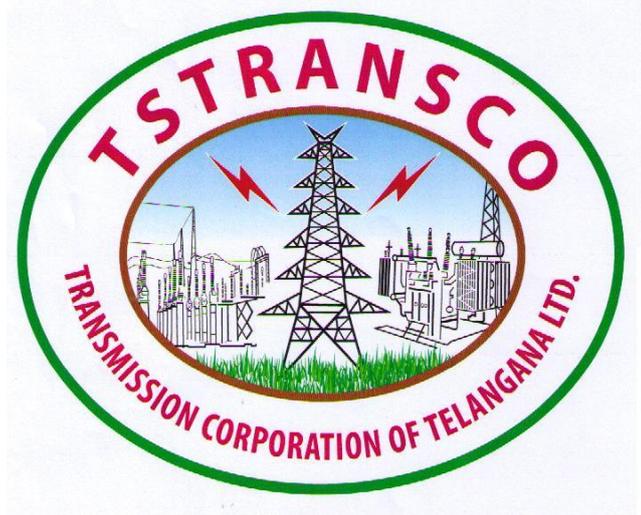


TRANSMISSION CORPORATION OF TELANGANA LIMITED
(State Transmission Utility)



**Filing for Proposed Annual Fee and Operating
Charges for SLDC Business for the balance period of
3rd Control Period (FY2017-18 and FY2018-19)**

21st April 2017

**BEFORE THE HONOURABLE TELANGANA STATE ELECTRICITY
REGULATORY COMMISSION**

AT ITS OFFICE AT Vth FLOOR, SINGARENI BHAVAN, RED HILLS, HYDERABAD

FILING NO. _____/2017

CASE NO. _____/2017

In the matter of:

Filing of the Aggregate Revenue Requirement (ARR), Filing for Proposed Tariff (FPT) for the balance period of 3rd Control Period (FY2017-18 to FY2018-19) for its SLDC Activity under Section 26(5) of the Andhra Pradesh Electricity Reform Act, 1998 (hereinafter referred to as 'the Act') and under Part VII (Section 61 to Section 64) of the Electricity Act, 2003 read with the relevant APERC Guidelines and Regulations as adapted by the TSERC till date, by the Transmission Corporation of Telangana Limited ('TSTransco' or 'the Licensee') as the Transmission Licensee and SLDC operator.

In the matter of:

TRANSMISSION CORPORATION OF TELANGANA LIMITED

...
Applicant

**AFFIDAVIT OF APPLICANT VERIFYING THE APPLICATION ACCOMPANYING
FILING OF AGGREGATE REVENUE REQUIREMENT**

I, D. Prabhakar Rao, S/o D. Pashupati Rao working for gain at the Transmission Corporation of Telangana Limited do solemnly affirm and say as follows:

I am the Chairman and Managing Director of TSTransco, the licensee company operating and controlling the Transmission & SLDC business of electricity in Telangana State pursuant to the license granted by the erstwhile Hon'ble APERC and in terms of Government of Telangana State (GoTS) orders vide G.O.Ms.No.9 dated 17-09-2014. I am competent and duly authorized by TSTransco to affirm, swear, execute and file this affidavit in the present proceedings.

1. I have read and understood the contents of the accompanying Filing of Aggregate Revenue Requirement for SLDC Business. The statements made in the paragraphs of the accompanying application are true to my knowledge, derived from the official records made available to me and are based on information and advice received which I believe to be true and correct.

DEPONENT

VERIFICATION:

I, the above named Deponent solemnly affirm at Hyderabad on this 21st **April, 2017** that the contents of the above affidavit are true to my knowledge, no part of it is false and nothing material has been concealed there from.

DEPONENT

**BEFORE THE HONOURABLE TELANGANA STATE ELECTRICITY
REGULATORY COMMISSION**

AT ITS OFFICE AT Vth FLOOR, SINGARENI BHAVAN, RED HILLS, HYDERABAD

FILING NO. _____/2017

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In the matter of:

Filing of the Aggregate Revenue Requirement (ARR), Filing for Proposed Tariff (FPT) for the balance period of 3rd Control Period (FY2017-18 to FY2018-19) for its SLDC Activity under Section 26(5) of the Andhra Pradesh Electricity Reform Act, 1998 (hereinafter referred to as 'the Act') and under Part VII (Section 61 to Section 64) of the Electricity Act, 2003 read with the relevant APERC Guidelines and Regulations as adapted by the TSERC till date, by the Transmission Corporation of Telangana Limited ('TSTransco' or 'the Licensee') as the Transmission Licensee and SLDC operator.

In the matter of:

TRANSMISSION CORPORATION OF TELANGANA LIMITED

...
Applicant

The Applicant respectfully submits as under: -

1. With the enactment of Andhra Pradesh Reorganisation Act 2014, The Telangana State has been carved out from the undivided Andhra Pradesh State as the 29th State of the Republic India on 02.06.2014.
2. The erstwhile Regulatory Commission of undivided State of Andhra Pradesh has issued Regulation no 3 of 2014 (Reorganization) Regulation, 2014 on 25.05.2014 consequent to the framing of Andhra Pradesh Reorganisation Act 2014 notified by Government of India on 01.03.2014, where in clause 3 of the regulation says that, "" All the regulations as well as their supplementary regulations/amendments , rules, orders, proceedings , guidelines , memos, notifications, other instruments issued immediately before 2nd June 2014 by the APERC for the conduct of business and other matters shall fully and completely apply to the

whole of the states of Telangana and Andhra Pradesh and shall similarly apply in relation to all matters falling within the jurisdiction of the Commission until they are altered, repealed or amended by the respective State Electricity Regulatory Commissions”.

