

GUJARAT ELECTRICITY REGULATORY COMMISSION



**Mid-term Review
of
Business Plan
For
State Load Dispatch Centre (SLDC)**

Case No. 1386 of 2013

29th April 2014

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**GUJARAT ELECTRICITY REGULATORY COMMISSION
(GERC)**

GANDHINAGAR

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CONTENTS

1. Introduction	1
1.1 Background	1
1.2 State Load Dispatch Centre (SLDC)	2
1.3 Petition of SLDC for Mid-term Review of Business Plan	3
1.4 Admission of the petition and the public hearing process	3
1.5 Contents of this order	4
2. Summary of SLDC's Petition	5
2.1 Mid-term Review for FY 2014-15 and FY 2015-16	5
2.2 Proposed SLDC charges for FY 2014-15	6
3. Mid-term Review of Business Plan	7
3.1 Capital Expenditure	7
3.2 Capitalisation	11
3.3 Operation and Maintenance (O&M) Expenses	12
3.4 Depreciation	13
3.5 Interest and Finance Charges	14
3.6 Return on Equity	15
3.7 Interest on Working Capital	17
3.8 Income Tax	18
3.9 RLDC, ULDC & SCADA Upgradation	19
3.10 Other Income	20
3.11 Approved ARR for SLDC	21
COMMISSION'S ORDER	23



LIST OF TABLES

Table 2.1: Mid-term Review for FY 2014-15 and FY 2015-16	5
Table 2.2: Tariff for FY 2014-15	6
Table 3.1: Revised Capital Expenditure for FY 2013-14 to FY 2015-16.....	7
Table 3.2: Approved capitalisation in Mid-term Review	11
Table 3.3: Gross fixed Assets approved in the Mid-term Review.	11
Table 3.4: O&M expenses projected for the Control Period FY 2013-14 to FY 2015-16.....	12
Table 3.5: O&M expenses approved in the Mid-term Review for FY 2014-15 to FY 2015-16.....	13
Table 3.6: Proposed Depreciation for FY 2014-15 to FY 2015-16.....	13
Table 3.7: Working of Depreciation rate for FY 2014-15 to FY 2015-16.....	13
Table 3.8: Approved Depreciation in the Mid-term Review.....	14
Table 3.9: Proposed Interest and Finance Charges for FY 2014-15 to FY 2015-16	14
Table 3.10: Approved Interest and Finance Charges in the Mid-term Review	15
Table 3.11: Proposed Return on Equity for FY 2014-15 to FY 2015-16	16
Table 3.12: Approved Return on Equity in the Mid-term Review	16
Table 3.13: Proposed Interest on Working Capital for FY 2014-15 to FY 2015-16	17
Table 3.14: Interest on Working Capital approved in the Mid-term Review.....	18
Table 3.15: Income Tax projected in the Mid-term Review.....	18
Table 3.16: Income Tax approved in the Mid-term Review.....	18
Table 3.17: Proposed RLDC, ULDC, SCADA Upgradation for FY 2014-15 to FY 2015-16	19
Table 3.18: Approved RLDC, ULDC, SCADA Upgradation for FY 2014-15 to FY 2015-16	20
Table 3.19: Proposed Revenue from Other Income for FY 2014-15 to FY 2015-16	20
Table 3.20: Average Other Income of last three years	21
Table 3.21: Approved Revenue from Other Income in the Mid-term Review	21
Table 3.22: Approved ARR for SLDC.....	22



