARIFFS**

FOR

**DISTRIBUTION BUSINESS FOR 4th CONTROL PERIOD
(FY 2019-20 TO FY 2023-24)**

IN THE SUPPLY AREAS OF

**SOUTHERN POWER DISTRIBUTION COMPANY OF
TELANGANA LIMITED (TSSPDCL)**

AND

**NORTHERN POWER DISTRIBUTION COMPANY OF
TELANGANA LIMITED (TSNPDCL)**

29.04.2020

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LIST OF ABBREVIATIONS

A&G	Administrative and General
APCPDCL	Andhra Pradesh Central Power Distribution Corporation Limited
APERC	Andhra Pradesh Electricity Regulatory Commission
APNPDCL	Northern Power Distribution Company of Andhra Pradesh Limited
APTransco	Transmission Corporation of Andhra Pradesh Limited
ARR	Aggregate Revenue Requirement
AT&C	Aggregate Technical and Commercial Losses
CAGR	Compound Annual Growth Rate
CC	Consumer Contribution
CEA	Central Electricity Authority
CERC	Central Electricity Regulatory Commission
CPI	Consumer Price Index
CT	Current Transformer
CWIP	Capital Work in Progress
DA	Daily Allowance
DE	Divisional Engineer
DISCOM	Distribution Company
DNR	Distribution Network Renovation
DTR	Distribution Transformer
EE	Employee Expenses
FPT	Filing for Proposed Tariff
FRP	Financial Restructuring Plan
FY	Financial Year
G.O.Ms.	Government Order (Manuscript)
GFA	Gross Fixed Assets
GHMC	Greater Hyderabad Municipal Corporation
GoI	Government of India
HT	High Tension
HV	High Voltage
HVDC	High Voltage Direct Current
IDC	Interest During Construction
ISI	Indian Standard Institute
JICA	Japan International Cooperation Agency
JLM	Junior Line Man
kV	kilo Volt
LI	Lift Irrigation
LT	Low Tension
LV	Low Voltage
MAT	Minimum Alternative Tax
MoP	Ministry of Power
MSW	Municipal Solid Waste

MU	Million Units
MW	Mega-Watt
MYT	Multi Year Tariff
NEP	National Tariff Policy
NTI	Non Tariff Income
NTP	National Tariff Policy
O&M	Operation and Maintenance
O.P.	Original Petition
OA	Open Access
OCFA	Original Cost of Fixed Assets
PFC	Power Finance Corporation
PTC	Power Trading Corporation
PTR	Power Transformer
R&M	Repairs & Maintenance
RBI	Reserve Bank of India
RE	Renewable Energy
REC	Rural Electrification Corporation
RMI	Renovation, Modernisation & Improvement
RoCE	Return on Capital Employed
RoE	Return on Equity
RRB	Regulated Rate Base
Rs.	Rupees
RTC	Round the Clock
SAC	State Advisory Committee
SCCL	Singareni Collieries Company Limited
SLDC	State Load Despatch Centre
SS	Sub-Station
STU	State Transmission Utility
TSERC	Telangana State Electricity Regulatory Commission
TSNPDCL	Northern Power Distribution Company of Telangana Limited
TSSPDCL	Southern Power Distribution Company of Telangana Limited
TSTransco	Transmission Corporation of Telangana Limited
UDAY	Ujwal Discom Assurance Yojana
VCB	Vacuum Circuit Breaker
WACC	Weighted Average Cost of Capital
WPI	Wholesale Price Index

**TELANGANA STATE ELECTRICITY REGULATORY COMMISSION
HYDERABAD**

O.P.Nos.9 and 10 of 2019

And

I.A.No.9 of 2020

Present

Sri T.Sriranga Rao, Chairman

Sri M.D.Manohar Raju, Member (Technical)

Sri Bandaru Krishnaiah, Member (Finance)

Dated: 29.04.2020

O.P.No.9 of 2019

Southern Power Distribution Company of Telangana Limited (TSSPDCL) ... Applicant

O.P.No.10 of 2019

Northern Power Distribution Company of Telangana Limited (TSNPDCL) ... Applicant

The Southern Power Distribution Company of Telangana Limited (TSSPDCL) and the Northern Power Distribution Company of Telangana Limited (TSNPDCL) (hereinafter referred to as “Petitioners” or “DISCOMs” or “Licensees”) filed Petitions under Multi Year Tariff (MYT) principles in accordance with the “Terms & Conditions for Determination of Tariff for Wheeling and Retail Sale of Electricity” Regulation No.4 of 2005, adopted by Telangana State Electricity Regulatory Commission (hereinafter referred to as “TSERC” or “Commission”) vide its Regulation No.1 of 2014 before the Commission on 16.12.2019 for approval of Aggregate Revenue Requirement (ARR) along with the Filing for Proposed Tariff (FPT) i.e., Wheeling Tariff for Distribution Business for 4th Control Period (FY 2019-20 to FY 2023-24). The Petitions were admitted by the Commission and assigned O.P.No.9 of 2019 and O.P.No.10 of 2019 for TSSPDCL and TSNPDCL respectively.

The Commission, in exercise of its powers under the Electricity Act, 2003 and Regulation No.4 of 2005, adopted by TSERC vide its Regulation No.1 of 2014, and after considering Petitioners’ submissions, suggestions and objections of the other stakeholders, responses of Petitioners’ issues that are raised during the Public Hearing, and all other relevant material, passed the following common Order.

ORDER

CHAPTER 1 INTRODUCTION

1.1 BACKGROUND

1.1.1 Telangana State Electricity Regulatory Commission (herein referred to as TSERC or the Commission) was constituted by the Government of Telangana (GoTS) in terms of the provisions of Schedule XII (C) (3) of the A.P.Reorganisation Act of 2014, read with Section 82 of the Electricity Act, 2003 (Act, 2003) vide G.O.Ms.No.3, (Energy) (Budget) Department, dated 26.07.2014.

1.1.2 This Commission having been established u/s 82(1) of the Act, 2003 is required to exercise the powers and functions vested in it in terms of Section 86 and Section 62(1) of the Act, 2003 to determine the tariff for (1) supply of electricity by a generating company to a distribution licensee; (2) transmission of electricity; (3) wheeling of electricity; and (4) retail sale of electricity as the case may be within the state of Telangana.

1.1.3 The Commission issued Regulation, viz., Regulation No.1 of 2014, on 10.12.2014 being Adoption of Previously Subsisting Regulations, Decisions, Directions or Orders, Licenses and Practice of Directions. Clause 2 of this regulation specifies as follows:

“All regulations, decisions, directions or orders, all the licences and practice directions issued by the erstwhile Andhra Pradesh Electricity Regulatory Commission (Regulatory Commission for States of Andhra Pradesh and Telangana) as in existence as on the date of the constitution of the Telangana State Electricity Regulatory Commission and in force, shall mutatis-mutandis apply in relation to the stakeholders in electricity in the State of Telangana including the Commission and shall continue to have effect until duly altered, repealed or amended, any of Regulation by the Commission with effect from the date of notification as per Notification issued by the Government of Telangana in G.O.Ms.No.3 Energy(Budget) Department, dt.26-07-2014 constituting the Commission.”

1.1.4 In accordance with the above Regulation, all the Regulations framed by the erstwhile Andhra Pradesh Electricity Regulatory Commission (APERC) will continue to apply for the state of Telangana, till further modification. Accordingly, the Regulation No.4 of 2005 as in existence as on date of constitution of TSERC and in force, shall mutatis-mutandis apply in relation to determination of ARR and Wheeling Tariffs TSSPDCL and TSNPDCL.

- 1.1.5 The Commission, in its Order dated 27.03.2015 in O.P.Nos.78&79 of 2015, had approved the ARR and Wheeling Tariffs for TSSPDCL and TSNPDCL for 3rd Control Period from FY 2014-15 to FY 2018-19. The Commission, in its Amendment Order dated 31.12.2016, had issued certain Amendments to the Order dated 27.03.2015.
- 1.1.6 In accordance with Clause 6.1 of the Regulation No.4 of 2005, the Distribution Licensees are required to file for each of their licensed business, an application for approval of ARR for each year of the Control Period, not less than 120 days before the commencement of the first year of the Control Period. Regulation No.4 of 2005 also defines Control Period as a multi-year period fixed by the Commission from time to time, usually 5 years, for which the principles of determination of ARR will be fixed. Accordingly, 4th Control Period is from FY 2019-20 to FY 2023-24. The Petitions for approval of ARR for 4th Control Period from FY 2019-20 to FY 2023-24 was to be filed by 30.11.2018.
- 1.1.7 The Petitioners, vide their letters dated 25.09.2018, 31.12.2018, 19.03.2019, 29.06.2019, and 30.09.2019 sought extension of time for filing of Petitions for 4th Control Period from 30.11.2018, lastly upto 30.11.2019. The Commission vide its letter dated 11.12.2018 communicated to the Petitioners that the same shall be considered along with the Petitions to be filed for 4th Control Period. The instant Petitions were filed on 16.12.2019.
- 1.1.8 The Petitioners have expressed the following difficulties in preparation of Petitions for 4th Control Period while seeking extension of time for filing of Petition for 4th Control Period:
- i. Revision of cost estimates due to finalisation of audited accounts for the Base Year i.e., FY 2018-19.
 - ii. Enforcement of Model Code of Conduct from 10.03.2019 upto 23.05.2019 for the Lok Sabha elections 2019 by the Election Commission of India.
 - iii. Non-receipt of information of Lift Irrigation (LI) schemes from Irrigation Department.
 - iv. Non-receipt of information on power availability and cost thereon from Central Generating Stations.
- 1.1.9 The Commission reviewed the representations/letters submitted by the Licensees for extension of time and resolved to condone the delay in filing the Petition for determination of ARR and Wheeling Tariffs for 4th Control Period i.e., FY 2019-20 to

FY 2023-24.

1.1.10 TSSPDCL and TSNPDCL filed the instant Petitions for approval of ARR and Wheeling Tariffs for 4th Control Period from FY 2019-20 to FY 2023-24 with the following prayers:

- Condone the delay in filing of this petition.
- Take the accompanying ARR and Wheeling Tariff application on record for Distribution Business and treat it as complete;
- Grant suitable opportunity within a reasonable time frame to the additional material information that may be subsequently available;
- Consider and approve ARR and Tariff application including all requested regulatory treatments in the filing;
- Pass such order as the Hon'ble Commission may deem fit and proper in the facts and circumstances of the case.

1.2 ADMISSION OF PETITIONS AND REGULATORY PROCESS

1.2.1 The Petitions for approval of ARR and Tariff for Distribution Business for 4th Control Period from FY 2019-20 to FY 2023-24 submitted by the DISCOMs were scrutinised and found to be generally in order as required under the TSERC (Conduct of Business) Regulations, 2015 (Regulation No.2 of 2015). The Commission admitted the filings and the same were taken on record by assigning the following Original Petition (O.P.) numbers:

- O.P.No.9 of 2019 for TSSPDCL
- O.P.No.10 of 2019 for TSNPDCL

1.2.2 Upon scrutiny of the filings of the Petitioners, the Commission identified certain data gaps and directed the Petitioners to furnish additional information. As directed by the Commission, the Petitioners furnished the additional information and placed the same on their respective websites. However, the petitioners not furnished the total information for the true-up of 1st, 2nd and 3rd Control Periods.

1.2.3 The Petitioners, as directed by the Commission, published for information of all stakeholders a notice in two (2) English newspapers, two (2) Telugu newspapers and one (1) Urdu newspaper on 29.12.2019. The notice was to inform the general public that the Petitioners have filed the ARR and Tariff in respect of their Distribution Business for 4th MYT Control Period before the Commission.

1.2.4 Overview of Stakeholders' Consultation Process:

1.2.4.1 The filings have been made available by the Petitioners along with supporting

material to the public at large including all stakeholders. The filings and supporting material were also hosted on the websites of the Commission as well as the Petitioners.

1.2.4.2 It was also notified in the public notice (Annexure-1) that, objections/suggestions on the filings may be filed with the Petitioners by 28.01.2020 with a copy marked to the Commission. In response to the public notice, objections/suggestions were received from five (5) stakeholders (Annexure-2) by the Commission in writing and no further objections/suggestions were received during the Public Hearing. One (1) stakeholder has submitted additional objections/suggestions after the Public Hearing and the same has also been considered by the Commission. The list of persons who attended the Public Hearing on 06.02.2020 is enclosed at Annexure-3.

1.2.4.3 The Petitioners were directed to give the reply to the stakeholders in writing to all the written objections/suggestions received by 04.02.2020 by sending the same to the respective objector with a copy to the Commission before the scheduled date of Public Hearing. The replies were also to be posted on the website of the Commission.

1.2.4.4 The State Advisory Committee (SAC) meeting was conducted on 29.01.2020 to elicit views of members on the filings of the Petitioners. The views of the members were duly considered while determining the ARR and Wheeling Tariffs.

1.2.4.5 The Commission has conducted the Public Hearing at Commission's Court Hall on 06.02.2020. During the Public Hearing, the Petitioners made brief presentations on their respective filings and then the Commission heard the objectors desiring to be heard in person. At the hearing, apart from the registered objectors, the persons/organizations who had turned up at the venue directly were also heard. At the end, as directed by the Commission, the Petitioners responded on the issues raised by the objectors during the Public Hearing.

1.3 DATA GAPS AND PETITIONERS' RESPONSES

1.3.1 During scrutiny, the filings of the Petitioners as well as based on objections raised by the objectors' certain information was found to be deficient in certain aspects and therefore, additional information was sought. Subsequently, the Petitioners submitted the additional information sought by the Commission for the 4th Control Period. The Commission has considered the original filings and additional information submitted by the Petitioners. However, the petitioners have not submitted the required

information for the True-up of 1st, 2nd & 3rd Control Periods.

CHAPTER 2 SUMMARY OF FILINGS

2.1 PETITIONERS' SUBMISSIONS

2.1.1 The Petitioners have made the following submissions in their original filings and the additional submissions:

- True-up of 1st Control Period from FY 2006-07 to FY 2008-09
- True-up of 2nd Control Period from FY 2009-10 to FY 2013-14
- True-up of 3rd Control Period from FY 2014-15 to FY 2018-19
- ARR for 4th Control Period from FY2019-20 to FY2023-24
- Wheeling Tariffs for 4th Control Period from FY 2019-20 to FY 2023-24
- Wheeling Loss trajectory for 4th Control Period from FY2019-20 to FY2023-24

2.1.2 The summary of each of the submissions is detailed below:

2.2 TRUE-UP OF 1ST AND 2ND CONTROL PERIODS

2.2.1 The Commission, in its MYT Order dated 27.03.2015, directed Discoms to file the true up proposals of Distribution Business for both Control Periods (i.e., 1st Control Period and 2nd Control Period) after segregating the assets and liabilities of Anantapur and Kurnool districts from APCPDCL and Seven Mandals of APNPDCL in line with the A.P.Reorganisation Act, 2014, as per prevailing Regulation.

2.2.2 TSSPDCL and TSNPDCL submitted that the segregation of assets and liabilities has been carried out as per A.P.Reorganisation Act, 2014 and in line with G.O.Ms.No.24, dated 29.05.2014 and G.O.Ms.No.20, dated 08.05.2014. Accordingly, the true-up claim for TSSPDCL has been considered at 82.55% of the total claim for erstwhile APCPDCL and the true-up claim for TSNPDCL has been considered as 99.83% of the total claim for erstwhile APNPDCL.

2.2.3 The summary of true-up of 1st Control Period claimed by TSSPDCL (for erstwhile APCPDCL) is as shown in the Table below:

Table 2-1: Summary of true-up of 1st Control Period claimed by TSSPDCL (for erstwhile APCPDCL)

Particulars	FY 2006-07			FY 2007-08			FY 2008-09		
	Approved	Actual	Deviation	Approved	Actual	Deviation	Approved	Actual	Deviation
O&M expenses (net)	371.27	456.47	85.20	389.84	552.10	162.26	406.90	545.97	139.07
Return on Capital Employed	132.55	113.18	(19.37)	146.21	118.97	(27.24)	159.90	145.67	(14.23)
Depreciation during the	130.90	138.50	7.60	152.47	146.39	(6.08)	171.85	153.32	(18.53)

Rs. in crore

Particulars	FY 2006-07			FY 2007-08			FY 2008-09		
	Approved	Actual	Deviation	Approved	Actual	Deviation	Approved	Actual	Deviation
year									
Taxes on Income		0.82	0.82		1.28	1.28	0.00	1.04	1.04
Special Appn. For Safety measures	5.00	0.00	(5.00)	5.00	0.00	(5.00)	5.00	0.00	(5.00)
Other Expenditure	4.47	1.69	(2.78)		6.61	6.61	0.00	13.78	13.78
Gross ARR	644.19	710.67	66.48	693.52	825.36	131.84	743.65	859.78	116.13
Revenue	644.19	649.79	5.60	693.52	690.11	(3.41)	743.65	737.33	(6.32)
Non-Tariff Income		30.96	30.96		24.24	24.24	0.00	23.39	23.39
Total Revenue	644.19	680.75	36.56	693.52	714.35	20.83	743.65	760.72	17.07
Total Gap	0.00	29.92	29.92	0.00	111.00	111.00	0.00	99.07	99.07
Cumulative Gap			29.92			140.92			239.99

2.2.4 TSSPDCL has claimed the total gap of Rs.239.99 crore for erstwhile APCPDCL. Out of the total gap of Rs.239.99 crore, TSSPDCL has claimed its share at Rs.198.11 crore on account of true-up of 1st Control Period from FY 2006-07 to FY 2008-09.

2.2.5 The summary of true-up of 1st Control Period claimed by TSNPDCL (for erstwhile APNPDCL) is as shown in the Table below:

Table 2-2: Summary of true-up of 1st Control Period claimed by TSNPDCL (for erstwhile APNPDCL)

Rs. in crore

Particulars	FY 2006-07			FY 2007-08			FY 2008-09		
	Approved	Actuals	Deviation	Approved	Actuals	Deviation	Approved	Actuals	Deviation
O&M Expenses (net)	196.71	243.17	46.46	200.93	228.01	27.08	210.78	281.66	70.88
Return on Capital Employed	77.51	80.49	2.98	87.01	76.66	(10.35)	93.65	93.95	0.29
Depreciation	82.38	89.63	7.25	90.27	102.46	12.19	98.10	115.28	17.18
Taxes on Income	-	1.38	1.38	-	1.46	1.46	-	1.67	1.67
Special Appn. For Safety measures	5.00	-	(5.00)	5.00	-	(5.00)	5.00	22.33	17.33
Other Expenditure	3.45	-	(3.45)	-	0.55	0.55	-	0.64	0.64
Gross ARR	365.05	414.67	49.62	383.21	409.14	25.93	407.53	515.52	107.99
Revenue	365.05	365.05	-	383.21	383.21	-	407.53	407.53	-
Non-Tariff Income	-	-	-	-	-	-	-	-	-
Total Revenue	365.05	365.05	-	383.21	383.21	-	407.53	407.53	-
Total Gap/(Surplus)	-	49.62	49.62	-	25.93	25.93	-	107.99	107.99
Cumulative Gap/(Surplus)			49.62			75.55			183.53

2.2.6 TSNPDCL has claimed the total gap of Rs.183.53 crore for erstwhile APNPDCL. Out of the total gap of Rs.183.53 crore, TSNPDCL has claimed its share at Rs.183.22 crore on account of true-up of 1st Control Period from FY 2006-07 to FY 2008-09.

2.2.7 The summary of true-up of 2nd Control Period claimed by TSSPDCL (for erstwhile APCPDCL) is as shown in the Tables below:

Table 2-3: Summary of true-up of 2nd Control Period claimed by TSSPDCL (for erstwhile APCPDCL)

Rs. in crore

Particulars	FY 2009-10			FY 2010-11			FY 2011-12		
	Approved	Actual	Deviation	Approved	Actual	Deviation	Approved	Actual	Deviation
O&M expenses (Net)	644.72	602.58	-42.14	716.33	849.91	133.58	784.65	1105.96	321.31
Return on Capital Employed	184.72	173.11	-11.61	209.14	200.86	-8.28	227.66	254.59	26.93
Depreciation during the year	224.82	166.57	-58.25	301.67	182.27	-119.40	380.94	220.13	-160.81
Taxes on Income	1.50	3.34	1.84	1.50	2.44	0.94	1.50	1.28	-0.22
Special Appn. for safety measures	5.00		-5.00	5.00		-5.00	5.00		-5.00
Other Expenditure		0.00	0.00		0.56	0.56		1.99	1.99
Gross ARR	1060.76	945.60	-115.16	1233.64	1236.05	2.41	1399.75	1583.95	184.20
Revenue	1028.65	1022.38	-6.27	1201.47	1201.47	0.00	1367.50	1367.56	0.06
Non-Tariff Income	32.10	40.36	8.26	32.17	43.35	11.18	32.25	47.41	15.16
Total Revenue	1060.75	1062.74	1.99	1233.64	1244.82	11.18	1399.75	1414.97	15.22
Total Gap/ (Surplus)	0.00	-117.15	-117.15	0.00	-8.77	-8.77	0.00	168.98	168.98
Cumulative Gap/ (Surplus)			-117.15			-125.92			43.06

Particulars	FY 2012-13			FY 2013-14		
	Approved	Actual	Deviation	Approved	Actual	Deviation
O&M expenses (Net)	869.17	1106.41	237.24	954.34	1221.96	267.62
Return on Capital Employed	243.99	293.17	49.18	257.17	348.27	91.10
Depreciation during the year	443.94	254.56	-189.38	514.17	284.00	-230.17
Taxes on Income	1.50		-1.50	1.50	0.00	-1.50
Special Appn. for safety measures	5.00		-5.00	5.00	0.00	-5.00
Other Expenditure		16.41	16.41		0.00	0.00
Gross ARR	1563.60	1670.55	106.96	1732.18	1854.23	122.05
Revenue	1531.28	1531.45	0.17	1699.76	1699.83	0.08
Non-Tariff Income	32.32	51.10	18.78	32.42	50.13	17.71
Total Revenue	1563.60	1582.55	18.95	1732.18	1749.96	17.79
Total Gap	0.00	88.01	88.00	0.00	104.26	104.26
Cumulative Gap			131.06			235.33

2.2.8 TSSPDCL has claimed the total gap of Rs.235.33 crore for erstwhile APCPDCL. Out of the total gap of Rs.235.33 crore, TSSPDCL has claimed its share at Rs.194.26 crore on account of true-up of 2nd Control Period from FY 2009-10 to FY 2013-14.