3. In accordance with the above regulation, all the regulations framed by erstwhile APERC will continue to apply for the state of Telangana. Subsequently, TSERC vide Telangana Official Gazette has issued its first regulation, Regulation no 1 of 2014 (adoption of Previously subsisting Regulations, Decisions, Directions, or Orders, Licenses and Practice of Directions) wherein clause 2 says that “ All regulations, decisions, directions or orders, all the licenses 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 Commission”
4. This filing for ARR, FPT and MYT is in accordance with the provisions of the Reform Act, the Electricity Act 2003, the License granted by the Hon’ble Commission to TSTransco on July 11, 2014 and the Guidelines and Regulations including the regulations pertaining to Transmission, SLDC, Open Access, etc., issued by the Honorable Commission till date.
5. As per the Commission’s Regulations, the 3rd Control period is 5 years for SLDC business i.e., from FY 2014-15 to FY 2018-19. Accordingly, APTRANSCO had already filed MYT for the 3rd control period for SLDC businesses. Based on MYT submitted by, APERC had issued MYT for the 3rd control period (FY 2014-15 to FY 2018-19).
6. Consequent upon formation of the state of Telangana and its coming into being with effect from 02.06.2014, the Government of Andhra Pradesh has established Transmission Corporation of Telangana Limited vide G.O Ms. No 25, Dt. 29.05.2014. The Commission (APERC) has issued deemed license to TSTRANSCO with Licence No. 1 of 2014 vide proceeding No. APERC/Secy/160/2014 dt. 11.07.2014.

Sub-section (1) of section 31 of the Electricity Act, 2003, provides that the State Government shall establish a State Load Dispatch Center (SLDC). Sub-section (2) of the Section 31 provides that the said SLDC shall be operated by a Government company/authority/corporation constituted by or under any State Act and that until such company /authority /corporation is notified by the State Government, the State Transmission Utility (STU) shall operate the SLDC. The Government of TS notified in G.O.Ms.No.9 dated 17-09-2014 that the existing SLDC shall continue as SLDC and be operated by the Transmission Corporation of Telangana Ltd. (TSTRANSCO), which was earlier notified as STU for Telangana State.

On formation of TS TRANSCO, the opening balance of assets and liabilities pertaining to TS TRANSCO as on 02nd June, 2014 are yet to be finalized/notified. APTRANSCO has communicated a draft demerger plan of composite APTRANSCO. TS TRANSCO has requested certain additional information/clarifications on the draft demerger plan communicated by APTRANSCO. Despite repeated correspondence, the information is still awaited from APTRANSCO.

In the absence of separate approved ARR for TS TRANSCO, the expenditure approved for composite APTRANSCO as per the Tariff Order for 3 MYT Control period (FY 2014-15 to FY 2018-19) by Hon'ble APERC has been segregated based on power allocation ratio @53.89% to TS DISCOMs (notified by GoAP vide G.O.Ms.No.20, Dt.08.05.2014) and considered to compare with Actuals for FY 2014-15 and FY 2015-16.

Further, pending segregation of assets and liabilities of composite APTRANSCO between two entities, TS TRANSCO has compiled its provisional accounts for FY 2014-15 (02.06.2014 to 31.03.2015) and for FY 2015-16 based on the provisional opening balance of assets and liabilities as per the draft demerger plan communicated by APTRANSCO. The same are subjected to Statutory/A.G.Audit.

7. TSTRansco has filed herein the ARR, FPT and MYT for determining the Annual Fee and Operating Charges for its SLDC Business for the remaining part of Third Control Period of Two years for i.e., FY 2017-18 and FY 2018-19.

8. While filing the present ARR, FPT and MYT petition for SLDC businesses, TSTransco has endeavored to comply with the various applicable legal and regulatory directions and stipulations including the directions of the Hon'ble Commission in the Business Rules of the Commission, the Guidelines, prior ARR and Tariff Orders and Levy and Collection Of Fees and Charges by State Load Despatch Centre (Regulation No. 1 of 2006) dated July 27, 2006.
9. Based on the information available, the Applicant has made bonafide efforts to comply with the directions of the Hon'ble Commission and discharge its obligations to the best of its abilities. However, should any further material become available in the near future, the Applicant reserves the right to file such additional information and consequently amend/revise the application.
10. The current petition for Annual fee and Operating charges for SLDC Business being filed has been discussed and approved by the Board of Directors of TSTransco and Sri. D. Prabhakar Rao, Chairman and Managing Director of TSTransco has been authorized to execute and file the said annual fee and operating charges Petition on behalf of TSTransco. Accordingly, the current petition for Annual fee and Operating Charges for SLDC Business is signed and verified by, and backed by the affidavit of Sri. D. Prabhakar Rao, Chairman and Managing Director.
11. In the aforesaid facts and circumstances, the Applicant requests that the Hon'ble Commission:
 - a. Take the accompanying Annual fee and Operating charges for Petition of TSTransco for SLDC Business on record;
 - b. Grant suitable opportunity to TSTransco within a reasonable time frame to file additional material information if any;
 - c. Treat the filing as complete in view of substantial compliance with justification placed on record;
 - d. Consider and approve SLDC Annual fee and Operating charges including all requested regulatory treatments in the filing;

- e. Pass such order, as the Hon'ble Commission may deem fit and proper in the facts and circumstances of the case.

TRANSMISSION CORPORATION OF TELANGANA LIMITED
(APPLICANT)

Through

D. PRABHAKAR RAO
CHAIRMAN AND MANAGING DIRECTOR

Place: HYDERABAD

Dated: 21.04.2017

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1 Introduction

Pursuant to the applicable provisions of the Electricity Act, 2003, the State Government shall establish a State Load Dispatch Center (SLDC). Section 31 (2) of the Act, provides that the said SLDC shall be operated by a Government Company / Authority / Corporation constituted by or under any State Act and that until such Company / Authority / Corporation is notified by the State Government, the State Transmission Utility (STU) shall operate the SLDC.