ABBREVIATIONS

A&G	Administration and General Expenses
ARR	Aggregate Revenue Requirement
CAPEX	Capital Expenditure
CERC	Central Electricity Regulatory Commission
Control Period	FY 2011-12 to FY 2015-16
DGVCL	Dakshin Gujarat Vij Company Limited
DISCOM	Distribution Company
EA	Electricity Act, 2003
EHV	Extra High Voltage
FPPPA	Fuel and Power Purchase Price Adjustment
FY	Financial Year
GEB	Gujarat Electricity Board
GERC	Gujarat Electricity Regulatory Commission
GETCO	Gujarat Energy Transmission Corporation Limited
GFA	Gross Fixed Assets
GoG	Government of Gujarat
GSECL	Gujarat State Electricity Corporation Limited
GUVNL	Gujarat Urja Vikas Nigam Limited
HT	High Tension
JGY	Jyoti Gram Yojna
kV	Kilo Volt
kVA	Kilo Volt Ampere
kVAh	Kilo Volt Ampere Hour
kWh	Kilo Watt Hour
LT	Low Tension Power
MGVCL	Madhya Gujarat Vij Company Limited
MTR	Mid-term Review
MU	Million Units (Million kWh)
MW	Mega Watt
MYT	Multi-Year Tariff
O&M	Operations & Maintenance
PF	Power Factor
PGCIL	Power Grid Corporation of India Limited
PGVCL	Paschim Gujarat Vij Company Limited
PPA	Power Purchase Agreement
R&M	Repair and Maintenance
RLDC	Regional Load Despatch Centre
SBI	State Bank of India
SLDC	State Load Despatch Centre
UGVCL	Uttar Gujarat Vij Company Limited
WRLDC	Western Regional Load Despatch Centre





Before the Gujarat Electricity Regulatory Commission at Gandhinagar

Case No. 1386 of 2013

Date of the Order: 29th April 2014

CORAM

Shri Pravinbhai Patel, Chairman

Dr. M. K. Iyer, Member

ORDER

1. Introduction

1.1 Background

Section 16.2 of GERC (MYT) Regulations, 2011, provides for submission of Business Plan for each of the Control Period by the Generating Company, Transmission Licensee, Distribution Wires Business and Retail Supply Business. Based on the Business Plan, the applicant shall submit the forecast of Aggregate Revenue (ARR) for the entire control period and expected revenue from the existing Tariffs for the first year of the control period, and the Commission shall determine ARR for the entire control period and the tariff of the first year of the control period for the Generating Company, Transmission Licensee and Distribution Wires Business Plan and Retail Supply Business.

Section 16.2 of the GERC (MYT) Regulations, 2011, also provides that the Generating Company, Transmission Licensee and Distribution Licensee may seek



Mid-term Review of the Business Plan through an application filed three (3) months prior to the filing of Petition for Truing up for the Second year of the control period and tariff determination for the fourth year of the control period.

Regulation 17.2 of the GERC (MYT) Regulations, 2011, provides that in case of Mid-term Review of Business Plan under Regulation 16.2, the Petition shall comprise of modification of the ARR for the remaining years of the control period, if any, with adequate justification for the same.

Regulation 19.1 of GERC (MYT) Regulations, 2011, also provides that Mid-term Review of the Business Plan / Petition may be sought by the generating company Transmission Licensee and Distribution licensee through an application filed three (3) months prior to the specified date of filing of petition for truing up for the second year of the control period and Tariff determination for the fourth year of the control period.

1.2 State Load Despatch Centre (SLDC)

The Government of Gujarat unbundled and restructured the Gujarat Electricity Board with effect from 1st April, 2005. The generation, transmission and distribution businesses of the erstwhile Gujarat Electricity Board were transferred to seven successor companies.

The seven successor companies are listed below:

- i) Gujarat State Electricity Corporation Limited (GSECL) - A Generation Company.
- ii) Gujarat Energy Transmission Corporation Limited (GETCO) - A Transmission Company

Four Distribution Companies:

- iii) Dakshin Gujarat Vij Company Limited (DGVCL)
- iv) Madhya Gujarat Vij Company Limited (MGVCL)
- v) Uttar Gujarat Vij Company Limited (UGVCL)
- vi) Paschim Gujarat Vij Company Limited (PGVCL); and
- vii) Gujarat Urja Vikas Nigam Limited (GUVNL) – A holding company and is also responsible for purchase of electricity from various sources and supply to Distribution Companies.