2.2.9 The summary of true-up of 2nd Control Period claimed by TSNPDCL (for erstwhile

APNPDCL) is as shown in the Tables below:

Table 2-4: Summary of true-up of 2nd Control Period claimed by TSNPDCL (for erstwhile APNPDCL)

Rs. in crore

Particulars	FY 2009-10			FY 2010-11			FY 2011-12		
	Approved	Actual	Deviation	Approved	Actual	Deviation	Approved	Actual	Deviation
O&M expenses (Net)	251.43	286.96	35.53	284.63	489.37	204.74	317.23	443.51	126.28
Return on Capital Employed	113.70	117.06	3.36	130.93	131.74	0.81	148.12	139.91	(8.21)
Depreciation during the year	149.73	142.76	(6.97)	183.80	147.11	(36.69)	232.45	160.77	(71.68)
Taxes on Income	1.25	1.68	0.43	1.25	1.93	0.68	1.50	0.87	(0.63)
Special Appn. for safety measures	5.00	30.88	25.88	5.00	17.92	12.92	5.00	1.16	(3.84)
Other Expenditure	3.90	1.01	(2.89)	3.97	0.59	(3.38)	4.03	1.21	(2.82)
Gross ARR	525.01	580.35	55.34	609.58	788.66	179.08	708.33	747.43	39.10
Revenue	519.15	519.15	-	603.67	603.67	-	702.38	702.38	-
Non-Tariff Income	5.86	15.87	10.01	5.91	15.59	9.68	5.95	17.61	11.66
Total Revenue	525.01	535.02	10.01	609.58	619.26	9.68	708.33	719.99	11.66
Total Gap	-	45.33	45.33	-	169.40	169.40	-	27.43	27.43
Cumulative Gap			45.33			214.73			242.16

Particulars	FY 2012-13			FY 2013-14		
	Approved	Actual	Deviation	Approved	Actual	Deviation
O&M expenses (Net)	368.02	560.09	192.07	407.91	646.35	238.44
Return on Capital Employed	156.79	153.97	(2.82)	159.13	164.96	5.83
Depreciation during the year	275.60	174.23	(101.37)	319.20	186.49	(132.71)
Taxes on Income	1.50	-	(1.50)	1.50	-	(1.50)
Special Appn. for safety measures	5.00	0.56	(4.44)	5.00	0.24	(4.76)
Other Expenditure	4.11	0.86	(3.25)	4.19	1.19	(3.00)
Gross ARR	811.02	889.69	78.67	896.93	999.23	102.30
Revenue	805.02	805.02	-	890.87	890.87	-
Non-Tariff Income	6.00	21.44	15.44	6.06	26.63	20.58
Total Revenue	811.02	826.46	15.44	896.93	917.51	20.58
Total Gap	-	63.24	63.24	-	81.72	81.72
Cumulative Gap			305.40			387.12

2.2.10 TSNPDCL has claimed the total gap of Rs.387.12 crore for erstwhile APNPDCL. Out of the total gap of Rs.387.12 crore, TSNPDCL has claimed its share at Rs.386.46 crore on account of true-up of 2nd Control Period from FY 2009-10 to FY 2013-14.

2.3 TRUE-UP OF 3RD CONTROL PERIOD

2.3.1 The summary of true-up of 3rd Control Period claimed by TSSPDCL is as shown in the Tables below:

Table 2-5: Summary of true-up of 3rd Control Period claimed by TSSPDCL

Rs. in crore

Particulars	FY 2014-15			FY 2015-16			FY 2016-17		
	Approved	Actual	Deviation	Approved	Actual	Deviation	Approved	Actual	Deviation
O&M expenses (Net)	1055.74	1315.69	259.95	1164.20	1080.82	-83.38	1397.80	1841.33	443.53
Return on Capital Employed	277.95	233.75	-44.20	376.00	332.55	-43.44	490.17	558.86	68.70
Depreciation during the year	497.25	457.14	-40.11	561.63	544.52	-17.11	634.64	673.28	38.64
Taxes on Income	14.40	0.00	-14.40	19.48	0.00	-19.48	25.39		-25.39
Special Appn. for safety measures	30.00	0.00	-30.00	35.00	0.00	-35.00	40.00	0.00	-40.00
Other Expenditure	0.48	1.01	0.53	0.50	5.66	5.16	0.53	9.61	9.08
Gross ARR	1875.82	2007.59	131.76	2156.80	1963.56	-193.25	2588.53	3083.08	494.56
Revenue	241.30	264.21	22.91	326.16	292.04	-34.12	320.55	323.43	2.88
Non-Tariff Income	-	-	-	-	-	-	-	-	-
Total Revenue	241.30	264.21	22.91	326.16	292.04	-34.12	320.55	323.43	2.88
Total Gap/ (Surplus)	1634.52	1743.37	108.85	1830.64	1671.52	-159.12	2267.98	2759.66	491.68
Cumulative Gap/(Surplus)			108.85			-50.27			441.41

Particulars	FY 2017-18			FY 2018-19		
	Approved	Actual	Deviation	Approved	Actual	Deviation
O&M expenses (Net)	1633.80	2109.00	475.20	1901.31	2404.02	502.71
Return on Capital Employed	610.10	565.30	-44.80	729.99	542.28	-187.71
Depreciation during the year	704.56	772.14	67.58	774.49	855.81	81.32
Taxes on Income	31.60		-31.60	37.81	0.00	-37.81
Special Appn. for safety measures	45.00		-45.00	50.00	0.00	-50.00
Other Expenditure	0.56	16.20	15.64	0.59	21.69	21.10
Gross ARR	3025.62	3462.64	437.02	3494.18	3823.80	329.62
Revenue	362.72	228.69	-134.03	395.46	436.84	41.38
Non-Tariff Income	-	-	-	-	-	-
Total Revenue	362.72	228.69	-134.03	395.46	436.84	41.38
Total Gap/ (Surplus)	2662.90	3233.95	571.04	3098.72	3386.96	288.23
Cumulative Gap/(Surplus)			1012.45			1300.69

2.3.2 TSSPDCL has claimed the total gap of Rs.1300.69 crore on account of true-up of 3rd Control Period from 2014-15 to FY 2018-19.

2.3.3 The summary of true-up of 3rd Control Period claimed by TSNPDCL is as shown in the Tables below:

Table 2-6: Summary of true-up of 3rd Control Period claimed by TSNPDCL

Rs. in crore

Particulars	FY 2014-15			FY 2015-16			FY 2016-17		
	Approved	Actual	Deviation	Approved	Actual	Deviation	Approved	Actual	Deviation

Particulars	FY 2014-15			FY 2015-16			FY 2016-17		
	Approved	Actual	Deviation	Approved	Actual	Deviation	Approved	Actual	Deviation
O&M expenses (Net)	628.08	891.26	263.18	740.26	873.50	133.24	882.64	912.92	30.28
Return on Capital Employed	188.52	151.16	(37.36)	224.68	159.89	(64.79)	267.65	247.28	(20.37)
Depreciation during the year	235.27	195.01	(40.26)	258.20	132.69	(125.51)	311.59	208.13	(103.46)
Taxes on Income	8.48	-	(8.48)	9.09	-	(9.09)	9.36	-	(9.36)
Special Appn. for safety measures	25.89	2.01	(23.88)	61.86	2.47	(59.39)	65.12	5.15	(59.97)
Other Expenditure	1.25	6.80	5.55	1.31	0.12	(1.19)	1.38	0.04	(1.34)
Gross ARR	1087.49	1246.23	158.74	1295.40	1168.67	(126.73)	1537.74	1373.52	(164.22)
Revenue	1019.34	1019.34	-	1203.15	1203.15	-	1390.17	1390.17	-
Non-Tariff Income	68.15	16.75	(51.40)	92.25	24.94	(67.31)	147.57	19.93	(127.64)
Total Revenue	1087.49	1036.09	(51.40)	1295.40	1228.09	(67.31)	1537.74	1410.10	(127.64)
Total Gap/ (Surplus)	-	210.14	210.14	-	(59.42)	(59.42)	-	(36.59)	(36.59)
Cumulative Gap/ (Surplus)			210.14			150.72			114.13

Particulars	FY 2017-18			FY 2018-19		
	Approved	Actual	Deviation	Approved	Actual	Deviation
O&M expenses (Net)	1026.28	824.71	(201.57)	1194.45	1773.84	579.39
Return on Capital Employed	328.59	213.08	(115.51)	404.02	258.51	(145.51)
Depreciation during the year	372.40	235.82	(136.58)	427.63	268.29	(159.34)
Taxes on Income	9.56	-	(9.56)	10.58	-	(10.58)
Special Appn. for safety measures	68.41	18.58	(49.83)	71.42	23.64	(47.78)
Other Expenditure	1.45	-	(1.45)	1.52	-	(1.52)
Gross ARR	1806.69	1292.19	(514.50)	2109.62	2324.27	214.65
Revenue	1632.93	1632.93	-	1920.47	1920.47	-
Non-Tariff Income	173.76	31.59	(142.17)	189.15	62.79	(126.36)
Total Revenue	1806.69	1664.52	(142.17)	2109.62	1983.26	(126.36)
Total Gap/ (Surplus)	-	(372.33)	(372.33)	-	341.01	341.01
Cumulative Gap/ (Surplus)			-258.20			82.82

2.3.4 TSNPDCL has claimed the total gap of Rs.82.82 crore on account of true-up of 3rd Control Period from 2014-15 to FY 2018-19.

2.4 CAPITAL INVESTMENT PLAN FOR 4TH CONTROL PERIOD

2.4.1 The summary of Capital Investment Plan proposed by TSSPDCL for 4th Control Period is as shown in the Table below:

Table 2–7: Summary of Capital Investment Plan proposed by TSSPDCL for 4th Control Period

Rs. in crore

Particulars	2019-20	2020-21	2021-22	2022-23	2023-24	Total
Load Growth and Network Strengthening						
Substation Addition	233.82	212.42	501.76	735.67	686.55	2370.22
PTR Addition	2.74	8.51	12.70	20.22	25.21	69.38
PTR Upgradation	31.71	12.77	9.35	14.58	11.74	80.15
Feeder Addition	7.21	10.06	16.97	19.91	28.22	82.37
DTR Addition	831.54	931.31	1048.83	1186.84	1350.53	5349.05
Sub Total	1107.02	1175.07	1589.61	1977.22	2102.25	7951.17
Other Capex						
Loss Reduction	25.75	28.73	29.79	30.79	31.94	147.00
Reliability Improvement & Contingency Schemes	32.44	36.87	40.21	45.06	50.58	205.17
Renovation & Modernisation	167.17	199.01	222.37	249.25	281.55	1119.34
New Consumer Capex	191.68	193.40	198.56	204.19	210.78	998.61
Civil Infrastructure Development	11.78	13.61	15.66	17.95	20.51	79.51
Technology Upgradation	59.24	59.35	59.56	59.66	59.77	297.57
Land Cost for SS	12.68	9.09	24.54	34.86	33.74	114.90
Road cutting cost (Cables for SS)	24.30	21.00	68.02	122.44	112.40	348.17
Sub Total	525.03	561.05	658.71	764.20	801.27	3310.27
Total	1632.05	1736.12	2248.32	2741.42	2903.52	11261.44
IDC	83.76	79.07	102.88	132.63	145.39	543.73
O&M expenses capitalised	145.82	155.95	206.84	255.80	271.63	1036.04
Grand Total	1861.63	1971.14	2558.04	3129.85	3320.54	12841.21

2.4.2 The summary of Capital Investment Plan proposed by TSNPDCL for 4th Control Period is as shown in the Table below:

Table 2–8: Summary of Capital Investment Plan proposed by TSNPDCL for 4th Control Period

Rs. in crore

Particulars	2019-20	2020-21	2021-22	2022-23	2023-24	Total
Load Growth and Network Strengthening						
Substation Addition	191.83	541.25	696.42	1185.84	944.27	3559.60
PTR Addition	16.08	31.30	24.00	37.78	41.56	150.72
PTR Upgradation	11.98	12.98	13.22	11.10	16.08	65.36
Feeder Addition	4.75	24.66	19.70	16.83	6.70	72.63
DTR Addition	624.47	689.58	761.61	841.53	930.08	3847.28
Sub Total	849.11	1299.76	1514.95	2093.07	1938.68	7695.58
Other Capex						
Loss Reduction	201.96	301.33	167.65	129.27	136.00	936.21
Reliability Improvement & Contingency Schemes	194.56	221.86	224.12	241.56	265.10	1147.19
Renovation & Modernisation	19.70	23.18	22.32	26.00	29.28	120.48
New Consumer Capex	30.29	31.68	33.18	34.71	36.34	166.21
Civil Infrastructure Development	26.23	29.22	32.47	39.01	46.13	173.06
Technology Upgradation	29.37	30.27	31.22	31.61	32.62	155.09
Sub Total	502.10	637.54	510.96	502.17	545.47	2698.24
Total	1351.22	1937.30	2025.91	2595.24	2484.15	10393.82
IDC	98.41	132.30	145.07	180.60	181.06	737.45
O&M expenses capitalised	135.12	193.73	202.59	259.52	248.42	1039.38
Grand Total	1584.75	2263.33	2373.57	3035.37	2913.63	12170.65

2.5 ARR FOR 4TH CONTROL PERIOD

2.5.1 The ARR claimed by TSSPDCL for 4th Control Period is as shown in the Table below:

Table 2–9: ARR claimed by TSSPDCL for 4th Control Period

Rs. in crore					
Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
Operation and Maintenance expenses	2808.18	3086.00	3406.86	3809.44	4245.19
Depreciation	1010.58	1156.66	1282.68	1448.19	1609.01
Taxes on Income	48.92	58.05	64.24	73.07	84.53
Special Appropriations	50.00	50.00	50.00	50.00	50.00
Total Expenditure	3917.69	4350.71	4803.79	5380.70	5988.73
Less: O&M expenses capitalized	145.82	155.95	206.84	255.80	271.63
Net Expenditure	3771.87	4194.76	4596.95	5124.91	5717.10
Add Return on Capital Employed	638.21	772.20	872.61	1005.86	1171.20
Total Distribution ARR	4410.08	4966.96	5469.56	6130.77	6888.31
Less: Wheeling Revenue from Third Party/Open Access/NTI	475.49	502.04	542.96	586.80	638.25
Revenue Requirement, (Net transferred to Retail Supply Business)	3934.58	4464.92	4926.60	5543.97	6250.05

2.5.2 The ARR claimed by TSNPDCL for 4th Control Period is as shown in the Table below:

Table 2–10: ARR claimed by TSNPDCL for 4th Control Period

Rs. in crore					
Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
Operation and Maintenance expenses	2049.75	2358.28	2718.40	3220.05	3703.71
Depreciation	417.36	545.28	688.28	871.59	1073.01
Taxes on Income	15.93	21.88	28.12	35.34	43.05
Other Expenditure	0.00	0.00	0.00	0.00	0.00
Special Appropriations	56.87	59.97	60.19	60.41	59.97
Total Expenditure	2539.90	2985.40	3494.98	4187.39	4879.74
Less: O&M expenses capitalized	135.12	193.73	202.59	259.52	248.42
Net Expenditure	2404.78	2791.67	3292.38	3927.87	4631.32
Add Return on Capital Employed	350.37	513.64	693.84	896.78	1112.46
Total Distribution ARR	2755.15	3305.31	3986.22	4824.65	5743.78
Less: Wheeling Revenue from Third Party/Open Access/NTI	140.99	151.92	160.85	175.46	188.44
Revenue Requirement, (Net transferred to Retail Supply Business)	2614.17	3153.39	3825.37	4649.19	5555.35

2.6 WHEELING TARIFFS FOR 4TH CONTROL PERIOD

2.6.1 The Wheeling Tariffs claimed by TSSPDCL and TSNPDCL for 4th Control Period is as shown in the Table below:

Table 2–11: Wheeling Tariffs claimed by TSSPDCL and TSNPDCL for 4th Control Period

Rs./kVA/month										
Particulars	FY 2019-20		FY 2020-21		FY 2021-22		FY 2022-23		FY 2023-24	
	TSSPDCL	TSNPDCL	TSSPDCL	TSNPDCL	TSSPDCL	TSNPDCL	TSSPDCL	TSNPDCL	TSSPDCL	TSNPDCL
33 kV	35.88	50.05	37.43	59.49	38.22	70.93	39.93	85.48	40.96	100.82

Particulars	FY 2019-20		FY 2020-21		FY 2021-22		FY 2022-23		FY 2023-24	
	TSSPDCL	TSNPDCL	TSSPDCL	TSNPDCL	TSSPDCL	TSNPDCL	TSSPDCL	TSNPDCL	TSSPDCL	TSNPDCL
11 kV	302.81	508.28	314.71	594.07	327.55	702.02	348.78	841.21	368.33	981.19
LT	791.92	1078.42	853.33	1243.51	905.81	1451.42	981.85	1696.73	1068.48	1955.64

2.7 WHEELING LOSS TRAJECTORY FOR 4TH CONTROL PERIOD

2.7.1 The Wheeling Loss trajectory proposed by TSSPDCL and TSNPDCL for 4th Control Period is as shown in the Table below:

Table 2–12: Wheeling Loss trajectory proposed by TSSPDCL and TSNPDCL for 4th Control Period

Particulars	FY 2019-20		FY 2020-21		FY 2021-22		FY 2022-23		FY 2023-24	
	TSSPDCL	TSNPDCL	TSSPDCL	TSNPDCL	TSSPDCL	TSNPDCL	TSSPDCL	TSNPDCL	TSSPDCL	TSNPDCL
33 kV Loss	3.68%	3.58%	3.66%	3.58%	3.64%	3.57%	3.63%	3.57%	3.61%	3.57%
11 kV Loss	4.65%	3.92%	4.61%	3.92%	4.56%	3.92%	4.51%	3.92%	4.47%	3.91%
LT Loss	5.93%	5.01%	5.81%	5.00%	5.69%	5.00%	5.58%	4.99%	5.47%	4.99%

Contd...

CHAPTER 3

ISSUES RAISED BY STAKEHOLDERS, RESPONSES OF PETITIONERS' AND COMMISSION'S VIEWS

3.1 OBJECTIONS/SUGGESTIONS/COMMENTS MADE ON FILINGS

3.1.1 Six stakeholders have filed objections/suggestions/comments on the Petitions for true-up for 1st, 2nd and 3rd Control Periods and determination of ARR and Wheeling Tariffs for 4th Control Period. The Petitioners have filed replies on the objections/suggestions/ comments received from the stakeholders. For the sake of clarity, the objections/ suggestions/ comments raised by the stakeholders and responses of the Petitioners have been consolidated and summarised issue-wise. The Commission has concluded all the objections/ suggestions/ comments of the stakeholders made in writing as well as during the course of Public Hearing and the responses to them by the Petitioners.

3.2 DELAY IN FILING THE PETITION

Stakeholders' submissions

3.2.1 The DISCOMs, in their Petitions, have submitted the reason for delay as non-finalisation of annual accounts for the Base Year. This reason for delay submitted by the Petitioners is not justified.

Petitioners' replies

3.2.2 The DISCOMs have sought time extension for valid reasons as submitted before the Commission. The MYT filings comprise of 5-year plan of costs and expected revenues of the DISCOMs based on the Base Year values. Hence, the Base Year values have significant material impact on the projections of the ARR for the ensuing Control Period. As the annual accounts happened to get finalized before the event of DISCOMs' filings, it was considered appropriate to include the actual audited values in the filings for projection of costs and revenues for 4th Control Period.

Commission's Views

3.2.3 The Commission reviewed the representations/letters submitted by the Petitioners for extension of time and resolved to condone the delay in filing the Petitions for ARR and Wheeling Tariffs for 4th Control Period i.e., for FY 2019-20 to FY 2023-24.