As per the provisions of Andhra Pradesh Reorganisation Act, 2014, by enactment of which, Telangana State was formed as the 29th State of the Republic India on 02.06.2014 has necessitated formation of TRANSCO and SLDC for the new State, the Government of AP has created TRANSCO for Telangana to function as Transmission Utility for Telangana and incorporated under Companies Act, 2013.

The Government of Telangana, under the Section 31(1) of the EA 2003 has notified Telangana TRANSCO as the State Transmission Utility (STU) in the state vide G.O.Ms.No. 1, dated 21-06-2014. TSTRANSCO is presently carrying out solely, the Transmission & SLDC business as per the Licence No.1 of 2014 granted by the erstwhile APERC on Deemed Licence Conditions of Licensee, Transitional (Reorganisation) Regulations, etc.

Under the provisions of Section 31(2) of the EA 2003, the existing SLDC was declared as deemed to have been established by the Government of Telangana vide G.O.Ms.No. 9, dated 17-09-2014 and since been operated by the State Transmission Utility (i.e., TSTRANSCO).

The Telangana SERC has adopted vide its Regulation No. 1 of 2014, previously subsisting Regulations, Decisions, Directions, or Orders, Licenses and Practice of Directions or orders, all the licenses and practice directions issued by the erstwhile Andhra Pradesh Electricity Regulatory Commission (Regulatory Commission for States of Andhra Pradesh and Telangana until duly altered, repealed or amended, any of Regulation by the Commission.

Based on MYT submitted by APTRANSCO for 3rd Control Period, the erstwhile APERC had issued MYT for the 3rd Control Period (FY 2014-15 to FY 2018-19) for SLDC business.

This filing for ARR, FPT and MYT is in accordance with the provisions of the Reforms Act, 1998, the Electricity Act, 2003, Licences granted by the erstwhile APERC to TSTransco on July 11, 2014 and the Guidelines and Regulations including the regulations pertaining to Transmission, SLDC, Open Access, etc., issued by the Honorable Commission till date. Section 32 (3) of the Electricity Act, 2003 provides for levy and collection of such fees and charges from the generating companies and licensees engaged in the intra-state transmission of electricity as may be specified by the State Commission.

As per the clause 6 of Regulation No. 1 of 2006, dated July 27, 2006 (Levy and Collection of Fees and Charges by State Load Dispatch), TSTransco has to file with the Commission, an application / petition with statements containing details of the Fee and Charges under its currently – approved levels of fee and charges along with the proposals for the balance period of 3rd Control Period i.e., for FY2017-18 to FY2018-19.

In compliance with the TSERC Regulations and Guidelines, TSTransco, the State Transmission Utility & Transmission Licensee managing the SLDC business herein submits the following in this Petition:

- i. Analysis of Performance of FY 2014-2015 and FY 2015-16.
- ii. Revised Estimates for FY2016-17.
- iii. Annual Fee for the balance period of 3rd Control Period (FY2017-18 to FY2018-19).
- iv. Operating Charges for the balance period of 3rd Control Period (FY2017-18 to FY2018-19)
- v. True Up - Analysis of Performance from FY 2014-15 to FY 2015-16

2 True up Analysis of Performance for FY 2014-15 (02.06.2014 to 31.03.2015) and for FY 2015-16:

Consequent to bifurcation of Andhra Pradesh State, a separate Transmission Utility in the name of TRANSMISSION CORPORATION OF TELANGANA LIMITED (TS TRANSCO) for the State of Telangana has been incorporated and commenced its activities w.e.f.02/06/2014 i.e., from the formation day of State of Telangana. On formation of TSTRANSCO, the opening balance of assets and liabilities pertaining to TS TRANSCO as on 2nd June, 2014 are yet to be finalized /notified.

Pending segregation of assets and liabilities of composite APTRANSCO between two entities, TSTRANSCO has compiled its provisional accounts for FY2014-15 (02.06.2014 to 31.03.2015) and for FY2015-16 based on the provisional opening balance of assets and liabilities as per the draft demerger plan communicated by APTRANSCO. The same are subjected to Statutory/A.G.Audit.

In the absence of separate approved ARR for TSTRANSCO, the expenditure approved for composite APTRANSCO has been segregated based on power allocation ratio @53.89% to TS DISCOMs (notified by Govt. of AP vide G.O.Ms.No.20, Dt.08.05.2014) and considered to compare with actuals for FY 2014-15 and FY 2015-16.

This True up filing is made by the Transmission Licensee, TRANSMISSION CORPORATION OF TELANGANA LIMITED (TSTRANSCO) as per Clause 4.7 of the Andhra Pradesh Electricity Regulatory Commission (Levy and collection of fees and charges by State Load Despatch Centre) Regulation No.1 of 2006 for variations in recovery of capital cost and operating charges over the fees and charges fixed for a year on account of variations in SLDC usage for the FY2014-15 (02.06.2014 to 31.03.2015) and FY2015-16.

The licensee is submitting the following as part of true-up for FY2014-15 (02.06.2014 to 31.03.2015) and FY2015-16:

- Statement of variance with the Tariff Order for each item in the Aggregate Revenue Requirement and reasons for variation.

- Actual Aggregate Revenue Requirement (ARR) for each year computed based on O&M Charges and actual interest and other costs.
- The Surplus/Deficit for each year is arrived based on actual revenue for the respective year.

2.1 Operation and Maintenance (O&M) Expenses True Up:

The O&M Expenses cover the Employees Cost, Administrative & General Expenses, Repairs & Maintenance Expenses.