The transmission assets of the erstwhile Gujarat Electricity Board, including the assets related to the State Load Despatch Centre, were transferred to the newly created entity, GETCO. However, the Government of India, Ministry of Power, has



initiated steps to de-link the National / State Load Dispatch Centre, from the Central Transmission Utility (CTU) / State Transmission Utility (STU).

Section 31 (1) of the Electricity Act, 2003, requires the State Government to establish a separate State Load Dispatch Centre (SLDC). Section 31 (2) of the Electricity Act provides that the SLDC shall be operated by a Government company / authority / corporation constituted under any State Act and until such company / authority / corporation is notified by the State Government, the State Transmission Utility (STU) would operate the SLDC. Accordingly, in the State of Gujarat, the STU, viz., Gujarat Energy Transmission Corporation Limited (GETCO), has so far been operating the SLDC.

In pursuance of Government of India initiatives to de-link the operation of SLDC from STU, the Commission, in its MYT Order dated 17th January, 2009, directed that GETCO may file a separate ARR for SLDC from FY 2009-10. The Commission had directed that the GETCO should initiate action to compile the data for filing a separate ARR petition for SLDC for FY 2010-11. As per directive of the Commission, SLDC filed its first ARR Petition for the FY 2009-10.

SLDC filed the petition for approval of ARR for the MYT period 2011-16 and determination of SLDC fees and charges for the FY 2011-12 on 29th December, 2010. The Commission issued its order on 31st March, 2011 approving the ARR for MYT period FY 2011-12 to FY 2015-16 and SLDC fees and charges for the FY 2011-12.

1.3 Petition of SLDC for Mid-term Review of Business Plan

In accordance with Regulation 16.2 of GERC (MYT) Regulations, 2011, and Regulation 4 of GERC (Levy and Collection of Fees and Charges by SLDC) Regulations, 2005, the State Load Dispatch Centre (SLDC) has filed the Petition for Mid-term Review of Business Plan and Revision of ARR for the remaining control period for FY 2014-15 and FY 2015-16.

1.4 Admission of the petition and the public hearing process

The SLDC has submitted the current petition for Mid-term Review of Business Plan and Revision of ARR for balance years for FY 2014-15 and FY 2015-16 of the control



period. The Commission admitted the above petition (Case No. 1386/2013) on 11th December, 2013.

SLDC has filed an addendum petition on 30th December, 2013 (Case No 1386 of 2013) for True-up for FY 2012-13, Mid-term Review for FYs 2014-15 and 2015-16 and tariff for FY 2014-15 under GERC (MYT) Regulations, 2011, and section 62 of the Electricity Act, 2003.

In accordance with Section 64 of the Electricity Act, 2003, the Commission directed GETCO to publish its application in the abridged form to ensure public participation. The Public Notice was issued in the following newspapers on 12th December, 2013 inviting objections / suggestions from its stakeholders on the Mid-term Review Petition filed by it.

Sl. No.	Name of the Newspaper	Language	Date of publication
1	The Indian Express	English	12.12.2013
2	Gujarat Samachar	Gujarati	12.12.2013

The petitioner also placed the public notice and the petition on the website (www.sldcguj.com) for inviting objections and suggestions on its petition. The interested parties/stakeholders were asked to file their objections / suggestions on the petition on or before 10th January, 2014.

The Commission has not received objections / suggestions on the Mid-term Review petition filed by SLDC.

The public hearing was conducted in Commission's Office in Gandhinagar as scheduled on 11th February 2014. During the hearing nobody submitted their views on the Mid-term Review petition filed by SLDC.

1.5 Contents of this order

The order is divided into three chapters, as under:

1. The **First Chapter** provides the background, the petition and details of the public hearing process.
2. The **Second Chapter** outlines the summary of SLDC's Mid-term Review Petition.
3. The **Third Chapter** deals with Mid-term Review of Business Plan and Revision of ARR for FY 2014-15 and FY 2015-16.