3.3 ACTUAL SALES AND POWER PURCHASE COST FOR FY 2015-16, FY 2016-17, FY 2017-18 AND FY 2018-19

Stakeholders' submissions

3.3.1 In the Retail Supply Tariff Orders for FY 2015-16 and FY 2016-17, the Commission has not approved any bilateral/short-term power purchase for the respective years. However, in the true-up of FY 2015-16 and FY 2016-17, the Commission had approved the short-term power purchase for the respective years. The following can be observed in this regard:

- The energy availability projections made by the DISCOMs in the Retail Supply Tariff Petitions for FY 2015-16 and FY 2016-17 have been on higher side.
- Owing to unrealistic projections of energy availability in the Tariff Petitions for FY 2015-16 and FY 2016-17, the DISCOMs had purchased from market after the issue of Tariff Orders.
- The Commission had disallowed some quantum of market purchases in the true-up of FY 2015-16 and FY 2016-17.
- The justification for the variation in power purchase quantum from the approved sources had not been submitted.
- The details of backing down of energy from approved sources for purchasing from market had not been submitted.
- The DISCOMs had not submitted whether the market purchases had been made round the clock basis for meeting the demand during peak hours.
- The compliance to the Commission's directives regarding the procurement from short-term sources had not been submitted.
- The actual power purchase quantum for FY 2015-16 and FY 2016-17 had been lower than that approved by the Commission in the respective Tariff Orders but the actual power purchase cost had been higher than the approved power purchase cost for the respective years.

3.3.2 In the Retail Supply Tariff Order for FY 2018-19, the Commission had considered the sale of the entire surplus energy projected for FY 2018-19. The average rate of sale of surplus energy had been considered as Rs.3.10/kWh as against the approved average power purchase cost of Rs.4.07/kWh. Further, it was stated in the Tariff Order that GoTS had agreed to provide subsidy of Rs.4984.30 crore as against the revenue gap of Rs.5940.47 crore determined by the Commission. The Commission had also directed the DISCOMs to pursue with GoTS for release of differential amount and directed to file a Petition seeking appropriate relief in the absence of commitment from GoTS by 30.09.2018 for release of the differential amount. The status of the same has not been submitted by the DISCOMs.

Petitioners' replies

3.3.3 The Petitioner did not submit any reply.

Commission's Views

3.3.4 The Commission noted that the stakeholders' submissions pertain to Retail Supply Businesses of the DISCOMs.

3.4 TRUE-UP FOR 1ST, 2ND AND 3RD CONTROL PERIODS***Stakeholders' submissions***

3.4.1 The DISCOMs, in their Petitions, have submitted that the true-up claims for 1st and 2nd Control Periods would be filed with the true-up claims for 3rd Control Period in due course of time. Determination of true-up for the past periods gives a realistic picture to project future requirements. Therefore, determination of true-up for the past periods should precede the MYT determination for 4th Control Period.

3.4.2 TSSPDCL has claimed the gap of Rs.198.11 crore and Rs.194.26 crore on account of true-up of 1st and 2nd Control Periods respectively. TSNPDCL has claimed the gap of Rs.183.2 crore and Rs.386.5 crore for 1st and 2nd Control Periods respectively.

3.4.3 TSSPDCL has claimed the total gap of Rs.1300.69 crore on account of true-up of 3rd Control Period. In this regard, TSSPDCL submitted as under:

- Under the Ujwal Discom Assurance Yojana (UDAY) scheme, total outstanding debt of Rs.6196 crore (75% of total outstanding) as on 30.09.2015 has been taken over by GoTS.
- GoTS has released Rs.4593.84 crore in FY 2016-17 and Rs.282.93 crore in FY 2017-18 in the form of equity.
- The outstanding loans which include long-term and short-term borrowings have been taken over by GoTS in the form of equity infusion.
- The debt takeover by GoTS under UDAY scheme has resulted in change in the actual debt-equity ratio to 28:72 in FY 2016-17.
- In accordance with Tariff Policy, 2016, the equity in excess of 25% shall be treated as normative loan and weighted average rate of interest has to be allowed thereon, and accordingly the approved debt-equity ratio of 75:25 has been considered for FY 2016-17.
- So, no benefit has been accrued due to UDAY scheme as the equity infusion by GoTS attracts return of 14% which is higher than the cost of debt that would have been incurred in the absence of UDAY scheme.
- The loans taken over under UDAY comprise of Financial Restructuring Plan (FRP) loans availed to meet the payments towards power purchase and these

costs of finance are not allowed by the Commission as a pass through under Distribution or Retail Supply Business. Hence no benefit can be claimed against these loans.

- 3.4.4 As per the Tripartite Agreement between Ministry of Power, GoI, GoTS and the DISCOMs dated 04.01.2017, GoTS had to transfer Rs.4462 crore (50% of the total outstanding debt as on 30.09.2015) in FY 2016-17 in the form of grant and Rs.2230 crore (25% of the total outstanding debt as on 30.09.2015) in the form of loan to the DISCOMs. The DISCOMs had to pay the interest on loans till takeover by GoTS. The balance amount of Rs.2231 crore (25% of the total outstanding debt as on 30.09.2015) had to be transferred to the DISCOMs in the form of equity. Further, GoTS has to take over the future losses of the DISCOMs in a graded manner and shall provide funds to the tune of 5%, 10%, 25% and 50% of the loss of FY 2016-17, FY 2017-18, FY 2018-19, and FY 2019-20 respectively.
- 3.4.5 TSSPDCL has submitted that GoTS infused Rs.4876.71 crore in the form of equity and as against the amount of Rs.2230 crore to be infused as per the UDAY agreement. TSNPDCL has submitted that GoTS has infused Rs.2396.17 crore and Rs.450 crore in the form of equity in FY 2016-17 and FY 2017-18 respectively. It is a violation of the terms and conditions of UDAY agreement and a negation of the commitment GoTS had given therein.
- 3.4.6 In view of the above, the DISCOMs have been deprived of the benefit that ought to have accrued from GoTS under UDAY scheme. Notwithstanding the UDAY agreement, the DISCOMs have claimed the gap on account of true-up of 3rd Control Period in entirety, penalising the consumers for the failure of GoTS to honour its commitments given in the UDAY agreement. Further, as FRP loans had been availed to meet the payments towards power purchase and costs of finance related thereto are not allowed by the Commission as a pass through under Distribution or Retail Supply business, the DISCOMs are not entitled to claim the same under true-up.
- 3.4.7 The DISCOMs have submitted that utmost importance is given to timely completion of projects undertaken and have been following the practice of capitalising (addition to fixed assets) only those works which have actually been completed. However, the details of actual capitalisation and time and cost overrun for the works completed during 3rd Control Period have not been submitted. Any interest during construction for delays in respect of completion of projects/schemes should not be allowed, unless

the Commission's approval for extension in the completion schedule has been obtained in advance. The mechanism of awarding orders or contracts for execution of works and projects and purchases of materials by the DISCOMs is to be monitored to ensure that real and transparent competitive bidding is scrupulously followed, expenditure incurred is prudent and time schedules are adhered to. The particulars of such delays, if any, project/scheme-wise, and cost escalation, including interest during construction, during periods of such delays is to be examined in order to determine permissible expenditure during the last three years. The stakeholder sought the details regarding the same.

Petitioners' replies

- 3.4.8 The true-up claims for 1st, 2nd and 3rd Control Periods have been submitted to the Commission with all the relevant details. Material procurement has been carried out by calling tenders in e-procurement platform in a transparent manner depending on system requirements.

Commission's Views

- 3.4.9 The Commission's view on the true-up claims for 1st, 2nd and 3rd Control Periods are detailed in Chapter 4.

3.5 RESOURCE PLANS FOR 4TH CONTROL PERIOD

Stakeholders' submissions

- 3.5.1 The DISCOMs have submitted that they have filed their Resource Plans for 4th Control Period before the Commission and pending Commission's approval on the sales forecast, Distribution Loss trajectory, load forecast and Distribution Plan for 4th Control Period, they have adopted the Distribution Plans submitted in the Resource Plans. Approval of Resource Plans by conducting a separate Public Hearing is required before deciding on the MYT Petition filed for 4th Control Period. The absence of mandate in the Regulations for conducting Public Hearing on the Resource Plans cannot be a justifiable reason for not conducting Public Hearings on the Resource Plans.
- 3.5.2 Approval of Power Purchase Agreements (PPAs) in the absence of Resource Plans had led to availability of surplus power and financial burden on the electricity consumers in form of payment of fixed charges to the backed down thermal

generating stations for purchasing power from costly and must run Non-Conventional Energy (NCE) sources. In the interest of transparency, accountability and public participation in the regulatory process, the Commission may conduct Public Hearings for the approval of Resource Plans. The analysis of the Resource Plans is important in view of the following:

- i. If the distribution capacity is expanded considering the estimated demand growth and generation capacity for 4th Control Period, it may lead to creation of excess capacity and under-utilization of capacity. Plant Load Factor or Capacity Utilisation Factor (in the case of NCE sources) of respective power plants should be the basis for expansion of distribution capacities, with some reserve margin.
- ii. Although the DISCOMs have proposed growth in the distribution system in the State during 4th Control Period, demand growth projections during the same period have not been submitted.
- iii. Backing down of conventional generation, especially for purchasing non-conventional energy, would lead to under-utilization of distribution capacities.
- iv. Slump in demand or slower demand growth compared to load forecast would also lead to under-utilization of transmission and distribution capacities. With slowdown of economy in the country and Telangana State, the demand for power has come down considerably during the last four months of 2019 compared to the corresponding period of 2018. With no signs of economy picking up, similar position may continue during the next financial year also.
- v. With availability of surplus power, both off-peak and peak, emerging in the country, if the DISCOMs cannot sell surplus power in the market at remunerative prices, to that extent, distribution capacity gets under-utilized.
- vi. Energy conservation measures, if implemented effectively, would also lead to under-utilization of distribution capacities.
- vii. Power evacuation schemes for the projects whose timely completion is uncertain would naturally lead to stranded assets and unwarranted financial burdens.
- viii. The proposed Capital Investment Plan for 4th Control Period may be approved after analysis of the justification submitted by the DISCOMs regarding the need for procuring power from the proposed projects, without entering into PPAs.

3.5.3 TSSPDCL and TSNPDCL have projected the total capital expenditure of Rs.11261 crore, and Rs.10394 crore respectively for 4th Control Period. Due diligence has to be carried out on the proposed capital expenditure for 4th Control Period in view of the past performance and the means of finance of the proposed capital expenditure. The DISCOMs have not submitted the basis for the cost estimates of various components of the proposed additions for expansion of distribution network. The DISCOMs have only submitted that they have considered the cost data of FY 2018-19 and annual escalation of 4.68% on the same. The unit cost thus derived for each year has been

multiplied with the network additions for the corresponding year to arrive at the capital investment for that year.

- 3.5.4 More than Rs.12000 crore were reported to have been spent in Telangana during FY 2017-18 to improve distribution network to facilitate 24X7 power supply to agriculture sector. When such huge expenditure was incurred in the recent past to improve distribution network in the State the new proposals on distribution network expansion needs to be assessed prudently. The works related to network strengthening and R&M appear under different heads like other capital expenditure as a part of total capital expenditure, R&M expense as a part of O&M expenses and special appropriations for safety measures. It has to be seen that there is no duplication of work and expenditure incurred has impact on the ground.
- 3.5.5 The DISCOMs have projected coincident demand and total demand contribution at 33 kV, 11 kV and LT levels. The DISCOMs have not submitted the estimated demand growth, need for addition of generation capacity and availability of surplus power, both peak and off-peak during 4th Control Period. The stakeholder sought the following information:
- i. Details of availability of generation capacities under existing PPAs and generation capacities proposed to be added during 4th Control Period along with justification for new generation capacities to meet projected demand.
 - ii. Details pertaining to backing down of generation capacities, especially for purchasing from high cost and must run NCE sources like wind and solar, and the fixed cost paid for the backed down generation during 3rd Control Period and fixed cost estimated to be paid during 4th Control Period.
- 3.5.6 The total electricity load at 33 kV (including losses) for Telangana State, TSSPDCL and TSNPDCL is projected to increase by 18.08%, 19.28% and 14.81% respectively during 4th Control Period. Whereas the Distribution ARR (combined for both the DISCOMs) transferred to Retail Supply Business is projected to increase by 80.26% during the same period. The projected increase in base capital expenditure during 4th Control Period is to the tune of 106.60%.

Petitioners' replies

- 3.5.7 Resource Plans, that were submitted to the Commission on 31.10.2018, include sales forecast, Loss trajectory, load forecasts and Distribution Plans in accordance with the Guidelines for Load Forecast, Resource Plan and Power Procurement, 2006 and Regulation No.4 of 2005. Pending approval of the Commission, the DISCOMs have

adopted the Distribution Plans submitted in the Resource Plans for projection of ARR for 4th Control Period. The Regulations does not mandate Public Hearing process to approve the Resource Plans.

- 3.5.8 The DISCOMs have considered the existing network infrastructure such as sub-division wise sub-stations, PTRs and their loading pattern, connected feeders and their peak loads, DTRs and their loading pattern in their Resource Plans. The DISCOMs have proposed new substations, PTRs, DTRs and connected feeders based on the sub-division wise load growth and existing overloaded network elements. The existing network system and proposed demand increase forms the basis for the distribution plan submitted under the Resource Plans. Further, all cost elements of ARR such as O&M expenses, depreciation, and Return on Capital Employed (RoCE) have been computed considering the audited annual accounts for FY 2018-19.
- 3.5.9 The capital expenditure for 4th Control Period has been proposed based on the Distribution Plans submitted in the respective Resource Plans. The total actual capital expenditure during 3rd Control Period for TSSPDCL is Rs.8162 crore as against the approved capital expenditure of Rs.7763 crore. TSNPDCL licence area caters to 18 Districts with area of 66860 sq.km which comprises predominantly rural area and most of the substations are of low capacity. The capital investment plan has been proposed considering uninterrupted/alternative power supply and supply of quality power to all consumers, in addition to load growth.
- 3.5.10 The DISCOMs have considered the existing schemes and proposed new schemes to meet the capital expenditure during 4th Control Period. The DISCOMs have also projected the consumer contributions and grants of the existing schemes which are anticipated to be received in the ensuing 5-year period. The means of finance of the proposed capital investments is based on the norms of the lenders duly considering the consumer contributions and grants. The DISCOMs have not claimed any interest or return on the assets contributed by consumer contributions/grants. The consumer contributions/grants received during the year has been deducted while computing Regulated Rate Base (RRB) and RoCE has been claimed on the same in accordance with the Regulation No.4 of 2005. In accordance with Accounting Standard 12, the depreciation on assets funded by consumer contributions/grants is being amortised considered as non-tariff income.

- 3.5.11 The actual expenditure incurred towards strengthening of distribution network to provide 24x7 power supply to agriculture sector is Rs.380.69 crore and Rs.755 crore for TSSPDCL and TSNPDCL respectively. The other capital expenditure is additional to base capital expenditure and has been proposed to meet the specific goals. The R&M expenditure under other capital expenditure is towards investment for renovation and modernisation of existing assets while R&M expenses under O&M expenses are towards the maintenance and repairs of the assets setup in the system. Further, the special appropriations are towards safety of the consumers and the employees who work near the network system. Hence, the costs have been classified under different heads according to purpose and there is no duplication of costs.
- 3.5.12 The DISCOMs have submitted the sales forecast, energy requirement and peak demands (coincident and non-coincident) for 4th Control Period in their Resource Plans. The projections of distribution capacity have been done on the basis of load growth trend analysis at each subdivision level and future plans considering appropriate growth rates. The distribution capacity has been projected based on the demand of the system. Therefore, the sources of power have little to no impact on these projections as long as power is available. Power is not sold in the market unless system demand is fulfilled. NCE sources have must run status and would be dispatched first. The NCE capacities of which solar is the largest component have been tied up through competitive bidding and the tariffs have been adopted as per Section 63 of the Act. The distribution infrastructure projection has been done for systems below 33 kV based on demand (sales). The power evacuation system for generation projects is created along with the project. The State aims to supply 24X7 quality power to all consumers and is currently able to meet all demand without any curtailments due to lack of availability or delays in network augmentation.
- 3.5.13 The load (in MW) as stated by the stakeholder are the loads computed by considering 80% of contracted demand for HT Voltages and 20% of the contracted demands for LT voltages in view of diversity factor. The base capital expenditure has been projected based on the demand forecast and the existing network infrastructure parameters and its loading pattern. The capital expenditure plan has been prepared taking into consideration the overloading of the existing network units, proposed network infrastructure to cater to new loads and the cost escalation factor to cover the increase in material and labour costs during 4th Control Period.

Commission's Views

- 3.5.14 Regulation No.4 of 2005 stipulates the Distribution Licensees to file their Resource Plans on 1st April of the year preceding the first year of the Control Period. The Resource Plan shall inter-alia contain the sales forecast, load forecast, power procurement plan, and Distribution Plan (Capital Investment Plan) consistent with the requirements of the Commission's Guidelines on Load Forecast and Resource Plan (Distribution Plan and Power Procurement Plan). Further, the Resource Plan as approved by the Commission shall be adopted by the Distribution Licensees in their Multi-Year and Annual filings for the Control Period.
- 3.5.15 The Resource Plans for 4th Control Period from FY 2019-20 to FY 2023-24 and 5th Control Period from FY 2024-25 to FY 2028-29 was to be filed on 01.04.2018. The DISCOMs have filed their Resource Plans for 4th Control Period on 31.10.2018. In the Resource Plans submitted, the DISCOMs stated that the formulation of power procurement plan in co-ordination with various generators is under process and the same shall be submitted at an early date. In replies to stakeholders' comments, the DISCOMs submitted that the power procurement plan would be submitted shortly. The DISCOMs have not submitted the power procurement plan in compliance with the Guidelines. Further, the DISCOMs in seeking extension of time for filing of MYT Petitions for 4th Control Period cited the reasons of finalisation of annual accounts and non-receipt of information of Lift Irrigation schemes from Irrigation Department.
- 3.5.16 The Commission is of the considered view that as the filing of MYT Petitions for 4th Control Period has already been delayed, further delay on determination of MYT for 4th Control Period is undesirable for want of approval of Resource Plans. The DISCOMs have submitted their Capital Investment Plans for 4th Control Period in the instant Petitions. On prudence check of the same, the Commission has approved the Capital Investment Plan for 4th Control Period in this Order as detailed in Chapter 5.

3.6 OPERATION & MAINTENANCE (O&M) EXPENSES***Stakeholders' submissions***

- 3.6.1 The annual escalation rate of 4.68% has been considered for projecting the capital investments whereas the annual escalation rate of 5.42% has been considered for projecting the O&M expenses for 4th Control Period. The annual escalation rate of 4.68% may be considered uniformly.

- 3.6.2 TSSPDCL and TSNPDCL have claimed the total O&M expenses of Rs.17356 crore and Rs.14050.19 crore respectively for 4th Control Period. Out of the total O&M expenses, employee expenses are to the tune of 87.44% and 90.02% for TSSPDCL and TSNPDCL respectively. The year-on-year increase in O&M expenses and the proportion of employee expenses in the same has to be analysed in comparison to the growth rates of number of substations, line length (in km), number of DTRs and number of consumers, for 3rd Control Period from FY 2014-15 to FY 2018-19. The allowable O&M expenses need to be allowed at prudent levels for efficiency improvement.
- 3.6.3 The projected increase in employee expenses, and R&M expenses during 4th Control Period is to the tune of 62.27% and 90.59% respectively.
- 3.6.4 Due to inadequate technical staff at ground level, people in rural areas, mostly farmers try to attend to the repairs to the DTRs and conductors on their own and have been meeting with accidents. While officer level posts are being filled up there are vacancies in the case of technical staff at the ground level, particularly in rural areas. The staffing pattern need to be examined in the approval of O&M expenses.

Petitioners' replies

- 3.6.5 The annual escalation rate of 4.68% considered for projecting the capital investments for 4th Control Period is based on the CPI and WPI indices for the years from 2012 to 2017 and is as per the Resource Plan submitted on 31.10.2018. Whereas the annual escalation rate of 5.42% considered for projecting the O&M expenses for 4th Control Period is based on the CPI and WPI indices for the years from 2012 to 2018. The DISCOMs have considered the updated data in its MYT filings for projections of O&M expenses.
- 3.6.6 O&M expenses comprise of employee, A&G and R&M expenses. The portion of A&G and R&M expenses would be insignificant in total O&M expenses. O&M expenses constitutes about 70% of Distribution ARR of DISCOMs. The norms of O&M expenses for 4th Control Period have been projected considering the methodology approved by the Commission for 3rd Control Period.
- 3.6.7 The actual O&M expenses of TSSPDCL and TSNPDCL during 3rd Control Period is as shown in the Tables below:

Table 3-1: Actual O&M expenses of TSSPDCL during 3rd Control Period

Rs. in crore							
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19	Total	CAGR
Employee cost	1066	823	1491	1897	2249	7526	21%
A&G expenses	89	101	334	213	163	899	16%
R&M expenses	250	278	139	109	127	903	-16%
Total	1404	1203	1963	2218	2538	9327	16%
Y-o-Y Growth		-14%	63%	13%	14%		

Table 3-2: Actual O&M expenses of TSNPDCL during 3rd Control Period

Rs. in crore							
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19	Total	CAGR
Employee cost	990	720	1387	1804	2135	7036	23%
A&G expenses	75	88	316	197	143	819	18%
R&M expenses	250	273	139	109	127	898	-10%
Total	1315	1081	1842	2110	2405	8753	17%
Y-o-Y Growth		-18%	70%	15%	14%		

- 3.6.8 The negative growth reflected in A&G and R&M expenses is mainly due to reclassification of expenses towards remuneration paid to outsourcing employees from R&M expenses to A&G expenses during FY 2016-17 and from A&G expenses to employee cost from FY 2017-18 on account of regularization of employees in accordance with the High Court orders. The overall growth in actual O&M expenses during 3rd Control Period is to the tune of 16% and 16.5% whereas the overall growth in O&M expenses projected for 4th Control Period is to the tune of 11% and 16% for TSSPDCL and TSNPDCL respectively, which is rational and close to the actual trend.
- 3.6.9 As per the departmental administrative procedures, the O&M staff are being allotted to the operation sections. Vacancies have been filled in a phased manner and the services of artisans have also been utilized for maintenance work. TSSPDCL and TSNPDCL have taken up the recruitment process for 2500 nos. and 2284 nos. Junior Line Men (JLM) respectively for maintaining adequate number of O&M staff at the ground level. The consumers/farmers have been informed that any grievance may be intimated to the concerned Assistant Engineer (AE)/Operation or toll-free No.18004253600 for early rectification. The farmers are being requested not to climb the pole or not to make any repairs to the DTRs and conductors on their own.