Table 1: True Up: O&M Expenses

(Rs. in Crores)

Particulars	FY 2014-15 (02.06.2014 to 31.03.2015)			FY 2015-16			Total		
	Tariff Order	Actuals	Devi- ation	Tariff Order	Actuals	Devi- ation	Tariff Order	Actuals	Devi- ation
1	2	3	4 (3-2)	5	6	7 (6-5)	8	9	10 (9-8)
Employees Cost	19.28	24.90	5.62	24.75	29.48	4.73	44.04	54.38	10.34
Administration and General Exp.	5.51	1.52	-3.99	7.19	1.92	-5.27	12.70	3.44	-9.26
Repairs & Maintenance Exp.	3.67	2.15	-1.52	2.54	1.55	-0.99	6.21	3.70	-2.51
Special Appropriation (True up for 1st Control Period)	-0.27		0.27			0.00	-0.27	0.00	0.27
Special Appropriation (True up for 2nd Control Period)	-0.31		0.31			0.00	-0.31	0.00	0.31
Total:	27.89	28.57	0.68	34.48	32.95	-1.53	62.37	61.52	-0.85

Operating Expenses consist of the following expenses:

- Employee Expenses
- Administration and General Expenses
- Repair & Maintenance Expenses
- Other Miscellaneous expenses

Variance in O&M Expenses:

- As could be seen from the above that there is decrease of Rs.0.85 Crores in operating costs for FY 2014-15 (02.06.2014 to 31.03.2015) and FY 2015-16.
- Pending final allocation of employees between APTRANSCO and TS TRANSCO, actuarial valuation towards employee terminal benefits could not be taken up. However, Pension & Gratuity Contribution has been provided provisionally. The actuals does not include provision towards Leave Encashment.

2.2 Capital Cost True Up:

Capital Cost is a recovery towards Interest & Finance Charges and Depreciation is a claim towards replacement cost of fixed assets. Depreciation has been calculated for every year on all the fixed assets capitalized up to the previous year considering the rates notified by the Ministry of Power, Govt. of India.

Table 2 : True Up: Capital Cost

(Rs. in Crores)

Particulars	FY 2014-15 (02.06.2014 to 31.03.2015)			FY 2015-16			Total		
	Tariff Order	Actuals	Deviation	Tariff Order	Actuals	Deviation	Tariff Order	Actuals	Deviation
1	2	3	4 (3-2)	5	6	7 (6-5)	8	9	10 (9-8)
Capital Cost	2.48	0.40	-2.08	4.02	0.53	-3.49	6.50	0.93	-5.57
Total:	2.48	0.40	-2.08	4.02	0.53	-3.49	6.50	0.93	-5.57

There is a reduction of Rs. 5.57 Crores in Capital cost. This is mainly due to lesser capitalization of fixed assets than envisaged in Tariff Order.

2.3 Revenue True Up:

The following is the position of Revenue during FY 2014-15 (02.06.2014 to 31.03.2015) and FY 2015-16:

Table 3: True Up: Revenue

(Rs. in Crores)

Particulars	FY 2014-15 (02.06.2014 to 31.03.2015)			FY 2015-16			Total		
	Tariff Order	Actuals	Devi- ation	Tariff Order	Actuals	Devi- ation	Tariff Order	Actuals	Devi- ation
1	2	3	4 (3-2)	5	6	7 (6-5)	8	9	10 (9-8)
Revenue from SLDC Charges :									
Operating Charges	27.89	32.07	4.18	34.48	39.36	4.88	62.37	71.43	9.06
Annual Fees	2.48	1.53	-0.95	4.02	4.17	0.15	6.50	5.70	-0.80
Sub-Total:	30.37	33.60	3.23	38.50	43.53	5.03	68.87	77.13	8.26
Other Income		1.15	1.15		1.31	1.31	0.00	2.46	2.46
Total:	30.37	34.75	4.38	38.50	44.84	6.34	68.87	79.59	10.72

- The Actual Revenue from SLDC Charges during FY 2014-15 (02.06.2014 to 31.03.2015) and FY 2015-16 is Rs.77.13 Crores as against Rs.68.87 Crores approved by the united Commission; thereby there is an increase of Rs.8.26 Crores. The main reason for increase is due to increase of revenue from Open Access Customers.
- Further, there is a increase in Other Income of Rs.2.46 Crores mainly on account of income from SLDC Processing fees.

2.4 Surplus/ (Deficit) during the period FY 2014-15 to FY 2015-16

The Total Aggregate Revenue Requirement (ARR) approved by Hon'ble Commission for FY2014-15 (02.06.2014 to 31.03.2015) and FY2015-16 is Rs.68.87 Crores, as against which actual ARR is Rs.62.45 Crores, thereby there is a reduction of Rs.6.42 Crores in ARR. Further, there is an increase in revenue to the tune of Rs.10.72 Crores, resulted to a total surplus of Rs.17.14 Crores. The same shall be passed on to consumers (benefit to the TS Discoms) during FY2017-18 and FY2018-19.

Table 4 : True Up: ARR Deviation – (Tariff Order vis-à-vis Actual): (Rs. in Crores)

Particulars	FY 2014-15 (02.06.2014 to 31.03.2015)			FY 2015-16			Total		
	Tariff Order	Actuals	Devi- ation	Tariff Order	Actuals	Devi- ation	Tariff Order	Actuals	Devi- ation
1	2	3	4 (3-2)	5	6	7 (6-5)	8	9	10 (9-8)
Total Expenditure	30.37	28.97	-1.40	38.50	33.48	-5.02	68.87	62.45	-6.42
Revenue from SLDC Charges :	30.37	34.75	4.38	38.50	44.84	6.34	68.87	79.59	10.72
Surplus/(Deficit)	0.00	5.78	5.78	0.00	11.36	11.36	0.00	17.14	17.14

3 Determination of SLDC Annual Fee for balance period of 3rd Control Period:

The Hon'ble Commission has notified vide Regulation No. 1 of 2006, dated July 27th 2006 "Levy and collection of Fees and Charges by SLDC". As per the above regulation, TSTRANSCO has to file an application for Annual Fee and Operating Charges for the balance period of 3rd Control Period (i.e., from FY2017-18 to FY2018-19).