2. Summary of SLDC's Petition

The SLDC has projected its Revised Aggregate Revenue Requirement for FY 2014-15 and FY 2015-16 as part of Mid-term Review process for the remaining years of the control period.

2.1 Mid-term Review for FY 2014-15 and FY 2015-16

The comparison of revised projections for FY 2014-15 and FY 2015-16 in the Mid-term Review Vis-a-Vis the costs approved by the Commission in the MYT Order dated 31st march, 2011 are given as below:

Table 2.1: Mid-term Review for FY 2014-15 and FY 2015-16

Sl. No.	Particulars	FY 2014-15		FY 2015-16	
		Approved in the MYT Order	Projected in the Mid-term Review	Approved in the MYT Order	Projected in the Mid-term Review
		(Rs. Lakh)			
1	Operation & Maintenance Expenses	1253.56	1433.56	1325.27	1576.92
1.1	Employee cost	916.85	1163.61	969.30	1279.97
1.2	Repair & maintenance	47.86	49.07	50.60	53.97
1.3	Administration and general charges	288.85	220.89	305.37	242.97
2	Interest on Working Capital	26.62	41.87	27.93	46.84
3	RLDC fees & charges	16.46	16.46	18.10	18.10
4	Charges for ULDC & other related projects	817.57	817.57	820.40	820.42
5	WAM charges	22.66	-	22.66	-
6	SCADA Upgradation	-	483.00	-	483.00
7	Less: Other Income	178.42	108.72	196.03	108.72
8	Operating Cost Budget (a)	1958.45	2683.74	2018.33	2836.55
9	Depreciation	144.82	237.28	155.57	245.98
10	Interest & Finance Charges	129.20	186.69	126.93	241.06
11	Return on Equity	106.64	127.57	114.34	168.64
12	Less: expenses Capitalised	-	-	-	-
13	Add: Provision for Tax	21.25	25.52	22.79	33.74
14	Capital Cost Budget (b)	401.91	577.06	419.63	689.42
15	Total Revenue Budget	2360.36	3260.80	2437.96	3525.98



2.2 Proposed SLDC charges for FY 2014-15

Based on the above Revised ARR for FY 2014-15 the SLDC has revised the SLDC charges for the FY 2014-15 as indicated below:

Table 2.2: Tariff for FY 2014-15

(Rs. Lakh)

Sl. No.	Particulars	Unit	FY 2014-15
1	ARR projected for FY 2014-15	Rs. Lakh	3261
2	Add Revenue gap for FY 2012-13	Rs. Lakh	377
3	Total SLDC charges	Rs. Lakh	3638
4	Grid connection fees	Rs.	10000



3. Mid-term Review of Business Plan

3.1 Capital Expenditure

SLDC has proposed the revised Capital Expenditure at Rs. 1497 Lakh for FY 2013-14, Rs. 1025 Lakh for FY 2014-15 and Rs. 931 Lakh for FY 2015-16 in the Mid-term Review Petition. The Capital Expenditure approved for these years in the MYT Order dated 31st March, 2011 and revised projection submitted by SLDC in the Mid-term Review are given in the Table below:

Table 3.1: Revised Capital Expenditure for FY 2013-14 to FY 2015-16.

(Rs. Lakh)							
Sl. No.	Particulars	FY 2013-14 Approved in the MYT Order	FY 2013-14 Projected in the Mid-term Review	FY 2014-15 Approved in the MYT Order	FY 2014-15 Projected in the Mid-term Review	FY 2015-16 Approved in the MYT Order	FY 2015-16 Projected in the Mid-term Review
1	Land Acquisition Cost	-	-	-	-	-	-
2	Augmentation/ Upgradation of existing system	90	110	75	110	75	-
3	Strengthening of communication channels	35	536	30	536	30	870
4	Additional system/ Software planning	20	681	20	279	20	31
5	IT Infrastructure	10	35	10	50	10	-
6	SLDC Building Development	80	80	30	30	10	10
7	Office Equipment	14	35	11	10	11	10
8	Staff recreation facilities	15	15	5	5	5	5
9	Additional Expenditure	-	5	2	5	2	5
10	Total	264	1497	183	1025	163	931