Commission's Views

- 3.6.10 Regulation No.4 of 2005 stipulates that the O&M expenses for the Control Period shall be determined by using pre-determined norms or formulae. The Commission has approved the norms of O&M expenses for 4th Control Period considering the actual

O&M expenses for the Base Year i.e., FY 2018-19. The normative O&M expenses approved for 4th Control Period is detailed in Chapter 5.

3.7 RETURN ON CAPITAL EMPLOYED (ROCE)

Stakeholders' submissions

- 3.7.1 The cost of debt is projected to increase from 10.33% to 11.26% and from 10.16% to 10.81% for TSSPDCL and TSNPDCL respectively during 4th Control Period. The differences in the cost of debt proposed by the DISCOMs for 4th Control Period show elements of subjectivity unrelated to market trends. The cost of debt may be approved realistically in tune with market trends. The DISCOMs may explore the possibility of swapping loans to get benefit of relatively lower interest rates. The DISCOMs may also explore possibilities of bargaining with funding agencies for reduction of interest rates in view of the downtrend of the same in the market.
- 3.7.2 The DISCOMs have claimed the Return on Equity of 14% for 4th Control Period. In light of the declining trend of cost of debt, the Return on Equity may be approved as 12% since there is no risk to the DISCOMs and all the costs are being recovered under the present regulatory framework.

Petitioners' replies

- 3.7.3 The DISCOMs avail debt mainly from M/s Rural Electrification Corporation (REC) Limited. The actual lending rates of REC is as shown in the Table below:

Table 3-3: Actual lending rates of REC as submitted by the DISCOMs

Financial Year	TSSPDCL	TSNPDCL (Average interest rate of long-term loans)
2014-15	-	11.65%
2015-16	11.5% - 12%	11.93%
2016-17	11%	11.09%
2017-18	10.75% - 11%	10.49%
2018-19	10.75% - 11%	10.90%
2019-20	11%	-

- 3.7.4 The cost of debt claimed for 4th Control Period is in line with the actual lending rates as shown above.
- 3.7.5 The Tariff Policy 2016 stipulates that the rate of return notified by CERC for transmission may be adopted by the State Electricity Regulatory Commissions for distribution with appropriate modification taking into view the higher risks involved. CERC vide its (Terms and Conditions of Tariff) Regulations, 2019 has determined the

Return on Equity for Transmission business as 15.5%. The Commission vide its MYT Order for 3rd Control Period has approved the Return on Equity for Distribution business as 14%. Accordingly, the Return on Equity has been claimed as 14% for 4th Control Period.

Commission's Views

- 3.7.6 Regulation No.4 of 2005 stipulates that the cost of debt shall be determined at the beginning of the Control Period after considering DISCOMs proposals, present cost of debt, market conditions and other relevant factors. Regulation No.4 of 2005 stipulates that the Return on Equity shall be determined at the beginning of the Control Period after considering CERC norms, DISCOMs proposals, previous years D/E mix, risks associated with distribution and supply business, market conditions and other relevant factors.
- 3.7.7 The Commission has approved the cost of debt and Return on Equity for 4th Control Period in accordance with Regulation No.4 of 2005 as detailed in Chapter 5.

3.8 DEPRECIATION

Stakeholders' submissions

- 3.8.1 The Petitioner has submitted that depreciation has been calculated considering the rates notified by the Ministry of Power, GoI. Permitting recovery of depreciation charges over the useful lifespan of the assets would ensure a fairer recovery of the same by the DISCOMs, though over a longer period of time. The stakeholder requested the Commission to allow least possible depreciation rates, or at least, the lowest depreciation rates as per the Regulations and norms of Central Electricity Regulatory Commission (CERC) or Ministry of Power, GoI, whichever are lower.

Petitioners' replies

- 3.8.2 The DISCOMs have been following the depreciation rates as notified by the Ministry of Power, GoI. In order to be in conformity with the annual accounts, the depreciation has been claimed considering the MoP rates. Any change in the depreciation rate and methodology shall be a significant policy decision and it affects the financial reports of the DISCOMs. Further depreciation enables the DISCOMs to meet their repayments of long-term loans.

Commission's Views

- 3.8.3 Regulation No.4 of 2005 stipulates that the depreciation shall be calculated on the amount of Original Cost of Fixed Assets included in the Regulated Rate Base at the beginning of each year of the Control Period, generally based on the methodology, rates and other terms as decided by CERC from time to time. The Commission has approved the depreciation for 4th Control Period considering the rates of depreciation as specified by CERC in its Tariff Regulations, 2019 as detailed in Chapter 5.

3.9 TAXES ON INCOME***Stakeholders' submissions***

- 3.9.1 The DISCOMs have claimed the Return on Equity of 14%. TSSPDCL has claimed tax on income considering MAT rate while TSNPDCL has considered Corporate Tax rate for 4th Control Period. The tax on income is to be allowed in light of the actual tax rate applicable. As DISCOMs are allowed Return on Equity of 14% and Supply Margin of 2%, the income tax on the same may be borne by the DISCOMs. The stakeholder requested the Commission to not allow income tax as pass through to be collected from consumer as part of ARR.

Petitioners' replies

- 3.9.2 The tax on income for 4th Control Period has been claimed in accordance with Clause 18 of the Regulation No.4 of 2005.

Commission's Views

- 3.9.3 Regulation No.4 of 2005 stipulates that the taxes on income, if any, on the income stream of the licensed business of the Distribution Licensee shall be treated as an expense and shall be recoverable through ARR. Accordingly, taxes on income is allowable to be treated as an expense in ARR subject to the provisions of the Regulation No.4 of 2005. The Commission has approved the tax on income for 4th Control Period in accordance with the provisions of the Regulation No.4 of 2005 as detailed in Chapter 5.

3.10 SPECIAL APPROPRIATIONS***Stakeholders' submissions***

- 3.10.1 The DISCOMs have claimed special appropriations for 4th Control Period towards safety measures towards safety of consumers and their employees. The Commission

approved the amounts of Rs.200 crore and Rs.292 crore for TSSPDCL and TSNPDCL respectively for 3rd Control Period for safety improvement plan. In spite of the Commission's directive for compliance, the DISCOMs have submitted that they have not completed the proposed works under the plan and proposed to complete them on priority basis. The DISCOMs have also not submitted the details regarding the improvement in safety of consumers and their employees and reduction in rate of accidents during 3rd Control Period. The actual amounts expended during 3rd Control Period out of the special appropriations approved by the Commission is required to be analysed.

3.10.2 The number of deaths due to electrocution have been increasing over the years. Sagging conductors, unsafe DTRs and absence of technical help at the grass roots level are some of the important reasons for these avoidable deaths. It is welcome measure that the DISCOMs have designated officers at the Circle level as Safety Officers. It has to be seen that capital investments made and R&M works taken up result in decline in deaths due to electrocution.

3.10.3 In response to the Commission's directive to run neutral wire from 33/11 kV SS to single phase transformers both existing and new installations without resorting to use of earth as return conductor, the DISCOMs submitted as under:

"Since the hamlets are spread over at distant places, running a neutral wire from 33/11 kV Sub-station is very expensive. Further, earthing of neutral at intermediate locations, needs additional expenditure. Hence, it has been decided to provide local ground earthing by maintaining the earth resistance as per REC construction standards."

3.10.4 At the same time TSSPDCL has claimed the amount of Rs.4 crore for each year of 4th Control period towards running of neutral wire from SS. TSNPDCL has claimed the amount of about Rs.7 crore for each year of 4th Control Period under the head of 'Other' which may be towards running of neutral wire from SS. The compliance to the Commission's directive has to be ensured strictly.

Petitioners' replies

3.10.5 Almost 80% of the accidents have occurred due to faults at consumer end like insulation failure, faulty domestic wiring, non-standard equipment, repairing of starter and service wire, etc. In order to reduce these accidents, the DISCOMs have undertaken various awareness activities such as safety week, pamphlets distribution, wall posters on electrical safety at public places etc. TSSPDCL and TSNPDCL have

incurred the expenditure of Rs.189.29 crore and Rs.131.25 crore respectively during 3rd Control Period for undertaking the following rectification/installation works under safety measures:

- Sagging of 11 kV and LT Lines.
- Requirement of intermediate 11 kV and LT poles.
- Bent/leaned/Damaged/Rusted poles.
- Damaged stays and struts.
- Damaged or worn-out conductor.
- Defective earthing rectification.
- Defective AB switches rectification.
- Defective HG Fuse sets rectification.
- Low level road crossings with insufficient ground clearance.
- Providing new AB Switches wherever not existing.

3.10.6 On execution of above-mentioned works, accidents in TSSPDCL's licence area have reduced from 333 nos. in FY 2017-18 to 169 in FY 2019-20 (upto December 2019). In addition to the above-mentioned works, TSNPDCL has (i) undertaken power week program in September 2019 (ii) incurred expenditure of Rs.60.83 crore to renovate the rural distribution infrastructure, (ii) incurred expenditure of Rs.32.64 crore under DNRD Program. Under safety improvement program TSNPDCL has incurred the expenditure of Rs.93.47 crore in FY 2019-20 (upto December 2019).

3.10.7 Field officers have been instructed to ensure providing local ground earthing by maintaining the earth resistance as per the REC Construction standards wherever single phase DTRs are existing in the villages and continuously pursuing for the compliance of the Commission's directive.

Commission's Views

3.10.8 Regulation No.4 of 2005 provides for allowing any other relevant expenditure in addition to the main items of ARR. In line with the earlier MYT Orders and the importance of safety in the distribution system, the Commission has allowed the special appropriations for 4th Control Period.

3.10.9 The DISCOMs are directed to run neutral wire from 33/11 kV SS to all single-phase transformers both existing and new installations without resorting to use of earth as return conductor. Further the DISCOMs are directed to strictly implement earthing practices as per 61(1) (a), 67(1A) and 92 of IE Rules, 1956 and provide three earth pits as per the prescribed construction standards. The DISCOMs should file half

yearly reports on compliance to the same by 31st October and 30th April for periods ending 30th September and 31st March respectively.

3.11 DISTRIBUTION LOSS TRAJECTORY

Stakeholders' submissions

3.11.1 The actual voltage wise losses achieved for FY 2018-19 are higher than the loss targets approved by the Commission. The DISCOMs have requested the Commission to consider the actual voltage wise losses achieved for FY 2018-19 for approving the loss trajectory for 4th Control Period. Despite huge capital expenditure proposed for expansion and strengthening of the distribution system, the proposed reduction of Distribution Loss during 4th Control Period is insignificant. A part of line losses is being shown under agricultural consumption, in the absence of metering, and as a result of methodology adopted for estimating agricultural consumption of power. The loss trajectory for 4th Control Period may be approved realistically taking all factors into consideration.

Petitioners' replies

3.11.2 Clause 5.3 (h)(2) of the Tariff Policy provides as under:

“In cases where operations have been much below the norms for many previous years the initial starting point in determining the revenue requirement and the improvement trajectories should be recognized at “relaxed” levels and not the “desired” levels.”

3.11.3 Therefore, the DISCOMs have considered the actual losses achieved in FY 2018-19 as basis for projection of loss trajectory for 4th Control Period. The DISCOMs could not achieve the stringent loss targets approved by the Commission for 3rd Control Period despite extensive loss reduction measures taken during the period. TSSPDCL has projected annual loss reduction of 2% for LT, 1% for 11 kV and 0.5% loss reduction for 33 kV voltage levels. TSNPDCL has implemented various loss reduction measures like strengthening of the network infrastructure, addition of network elements, and has been vigorously undertaking the Energy Audit to closely monitor the losses. Achieving slight reduction in losses after reaching certain benchmark levels would be quite ambitious and requires huge capital investments backed by technology upgradation. Out of the total capital investments proposed by TSNPDCL for 4th Control Period, 80% of the proposed investments is under base capex to handle network growth and 20% of proposed investments would be utilized for reduction of losses, reliability improvement, civil infrastructure, renovation &

modernization and technology upgradation etc. The estimation of the agricultural consumption is done as per the ISI methodology approved by the Commission.

Commission's Views

- 3.11.4 The Commission's view on the Distribution Loss trajectory for 4th Control Period is detailed in Chapter 5.

3.12 ANNUAL PERFORMANCE REVIEW

Stakeholders' submissions

- 3.12.1 Para 8.1 of Tariff Policy states that implementation of MYT framework "would minimize risks for utilities and consumers, promote efficiency and appropriate reduction of system losses and attract investments and would also bring greater predictability to consumer tariffs on the whole by restricting tariff adjustments to known indicators on power purchase prices and inflation indices. The framework should be applied for both public and private utilities". Experience has confirmed that the claimed objectives of MYT are belied. The stakeholder requested the Commission to review implementation of the MYT Order annually by holding Public Hearings and take further necessary action periodically, including revision of tariffs annually, if necessary.

Petitioners' replies

- 3.12.2 The Petitioners did not submit any reply.

Commission's Views

- 3.12.3 Clause 10.7 of the Regulation No.4 of 2005 stipulates that for the purpose of sharing of gains and losses with the consumers, only aggregate gains or losses for the Control Period as a whole will be considered. Clause 16.3 of the Regulation No.4 of 2005 stipulates that the Commission may provide corrections to the ARR of the Distribution Licensees for subsequent years of the Control Period to the extent of deviation of investments approved as part of the Capital Investment Plan. Further, Clause 21 of the Regulation No.4 of 2005 stipulates that the Commission may undertake periodic reviews of Distribution Licensees' performance during the Control Period, to address any practical issues, concerns or unexpected outcomes that may arise, and in general to assess the efficacy of MYT principles.

3.12.4 The Commission is of the considered view that periodical review of the actual performance of the DISCOMs during the Control Period is important in balancing the interest of the DISCOMs as well as the consumers. Therefore, **the Commission directs the DISCOMs to file the Performance Review (true-up) for each year of 4th Control Period before 31st December of the following year. As a first step, the DISCOMs shall file the Annual Performance Review for FY 2019-20 by 31.12.2020.**

3.13 WHEELING CHARGES FOR 4TH CONTROL PERIOD

Stakeholders' submissions

3.13.1 The AP Solar Policy 2012 provides for exemption from payment of Wheeling Charges for a period of 7 years from the date of implementation of the project for both third party and captive Open Access. The interpretation of the DISCOMs that the period of 7 years is to be counted from the implementation date of the Policy is misplaced and the period of 7 years should be counted from the date of implementation of the project. This aspect is amply clear in the Telangana Solar Policy 2015. The Telangana Solar Policy 2015 provides for exemption from payment of Wheeling Charges for captive use within the State for a period of 10 years from the date of commissioning. The projects commissioned under the AP Solar Policy 2015 and the Telangana Solar Policy 2015 are to be given similar treatment as regards the determination of start date of implementation period is concerned.

3.13.2 The DISCOMs have been citing non-disbursal of funds by GoTS towards the exemption from payment of Wheeling Charges provided under the AP Solar Policy 2015 and the Telangana Solar Policy 2015 and claiming the Wheeling Charges on such third party/captive Open Access within the State. This issue was represented to GoTS and it was informed that GOs have been released to this effect. However, on perusal of the GOs issued by GoTS, it was observed that the funds could not be disbursed by GoTS in the absence of the utilisation certificate from the designated authority. The developers who are eligible for exemption from payment of Wheeling Charges should not be burdened on account of lapses on part of the authorities.

3.13.3 The stakeholders requested the Commission to include the provisions of the AP Solar Policy 2012 and the Telangana Solar Policy 2015 regarding exemption from payment of Wheeling Charges in the MYT Order for 4th Control Period.

Petitioners' replies

3.13.4 The date of implementation of AP Solar Policy 2012 is from 26.09.2012 and incentives shall be in force for a period of 7 years from the date of implementation and as such the incentives with respect to exemption from payment of Wheeling Charges for captive use/third party sale within the State have ceased to exist on 26.09.2019. Accordingly, the DISCOMs have not proposed any exemption from payment of Wheeling Charges for captive use/third party sale within the State for the solar power developers commissioned under the AP Solar Policy 2012.

3.13.5 The Commission vide its Amendment Order dated 31.12.2016 ruled as under:

“The wheeling and transmission charges are exempted for captive use within the state. They will be charged as applicable for third party sale. The transmission and distribution losses however is fully applicable for both third party within the state as well as captive use within the state

Provided further that the Govt. of Telangana shall reimburse the Discoms, the sum of money due to the exemption of the wheeling charges to the Solar Power Projects as stated in first proviso to the para 49. In the event of non-reimbursement by the Govt. of Telangana of the wheeling charges so exempted, the Discoms shall continue to levy the wheeling charges as applicable before this amendment plus the sum accrued as arrears from such consumers who are exempted under this amended order.”

3.13.6 As there is no reimbursement of Wheeling Charges so exempted from the Government of Telangana to the DISCOMs, the DISCOMs are bound to levy Wheeling Charges from all the Open Access consumers including from the solar captive developers covered under Telangana Solar Policy, 2015. GoTS has not disbursed any funds in spite of GOs issued and furnishing of utilisation certificate arises only after disbursement of funds.

Commission's Views

3.13.7 The DISCOMs are advised to sort out the issues of interpretation of Policy and reimbursement mechanism amicably in consultation with GoTS.

3.14 OTHERS***Stakeholders' submissions***

3.14.1 The DISCOMs have not submitted the information related to Base Year in accordance with the Regulation No.4 of 2005.

3.14.2 The farmers from whom land is being acquired for erection of substations, high voltage transmission towers and high voltage transmission lines are not being

compensated adequately as per the existing rules and regulations. The stakeholder requested the Commission to take steps for ensuring adequate compensation to the farmers.

3.14.3 The DTRs and fuse boxes installed in Hyderabad city are not compliant of BIS-ISI technical standards.

3.14.4 The Commission has directed the Petitioners to submit additional information and due diligence is required to be carried out on the Petitioners' submissions in this regard and appropriate decision is to be taken by the Commission. There was no adequate time to analyse the Petitioners' submissions which was uploaded on the Commission's website and as a result the objections/comments/suggestions are submitted only on a few points.

Petitioners' replies

3.14.5 The item wise break-up of ARR for the Base Year i.e., FY 2018-19 has been submitted in the respective Petitions. Such details include O&M expenses, scheme wise capital expenditure, fixed assets and corresponding depreciation, loans, consumer grants, load and losses achieved, wheeling revenue etc. The details pertaining to the past years have been submitted in the additional information as part of true-up claims which has been uploaded on the websites of the Commission as well as the DISCOMs.

3.14.6 The Petitioner submitted that the issue regarding compensation to farmers is related to Transmission business.

3.14.7 The procurement wing of TSSPDCL procures various material through e-procurement in a systematic manner such that all equipment is compliant to ISI standards and CEA Guidelines. The equipment thus procured are installed in accordance with REC standards and safety standards stipulated in the Electricity Act, 2003. TSSPDCL has been procuring star rated DTRs.

Commission's Views

3.14.8 The Commission has taken note of the stakeholders' submissions and Petitioners' responses to the same. The Commission has given due time to the stakeholders for making their submissions on the filings of the Petitioners. Further, the Commission has also considered the additional submissions made by the stakeholders after the

Public Hearing.

CHAPTER 4
ANALYSIS AND CONCLUSION ON TRUE-UP OF
1ST, 2ND & 3RD CONTROL PERIODS

4.1 REGULATORY PROVISIONS

4.1.1 The ARR of Distribution Licensee for each year of the Control Period shall include the following items:

- i. Cost of power procurement – for Retail Supply business alone;
- ii. Transmission charges – for Retail Supply business alone;
- iii. Load dispatch charges;
- iv. Operation and maintenance expenses;
- v. Return on capital employed;
- vi. Depreciation;
- vii. Taxes on Income;
- viii. Corrections for “uncontrollable” items and “controllable” items; and
- ix. Any other relevant expenditure.