Filing for Annual Fee:

TSTRANSCO has computed the Annual SLDC charges based on the following methodology:

- Estimation of Year on Year Investments for the period FY 2017-18 and FY 2018-19
- Computation of Capital Cost based on methodology suggested by the Hon'ble Commission
- Determination of Year on Year Generation Capacity
- Computation of SLDC Annual Charges

3.1 Capital Investments

SLDC Annual Fee is to cover the Capital cost of SLDC Business during the Control Period. In compliance to the Regulation 1 of 2006, the licensee has to estimate the Annual Fee based on methodology prescribed vide Regulation. Accordingly, the licensee has prepared a detailed investment plan for FY 2017-18 and FY 2018-19 as shown below.

Table 5 : Proposed Capital Investment for balance period of 3rd Control Period (Rs.)

Name of the Wing	2016-17 (R.E.)	2017-18	2018-19
SCADA Wing	₹ 9,70,00,000.00	₹ 9,59,75,000.00	₹ 8,44,75,000.00
Power Systems			₹ 85,00,000.00
Telecom	₹ 6,65,00,000.00	₹ 18,55,845.38	
Power Planning			₹ 1,60,00,000.00
EBC		₹ 3,00,00,000.00	
TOTAL	₹ 16,35,00,000.00	₹ 12,78,30,845.38	₹ 10,89,75,000.00
Investment proposed during the year (Rs. in Crores)	16.35	12.79	10.90

Based on the above investment plan, the Capital Cost for the balance period of 3rd Control Period is shown in Table 6:

Table 6: Proposed Capital Cost for the balance period of 3rd Control Period (Rs. in Crores)

Particulars	FY 2016-17	FY 2017-18	FY 2018-19
Opening Balance of Fixed Assets	8.58	8.58	8.58
Additions made during FY 2016-17	16.35	16.35	16.35
Additions made during FY 2017-18		12.79	12.79
Additions made during FY 2018-19			10.90
Total Asset Value	24.93	37.72	48.62
Rate of Interest	12%	12%	12%
Tenure	10	10	10
Capital Cost Claimed			
Opening Balance of Fixed Assets	1.52	1.52	1.52
Additions made during FY 2016-17	2.89	2.89	2.89
Additions made during FY 2017-18		2.26	2.26
Additions made during FY 2018-19			1.93
Total Capital Cost	4.41	6.68	8.60

The plan of Capital Assets to be added for SLDC Activity for the balance period of 3rd Control Period FY2017-18 to FY2018-19 and Revised Estimates for FY2016-17 is shown in Table 5.

The new Capital Assets proposed to be added during the balance period of 3rd control period and the need for such capital assets for SLDC business in each of the wings viz., SCADA, Telecommunication, Power System and Commercial/Energy Billing Centre wings is detailed below.

A. SCADA Wing:

Creation of Backup SLDC:

The SCADA/EMS system of M/s Alstom make (Now M/s GE) with Main SLDC & Backup SLDC (replica of Main SLDC) systems is procured replacing the old GE make system under “replacement/upgradation of existing SCADA/EMS system” project taken up by M/s PGCIL on turnkey basis on behalf of erstwhile APTRANSCO and other southern region constituents.

Consequent to bifurcation of erstwhile Andhra Pradesh State, the main SLDC equipment is allotted to Telangana and backup SLDC equipment is allotted to residual AP.

As per the Report of the Task Force (Satnam Committee) on Implementation of Pradhan Committee Report, each State should have a Main SLDC and a fully functional replica as Backup SLDC, as part of disaster management.

In view of the above, TSTRANSCO has identified the location for Backup SLDC at Warangal taking into consideration of the recommendations of the Forum of Load Despatchers.

Creation of Backup SLDC involves design, engineering, Notice Inviting Tenders (NIT), Tender Evaluation, finalization of contract, procurement, erection, project management, testing and commissioning and other works incidental thereto.

Unified Real Time Dynamic State Measurement (URTDSM) Project:

SCADA/EMS System is an essential tool for Grid Operation to carry out realtime operations of the Power Systems. These tools are to be supplemented by providing more advanced techniques based on Wide Area Measurement systems (WAMS).

To implement this advance technology on large scale, POWERGRID has taken up “Unified Real Time Dynamic State Measurement” (URTDSM) Project. The intent of this URTDSM projects to provide

complete observability of the Indian Power system in real time at NLDC (National Load Despatch Centre), RLDCs (Regional Load Despatch Centres) & all SLDCs (State Load Despatch Centres) of the country through installation of Phasor Measurement Units (PMUs) at the Power Plants & Substations, and Phasor Data Concentrators (PDCs) at all the Control Centres.

The necessary funds required for execution of the URTDSM Scheme would be allocated from National Transmission Pool Account and would be shared by all Designated ISTS Customers as per POC mechanism under CERC (Sharing of Transmission Charges and Losses) Regulations, 2010. However the following falls under SLDC scope.

- i) Arrangement of Air conditioning for the above equipment
- ii) A.C. input power supply
- iii) Fire fighting system

Providing Meeting/ Conference/Video Conference Hall:

SLDC has made provision for meeting/Conference/Video conference by identifying place in the Fifth floor Annex building. The necessary infrastructure like Furniture, Display screens, Conference equipment etc., to be arranged for making it fully functional.