Petitioner's submission

The petitioner has submitted that SLDC has revised its capital expenditure plan for FY 2013-14 to FY 2015-16 owing to spill over of two of the three ambitious projects taken up for improving entire system and overall efficiency by strengthening communication system and software support. SLDC has explained the spilled over projects as detailed below:

a) **Software for Energy Accounting and Scheduling for State Pool Account with AMR Support**

The objectives of Indian Electricity Act 2003 are Availability, Affordability and Grid



Discipline. One of the prime mechanisms devised by CERC is to ensure the objectives are met is Availability Based Tariff (ABT) mechanism. The State Electricity Regulatory Commissions have devised their own Intra State ABT Regulations taking clue from CERC Regulations and adding the state's individual constraints and criteria. Especially, the scheduling and energy accounting process is more complex, than in regional level. The complexity being attributed to injection at various voltages (renewable energy, CPPs & IPPs, mini & micro hydels), drawal at various voltages (HT, LT), Inter and Intra state Open Access generators and consumers, multiple PPAs etc. The regulatory commissions have entrusted respective state load dispatch centre with the function of ensuring availability, affordability and grid discipline by implementing intra state ABT observing State grid code.

SLDC has to maintain Energy Accounting for the State involving following major activities:

- Energy scheduling for day ahead and day of operation following the process defined by GERC.
- System monitoring.
- Meter Data Acquisition for analysis and accounting.
- Energy Accounting for the state.
- Energy Billing: Balancing and settlement; UI charges, energy charges, capacity charges realization, mis-declaration penalty, reactive energy charges, transmission charges, and Open Access charges.
- Calculation of Total transmission capacity, Available transmission capacity.
- Enable Open Access approval process.
- Adhere to Wind/ Solar regulations.
- Web based solution where in the authenticated users of constituents will enter information like declared capacity, drawl request, Open Access request etc. into the web page directly.

Current ABT/scheduling software was installed & commissioned before 5 years. Hence, now it is necessary to redevelop and redesign the software with latest technology to incorporate various changes as per the regulations & accounting methodology. It is also required to implement the new software with increased users and their requirements which requires minimal manual intervention and web interfaces.



It is also necessary to replace the existing system of meter (SEM) data receipt as it is being done manually. A comprehensive software solution is necessary from the stage of meter data receipt for reporting generation through web integration by making the entire data acquisition process fully automatic and thereby reducing manual intervention and maintaining a high degree of accuracy.

A paradigm shift is expected in the SCADA/EMS system methodology as new regulations like WIND Generation forecasting, REC mechanism, POC charges, incorporation of WIND/SOLAR generation, increase in Open Access Users are SLDC's forthcoming challenges. Hence, this may lead to expansion/up-gradation SCADA/EMS system with high standard in terms of latest technology, handling large volume of data storage, its processing for various reports, high speed data retrieval, high accuracy and elevated security, etc.

Update on the project is as under:

- Modem (1200Nos.) inspected and received at Asoj Store
- CRP-1 was carried out by project team at Bhuvneshwar
- Tender floated for communication of ABT project
- Three servers installed at SLDC
- Database installed in the servers
- Retendering was done on dt.28/10/2013

b) Wide Area Measurements (WAMS) through Phasor Measurement Units (PMUs)

Existing SCADA system having latency of the order of 10-12 seconds for the Analog/Status scan points and EMS system having limitations for carrying out system study in the Steady state mode. In the era of complex growing grid, it is highly opined to know the transient status of the Grid and to forecast the contingency and abnormality either in graphical/geographical format by providing WAMS.

PMU is an electronic device which gives the phasor measurement of the electrical quantity which means system will show the magnitude and angular position of the electrical quantity. It is useful for monitoring Stress level of grid in real-time by providing load angles of transmission lines.