4.1.2 Clause 5 of the Regulation No.4 of 2005 stipulates that till such time there is complete segregation of accounts between Distribution and Retail Supply businesses, the ARR for each business shall be supported by an Allocation Statement that contains the apportionment of costs and revenues to that business.

4.1.3 The DISCOMs submitted that there are no separate accounts for Distribution and Retail Supply businesses as both the businesses are being handled by a single entity. Based on the assumptions considered in the ARR filings submitted for Distribution and Retail Supply businesses, the segregation of cost and revenue amongst Distribution and Retail Supply businesses is as shown in the Table below:

Table 4–1: Allocation of cost and revenue amongst Distribution and Retail Supply businesses as submitted by the DISCOMs

Particulars	Business allocation	Remarks
Employee cost	Distribution business	Completely considered under Distribution business as segregation of employees cannot be done as most of the employees perform both distribution & retail supply business related activities.
Administration & General (A&G) expenses	Distribution business	Completely considered under Distribution business as it cannot be segregated account wise.
Repairs & Maintenance (R&M) expenses	Distribution business	Completely considered under Distribution business as it is linked to fixed assets which are mostly used for Distribution business.

Particulars	Business allocation	Remarks
Return on Capital Employed (RoCE)	Distribution business	Completely considered under Distribution business as it is linked to fixed assets and capital employed to acquire those assets including working capital which are mainly used for Distribution business.
Power purchase cost	Retail Supply business	Completely considered under Retail Supply business as it is related business activity
Network cost (Inter-State transmission, intra-State transmission, SLDC)	Retail Supply business	Completely considered under Retail Supply business as it is related business activity
Interest on Consumer Security Deposit (CSD)	Retail Supply business	Completely considered under Retail Supply business as it is related business activity
Supply Margin	Retail Supply business	Completely considered under Retail Supply business as it is related business activity
Revenue from sale of power including Government Subsidy	Retail Supply business	Completely considered under Retail Supply business as it is related business activity
Revenue from Cross Subsidy Surcharge, Additional Surcharge	Retail Supply business	Completely considered under Retail Supply business as it is related business activity
Wheeling Revenue	Distribution business	Completely considered under Distribution business as it is related business activity
Non-Tariff Income	Partly Distribution & Partly Retail Supply	Segregation of income done to the extent of nature of activity it relates to.

4.1.4 The DISCOMs have made submissions regarding the true-up claims for 1st, 2nd and 3rd Control Periods.

4.1.5 Before going into the merits of the true-up claims for 1st, 2nd and 3rd Control Periods, the Commission deems it fit to discuss on the key issues as under:

4.2 CAPITAL EXPENDITURE AND CAPITALISATION FOR 1ST, 2ND AND 3RD CONTROL PERIODS:

4.2.1 The Commission directed the DISCOMs to submit the year wise and scheme wise

actual capital expenditure and capitalisation for each year of the 1st, 2nd and 3rd Control Periods in the specified format. However, the DISCOMs did not submit the details sought by the Commission. In the absence of requisite details, the Commission is constrained to undertake the truing up exercise. **The Commission directs the DISCOMs to submit their true-up claims along with complete details sought regarding the capitalisation claimed for each year of the 1st, 2nd and 3rd Control Periods in the Petitions to be filed for Annual Performance Review for FY 2019-20. The DISCOMs are also directed to submit the requisite supporting documents such as Physical Completion Certificates (PCCs), Financial Completion Certificates (FCCs) etc. as mandated in the investment approval guidelines.**

4.3 UJJWAL DISCOM ASSURANCE YOJANA (UDAY) SCHEME

- 4.3.1 The Government of India, GoTS, and the DISCOMs have entered into a Tripartite MoU (UDAY MoU) dated 04.01.2017 in order to improve the operational and financial efficiency of the DISCOMs to enable their financial turnaround. Under the said scheme, GoTS is to take over 75% of the outstanding debt of the DISCOMs as on 30.09.2015 by the end of FY 2016-17. The loans taken over by GoTS was to be transferred to the DISCOMs in the form of grants (50%), loans (25%) and equity (25%). The DISCOMs submitted that no benefit has accrued to DISCOMs due to UDAY scheme as the entire loans taken over by GoTS have been converted into equity. **The Commission directs the DISCOMs to make a detailed submission regarding this differential treatment of GoTS and likely consequences of the same in the Petitions to be filed for Annual Performance Review for FY 2019-20.**
- 4.3.2 The loans taken over under UDAY scheme comprises of both short-term loans and long-term loans. The Commission directs the DISCOMs to submit the details of long-term loans viz., loans availed for capital expenditure, taken over by GoTS under UDAY scheme in the Petitions to be filed for Annual Performance Review for FY 2019-20.
- 4.3.3 It is made amply clear that the Commission is not expressing any opinion on the merits of true-up claims of the DISCOMs in this Order. The true-up claims will be considered afresh based on the submissions of the DISCOMs in the Petitions to be filed for Annual Performance Review for FY 2019-20.

CHAPTER 5
ANALYSIS AND CONCLUSION ON MYT FOR
4TH CONTROL PERIOD FROM FY 2019-20 TO FY 2023-24

5.1 CAPITAL INVESTMENT PLAN FOR 4TH CONTROL PERIOD

Petitioners' submission

5.1.1 The summary of Capital Investment Plan proposed by TSSPDCL for 4th Control Period is as shown in the Table below:

Table 5–1: Summary of Capital Investment Plan proposed by TSSPDCL for 4th Control Period

Rs. in crore

Particulars	FY 2019-20	FY 2020-21	FY 2021-22	FY 2022-23	FY 2023-24	Total
Load Growth and Network Strengthening						
Substation Addition	233.82	212.42	501.76	735.67	686.55	2370.22
PTR Addition	2.74	8.51	12.70	20.22	25.21	69.38
PTR Upgradation	31.71	12.77	9.35	14.58	11.74	80.15
Feeder Addition	7.21	10.06	16.97	19.91	28.22	82.37
DTR Addition	831.54	931.31	1048.83	1186.84	1350.53	5349.05
Sub Total	1107.02	1175.07	1589.61	1977.22	2102.25	7951.17
Other Capex						
Loss Reduction	25.75	28.73	29.79	30.79	31.94	147.00
Reliability Improvement & Contingency Schemes	32.44	36.87	40.21	45.06	50.58	205.17
Renovation & Modernisation	167.17	199.01	222.37	249.25	281.55	1119.34
New Consumer Capex	191.68	193.40	198.56	204.19	210.78	998.61
Civil Infrastructure Development	11.78	13.61	15.66	17.95	20.51	79.51
Technology Upgradation	59.24	59.35	59.56	59.66	59.77	297.57
Land Cost for SS	12.68	9.09	24.54	34.86	33.74	114.90
Road cutting cost (Cables for SS)	24.30	21.00	68.02	122.44	112.40	348.17
Sub Total	525.03	561.05	658.71	764.20	801.27	3310.27
Total	1632.05	1736.12	2248.32	2741.42	2903.52	11261.44
IDC	83.76	79.07	102.88	132.63	145.39	543.73
O&M expenses capitalised	145.82	155.95	206.84	255.80	271.63	1036.04
Grand Total	1861.63	1971.14	2558.04	3129.85	3320.54	12841.21

5.1.2 The summary of Capital Investment Plan proposed by TSNPDCL for 4th Control Period is as shown in the Table below:

Table 5–2: Summary of Capital Investment Plan proposed by TSNPDCL for 4th Control Period

Rs. in crore

Particulars	FY 2019-20	FY 2020-21	FY 2021-22	FY 2022-23	FY 2023-24	Total
Load Growth and Network Strengthening						
Substation Addition	191.83	541.25	696.42	1185.84	944.27	3559.60
PTR Addition	16.08	31.30	24.00	37.78	41.56	150.72
PTR Upgradation	11.98	12.98	13.22	11.10	16.08	65.36
Feeder Addition	4.75	24.66	19.70	16.83	6.70	72.63
DTR Addition	624.47	689.58	761.61	841.53	930.08	3847.28
Sub Total	849.11	1299.76	1514.95	2093.07	1938.68	7695.58
Other Capex						

Particulars	FY 2019-20	FY 2020-21	FY 2021-22	FY 2022-23	FY 2023-24	Total
Loss Reduction	201.96	301.33	167.65	129.27	136.00	936.21
Reliability Improvement & Contingency Schemes	194.56	221.86	224.12	241.56	265.10	1147.19
Renovation & Modernisation	19.70	23.18	22.32	26.00	29.28	120.48
New Consumer Capex	30.29	31.68	33.18	34.71	36.34	166.21
Civil Infrastructure Development	26.23	29.22	32.47	39.01	46.13	173.06
Technology Upgradation	29.37	30.27	31.22	31.61	32.62	155.09
Sub Total	502.10	637.54	510.96	502.17	545.47	2698.24
Total	1351.22	1937.30	2025.91	2595.24	2484.15	10393.82
IDC	98.41	132.30	145.07	180.60	181.06	737.45
O&M expenses capitalised	135.12	193.73	202.59	259.52	248.42	1039.38
Grand Total	1584.75	2263.33	2373.57	3035.37	2913.63	12170.65

5.1.3 The DISCOMs have submitted the basis and computations of the proposed capital investment plan for 4th Control Period.

Commission's View

5.1.4 The Commission, while approving the Capital Investment Plan for 4th Control Period has taken the following into consideration:

- i. As per Clause 22 of Regulation No.4 of 2016 (Distribution License Regulations), the DISCOMs shall have the duty to develop and maintain an efficient, coordinated and economical distribution system in their respective areas of distribution and to supply electricity in accordance with the provisions of the Electricity Act, 2003.
- ii. The Commission is guided by Section 61(c) of the Electricity Act, 2003, the factors which would encourage competition, efficiency, economical use of resources, good performance and optimum investments while determining the tariff.
- iii. The resource plans submitted by the DISCOMs.
- iv. The actual capital investment during 3rd Control Period.
- v. The actual investments during 9 months (April to December) of FY 2019-20.

5.1.5 The Commission after examining the investments with reference to the above points and computations of investments, adopted the same methodology as considered by the DISCOMs with following changes:

- i. The threshold limit of feeders has been considered as 150 amps for all the years as opposed to reduction year-on-year proposed by the DISCOMs.
- ii. Sales per kVA has been considered to be constant for each year of 4th Control Period.
- iii. The capital investment proposed under the head of 'other capex' appears to be significantly higher than the approved investments during 3rd Control Period. Therefore, the Commission has toned down the proposed investments for TSSPDCL and TSNPDCL respectively.

5.1.6 Based on the above, the capital investment plan approved by the Commission for 4th Control Period is as shown in the Tables below:

Table 5–3: Capital Investment approved for TSSPDCL for 4th Control Period

Rs. in crore

Particulars	FY 2019-20	FY 2020-21	FY 2021-22	FY 2022-23	FY 2023-24	Total
Load Growth and Network Strengthening						
Substation Addition	187.23	196.54	480.58	534.39	556.34	1955.07
PTR Addition	2.74	8.48	12.65	20.10	25.03	69.01
PTR Upgradation	31.67	12.73	9.31	14.50	11.66	79.87
Feeder Addition	5.60	4.46	6.12	9.44	12.42	38.04
DTR Addition	526.16	805.39	911.65	1037.34	1132.99	4413.53
Sub Total	753.40	1027.60	1420.31	1615.77	1738.44	6555.51
Other Capex						
Loss Reduction	18.02	20.11	20.85	21.55	22.36	102.90
Reliability Improvement & Contingency Schemes	22.71	25.81	28.15	31.54	35.41	143.62
Renovation & Modernisation	117.02	139.31	155.66	174.47	197.09	783.54
New Consumer Capex	134.18	135.38	138.99	142.93	147.55	699.03
Civil Infrastructure Development	8.24	9.53	10.96	12.57	14.36	55.66
Technology Upgradation	41.47	41.54	41.69	41.76	41.84	208.30
Land Cost for SS	8.88	6.36	17.18	24.40	23.62	80.43
Road cutting cost (Cables for SS)	17.01	14.70	47.62	85.71	78.68	243.72
Sub Total	367.52	392.74	461.10	534.94	560.89	2317.19
Total	1120.92	1420.34	1881.41	2150.71	2299.33	8872.70
IDC	57.53	64.69	86.09	104.05	115.14	427.49
O&M expenses capitalised	100.15	127.58	173.08	200.68	215.11	816.61
Grand Total	1278.60	1612.61	2140.58	2455.44	2629.57	10116.80

Table 5–4: Capital Investment approved for TSNPDCL for 4th Control Period

Rs. in crore

Particulars	FY 2019-20	FY 2020-21	FY 2021-22	FY 2022-23	FY 2023-24	Total
Load Growth and Network Strengthening						
Substation Addition	191.55	342.73	350.94	460.64	567.62	1913.48
PTR Addition	16.06	31.21	23.90	37.27	40.56	148.99
PTR Upgradation	11.96	12.94	13.17	11.04	15.96	65.07
Feeder Addition	4.75	8.41	9.69	9.66	9.85	42.36
DTR Addition	530.21	618.52	682.34	752.87	832.78	3416.73
Sub Total	754.53	1013.81	1080.04	1271.48	1466.77	5586.63
Other Capex						
Loss Reduction	121.17	180.80	100.59	77.56	81.60	561.72
Reliability Improvement & Contingency Schemes	116.73	133.11	134.47	144.94	159.06	688.31
Renovation & Modernisation	11.82	13.91	13.39	15.60	17.57	72.29
New Consumer Capex	18.17	19.01	19.91	20.83	21.80	99.72
Civil Infrastructure Development	15.74	17.53	19.48	23.41	27.68	103.84
Technology Upgradation	17.62	18.16	18.73	18.97	19.57	93.05
Sub Total	301.26	382.52	306.57	301.30	327.28	1618.94
Total	1055.79	1396.33	1386.62	1572.78	1794.06	7205.58
IDC	76.90	95.36	99.29	109.45	130.76	511.76
O&M expenses capitalised	105.58	139.63	138.66	157.28	179.41	720.56
Grand Total	1238.26	1631.33	1624.57	1839.51	2104.23	8437.89

5.1.7 The DISCOMs shall seek approval for individual schemes at least 90 days before undertaking the investment in accordance with the Guidelines for Investment Approval. The individual schemes/projects submitted by the DISCOMs for Commission's approval must provide complete details including those relating to the cost and capitalisation for each year of 4th Control Period.

5.2 CAPITALISATION FOR 4TH CONTROL PERIOD *Commission's View*

5.2.1 The Commission observed that the capitalisation as percentage of opening Capital Works in Progress (CWIP) plus capital expenditure during the year proposed by the DISCOMs for 4th Control Period is significantly higher than the actuals during 3rd Control Period. The Commission has approved the capitalisation for 4th Control Period based on the average capitalisation rate during 3rd Control Period.

5.2.2 The Commission has considered the closing CWIP as on 31.03.2019 as the opening CWIP as on 01.04.2019. Based on the approved capital investment for 4th Control Period, the approved capitalisation for 4th Control Period is as shown in the Table below:

Table 5-5: Capitalisation for 4th Control Period

Rs. in crore

Financial Year	Claimed			Approved		
	TSSPDCL	TSNPDCCL	Total	TSSPDCL	TSNPDCCL	Total
2019-20	2746.71	1803.52	4550.22	1713.51	954.88	2668.39
2020-21	1927.33	1990.06	3917.40	1653.65	1279.27	2932.92
2021-22	2323.29	2330.12	4653.41	1942.53	1444.86	3387.39
2022-23	2901.14	2769.96	5671.09	2246.83	1634.11	3880.94
2023-24	3244.26	2962.32	6206.59	2473.90	1859.56	4333.46
Total	13142.73	11855.98	24998.71	10030.42	7172.68	17203.10

5.3 DISTRIBUTION INFRASTRUCTURE FOR 4TH CONTROL PERIOD *Commission's View*

5.3.1 The DISCOMs have proposed the following distribution infrastructure at the end of each year of 4th Control Period:

Table 5-6: Distribution infrastructure claimed by TSSPDCL for 4th Control Period

Rs. in crore

Particulars	Units	2019-20	2020-21	2021-22	2022-23	2023-24
No. of substations	No.	1643	1689	1781	1904	2017
Line length	km	303725	318842	336618	356540	377423
No. of DTRs	No.	429343	448459	468893	490826	514482
No. of consumers	No.	8706449	9066441	9237277	9673846	10128449

Table 5–7: Distribution infrastructure claimed by TSNPDCL for 4th Control Period
Rs. in crore

Particulars	Units	2019-20	2020-21	2021-22	2022-23	2023-24
No. of substations	No.	1432	1605	1817	2160	2420
Line length	km	274992	291205	308508	328189	348033
No. of DTRs	No.	299336	316903	335423	354951	375551
No. of consumers	No.	5980563	6255315	6427694	6600069	6772444

5.3.2 Based on the approved capitalisation, the Commission has approved the distribution infrastructure for 4th Control Period as shown in the Tables below:

Table 5–8: Distribution infrastructure approved for TSSPDCL for 4th Control Period
Rs. in crore

Particulars	Units	FY 2019-20	FY 2020-21	FY 2021-22	FY 2022-23	FY 2023-24
No. of substations	No.	1624	1664	1741	1836	1922
Line length	km	298281	311252	326114	341543	357467
No. of DTRs	No.	422583	438985	456070	473056	491095
No. of consumers	No.	8536256	8845128	8987967	9326074	9672729

Table 5–9: Distribution infrastructure approved for TSNPDCL for 4th Control Period
Rs. in crore

Particulars	Units	FY 2019-20	FY 2020-21	FY 2021-22	FY 2022-23	FY 2023-24
No. of substations	No.	1402	1513	1645	1847	2010
Line length	km	268935	279357	290087	301697	314154
No. of DTRs	No.	291492	302785	314268	325789	338720
No. of consumers	No.	5851019	6027638	6134527	6236218	6344424

5.4 AGGREGATE REVENUE REQUIREMENT

5.4.1 The Aggregate Revenue Requirement (ARR) of Distribution Licensee for wheeling business contains the following:

- i. Operation and Maintenance (O&M) expenses;
- ii. Return on Capital Employed (RoCE);
- iii. Depreciation;
- iv. Taxes on income;
- v. Corrections for “uncontrollable” items and “controllable” items; and
- vi. Any other relevant expenditure.

5.4.2 The Petitioners’ submissions and the Commission’s analysis on each item of ARR is detailed below:

5.5 OPERATION AND MAINTENANCE (O&M) EXPENSES FOR 4TH CONTROL PERIOD

Petitioners’ submission

5.5.1 The O&M expenses comprise of (i) employee cost, (ii) A&G expenses and (iii) R&M expenses. The O&M expenses for 4th Control Period have been claimed considering

the methodology adopted by the Commission in the approval of O&M expenses for 3rd Control Period. Employee cost and A&G expenses are linked to cost derivatives viz., number of substations, length of lines, number of DTRs and number of consumers. R&M expenses are linked to Gross Fixed Assets (GFA) base.

5.5.2 The actual gross O&M expenses for FY 2018-19 have been considered as the base expenses for deriving the norms for 4th Control Period. The norms arrived for FY 2018-19 have been escalated year-on-year by 5.42% computed based on past 5 years CPI and WPI indices.

5.5.3 The normative parameters considered by the DISCOMs for projecting the O&M expenses for 4th Control Period is as shown in the Table below:

Table 5–10: O&M expenses claimed for 4th Control Period

Rs. in crore

Financial Year	Claimed		
	Gross expenses	Capitalisation	Net expenses
TSSPDCL			
2019-20	2808.18	145.82	2662.36
2020-21	3086.00	155.95	2930.05
2021-22	3406.86	206.84	3200.02
2022-23	3809.44	255.80	3553.64
2023-24	4245.19	271.63	3973.56
Total	17355.67	1036.03	16319.64
TSNPDCL			
2019-20	2049.75	135.12	1914.63
2020-21	2358.28	193.73	2164.55
2021-22	2718.40	202.59	2515.80
2022-23	3220.05	259.52	2960.52
2023-24	3703.71	248.42	3455.30
Total	14050.19	1039.38	13010.81
TOTAL			
2019-20	4857.93	280.94	4576.99
2020-21	5444.28	349.67	5094.61
2021-22	6125.26	409.43	5715.83
2022-23	7029.48	515.32	6514.16
2023-24	7948.90	520.04	7428.86
Total	31405.86	2075.41	29330.44

Commission's View

5.5.4 Clause 14.3 of the Regulation No.4 of 2005 stipulates that the O&M expenses for each year of the Control Period shall be determined by using pre-determined norms or formulae based on the Distribution Licensee's submissions, previous years' actual expenses and any other factors considered relevant by the Commission.

5.5.5 In the MYT Order dated 27.03.2015 for 3rd Control Period, the Commission has specified the methodology of determining the norms of O&M expenses. The Commission has approved the normative O&M expenses for 4th Control Period by adopting the same methodology:

- i. The actual gross O&M expenses for Base Year i.e., FY 2018-19 has been considered as the base.
- ii. The actual gross employee cost and A&G expenses have been allocated in the ratio of 49%, 21%, 10% and 20% for number of substations, line length, number of DTRs and number of consumers respectively.
- iii. The employee cost and A&G expenses thus allocated to cost derivatives are divided by cumulative number of substations, line length, number of DTRs and number of consumers in FY 2018-19.