B. Power Systems Wing:

Online/Offline Power System Studies:

Further, the recently introduced “Point of Connection Mechanism” for sharing of transmission charges and losses are based on power flow studies and shall require regular exchange of data among the utilities. To perform these activities, SLDC requires a versatile Power System Analysis Tool. Towards this CEA, PGCIL, NLDC and RLDCs are already using such tool called PSS/E software for carrying out basic and advanced level power system studies. The “Implementation Committee” for POC charges having representatives from CERC, CEA, NLDC, RPCs, STUs, and PGCIL had felt necessity to have common software platform

and recommended procurement of PSS/E software as this shall not only facilitate seamless data exchange but shall enable capacity building exercise of all stakeholders.

Accordingly, Powergrid procured PSS/E licenses for all the utilities during the year 2012-13 (united AP regime). After bifurcation of the state, 2 nos. licenses were retained by residual APTRANSCO and 2 nos. were handed over to TSTRANSCO. Out of which one license is being utilized by Power System wing and one license is with SLDC study Group.

For working on this software, with one license only one person can work at a time and this is severely impacting the efficiency of the work. In view of this, it is proposed to procure 4 nos. additional licenses (2 nos. licenses for SLDC study group and 2 nos. licenses for Power Systems).

C. Telecom Wing:

Augmentation of communication network for Up gradation of ULDC SCADA /EMS system for Main SLDC, Vidyut Soudha.

A communication system in Transmission Network under ULDC Up-gradation scheme was planned for transfer of real time data from all RTU locations to Main SLDC at Hyderabad and Back up SLDC at Tirupathi.

Approval was accorded for Augmentation of communication network for Up gradation of ULDC SCADA/EMS system for Main SLDC & Back up SLDC at Thirupathi by laying 656KM OPGW cable for providing fiber optic and PLCC communication at an estimated cost of Rs: 19.69Cr including AMC for 5 years and the work was awarded as a consultancy project to M/s PGCIL.

Consequent to the bifurcation of the State, out of total 656 KM OPGW cable, 122KM was proposed on Durshed – Siddipet - Gajwel 400KV to have redundant communication path to ALDC Warangal in Telangana state.

Accordingly, separate agreement was entered with M/s. PGCIL on 24.03.2015 for Telangana towards execution of the augmentation of communication network for upgradation of ULDC/EMS SCADA system for Main SLDC of TSTRANSCO at a project cost of Rs. 449.21 lakhs. Out of the above, 18.55 lakhs is projected requirement for the financial year 2017-18.

D. Power Planning Wing:

Load Forecasting for State of Telangana:

For State Discoms, SLDC - Telangana is responsible for optimum scheduling and despatch and also for secure, reliable and safe operation of the state grid. The forecasting Software will be able to provide short term forecast (same day forecast), day ahead forecast and weekly forecast. It will help to optimize scheduling of state generator, to plan outages of generating units, network elements and better grid management. It ultimately helps to enhance system security and reliability.

E. EBC Wing:

Proposal for new MRI & Manual Servers and developing new applications to suit present developments:

It is proposed to build appropriate levels of redundancy at the Server infrastructure facility to enable uninterrupted performance of applications. This can be achieved by implementing optimum hardware, both at the server and network level. At the database level, installing a Storage Area Network (SAN) device is considered to store the critical data files of Oracle database. At the server level, Oracle database is to be configured in a clustered mode. This fail- over arrangement will ensure that in the event of one server going down, the other server will still be available to the users for carrying out operations to the database. It is also proposed to develop new JAVA based applications to suit present developments in metering and Energy accounting.

3.2 Capital Cost Projection

Based on the capital investments shown above and 12% interest rate, the capital cost computed is shown below:

Table 7 : Capital Cost Projection

Capital Cost - Balance Period of 3rd Control Period			
(Rs. in Crores)			
Particulars	FY 2016-17	FY 2017-18	FY 2018-19
Capital Cost on new Investment	2.89	2.26	1.93
Capital Cost on Residual Investment	1.52	4.42	6.67
Total Capital Cost	4.41	6.68	8.60

3.3 Total Generation Capacity:

The total generation capacity estimated, including the capacity related to Open Access consumers over the next two years is as shown below:

Table 8: Estimated Generation Capacities

(MW)

S.No	Source of Power	2017-18	2018-19
I	Genco	5545.30	7295.28
A	Thermal	3063.47	4813.45
B	Hydro	2481.83	2481.83
II	Central Generating Stations	2412.43	2412.43
III	Joint Setor	24.51	24.51
IV	IPPs	898.10	783.10
V	NCEs (Solar, Wind, Mini Hydel etc.)	2527.80	2527.80
VI	Others (Chattisgarh, Singareni & Thermal PowerTech)	2967.45	2967.45
	TOTAL	14375.59	16010.57
VII	Open Access Generators	150.00	150.00
	GRAND TOTAL	14526.00	16161.00

Note:- Generating Station-wise details are shown in Annexures – B

3.4 Annual Fee for the balance period of 3rd Control Period and Revised Capital Cost for FY 2016-17:

As per Regulation 1 of 2006 the SLDC Annual Fee is to be calculated as detailed below:

$$\text{SLDC Annual Fee (Rs./MW/Annum)} = \text{Capital Cost}/(\text{Total Generating Capacity})$$

Table 9: SLDC Annual Fee for the balance period of 3rd Control Period

Particulars	Units	FY 2016-17 (R.E.)	FY 2017-18	FY 2018-19
Total Capital Cost	Rs. in Crores	4.41	6.68	8.60
Generation Capacity	MW	13770	14526	16161
SLDC Annual Fee	Rs./MW/P.A.	3202.61	4598.65	5321.45

The Annual fee for the Third control period has been calculated based on the total capital cost for the Third control period on total generation capacity as per SLDC regulation.

The Annual fee is **Rs. 4598.65/MW/P.A.** for the year FY 2017-18 and **Rs.5321.45/MW/P.A.** for FY 2018-19.