As renewable energy resources like unpredictable Wind generation creates real-



time challenges to Grid operators, the PMU will provide information well in advance about the status of the affected pocket of the grid.

The main use of WAMS analytics software is to provide an intelligent tool to the system operator to manage system in secure manner and to optimize the system resources confidently.

After long deliberation and discussion with industry experts and academicians, SLDC has planned three useful analytics for the Gujarat Power System as mentioned below:

- Online power system oscillation mode identification
- Hybrid State Estimator
- Dynamic Security Assessment with Voltage Stability

The above analytics will be developed by IIT-Bombay under sponsored research and development programme at an estimated cost of Rs. 87.45 Lakh. SLDC has initiated the WAMS for the Gujarat Grid. GETCO has signed MoU with IIT- Bombay for the development of the above modules. Proto type of module 1 completed and SRS of SEA under preparation. Visit of SLDC officials on dtd.20-21/10/2013.

Commission's Analysis

The Commission had approved the Capital Expenditure at Rs. 1565 Lakh in the MYT Order for the control Period FY 2011-12 to FY 2015-16. SLDC had incurred a Capital Expenditure of Rs. 72.35 Lakh in FY 2011-12 and Rs. 13.03 Lakh during FY 2012-13 and Projected Rs. 3451 Lakh during FY 2013-14 to FY 2015-16 in the Mid-term Review petition. Thus the revised Capital Expenditure proposed for the Control Period in the MYT Order is Rs. 3536 Lakh against Rs. 1565 Lakh proposed and approved in the MYT Order which is about 126% higher than what was approved in MYT Order.

The Commission approves the projected Capital Expenditure for FY 2014-15 to FY 2015-16 as proposed by SLDC in the Mid-term Review for strengthening the existing communication, tele-metering system etc. to discharge its function effectively as an independent system operator. SLDC has indicated that it would spend the CAPEX as projected in the Mid-term Review.



The Commission had determined the SLDC charges for FY 2013-14 in the Tariff order dated 28th March 2013. As such the Commission is not revising the CAPEX for FY 2013-14. The Commission approves the Capital Investment for FY 2014-15 of Rs. 1025 Lakh and for FY 2015-16 of Rs. 931 Lakh as projected by SLDC in the Mid-term Review petition.

3.2 Capitalisation

Petitioner's submission

SLDC has submitted to capitalize the projected CAPEX in the same year.

Commission's Analysis

The Commission, considered capitalisation of opening balance of work in progress and 80% of CAPEX projected during the control period for FY 2011-12 to FY 2015-16. The Commission now considered the same methodology for capitalisation in the Mid-term Review. The approved capitalisation and funding in the Mid-term Review are given in the Table below:

Table 3.2: Approved capitalisation in Mid-term Review

(Rs. Lakh)

Sl. No.	Particulars	FY 2013-14	FY 2014-15	FY 2015-16
1	Opening CWIP	-	-	205.00
2	Capital Expenditure (CAPEX)	264.00	1025	931
3	Capitalisation	303.00	820.00	949.80
4	Closing CWIP		205.00	186.20
5	Capitalization		820.00	949.80
6	Less Grants		-	-
7	Balance Capitalization		820.00	949.80
8	Debt (70%)		574.00	664.86
9	Equity (30%)		246.00	284.94

Gross Fixed Assets

The Commission has arrived at the opening and closing balance of GFA taking into consideration the capitalisation approved in the above para as detailed in the Table below:

Table 3.3: Gross fixed Assets approved in the Mid-term Review.

(Rs. Lakh)

Sl. No.	Year	Opening Balance	Addition during the year	Closing GFA
1	2013-14	771.11	303	1074.11
2	2014-15	1074.11	820.00	1894.11
3	2015-16	1894.11	949.80	2843.91



The above gross fixed assets are taken into consideration for computation of depreciation charges.