Table 5-11: Employee cost and A&G expenses for FY 2018-19

Particulars	Units	FY 2018-19	
		TSSPDCL	TSNPDCCL
Employee cost per Substation	Rs.	6917951	6024137
Employee Cost per km of line length	Rs.	16328	13474
Employee cost per DTR	Rs.	5467	5950
Employee Cost per Consumer	Rs.	545	590
A&G expenses per substation	Rs.	500056	311889
A&G expenses per km of line length	Rs.	1180	698
A&G expenses per DTR	Rs.	395	308
A&G expenses per consumer	Rs.	39	31

- iv. The norms thus arrived for Base Year have been escalated by the annual escalation rate of 4.53% to arrive at the norms of employee cost and A&G expenses for each year of 4th Control Period.
- v. The norms of employee cost and A&G expenses thus arrived at for each year of 4th Control Period are as under:

Table 5-12: Norms of employee cost and A&G expense for 4th Control Period

Particulars	Rs. in crore									
	FY 2019-20		FY 2020-21		FY 2021-22		FY 2022-23		FY 2023-24	
	TSSPDCL	TSNPDCCL	TSSPDCL	TSNPDCCL	TSSPDCL	TSNPDCCL	TSSPDCL	TSNPDCCL	TSSPDCL	TSNPDCCL
Employee Cost per substation	7231070	6296800	7558362	6581806	7900468	6879710	8258058	7191099	8631833	7516582
Employee Cost per km of line length	17067	14084	17840	14722	18647	15388	19491	16084	20373	16812
Employee cost per DTR	5715	6219	5973	6501	6244	6795	6526	7103	6822	7424
Employee Cost per consumer	570	616	595	644	622	673	651	704	680	736
A&G expenses per substation	522690	326005	546347	340761	571076	356185	596924	372306	623942	389157
A&G expenses per km of line length	1234	729	1290	762	1348	797	1409	833	1473	870
A&G expenses per DTR	413	322	432	337	451	352	472	368	493	384

Particulars	FY 2019-20		FY 2020-21		FY 2021-22		FY 2022-23		FY 2023-24	
	TSSPDCL	TSNPDCL	TSSPDCL	TSNPDCL	TSSPDCL	TSNPDCL	TSSPDCL	TSNPDCL	TSSPDCL	TSNPDCL
A&G expenses per consumer	41	32	43	33	45	35	47	36	49	38

- vi. The norms thus arrived for each year of 4th Control Period have been multiplied by cumulative number of substations, line length, number of DTRs and number of consumers approved for the respective year to arrive at the normative employee cost and A&G expenses for 4th Control Period.
- vii. The actual R&M expenses as percentage of opening GFA viz., K factor for FY 2018-19 has been computed as 1.01% and 1.19% for TSSPDCL and TSNPDCL respectively.

Table 5-13: Computation of K factor for FY 2018-19

Particulars	Units	FY 2018-19	
		TSSPDCL	TSNPDCL
Opening GFA	Rs. crore	12524.39	6042.99
R&M expenses	Rs. crore	126.66	71.98
K factor	%	1.01%	1.19%

- viii. The R&M expenses for each year of 4th Control Period have been arrived at by multiplying the K factor with the opening GFA for the respective year.

5.5.6 Based on the above, the normative O&M expenses approved by the Commission for 4th Control Period is as shown in the Table below:

Table 5-14: Normative O&M expenses for 4th Control Period

Rs. in crore

Financial Year	Claimed			Approved		
	Gross expenses	Capitalisation	Net expenses	Gross expenses	Capitalisation	Net expenses
TSSPDCL						
2019-20	2808.18	145.82	2662.36	2729.10	100.15	2628.95
2020-21	3086.00	155.95	2930.05	2950.48	127.58	2822.90
2021-22	3406.86	206.84	3200.02	3209.32	173.08	3036.24
2022-23	3809.44	255.80	3553.64	3518.26	200.68	3317.58
2023-24	4245.19	271.63	3973.56	3844.31	215.11	3629.21
Total	17355.67	1036.03	16319.64	16251.48	816.61	15434.87
TSNPDCL						
2019-20	2049.75	135.12	1914.63	1980.48	105.58	1874.90
2020-21	2358.28	193.73	2164.55	2190.52	139.63	2050.88
2021-22	2718.40	202.59	2515.80	2428.86	138.66	2290.20
2022-23	3220.05	259.52	2960.52	2739.83	157.28	2582.55
2023-24	3703.71	248.42	3455.30	3047.06	179.41	2867.65
Total	14050.19	1039.38	13010.81	12386.74	720.56	11666.18
TOTAL						
2019-20	4857.93	280.94	4576.99	4709.58	205.73	4503.85
2020-21	5444.28	349.67	5094.61	5141.00	267.22	4873.78
2021-22	6125.26	409.43	5715.83	5638.18	311.75	5326.43
2022-23	7029.48	515.32	6514.16	6258.09	357.96	5900.13
2023-24	7948.90	520.04	7428.86	6891.37	394.51	6496.86
Total	31405.86	2075.41	29330.44	28638.22	1537.17	27101.05

5.6 REGULATED RATE BASE (RRB) FOR 4TH CONTROL PERIOD

Petitioners' submission

5.6.1 TSSPDCL has claimed the Regulated Rate Base (RRB) of Rs.5676.05 crore, Rs.6734.17 crore, Rs.7453.33 crore, Rs.8477.77 crore and Rs.9806.91 crore for FY 2019-20, FY 2020-21, FY 2021-22, FY 2022-23 and FY 2023-24 respectively. TSNPDCL has claimed the RRB of Rs.3151.12 crore, Rs.4537.38 crore, Rs.6048.77 crore, Rs.7762.06 crore and Rs.9584.58 crore for FY 2019-20, FY 2020-21, FY 2021-22, FY 2022-23 and FY 2023-24 respectively.

Commission's View

5.6.2 The Commission considered RRB for 4th Control Period in accordance with the provisions of the Regulation No.4 of 2005:

- The closing GFA for FY 2018-19 has been considered as the opening cost of fixed assets for FY 2019-20.
- The closing accumulated depreciation for FY 2018-19 has been considered as the opening accumulated depreciation for FY 2019-20.
- The closing balance of consumer contribution for FY 2018-19 has been considered as the opening balance for FY 2019-20.
- The approved capitalisation during each year has been considered as the investments capitalised during the year.
- The consumer contributions received during each year has been considered as proposed by the Petitioner for the respective year.
- The approved depreciation during each year has been considered as the depreciation addition during the year.
- The closing GFA for each year of the Control Period has been considered as the opening GFA for the subsequent year of Control Period.
- The closing accumulated depreciation for each year of the Control Period has been considered as the opening accumulated depreciation for the subsequent year of the Control Period.
- The closing balance of consumer contribution for each year of the Control Period has been considered as the opening balance for the subsequent year of the Control Period.
- The working capital for each year has been considered as equivalent to 1/12th of approved net O&M expenses for the respective year.

5.6.3 The RRB claimed by the DISCOMs and approved by the Commission for 4th Control Period is as shown in the Table below:

Table 5-15: RRB for 4th Control Period

Financial Year	Claimed		Approved	
	TSSPDCL	TSNPDCL	TSSPDCL	TSNPDCL
2019-20	5676.05	3151.12	5270.03	2577.47
2020-21	6734.17	4537.38	5946.56	3240.02
2021-22	7453.33	6048.77	6655.54	4081.58
2022-23	8477.77	7762.06	7529.17	4991.94

Rs. in crore

Financial Year	Claimed		Approved	
	TSSPDCL	TSNPDCL	TSSPDCL	TSNPDCL
2023-24	9806.91	9584.58	8565.02	6015.37

5.7 WEIGHTED AVERAGE COST OF CAPITAL (WACC) FOR 4TH CONTROL PERIOD

Petitioners' submission

5.7.1 Debt portion has been considered as 75% of RRB and Equity portion has been considered as 25% of RRB. TSSPDCL has considered the cost of debt as 10.33%, 10.62%, 10.94%, 11.15% and 11.26% for FY 2019-20, FY 2020-21, FY 2021-22, FY 2022-23 and FY 2023-24 respectively. TSNPDCL has considered the cost of debt as 10.16%, 10.43%, 10.63%, 10.74% and 10.81% for FY 2019-20, FY 2020-21, FY 2021-22, FY 2022-23 and FY 2023-24 respectively. The cost of equity has been considered as 14%. TSSPDCL has considered WACC of 11.24%, 11.47%, 11.71%, 11.86% and 11.94% for FY 2019-20, FY 2020-21, FY 2021-22, FY 2022-23 and FY 2023-24 respectively. TSNPDCL has considered WACC of 11.12%, 11.32%, 11.47%, 11.55% and 11.61% for FY 2019-20, FY 2020-21, FY 2021-22, FY 2022-23 and FY 2023-24 respectively.

Commission's View

- 5.7.2 Regulation 4 of 2005 stipulates that the Debt Equity ratio shall be determined at the beginning of the Control Period after considering Distribution Licensee's proposal, previous years' D/E mix, market conditions and other relevant factors. The Commission has considered the Debt Equity ratio of 75:25.
- 5.7.3 Regulation No.4 of 2005 stipulates that the stipulates that the cost of debt shall be determined at the beginning of the Control Period after considering Distribution Licensee's proposals, present cost of debt, market conditions and other relevant factors. The Commission does not find it prudent to consider the cost of debt as proposed for 4th Control Period as it does not provide any impetus to the Licensees for negotiating the interest rates with the lending agencies. The Commission has considered the cost of debt equivalent to SBI 1-year MCLR (7.85% as on 10.02.2020) plus a margin of 2% and accordingly, the cost of debt has been considered as 9.85% for 4th Control Period.
- 5.7.4 The Commission has considered the cost of equity as 14%, the same proposed by the DISCOMs for 4th Control Period.

5.7.5 Based on the above, the Commission has approved WACC for 4th Control Period as shown in the Tables below:

Table 5–16: WACC for TSSPDCL for 4th Control Period

Particulars	Units	FY 2019-20		FY 2020-21		FY 2021-22		FY 2022-23		FY 2023-24	
		Claimed	Approved	Claimed	Approved	Claimed	Approved	Claimed	Approved	Claimed	Approved
Debt	%	75.00%	75.00%	75.00%	75.00%	75.00%	75.00%	75.00%	75.00%	75.00%	75.00%
Equity	%	25.00%	25.00%	25.00%	25.00%	25.00%	25.00%	25.00%	25.00%	25.00%	25.00%
Debt equity ratio		3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
Cost of Debt	%	10.33%	9.85%	10.62%	9.85%	10.94%	9.85%	11.15%	9.85%	11.26%	9.85%
Cost of Equity	%	14.00%	14.00%	14.00%	14.00%	14.00%	14.00%	14.00%	14.00%	14.00%	14.00%
WACC	%	11.24%	10.89%	11.47%	10.89%	11.71%	10.89%	11.86%	10.89%	11.94%	10.89%

Table 5–17: WACC for TSNPDCL for 4th Control Period

Particulars	Units	FY 2019-20		FY 2020-21		FY 2021-22		FY 2022-23		FY 2023-24	
		Claimed	Approved	Claimed	Approved	Claimed	Approved	Claimed	Approved	Claimed	Approved
Debt	%	75.00%	75.00%	75.00%	75.00%	75.00%	75.00%	75.00%	75.00%	75.00%	75.00%
Equity	%	25.00%	25.00%	25.00%	25.00%	25.00%	25.00%	25.00%	25.00%	25.00%	25.00%
Debt equity ratio		3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
Cost of Debt	%	10.16%	9.85%	10.43%	9.85%	10.63%	9.85%	10.74%	9.85%	10.81%	9.85%
Cost of Equity	%	14.00%	14.00%	14.00%	14.00%	14.00%	14.00%	14.00%	14.00%	14.00%	14.00%
WACC	%	11.12%	10.89%	11.32%	10.89%	11.47%	10.89%	11.55%	10.89%	11.61%	10.89%

5.8 RETURN ON CAPITAL EMPLOYED FOR 4TH CONTROL PERIOD

Petitioners' submission

5.8.1 TSSPDCL has claimed the Return on Capital Employed (RoCE) of Rs.638.21 crore, Rs.772.70 crore, Rs.872.61 crore, Rs.1005.86 crore and Rs.1171.20 crore for FY 2019-20, FY 2020-21, FY 2021-22, FY 2022-23 and FY 2023-24 respectively. TSNPDCL has claimed the RoCE of Rs.350.37 crore, Rs.513.64 crore, Rs.693.84 crore, Rs.896.78 crore and Rs.1112.46 crore for FY 2019-20, FY 2020-21, FY 2021-22, FY 2022-23 and FY 2023-24 respectively.

Commission's View

5.8.2 In accordance with Clause 13 of Regulation No.4 of 2005, the Commission has approved RoCE for 4th Control Period considering the approved RRB and WACC for each year as shown in the Table below:

Table 5–18: RoCE for 4th Control Period

Financial Year	Rs. in crore					
	Claimed			Approved		
	TSSPDCL	TSNPDC	Total	TSSPDCL	TSNPDC	Total
2019-20	638.21	350.37	988.58	573.77	280.62	854.40
2020-21	772.20	513.64	1285.84	647.43	352.76	1000.19
2021-22	872.61	693.84	1566.45	724.62	444.38	1169.00
2022-23	1005.86	896.78	1902.64	819.74	543.50	1363.24
2023-24	1171.20	1112.46	2283.66	932.52	654.92	1587.44
Total	4460.08	3567.10	8027.18	3698.08	2276.18	5974.26

5.9 DEPRECIATION FOR 4TH CONTROL PERIOD

Petitioners' submission

- 5.9.1 TSSPDCL has claimed the depreciation of Rs.1010.58 crore, Rs.1156.66 crore, Rs.1282.68 crore, Rs.1448.19 crore and Rs.1609.01 crore for FY 2019-20, FY 2020-21, FY 2021-22, FY 2022-23 and FY 2023-24 respectively. TSNPDCL has claimed the depreciation of Rs.417.36 crore, Rs.545.28 crore, Rs.688.28 crore, Rs.871.59 crore and Rs.1073.01 crore for FY 2019-20, FY 2020-21, FY 2021-22, FY 2022-23 and FY 2023-24 respectively.
- 5.9.2 Depreciation has been calculated for full year on opening GFA and for half year on asset addition during the year considering the rates notified by the Ministry of Power, GoI. The depreciation on assets created out of consumer contribution and grants has been considered as non-tariff income.

Commission's View

- 5.9.3 Clause 15 of Regulation No.4 of 2005 stipulates that the depreciation shall be calculated on the amount of original cost of fixed assets included in RRB at the beginning of each year of the Control Period based on the methodology, rates and other terms and decided by CERC from time to time. The Commission directed the DISCOMs to submit the depreciation computations for 4th Control Period in accordance with the provisions of Regulation No.4 of 2005. In reply, the DISCOMs submitted as under:
- The DISCOMs had claimed the depreciation for 1st Control Period considering the rates specified by CERC plus advance against depreciation (AAD). However, the erstwhile Commission had approved depreciation considering MoP rates and disallowed AAD claims of the DISCOMs. Further, the MoP rates had also been considered for 2nd and 3rd Control Periods.
 - Depreciation enables the DISCOMs to meet the obligations towards long-term loan repayment. On account of lower depreciation rates of CERC, the loan repayment period would become 25 years as opposed to 11 years if MoP rates are considered.
 - If the depreciation rates of CERC are considered without allowing AAD, the DISCOMs have to arrange for additional financing for meeting the repayment obligations.
- 5.9.4 The Commission does not find merit in the submissions of the DISCOMs as allowing depreciation at lower rates than notified by MoP would entail lower depreciation and accordingly the RRB and RoCE would be on higher side on account of lower depreciation.
- 5.9.5 The Commission has approved depreciation for 4th Control Period in accordance with

the provisions of the Regulation No.4 of 2005:

- i. The rates of depreciation as notified by CERC in its (Terms and Conditions of Tariff) Regulation, 2019 have been considered.
- ii. The depreciation has been approved considering the opening GFA for each year of the Control Period.
- iii. The amortisation of assets funded by consumer contributions and grants has been considered as non-tariff income.

5.9.6 The depreciation claimed by the DISCOMs and approved by the Commission for 4th Control Period is as shown in the Table below:

Table 5–19: Depreciation for 4th Control Period

Rs. in crore

Financial Year	Claimed			Approved		
	TSSPDCL	TSNPDCL	Total	TSSPDCL	TSNPDCL	Total
2019-20	1010.58	417.36	1427.94	759.54	374.39	1133.94
2020-21	1156.66	545.28	1701.94	850.02	424.81	1274.83
2021-22	1282.68	688.28	1970.96	937.33	492.35	1429.68
2022-23	1448.19	871.59	2319.78	1039.90	568.64	1608.54
2023-24	1609.01	1073.01	2682.02	1158.53	654.92	1813.45
Total	6507.13	3595.51	10102.64	4745.32	2515.12	7260.44

5.9.7 The Commission directs the DISCOMs to submit the computations of depreciation for each year of 4th Control Period in accordance with the provisions of CERC Tariff Regulations, 2019 in Annual Performance Review for each year of 4th Control Period.

5.10 TAXES ON INCOME

Petitioners' submission

5.10.1 TSSPDCL has claimed the tax on income of Rs.48.92 crore, Rs.58.05 crore, Rs.64.24 crore, Rs.73.07 crore and Rs.84.53 crore for FY 2019-20, FY 2020-21, FY 2021-22, FY 2022-23 and FY 2023-24 respectively. TSNPDCL has claimed the depreciation of Rs.15.93 crore, Rs.21.88 crore, Rs.28.12 crore, Rs.35.34 crore and Rs.43.05 crore for FY 2019-20, FY 2020-21, FY 2021-22, FY 2022-23 and FY 2023-24 respectively.

Commission's View

5.10.2 The Commission observed that the computations of tax on income submitted by TSNPDCL is erroneous which was also admitted in its replies to additional submissions.

5.10.3 The Commission has approved the tax on income for 4th Control Period in accordance with Regulation No.4 of 2005:

- i. RoE has been considered as equivalent to 14% of equity component of RRB.

- ii. The revised MAT rate of 17.472% has been considered for computing tax on RoE.

5.10.4 The tax on income claimed by the Petitioner and approved by the Commission for 4th Control Period is as shown in the Table below:

Table 5–20: Tax on income for 4th Control Period

Rs. in crore

Financial Year	Claimed			Approved		
	TSSPDCL	TSNPDCL	Total	TSSPDCL	TSNPDCL	Total
2019-20	48.92	15.93	64.85	39.05	19.10	58.15
2020-21	58.05	21.88	79.92	44.06	24.01	68.07
2021-22	64.24	28.12	92.36	49.32	30.24	79.56
2022-23	73.07	35.34	108.41	55.79	36.99	92.78
2023-24	84.53	43.05	127.58	63.47	44.57	108.04
Total	328.82	144.30	473.12	251.69	154.91	406.60

5.11 SPECIAL APPROPRIATIONS FOR 4TH CONTROL PERIOD

Petitioners' submission

5.11.1 TSSPDCL has claimed special appropriations to the tune of Rs.50 crore for each year of 4th Control Period. TSNPDCL has claimed special appropriations of Rs.56.87 crore, Rs.59.97 crore, Rs.60.19 crore, Rs.60.41 crore and Rs.59.97 crore for FY 2019-20, FY 2020-21, FY 2021-22, FY 2022-23 and FY 2023-24 respectively.

5.11.2 The expenses claimed towards special appropriations are proposed to be incurred for activities related to safety of consumers and employees.

Commission's View

5.11.3 The Commission is of the view that the expenses claimed towards special appropriations are on higher side in comparison to the actual expenses incurred in the past. Therefore, the Commission has approved the special appropriation of Rs.20 crore for each year of 4th Control Period for each DISCOM.

Table 5–21: Special appropriations for 4th Control Period

Rs. in crore

Financial Year	Claimed			Approved		
	TSSPDCL	TSNPDCL	Total	TSSPDCL	TSNPDCL	Total
2019-20	50.00	56.87	106.87	20.00	20.00	40.00
2020-21	50.00	59.97	109.97	20.00	20.00	40.00
2021-22	50.00	60.19	110.19	20.00	20.00	40.00
2022-23	50.00	60.41	110.41	20.00	20.00	40.00
2023-24	50.00	59.97	109.97	20.00	20.00	40.00
Total	250.00	297.41	547.41	100.00	100.00	200.00

5.12 NON-TARIFF INCOME FOR 4TH CONTROL PERIOD

Petitioners' submission

5.12.1 TSSPDCL has claimed non-tariff income of Rs.450.65 crore, Rs.456.87 crore, Rs.495.82 crore, Rs.536.47 crore and Rs.585.52 crore for FY 2019-20, FY 2020-21, FY 2021-22, FY 2022-23 and FY 2023-24 respectively. TSNPDCL has claimed non-tariff income of Rs.140.99 crore, Rs.151.92 crore, Rs.160.85 crore, Rs.175.46 crore and Rs.188.44 crore for FY 2019-20, FY 2020-21, FY 2021-22, FY 2022-23 and FY 2023-24 respectively.