4 Determination of SLDC Operating Charges for the balance period of 3rd Control Period

TSTRANSCO submits the Aggregate Revenue Requirement (ARR) for SLDC Charges for FY 2017-18 and FY 2018-19 as per the methodology notified by the Hon'ble Commission vide Regulation 1 of 2006. The following are the main components of ARR:

SLDC Operating Charges are to cover the O&M Expenses of SLDC Business i.e., Employees Cost, Administrative & General Expenses, Repairs & Maintenance Expenses relating to SLDC Business.

For estimating the O&M Expenses i.e., Employee Cost, Administration & General Expenses, Repairs & Maintenance Expenses, an escalation @ 8.60% was adopted based on the Multi Year Tariff Order issued by the Hon'ble APERC for 3rd Control Period.

Further, it is to submit that wage revision to the employees is due w.e.f. 01.04.2018. However, the impact of wage revision was not factored in the above projections. The same will be claimed separately based on actual.

Based on the above the following is the position of O&M Expenses for FY 2017-18 and FY 2018-19:

Table 10 : Projection – Operation and Maintenance Expenses (Rs. in Crores)

Particulars	FY 2016-17 (R.E.)	FY 2017-18	FY 2018-19
Operating Charges:			
Employees Cost	37.52	40.75	44.25
Administration & General Exp.	2.91	3.16	3.43
Repairs & Maintenance Exp.	1.34	1.46	1.58
Special Appropriation		(8.57)	(8.57)
Sub-Total:	41.77	36.80	40.69
Less: Non-Tariff Income	2.16	2.00	2.00
Total Operating Charges	39.61	34.80	38.69

4.1 Employee Cost:

The employee cost for the base year FY 2016-17 has been projected at an escalation rate of 8.60% as adopted by the erstwhile APERC while issuing the Multi Year Tariff for FY2014-15 to FY2018-19 for the 3rd Control Period.

$$\underline{\text{Employee Expenses for FY'16-'17} = (\text{Employee Expenses for FY'15-'16}) * 1.086}$$

The same growth rate has also been considered for projecting the employee expenses for the for the balance period of 3rd Control period (i.e., FY2017-18 & FY2018-19)

The employee cost, other than the salaries of the personnel, also contain the following components:

- Surrender leave
- Various medical allowances
- Other Allowances and pension contribution

Next wage revision is due with effect from 1st April 2018. The financial commitment of wage revision will be claimed based on actual.

4.2 Administration and General Charges:

The Administration and General(A&G) cost for the base year FY 2016-17 has been projected at an escalation rate of 8.60% as adopted by the erstwhile APERC while issuing the Multi Year Tariff for FY2014-15 to FY2018-19 for the 3rd Control Period.

$$\underline{\text{A\&G Expenses for FY'16-'17} = (\text{A\&G Expenses for FY '15-'16}) * 1.086}$$

The same growth rate has also been considered for projecting the A&G expenses for the for the balance period of 3rd Control period (i.e., FY2017-18 & FY2018-19)

4.3 Repairs and Maintenance Costs:

As per the clause No. 7 of Regulation 2/2006, the Energy Billing Centre is also considered as a part of the SLDC Business. Therefore the assets of SLDC Business are mainly in SCADA Wing & Energy Billing Centre.

These costs are primarily for the AMCs of various equipments. The Repairs & Maintenance Expenditure is projected based on the requirements of SCADA and Energy Billing Centre wing.

A. SCADA Wing:

The R&M expenditure projections cover for Annual Maintenance Charges for the following equipment available in SCADA wing.

1. AMC of Upgraded EMS/SCADA system.
2. AMC of DCPC location UPS systems.
3. AMC of PCs, printers & Networking hardware at SLDC.
4. AMC of Access Control System & Surveillance system
5. AMC of Air Conditioning Units at SLDC.

In addition, price adjustment or price variation for AMC of SCADA system, unforeseen expenses of EMS/SCADA system and Insurance for various equipments in SLDC are also considered in Repair and maintenance costs.

Further for regular maintenance the consumables are required for computer systems, printers and other equipment.

B. EBC:

For smooth functioning of proposed MRI & Manual Servers in 2017-18 AMC is proposed in 2018-19.

C. Telecom:

The repairs and maintenance cost of Telecom wing is projected based on AMC contracts of OLTEs and MUXS with different vendors and regular maintenance of Microwave links.

4.4 Special Appropriation:

Based on provisional/un-audited accounts, the surplus of Rs.17.14 Crores gained during FY 2014-15 (02.06.2014 to 31.03.2015) and FY 2015-16 is being passed on (benefit) to the consumers as a negative element during FY 2017-18 and FY 2018-19.

Table 11: Special Appropriation (Rs. in Crores)

Particulars	2017-18	2018-19
Special Appropriation	(8.57)	(8.57)

4.5 Non-Tariff Income:

The major components of other income are income from SLDC Processing fees, delayed payment surcharge etc. Based on the past trend, the Non-Tariff Income for FY 2017-18 and FY 2018-19 is estimated as detailed below:

Table 12: Non-Tariff Income (Rs. in Crores)

Particulars	FY 2016-17	FY 2017-18	FY 2018-19
Non – Tariff Income	2.16	2.00	2.00

4.6 Operating Charges for Third Control Period:

As per Regulation 1 of 2006 the SLDC Operating Charges are to be calculated as detailed below:

$$\text{SLDC Operating Charges (Rs./MW/Month)} = \frac{\text{Annual Operating Charges}}{\text{Total Generating Capacity} \times 12}$$

The details of Operating charges are shown in Table 13.

Table 13 : SLDC Operating Charges for the balance period of 3rd Control Period

Particulars	Unit	FY 2016-17 (Provl.)	FY 2017-18	FY 2018-19
Annual Operating Charges	Rs. Crores	39.61	34.80	38.69
Generation Capacity	MW	13770	14526	16161
Operating Charges	Rs./MW/Month	2397.12	1996.42	1995.03

The Monthly Operating Charges for the year 2017-18 is **Rs. 1996.42/MW/Month** and for the year 2018-19 is **Rs. 1995.03/MW/Month**.