Commission's View

5.12.2 The Commission has approved the non-tariff income as proposed by the DISCOMs for 4th Control Period.

Table 5-22: Non-tariff income for 4th Control Period

Rs. in crore

Financial Year	Claimed			Approved		
	TSSPDCL	TSNPDCL	Total	TSSPDCL	TSNPDCL	Total
2019-20	450.65	140.99	591.64	450.65	140.99	591.64
2020-21	456.87	151.92	608.79	456.87	151.92	608.79
2021-22	495.82	160.85	656.67	495.82	160.85	656.67
2022-23	536.47	175.46	711.93	536.47	175.46	711.93
2023-24	585.52	188.44	773.95	585.52	188.44	773.95
Total	2525.32	817.66	3342.98	2525.32	817.66	3342.98

5.13 REVENUE FROM OPEN ACCESS FOR 4TH CONTROL PERIOD***Petitioners' submission***

5.13.1 TSSPDCL has claimed the revenue from open access of Rs.24.84 crore, Rs.45.17 crore, Rs.47.14 crore, Rs.50.33 crore and Rs.52.74 crore for FY 2019-20, FY 2020-21, FY 2021-22, FY 2022-23 and FY 2023-24 respectively. TSNPDCL has not claimed any revenue from open access for 4th Control Period.

Commission's View

5.13.2 The Commission has approved the revenue from open access for TSSPDCL considering the approved wheeling charges for 4th Control Period. The Commission has not considered any revenue from open access for TSNPDCL.

Table 5-23: Revenue from Open Access for 4th Control Period

Rs. in crore

Financial Year	Claimed			Approved		
	TSSPDCL	TSNPDCL	Total	TSSPDCL	TSNPDCL	Total
2019-20	24.84	0.00	24.84	24.84	0.00	24.84
2020-21	45.17	0.00	45.17	44.62	0.00	44.62
2021-22	47.14	0.00	47.14	46.80	0.00	46.80

Financial Year	Claimed			Approved		
	TSSPDCL	TSNPDCL	Total	TSSPDCL	TSNPDCL	Total
2022-23	50.33	0.00	50.33	45.81	0.00	45.81
2023-24	52.74	0.00	52.74	49.84	0.00	49.84
Total	220.22	0.00	220.22	211.91	0.00	211.91

5.14 AGGREGATE REVENUE REQUIREMENT (ARR) FOR 4TH CONTROL PERIOD

Commission's View

5.14.1 The ARR for 4th Control Period claimed by the DISCOMs and approved by the Commission based on the above analysis is as shown in the Table below:

Table 5–24: ARR for 4th Control Period

Rs. in crore

Particulars	Claimed			Approved		
	TSSPDCL	TSNPDCL	Total	TSSPDCL	TSNPDCL	Total
FY 2019-20						
Operation & Maintenance expenses	2662.36	1914.63	4576.99	2628.95	1874.90	4503.85
Return on Capital Employed	638.21	350.37	988.58	573.77	280.62	854.40
Depreciation	1010.58	417.36	1427.94	759.54	374.39	1133.94
Taxes on Income	48.92	15.93	64.85	39.05	19.10	58.15
Special appropriations	50.00	56.87	106.87	20.00	20.00	40.00
Aggregate Revenue Requirement	4410.08	2755.15	7165.23	4021.32	2569.01	6590.33
Less: Non-Tariff Income	450.65	140.99	591.64	450.65	140.99	591.64
Less: Revenue from OA	24.84	0.00	24.84	24.84	0.00	24.84
Net Aggregate Revenue Requirement (to Retail Supply Business)	3934.58	2614.17	6548.75	3545.82	2428.03	5973.85
FY 2020-21						
Operation & Maintenance expenses	2930.05	2164.55	5094.61	2822.90	2050.88	4873.78
Return on Capital Employed	772.20	513.64	1285.84	647.43	352.76	1000.19
Depreciation	1156.66	545.28	1701.94	850.02	424.81	1274.83
Taxes on Income	58.05	21.88	79.92	44.06	24.01	68.07
Special appropriations	50.00	60.19	110.19	20.00	20.00	40.00
Aggregate Revenue Requirement	4966.96	3305.53	8272.49	4384.41	2872.45	7256.87
Less: Non-Tariff Income	456.87	151.92	608.79	456.87	151.92	608.79
Less: Revenue from OA	45.17	0.00	45.17	44.62	0.00	44.62
Net Aggregate Revenue Requirement (to Retail Supply Business)	4464.92	3153.61	7618.53	3882.93	2720.53	6603.46
FY 2021-22						
Operation & Maintenance expenses	3200.02	2515.80	5715.83	3036.24	2290.20	5326.43
Return on Capital Employed	872.61	693.84	1566.45	724.62	444.38	1169.00
Depreciation	1282.68	688.28	1970.96	937.33	492.35	1429.68
Taxes on Income	64.24	28.12	92.36	49.32	30.24	79.56
Special appropriations	50.00	60.19	110.19	20.00	20.00	40.00
Aggregate Revenue Requirement	5469.56	3986.22	9455.78	4767.51	3277.17	8044.68
Less: Non-Tariff Income	495.82	160.85	656.67	495.82	160.85	656.67
Less: Revenue from OA	47.14	0.00	47.14	46.80	0.00	46.80
Net Aggregate Revenue Requirement (to Retail Supply Business)	4926.60	3825.37	8751.97	4224.89	3116.32	7341.21
FY 2022-23						
Operation & Maintenance expenses	3553.64	2960.52	6514.16	3317.58	2582.55	5900.13
Return on Capital Employed	1005.86	896.78	1902.64	819.74	543.50	1363.24
Depreciation	1448.19	871.59	2319.78	1039.90	568.64	1608.54
Taxes on Income	73.07	35.34	108.41	55.79	36.99	92.78

Particulars	Claimed			Approved		
	TSSPDCL	TSNPDCL	Total	TSSPDCL	TSNPDCL	Total
Special appropriations	50.00	60.41	110.41	20.00	20.00	40.00
Aggregate Revenue Requirement	6130.77	4824.65	10955.42	5253.00	3751.68	9004.68
Less: Non-Tariff Income	536.47	175.46	711.93	536.47	175.46	711.93
Less: Revenue from OA	50.33	0.00	50.33	45.81	0.00	45.81
Net Aggregate Revenue Requirement (to Retail Supply Business)	5543.97	4649.19	10193.16	4670.72	3576.22	8246.94
FY 2023-24						
Operation & Maintenance expenses	3973.56	3455.30	7428.86	3629.21	2867.65	6496.86
Return on Capital Employed	1171.20	1112.46	2283.66	932.52	654.92	1587.44
Depreciation	1609.01	1073.01	2682.02	1158.53	654.92	1813.45
Taxes on Income	84.53	43.05	127.58	63.47	44.57	108.04
Special appropriations	50.00	59.97	109.97	20.00	20.00	40.00
Aggregate Revenue Requirement	6888.31	5743.78	12632.09	5803.72	4242.07	10045.79
Less: Non-Tariff Income	585.52	188.44	773.95	585.52	188.44	773.95
Less: Revenue from OA	52.74	0.00	52.74	49.84	0.00	49.84
Net Aggregate Revenue Requirement (to Retail Supply Business)	6250.05	5555.35	11805.40	5168.36	4053.63	9222.00

5.15 WHEELING CHARGES FOR 4TH CONTROL PERIOD

Petitioners' submission

5.15.1 The Wheeling Charges proposed by the DISCOMs for 4th Control Period is as shown in the Table below:

Table 5–25: Wheeling Charges proposed by the DISCOMs for 4th Control Period

Rs./kVA/month

Particulars	FY 2019-20		FY 2020-21		FY 2021-22		FY 2022-23		FY 2023-24	
	TSSPDCL	TSNPDCL	TSSPDCL	TSNPDCL	TSSPDCL	TSNPDCL	TSSPDCL	TSNPDCL	TSSPDCL	TSNPDCL
33 kV	35.88	50.05	37.43	59.49	38.22	70.93	39.93	85.48	40.96	100.82
11 kV	302.81	508.28	314.71	594.07	327.55	702.02	348.78	841.21	368.33	981.19
LT	791.92	1078.42	853.33	1243.51	905.81	1451.42	981.85	1696.73	1068.48	1955.64

Commission's View

5.15.2 The Commission has determined the Wheeling Charges for 4th Control Period considering the methodology adopted by the Commission for 3rd Control Period:

- The year wise approved ARR for each year of 4th Control Period has been allocated amongst 33 kV, 11 kV and LT voltage levels.
- Employee cost and A&G expenses have been apportioned among number of substations, line length, number of DTRs and number of consumers in the ratio of 49%, 21%, 10% and 20% respectively.
- R&M expenses have been allocated in proportion of GFA for each voltage level as the expense is driven by GFA.
- Depreciation, RoCE, taxes on income, non-tariff income have been allocated in proportion of GFA for each voltage level as these expenses are driven by GFA.

- v. The capitalised O&M expenses have been allocated in proportion to each voltage wise O&M expenses to total O&M expenses.
- vi. Having allocated the components of ARR among each voltage, the cost attributable for each voltage has been computed.
- vii. The demand incident at each voltage level has been arrived at by considering the voltage wise demands as submitted by the DISCOMs and approved losses.
- viii. The voltage wise wheeling charges have been computed by dividing the apportioned ARR at each voltage level by the demand at that voltage level.

5.15.3 Based on the above methodology, the Wheeling Charges determined by the Commission for 4th Control Period is as shown in the Table below:

Table 5–26: Wheeling Charges determined by the Commission for 4th Control Period

Particulars	Rs./kVA/month									
	FY 2019-20		FY 2020-21		FY 2021-22		FY 2022-23		FY 2023-24	
	TSSPDCL	TSNPDCL	TSSPDCL	TSNPDCL	TSSPDCL	TSNPDCL	TSSPDCL	TSNPDCL	TSSPDCL	TSNPDCL
33 kV	31.03	45.75	32.27	48.81	33.90	54.69	36.26	61.28	38.82	71.84
11 kV	283.72	462.66	291.78	497.60	304.11	553.19	322.51	637.80	341.95	718.89
LT	708.44	1004.48	733.06	1077.47	764.19	1188.22	809.98	1308.42	860.67	1426.36

5.16 WHEELING LOSSES FOR 4TH CONTROL PERIOD

Petitioners' submission

5.16.1 The wheeling losses proposed by the DISCOMs for 4th Control Period are as shown in the Table below:

Table 5–27: Wheeling losses proposed for 4th Control Period

Voltage level	FY 2019-20		FY 2020-21		FY 2021-22		FY 2022-23		FY 2023-24	
	TSSPDCL	TSNPDCL	TSSPDCL	TSNPDCL	TSSPDCL	TSNPDCL	TSSPDCL	TSNPDCL	TSSPDCL	TSNPDCL
33 kV	3.68%	3.58%	3.66%	3.58%	3.64%	3.57%	3.63%	3.57%	3.61%	3.57%
11 kV	4.65%	3.92%	4.61%	3.92%	4.56%	3.92%	4.51%	3.92%	4.47%	3.91%
LT	5.93%	5.01%	5.81%	5.00%	5.69%	5.00%	5.58%	4.99%	5.47%	4.99%

5.16.2 The DISCOMs submitted that they are striving to reduce the losses by implementation of loss reduction measures. However, the actual losses have been higher than the approved loss levels for 3rd Control Period. Citing Clause 5.11(h) of the Tariff Policy, 2016, the DISCOMs requested the Commission to consider the actual loss level of FY 2018-19 as base for approving the trajectory for 4th Control Period.

Commission's View

5.16.3 The comparison of approved target for wheeling losses vis-à-vis actual achievement for 3rd Control Period is as shown in the Table below:

Table 5–28: Wheeling losses for TSSPDCL for 3rd Control Period

Voltage level	FY 2014-15		FY 2015-16		FY 2016-17		FY 2017-18		FY 2018-19	
	Tariff Order	Actual	Tariff Order	Actual	Tariff Order	Actual	Tariff Order	Actual	Tariff Order	Actual
33 kV	3.99%	3.15%	3.99%	3.30%	3.99%	3.31%	3.99%	3.52%	3.99%	3.70%
11 kV	5.00%	5.09%	5.00%	5.08%	4.50%	4.50%	4.40%	4.40%	4.25%	4.70%
LT	7.50%	10.95%	6.50%	8.33%	5.50%	7.92%	5.25%	7.71%	5.00%	6.05%

Table 5–29: Wheeling losses for TSNPDCL for 3rd Control Period

Voltage level	FY 2014-15		FY 2015-16		FY 2016-17		FY 2017-18		FY 2018-19	
	Tariff Order	Actual	Tariff Order	Actual	Tariff Order	Actual	Tariff Order	Actual	Tariff Order	Actual
33 kV	4.00%	4.48%	4.00%	4.42%	4.00%	4.31%	4.00%	4.12%	4.00%	3.58%
11 kV	4.25%	4.70%	4.25%	4.62%	4.23%	4.50%	4.20%	4.24%	4.15%	3.92%
LT	7.00%	7.57%	6.00%	7.19%	5.50%	6.56%	5.25%	5.34%	5.00%	5.01%

5.16.4 By the end of 3rd Control Period, TSSPDCL could achieve the target loss level for 33 kV only while TSNPDCL could achieve the target loss level for 33 kV and 11 kV and slightly higher for LT. The DISCOMs have cited Clause 5.11(h) of the Tariff Policy, 2016 which stipulates as under:

“2. In cases where operations have been much below the norms for many previous years, the initial starting point in determining the revenue requirement and the improvement trajectories should be recognized at “relaxed” levels and not the “desired” levels. Suitable benchmarking studies may be conducted to establish the “desired” performance standards. Separate studies may be required for each utility to assess the capital expenditure necessary to meet the minimum service standards.”

5.16.5 It is pertinent to mention that TSSPDCL has incurred more capital investment than approved by the Commission for 3rd Control Period yet, the target loss levels could not be achieved. Therefore, the Commission does not find it prudent to consider the higher actual loss as base values for specifying the trajectory for 4th Control Period.

5.16.6 The Commission has considered the base level of loss as lower of approved and actual for each voltage level. Thereafter, the Commission has considered the annual reduction of 0.02%, 0.03% and 0.05% for 33 kV, 11 kV and LT levels respectively.

5.16.7 Based on the above, the wheeling losses approved by the Commission for 4th Control Period is as shown in the Table below:

Table 5–30: Wheeling losses approved for 4th Control Period

Voltage level	FY 2019-20		FY 2020-21		FY 2021-22		FY 2022-23		FY 2023-24	
	TSSPDCL	TSNPDCL	TSSPDCL	TSNPDCL	TSSPDCL	TSNPDCL	TSSPDCL	TSNPDCL	TSSPDCL	TSNPDCL
33 kV	3.68%	3.56%	3.66%	3.54%	3.64%	3.52%	3.62%	3.50%	3.60%	3.48%
11 kV	4.22%	3.89%	4.19%	3.86%	4.16%	3.83%	4.13%	3.80%	4.10%	3.77%

LT	4.95%	4.95%	4.90%	4.90%	4.85%	4.85%	4.80%	4.80%	4.75%	4.75%
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5.17 SUMMARY OF APPROVED WHEELING TARIFFS

5.17.1 The summary of approved Wheeling Tariffs (Wheeling Charges and Wheeling Losses) for 4th Control Period is as shown in the Tables below:

Table 5–31: Approved Wheeling Tariffs for TSSPDCL for 4th Control Period
TSSPDCL-Wheeling Charges (Rs./kVA/month)

Voltage	FY 2019-20	FY 2020-21	FY 2021-22	FY 2022-23	FY 2023-24
33 kV	31.03	32.27	33.90	36.26	38.82
11 kV	283.72	291.78	304.11	322.51	341.95
LT	708.44	733.06	764.19	809.98	860.67

TSSPDCL-Wheeling Losses

FY 2019-20				FY 2022-23			
Drawn at	Supply Point			Drawn at	Supply Point		
	33 kV	11 kV	LT		33 kV	11 kV	LT
33 kV	3.68%	7.74%	12.31%	33 kV	3.62%	7.60%	12.04%
11 kV	7.74%	4.22%	8.96%	11 kV	7.60%	4.13%	8.73%
LT	12.31%	8.96%	4.95%	LT	12.04%	8.73%	4.80%
FY 2020-21				FY 2023-24			
Drawn at	Supply Point			Drawn at	Supply Point		
	33 kV	11 kV	LT		33 kV	11 kV	LT
33 kV	3.66%	7.70%	12.22%	33 kV	3.60%	7.55%	11.94%
11 kV	7.70%	4.19%	8.88%	11 kV	7.55%	4.10%	8.66%
LT	12.22%	8.88%	4.90%	LT	11.94%	8.66%	4.75%

FY 2021-22			
Drawn at	Supply Point		
	33 kV	11 kV	LT
33 kV	3.64%	7.65%	12.13%
11 kV	7.65%	4.16%	8.81%
LT	12.13%	8.81%	4.85%

Table 5–32: Approved Wheeling Tariffs for TSNPDCL for 4th Control Period
TSNPDCL-Wheeling Charges (Rs./kVA/month)

Voltage	FY 2019-20	FY 2020-21	FY 2021-22	FY 2022-23	FY 2023-24
33 kV	45.75	48.81	54.69	61.28	71.84
11 kV	462.66	497.60	553.19	637.80	718.89
LT	1004.48	1077.47	1188.22	1308.42	1426.36

TSNPDCL-Wheeling Losses

FY 2019-20				FY 2022-23			
Drawn at	Supply Point			Drawn at	Supply Point		
	33 kV	11 kV	LT		33 kV	11 kV	LT
33 kV	3.56%	7.31%	11.90%	33 kV	3.50%	7.17%	11.62%
11 kV	7.31%	3.89%	8.65%	11 kV	7.17%	3.80%	8.42%
LT	11.90%	8.65%	4.95%	LT	11.62%	8.42%	4.80%
FY 2020-21				FY 2023-24			
Drawn at	Supply Point			Drawn at	Supply Point		
	33 kV	11 kV	LT		33 kV	11 kV	LT
33 kV	3.54%	7.26%	11.81%	33 kV	3.48%	7.12%	11.53%
11 kV	7.26%	3.86%	8.57%	11 kV	7.12%	3.77%	8.34%

LT	11.81%	8.57%	4.90%	LT	11.53%	8.34%	4.75%
FY 2021-22							
Drawn at	Supply Point						
	33 kV	11 kV	LT				
33 kV	3.52%	7.22%	11.72%				
11 kV	7.22%	3.83%	8.49%				
LT	11.72%	8.49%	4.85%				

Applicability

Applicable for the use of distribution system for wheeling of electricity of a licensee by other licensees, generating companies, captive power plants, and consumers who are permitted open access as per terms and conditions of Open Access Regulation (2 of 2005) and any other person(s).

Terms & Conditions

1. The Wheeling Tariffs (Wheeling charges and Wheeling losses) are to be levied as per terms and conditions approved by the Commission from time to time.
2. The Wheeling Charges payable and Wheeling energy losses to be borne shall be related to contracted capacity in kVA at the entry point except for LT system. For LT system 1 kW=1 kVA.
3. The Distribution Licensee shall deliver the quantum of contracted capacity given to it for wheeling, reduced by the Wheeling Loss.
4. The Wheeling Charges and Wheeling Losses in kind shall be up to the respective voltage level at which the wheeled electricity is delivered or injected whichever voltage is lower.
5. Wheeling Charges and Wheeling Losses are payable for contracted demand of the open access user at the entry point of the consumers.
6. If the wheeling involves transmission of electricity through transmission system of a Transmission Licensee, the consumer or the supplier as the case may be, shall pay the applicable transmission charges and transmission losses in kind also. Transmission system is considered to be involved in the wheeling of electricity in the following cases:
 - a. Entry/Exit point is connected to the EHT System.
 - b. The entry and exit points are connected to the network of more than one DISCOM.
 - c. If the wheeling of electricity is through the distribution system of more than one Distribution Licensee, the Wheeling Charges shall be payable to the Distribution Licensee of the area where the electricity is delivered.
7. The other conditions applicable for levy and collection of Wheeling Tariff shall be as per the provisions of the Regulation No.2 of 2005 (Terms and Conditions of Open Access to Intra-State Transmission and Distribution) and Regulation No.2 of 2006 (Balancing and Settlement Code) in force.
8. Exemption from payment of Wheeling Tariffs for the eligible Users of the Distribution Network shall be as per the Government policy in force. The DISCOMs may take up the issue of making good of revenue loss due to such exemption with the State Government for proper relief.

5.18 COMMISSION'S DIRECTIVES

5.18.1 The Commission's earlier directives and new directives issued in this Order are enclosed at Appendix C.

5.19 I. A.No.9 OF 2020 IN O.P.NOS.9 AND 10 OF 2019

5.19.1 The Commission had passed an interim order dated 27.03.2020 permitting the TSDICOMs to levy and collect the wheeling charges and wheeling losses in kind of FY 2018-19 determined in Wheeling Tariff order dated 27.03.2015 in O.P.Nos.78 & 79 of 2015, being applicable as on 31.03.2020 as per the Commission order dated 06.11.2019 in I.A.No.4 of 2019 in O.P.Nos.78 & 79 of 2015 from 01.04.2020 till the Commission passes a final order in O.P.Nos.9 & 10 of 2019.

5.19.2 As the Commission is now passing the final order determining the Wheeling Tariffs applicable for the period from FY 2020–21 to FY 2023-24, no further action in the above said I.A. is required and accordingly the same stands closed.”

The Wheeling Tariffs (Wheeling Charges and Wheeling Losses) determined for each year of 4th Control Period are applicable from 1st April to 31st March of the respective Financial Year. However, as FY 2019-20 and few days of FY 2020-21 are over, the Commission directs the DISCOMs to levy the Wheeling Tariffs (Wheeling Charges and Wheeling) Losses for remaining years of 4th Control Period from FY 2020-21 to FY 2023-24 as approved in this Order. For FY 2020-21, the Wheeling Tariffs (Wheeling Charges and Wheeling Losses) are **applicable w.e.f. 08.05.2020.**

This Order is corrected and signed on this the 29th day of April, 2020.

**Sd/-
(BANDARU KRISHNAIAH)
MEMBER**

**Sd/
(M.D.MANO HAR RAJU)
MEMBER**

**Sd/
(T.SRIRANGA RAO)
CHAIRMAN**

APPENDIX A

SCHEDULE OF APPROVED WHEELING TARIFFS

TSSPDCL-Wheeling Charges (Rs./kVA/month)

Voltage	FY 2019-20	FY 2020-21	FY 2021-22	FY 2022-23	FY 2023-24
33 kV	31.03	32.27	33.90	36.26	38.82
11 kV	283.72	291.78	304.11	322.51	341.95
LT	708.44	733.06	764.19	809.98	860.67

TSSPDCL-Wheeling Losses

FY 2019-20				FY 2022-23			
Drawn at	Supply Point			Drawn at	Supply Point		
	33 kV	11 kV	LT		33 kV	11 kV	LT
33 kV	3.68%	7.74%	12.31%	33 kV	3.62%	7.60%	12.04%
11 kV	7.74%	4.22%	8.96%	11 kV	7.60%	4.13%	8.73%
LT	12.31%	8.96%	4.95%	LT	12.04%	8.73%	4.80%
FY 2020-21				FY 2023-24			
Drawn at	Supply Point			Drawn at	Supply Point		
	33 kV	11 kV	LT		33 kV	11 kV	LT
33 kV	3.66%	7.70%	12.22%	33 kV	3.60%	7.55%	11.94%
11 kV	7.70%	4.19%	8.88%	11 kV	7.55%	4.10%	8.66%
LT	12.22%	8.88%	4.90%	LT	11.94%	8.66%	4.75%
FY 2021-22							
Drawn at	Supply Point						
	33 kV	11 kV	LT				
33 kV	3.64%	7.65%	12.13%				
11 kV	7.65%	4.16%	8.81%				
LT	12.13%	8.81%	4.85%				

TSNPDCL-Wheeling Charges (Rs./kVA/month)

Voltage	FY 2019-20	FY 2020-21	FY 2021-22	FY 2022-23	FY 2023-24
33 kV	45.75	48.81	54.69	61.28	71.84
11 kV	462.66	497.60	553.19	637.80	718.89
LT	1004.48	1077.47	1188.22	1308.42	1426.36

TSNPDCL-Wheeling Losses

FY 2019-20				FY 2022-23			
Drawn at	Supply Point			Drawn at	Supply Point		
	33 kV	11 kV	LT		33 kV	11 kV	LT
33 kV	3.56%	7.31%	11.90%	33 kV	3.50%	7.17%	11.62%
11 kV	7.31%	3.89%	8.65%	11 kV	7.17%	3.80%	8.42%
LT	11.90%	8.65%	4.95%	LT	11.62%	8.42%	4.80%
FY 2020-21				FY 2023-24			
Drawn at	Supply Point			Drawn at	Supply Point		
	33 kV	11 kV	LT		33 kV	11 kV	LT
33 kV	3.54%	7.26%	11.81%	33 kV	3.48%	7.12%	11.53%
11 kV	7.26%	3.86%	8.57%	11 kV	7.12%	3.77%	8.34%
LT	11.81%	8.57%	4.90%	LT	11.53%	8.34%	4.75%
FY 2021-22							
Drawn at	Supply Point						
	33 kV	11 kV	LT				
33 kV	3.52%	7.22%	11.72%				
11 kV	7.22%	3.83%	8.49%				
LT	11.72%	8.49%	4.85%				

APPENDIX B

TERMS & CONDITIONS AND APPLICABILITY OF WHEELING TARIFFS

Applicability

Applicable for the use of distribution system for wheeling of electricity of a licensee by other licensees, generating companies, captive power plants, and consumers who are permitted open access as per terms and conditions of Open Access Regulation (2 of 2005) and any other person(s).

Terms & Conditions

1. The Wheeling Tariffs (Wheeling charges and Wheeling losses) are to be levied as per terms and conditions approved by the Commission from time to time.
2. The Wheeling Charges payable and Wheeling energy losses to be borne shall be related to contracted capacity in kVA at the entry point except for LT system. For LT system, 1 kW=1 kVA.
3. The Distribution Licensee shall deliver the quantum of contracted capacity given to it for wheeling, reduced by the Wheeling Loss.
4. The Wheeling Charges and Wheeling Losses in kind shall be up to the respective voltage level at which the wheeled electricity is delivered or injected whichever voltage is lower.
5. Wheeling Charges and Wheeling Losses are payable for contracted demand of the open access user at the entry point of the consumers.
6. If the wheeling involves transmission of electricity through transmission system of a Transmission Licensee, the consumer or the supplier as the case may be, shall pay the applicable transmission charges and transmission losses in kind also. Transmission system is considered to be involved in the wheeling of electricity in the following cases:
 - a. Entry/Exit point is connected to the EHT System.
 - b. The entry and exit points are connected to the network of more than one DISCOM.
 - c. If the wheeling of electricity is through the distribution system of more than one Distribution Licensee, the Wheeling Charges shall be payable to the Distribution Licensee of the area where the electricity is delivered.
7. The other conditions applicable for levy and collection of Wheeling Tariff shall be as per the provisions of the Regulation No.2 of 2005 (Terms and Conditions of Open Access to Intra-State Transmission and Distribution) and Regulation No.2 of 2006 (Balancing and Settlement Code) in force.
8. Exemption from payment of Wheeling Tariffs for the eligible Users of the Distribution Network shall be as per the Government Policy in force. The DISCOMs may take up the issue of making good of revenue loss due to such exemption with the State Government for proper relief.

APPENDIX C COMMISSION'S DIRECTIVES

EARLIER DIRECTIVES

1. Neutral Wire-HVDC areas

The Commission directs the DISCOMs to run neutral wire from 33/11 kV SS to all single phase transformers both existing and new installations without resorting to use of earth as return conductor. Further, the DISCOMs are directed to strictly implement earthing practices as per 61(1)(a), 67(1A) and 92 of IE Rules, 1956 and provide three earth pits as per the prescribed construction standards. The DISCOMs shall submit half yearly reports by 31st October and 30th April for the periods ending 30th September and 31st March respectively.

NEW DIRECTIVES

2. Annual Performance Review

The Commission directs the DISCOMs to file the Performance Review (true-up) for each year of 4th Control Period before 31st December of the following year. As a first step, the DISCOMs shall file the Annual Performance Review for FY 2019-20 by 31.12.2020.

3. True-up for 1st, 2nd and 3rd Control Periods

The Commission directs the DISCOMs to submit their true-up claims along complete details sought regarding the capitalisation claimed for each year of the 1st, 2nd and 3rd Control Periods in the Petitions to be filed for Annual Performance Review for FY 2019-20. The DISCOMs are also directed to submit the requisite supporting documents such as Physical Completion Certificates (PCCs), Financial Completion Certificates (FCCs) etc. as mandated in the investment approval guidelines.

The Commission directs the DISCOMs to make a detailed submission regarding the differential treatment of GoTS under the UDAY scheme and likely consequences of the same in in the Petitions to be filed for Annual Performance Review for FY 2019-20

The Commission directs the DISCOMs to submit the details of long-term loans viz., loans availed for capital expenditure, taken over by GoTS under UDAY scheme in the Petitions to be filed for Annual Performance Review for FY 2019-20.

4. Computation of depreciation in accordance with CERC (Terms and Conditions of Tariff) Regulations, 2019

The Commission directs the DISCOMs to submit the computations of depreciation for each year of 4th Control Period in accordance with the provisions of the CERC Tariff Regulations, 2019 in Annual Performance Review for each year of 4th Control Period.

5. Capital Investments

The DISCOMs shall seek approval for individual schemes at least 90 days undertaking the investment in accordance with the Guidelines for Investment Approval. The individual schemes/ projects submitted by the DISCOMs for Commission's approval must provide complete details including those relating to the cost and capitalisation for each year of 4th Control Period.

Considering the importance of capitalisation of works, the Commission lays down the following requirements to be fulfilled before accepting inclusion of the value of capitalised work in the Original Cost of Fixed Assets (OCFA):

- a. On completion of a capital work, a physical completion certificate (PCC) to the effect that the work has been fully executed, physically, and the assets created are put in use, to be issued by the concerned engineer not below the rank of Superintendent Engineer.
- b. The PCC shall be accompanied or followed by a financial completion certificate (FCC) to the effect that the assets created have been duly entered in the fixed assets register by transfer from the Capital Works in Progress (CWIP) register to OCFA. The FCC shall have to be issued by the concerned finance officer not below the rank of Senior Accounts Officer.
- c. The above mentioned certificates have to be submitted to the Commission within 60 days of completion of work, at the latest.

The Commission may also inspect or arrange to inspect, at random, a few of the capitalised works included in the OCFA to confirm that the assets created are actually being used and are useful for the business.

ANNEXURE 1 PUBLIC NOTICE

BEFORE THE HONOURABLE TELANGANA STATE ELECTRICITY REGULATORY COMMISSION (TSERC)
D.No. 11-4-660, 5th Floor, Singareni Bhavan, Red Hills, HYDERABAD - 500 004.



SOUTHERN POWER DISTRIBUTION COMPANY OF TELANGANA Ltd.,



NORTHERN POWER DISTRIBUTION COMPANY OF TELANGANA Ltd.,

PUBLIC NOTICE

1. Notice is hereby given to all that the Distribution Company viz. Southern Power Company of Telangana Limited (TSSPDCL) holding Distribution and Retail Supply License No.13/2000, as, on 29-12-2000, filed before the Telangana State Electricity Regulatory Commission (TSERC) the Aggregate Revenue Requirement (ARR) and Tariff (wheeling Charges) proposal for the Distribution Business under MYT Framework for the 4th control period (FY 2019-20 to FY2023-24). These filings have been taken on record by the Hon'ble Commission in OP No: 9 of 2019.
2. Copies of the filings and proposal referred are available in the office of Chief General Manager (PC & RAC), TSSPDCL, Corporate Office, Ground Floor, Mint compound, Hyderabad-500063 and the Superintending Engineer, Operation circles of the Distribution Company at Banjara Hills, Hyderabad (South), Hyderabad (Central), Medchal, Cybercity, Habsiguda, Secunderabad, Rajendranagar, Sarconrager, Vikarabad, Mahabubnagar, Godwal, Nagarkurnool, Wanaparthy, Medak, Siddipet, Sangareddy, Nalgonda, Yadadri and Suryapet. Interested persons may inspect/peruse the said filings of ARR and Tariff (Wheeling Charges) proposals for Distribution Business under MYT Framework for the 4th control period (FY 2019-20 to FY2023-24) and take note thereof during office hours at any of the said offices free of cost. These proposals are also available on www.southernpower.com and the same may be accessed at www.tserc.gov.in. A copy of these filings can be obtained from the above offices from 30.12.2019 onwards on payment of Rs.200/- for Distribution Business filings (by cash). Also a summary of ARR and Tariff (Wheeling Charges) proposals in English or Telugu can be separately obtained on payment of Rs.10/- (by cash).
3. Objections/suggestions if any, on the ARR filings and Tariff (Wheeling Charges) proposed by the Distribution Company, together with supporting material may be sent to the Chief General Manager (PC & RAC), TSSPDCL, Corporate Office, Ground Floor, Mint compound, Hyderabad-500063 in person or through Registered Post so as to reach on or before 28.01.2020 by 5 PM. A copy of the same must also be filed with the Secretary (PC), TSERC, at the addresses mentioned above. The objections/suggestions should be duly signed and should carry full name and postal address of the person(s) sending the objections/suggestions. If the objections/suggestions are filed on behalf of any organization or any category of consumers, it should be clearly mentioned. If the objector also wants to be heard in person it may also be specifically mentioned. The Objection/Suggestion should accompany the following statement.

Name & full address of the Objector	Brief details of Objection(s)/ Suggestion(s)	Objections against Tariff proposals of TSSPDCL	Whether copy of objection & proof of delivery at Licensee's office enclosed (Yes/No)	Whether Objector wants to be heard in person (Yes/No)

4. The Aggregate Revenue Requirement (ARR) & Tariff (Wheeling Charges) for Distribution Business proposed by the Discom for the 4th control period (FY2019-20 to FY2023-24) are indicated in the **Schedule-I** below.
5. Telangana State Electricity Regulatory Commission intends to conduct Public Hearing at Court Hall, TSERC, #11-4-660, 5th Floor, Singareni Bhavan, Red Hills, Hyderabad-500 004 on **06.02.2020 (Thursday)** from 11.00hrs onwards.

Place: Hyderabad
Date: 29-12-2019

CHAIRMAN & MANAGING DIRECTOR
Southern Power Distribution Company of Telangana Ltd.

PUBLIC NOTICE

1. Notice is hereby given to all that the Distribution Company viz. Northern Power Company of Telangana Limited (TSPNDCL) holding Distribution and Retail Supply License No.14/2000, as, on 29-12-2000, filed before the Telangana State Electricity Regulatory Commission (TSERC) the Aggregate Revenue Requirement (ARR) and Tariff (wheeling Charges) proposal for the Distribution Business under MYT Framework for the 4th control period (FY 2019-20 to FY2023-24). These filings have been taken on record by the Hon'ble Commission in OP No: 10 of 2019.
2. Copies of the filings and proposal referred are available in the office of Chief General Manager (PC & RAC) at Warangal (TSPNDCL, H.No.2-5-312, Vidyut Bhawan, Naikolaguda,Haramkonda-506001) and the Superintending Engineer, Operation circles of the Distribution Company at Warangal Urban, Warangal Rural, Mahabubabad, Jayashankar (Bhupalpally), Jangaon, Karimnagar, Jagtial, Peddapati, Khammam, Bhadradri (Kothagudem), Nizamabad, Kamareddy, Adilabad, Nirmal, Mancherial and Komaram Bheem (Akalabad). Interested persons may inspect/peruse the said filings of ARR and Tariff (Wheeling Charges) proposals for Distribution Business under MYT Framework for the 4th control period (FY 2019-20 to FY2023-24) and take note thereof during office hours at any of the said offices free of cost. These proposals are also available on www.tspndcl.in and the same may be accessed at www.tserc.gov.in. A copy of these filings can be obtained from the above offices from 30.12.2019 onwards on payment of Rs.200/- for Distribution Business filings (by cash). Also a summary of ARR and Tariff (Wheeling Charges) proposals in English or Telugu can be separately obtained on payment of Rs.10/- (by cash).
3. Objections/suggestions if any, on the ARR filings and Tariff (Wheeling Charges) proposed by the Distribution Company, together with supporting material may be sent to the Chief General Manager (PC & RAC) at Warangal (TSPNDCL, H.No.2-5-312, Vidyut Bhawan, Naikolaguda,Haramkonda-506001) in person or through Registered Post so as to reach on or before 28.01.2020 by 5 PM. A copy of the same must also be filed with the Secretary (PC), TSERC, at the addresses mentioned above. The objections/suggestions should be duly signed and should carry full name and postal address of the person(s) sending the objections/suggestions. If the objections/suggestions are filed on behalf of any organization or any category of consumers, it should be clearly mentioned. If the objector also wants to be heard in person it may also be specifically mentioned. The Objection/Suggestion should accompany the following statement.

Name & full address of the Objector	Brief details of Objection(s)/ Suggestion(s)	Objections against Tariff proposals of TSPNDCL	Whether copy of objection & proof of delivery at Licensee's office enclosed (Yes/No)	Whether Objector wants to be heard in person (Yes/No)

4. The Aggregate Revenue Requirement (ARR) & Tariff (Wheeling Charges) for Distribution Business proposed by the Discom for the 4th control period (FY2019-20 to FY2023-24) are indicated in the **Schedule-I** below.
5. Telangana State Electricity Regulatory Commission intends to conduct Public Hearing at Court Hall, TSERC, #11-4-660, 5th Floor, Singareni Bhavan, Red Hills, Hyderabad-500 004 on **06.02.2020 (Thursday)** from 11.00hrs onwards.

Place: Warangal
Date: 29-12-2019

CHAIRMAN & MANAGING DIRECTOR
Northern Power Distribution Company of Telangana Ltd.

SCHEDULE-I

PROPOSED ARR , WHEELING CHARGES AND WHEELING LOSSES (%)

FOR DISTRIBUTION BUSINESS FOR 4th CONTROL PERIOD (FY 2019-20 TO FY 2023-24)

Sl No.	Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
A) Aggregate Revenue Requirement (Rs.Crs)						
1.	ARR	3934.58	4464.92	4926.60	5543.97	6250.05
B) Wheeling Charges(Rs./kVA/Month)						
1.	33 kV	35.88	37.43	38.22	39.93	40.96
2.	11 kV	302.81	314.71	327.55	340.76	368.33
3.	LT	791.92	853.33	905.81	981.85	1066.48
C) Voltage wise loss reduction trajectory (Wheeling Losses (%))						
1.	33 kV	3.86	3.86	3.84	3.83	3.81
2.	11 kV	4.85	4.81	4.56	4.51	4.47
3.	LT	5.03	5.81	5.69	5.58	5.47
D. Capital Investment (Rs.Crs)						
1.	Capital Investments	1632	1736	2248	2741	2904

SCHEDULE-I

PROPOSED ARR , WHEELING CHARGES AND WHEELING LOSSES (%)

FOR DISTRIBUTION BUSINESS FOR 4th CONTROL PERIOD (FY 2019-20 TO FY 2023-24)

Sl No.	Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
A) Aggregate Revenue Requirement (Rs.Crs)						
1.	ARR	2614	3153	3825	4649	5555
B) Wheeling Charges(Rs./kVA/Month)						
1.	33 kV	50.05	50.49	50.49	70.93	85.48
2.	11 kV	598.20	594.07	702.02	841.21	981.19
3.	LT	1078.42	1243.51	1451.42	1696.73	1955.64
C) Voltage wise loss reduction trajectory (Wheeling Losses (%))						
1.	33 kV	3.28	3.28	3.57	3.57	3.57
2.	11 kV	3.92	3.92	3.92	3.92	3.91
3.	LT	5.01	5.00	5.00	4.99	4.99
D. Capital Investment (Rs.Crs)						
1.	Capital Investments	1351	1937	2026	2595	2484

ANNEXURE 2
LIST OF STAKEHOLDERS WHO SUBMITTED
THE WRITTEN COMMENTS/OBJECTIONS/SUGGESTIONS

S. No.	Name and address of the stakeholder
1.	Sri M.Venugopala Rao, Senior Journalist & Convenor, Centre for Power Studies, H.No.1-100/MP/101, Monarch Prestige, Journalist's Colony, Gopanpally, Serlingampally Mandal, Hyderabad 500 032.
2.	Sri M.Thimma Reddy, Convenor, People's Monitoring Group on Electricity Regulation, 139, Kakatiyanagar, Hyderabad 500 008.
3.	Sri G.Prabhakar Rao, Plot No.241/102, Opp. Jaya Residency, Electric Tower Line road, Jayanagar, Kukatpally, Hyderabad 500 072.
4.	M/s Arhyama Solar Power Pvt. Ltd., #1-8-31 to 41, III Floor, Kapadia Towers, Lane Opp to ICICI Bank Bapubagh Colony, Penderghast Road, Secunderabad 500 003.
5.	Telangana Solar Open Access Developers Association, #8-3-224/4/A, Plot No.11&12, Sy.No.01, Room No.412 Madhura Nagar, Yousufguda, Hyderabad 500 038.

ANNEXURE 3
LIST OF STAKEHOLDERS WHO ATTENDED
THE PUBLIC HEARING HELD ON 06.02.2020

S. No.	Name and address of the stakeholder
1.	Sri M.Venugopala Rao, Senior Journalist & Convenor, Centre for Power Studies, H.No.1-100/MP/101, Monarch Prestige, Journalist's Colony, Gopanpally, Serlingampally Mandal, Hyderabad 500 032.
2.	Sri M.Thimma Reddy, Convenor, People's Monitoring Group on Electricity Regulation, 139, Kakatiyanagar, Hyderabad 500 008.
3.	M/s Arhyama Solar Power Pvt. Ltd., #1-8-31 to 41, III Floor, Kapadia Towers, Lane Opp. to ICICI Bank Bapubagh Colony, Penderghast Road, Secunderabad 500 003.
4.	Telangana Solar Open Access Developers Association, #8-3-224/4/A, Plot No.11&12, Sy.No.01, Room No.412 Madhura Nagar, Yousufguda, Hyderabad 500 038.

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