5 Summary – SLDC Charges

Table 14 : Summary – Filing for SLDC for the balance period of 3rd Control Period

Summary - SLDC MYT Filing for the Balance period of Third Control Period				
Particulars	Unit	FY 2016-17 (Base Year)	FY 2017-18	FY 2018-19
Capital Cost	INR Crs	4.41	6.68	8.60
Employees Cost	INR Crs	37.52	40.75	44.25
Administration & General Exp.	INR Crs	2.91	3.16	3.43
Repairs & Maintenance Exp.	INR Crs	1.34	1.46	1.58
<i>Special Appropriation</i>	<i>INR Crs</i>		-8.57	-8.57
O&M Expenses	INR Crs	41.77	36.80	40.69
<i>Less: Non-Tariff Income</i>	<i>INR Crs</i>	<i>2.16</i>	<i>2.00</i>	<i>2.00</i>
Total Operating Cost	INR Crs	39.61	34.80	38.69
Generation Capacity	MW	13770	14526	16161
SLDC Annual Fee	Rs./MW/Annum	3202.61	4598.65	5321.45
Operating Charges	Rs./MW/Month	2397.12	1996.42	1995.03

ANNEXURE: Generating Capacities

Table 15 : Generating Capacities

(MW)

Sl.No.	Generating Station/Source	Total Capacity	TSDISCOMS Share	
			2017-18	2018-19
1	VTPS I	383.25	206.53	206.53
2	VTPS II	383.25	206.53	206.53
3	VTPS III	383.25	206.53	206.53
4	VTPS IV	462.50	249.24	249.24
5	RTPP I	382.20	205.97	205.97
6	RTPP II	382.20	205.97	205.97
7	RTPP III	191.10	102.98	102.98
8	KTPS A	216.72	116.79	116.79
9	KTPS B	216.72	116.79	116.79
10	KTPS C	216.72	116.79	116.79
11	KTPS D	455.00	245.20	245.20
12	KTPS VI	462.50	249.24	249.24
13	RTS B	56.88	30.65	30.65
14	KTPP I	462.50	249.24	249.24
15	KTPP II	555.00	555.00	555.00
16	KTPS VII	760.00	0.00	760.00
17	BTPP	990.00	0.00	990.00
A	Total Thermal	6959.79	3063.47	4813.45
1	Manchkund PH AP share	83.16	44.81	44.81
2	Tungabhadra PH AP share	57.02	30.73	30.73
3	SSLM LCPH	891.00	891.00	891.00
4	NSPH	807.44	807.44	807.44
5	NSLCPH	59.40	59.40	59.40
6	Pochampad PH	26.73	26.73	26.73
7	Nizamsagar PH	9.90	9.90	9.90
8	Singur	14.85	14.85	14.85
9	Priyadarshini Jurala HES	231.66	231.66	231.66
10	Pochampad II	8.91	8.91	8.91
11	Lower Jurala HE	237.60	237.60	237.60
12	Pulichintala	118.80	118.80	118.80
B	Total Hydro	2546.47	2481.83	2481.83
C	Total Genco	9506.26	5545.30	7295.28

Filing of ARR of SLDC business for Balance Period of 3rd Control Period (FY2017-18 and FY2018-19)

1	NTPC(SR) Ramagundam U1-U6	629.78	339.39	339.39
2	NTPC(SR) Ramagundam U7	158.58	85.46	85.46
3	NLC TS-II Stage-I	103.93	56.01	56.01
4	NLC TS-II Stage-II	183.93	99.12	99.12
5	NPC-MAPS	38.99	21.01	21.01
6	Talcher Stage 2	374.00	201.55	201.55
7	NTPC-Simhadri Stage I	940.00	506.57	506.57
8	NTPC-Simhadri Stage II	432.49	233.07	233.07
9	Kaiga (Nuclear) Plant I & II	121.37	65.41	65.41
10	Kaiga (Nuclear) Plant III & IV	128.54	69.27	69.27
11	Vallur Thermal Power Plant	206.87	111.48	111.48
12	Kalpakkam	116.16	62.60	62.60
13	Tuticorn	234.23	126.23	126.23
14	Kudgi I & II	703.12	378.91	378.91
15	Neyveli	104.60	56.37	56.37
D	Total Central Sector	4476.59	2412.43	2412.43
1	APGPCL-I	15.60	6.67	6.67
2	APGPCL-II	41.72	17.84	17.84
E	Total Joint Sector	57.32	24.51	24.51
1	BSES	213.40	115.00	0.00
2	GVK Extension	213.40	115.00	115.00
3	Vemagiri	358.90	193.41	193.41
4	Gowthami	450.08	242.55	242.55
5	Konaseema	430.76	232.14	232.14
F	Total IPPs	1666.54	898.10	783.10
1	Bagasse	42.00	42.00	42.00
2	Bio Mass	24.00	24.00	24.00
3	Municipal/Industrial Waste	8.00	8.00	8.00
5	Mini Hydel	7.00	7.00	7.00
6	Solar	2346.00	2346.00	2346.00
7	Wind	100.80	100.80	100.80
G	Total Non Conventional	2527.80	2527.80	2527.80
1	Singareni TPP	1128.00	1128.00	1128.00
2	Chhattisgarh Power	1000.00	1000.00	1000.00
3	Thermal Power Tech I	500.00	269.45	269.45
4	Thermal Power Tech	570.00	570.00	570.00
H	Total Others	3198.00	2967.45	2967.45
I	Discom Total	21432.51	14375.59	16010.57
J	Open Access		150.00	150.00
K	Grand Total		14525.59	16160.57