3.3 Operation and Maintenance (O&M) Expenses

SLDC has projected the O&M expenses at Rs. 1433.56 Lakh for FY 2014-15 and Rs. 1576.92 Lakh for FY 2015-16 in the Mid-term Review petition. The O&M expenses approved for these years in the MYT order dated 6th September 2011 and the revised projection in the Mid-term Review submitted by SLDC are given in the Table below:

**Table 3.4: O&M expenses projected for the Control Period FY 2013-14 to FY 2015-16
(Rs. Lakh)**

Sl. No.	Particulars	FY 2014-15 Approved in the MYT Order	FY 2014-15 Projected in the Mid-term Review	FY 2015-16 Approved in the MYT Order	FY 2015-16 Projected in the Mid-term Review
1	Employee Cost	916.85	1163.61	969.30	1279.97
2	Repair & Maintenance	47.86	49.07	50.60	53.97
3	Administration & General Charges	288.85	220.89	305.37	242.97
4	Operation & Maintenance Expenses	1253.56	1433.56	1325.27	1576.92

Petitioner's Submission

SLDC has submitted that it has considered growth rate of the actuals for FY 2012-13 in working out the O&M expenses for remaining control period. SLDC has mentioned that the company has witnessed inflation factor of 9.63% of p.a. based on the CPI. It has considered point to point CAGR between March 2010 and March 2013 in the CPI for industrial workers and proposed 10% increase over actual for FY 2012-13 in working out the O&M expenses in Mid-term Review.

Commission's Analysis

The Commission has examined the O&M expenses incurred by SLDC during FY 2012-13 component wise. GERC (MYT) Regulations, 2011, specified the escalation of O&M Expenses viz, Employee cost, Repairs and Maintenance expenses and Administration and General Expenses at 5.72% p.a. for FY 2012-13 onwards.

The Commission, accordingly, approves the Employee cost, R&M Expenses and A&G Expenses with 5.72% escalation p.a. for FY 2014-15 and FY 2015-16 over the actuals incurred under these heads during FY 2012-13 as per audited accounts. The approved O&M expenses are given in the Table below:



Table 3.5: O&M expenses approved in the Mid-term Review for FY 2014-15 to FY 2015-16

(Rs. Lakh)

Sl. No.	Particulars	FY 2014-15	FY 2015-16
1	Employee Cost	1074.82	1136.30
2	Repair & Maintenance	45.32	47.91
3	Administration & General Charges	204.03	215.70
4	Operation & Maintenance Expenses	1324.17	1399.91

3.4 Depreciation

SLDC has projected the depreciation at Rs. 237 Lakh for FY 2014-15 and Rs. 246 Lakh for FY 2015-16 in the Mid-term Review Petition. The depreciation approved for these years in the MYT Order dated 31st March, 2011 and now submitted by SLDC in the Mid-term Review are given in the Table below:

Table 3.6: Proposed Depreciation for FY 2014-15 to FY 2015-16

Particulars	FY 2014-15 Approved in the MYT Order	FY 2014-15 Projected in the Mid-term Review	FY 2015-16 Approved in the MYT Order	FY 2015-16 Projected in the Mid-term Review
Gross Block in Beginning of the year	2371.84	2267.60	2570.84	3293.00
Additions during the year (Net)	199.00	1025.40	168.00	930.50
Depreciation for the year	144.82	237.28	155.57	245.98
Average Rate of Depreciation	5.86%*	8.53%	5.86%*	6.55%

* In the petition 5.28% is wrongly mentioned by the petitioner

Petitioner's submission

SLDC has submitted that Gross Fixed Assets and Depreciation have been computed on the basis of audited accounts of FY 2012-13. SLDC has considered the asset addition as per balance sheet for FY 2012-13 and estimated addition in FY 2013-14 to FY 2015-16. Depreciation rate has been considered as same of FY 2012-13 except for software which has 100% depreciation in the year of capitalization as detailed in the Table below:

Table 3.7: Working of Depreciation rate for FY 2014-15 to FY 2015-16
(Rs. Lakh)

Particulars	FY 2014-15	FY 2015-16
Opening Balance	2,268	3,293
Normal Asset Addition	938	894
Software Asset Addition	87	38
Depreciation rate for normal asset	6.36%	6.36%
Average Normal Asset	2,365	3,281
Depreciation on Normal Asset	150	208
Depreciation of Software (100%)	87	38
Total Depreciation	237	246
Depreciation Rate	8.53%	6.55%



Commission's Analysis

SLDC has submitted that it has considered the rate of depreciation same as of FY 2012-13 except for software which has 100% depreciation in the same year of capitalization. SLDC has worked out the depreciation rate at 8.53% for FY 2014-15 and 6.55% for FY 2015-16. However the commission has taken into consideration, the depreciation rate of 6.34% as per actuals based on audited accounts for FY 2012-13 in the Mid-term Review as detailed in the Table below:

Table 3.8: Approved Depreciation in the Mid-term Review

Particulars	(Rs. Lakh)		
	FY 2013-14	FY 2014-15	FY 2015-16
Gross Block in the beginning of the year	771.11	1074.11	1894.11
Additions during the year	303.00	820.00	949.80
Gross Block at the end of the year	1074.11	1894.11	2843.91
Average of GFA		1484.11	2369.01
Average rate of depreciation		6.34%	6.34%
Depreciation for the year		94.09	150.20

3.5 Interest and Finance Charges

SLDC has projected the interest and finance charges at Rs. 186.69 Lakh for FY 2014-15 and Rs. 241.06 Lakh for FY 2015-16 in the Mid-term Review Petition. The interest and finance charges approved for these years in the MYT Order dated 31st March, 2011 and now submitted by SLDC in the Mid-term Review are given in the Table below:

Table 3.9: Proposed Interest and Finance Charges for FY 2014-15 to FY 2015-16

Sl. No.	Particulars	(Rs. Lakh)			
		FY 2014-15 Approved in the MYT Order	FY 2014-15 Projected in the Mid-term Review	FY 2015-16 Approved in the MYT Order	FY 2015-16 Projected in the Mid-term Review
1	Opening Loans	1239.14	1463.94	1233.62	2035.33
2	Loan Additions during the year	139.30	717.78	117.60	651.35
3	Repayment during the year	144.82	146.39	155.57	203.53
4	Closing Loans	1233.62	2035.33	1195.65	2483.15
5	Average Loans	1236.38	1749.64	1214.64	2259.24
6	Interest on Loans	129.20	186.69	126.93	241.06
7	Guarantee Charges	-	-	-	-
8	Total Interest and Finance Charges	129.20	186.69	126.93	241.06
9	Weighted Average Rate Interest on Loan	10.45%	10.67%	10.45%	10.67%



Petitioner's submission

SLDC has submitted that the projected capital expenditure and funding of the same have a large bearing on the long term interest expenditure. SLDC has considered repayment of loans as 1/10th of the opening outstanding loans and interest rate of 10.67% is considered same as audited accounts for FY 2012-13 of GETCO.

Commission's Analysis

The Commission has examined the interest and finance charges projected by SLDC in the Mid-term Review. The Commission has analyzed the capitalisation of capital expenditure proposed by SLDC in the Mid-term Review and approved the capitalisation and the funding of the CAPEX. The loan for SLDC is being considered from the loan portfolio of GETCO and hence the weighted average rate of interest of 10.78% from the GETCO loan portfolio is considered as interest rate for SLDC. The opening loan for FY 2013-14 is taken considering the closing loan as per annual accounts for FY 2012-13 and the addition of loans as approved in para 3.2 above for the Mid-term Review. Depreciation approved is considered as repayment of loan in accordance with GERC (MYT) Regulations, 2011. The details are given in the Table below:

Table 3.10: Approved Interest and Finance Charges in the Mid-term Review

Particulars	(Rs. Lakh)		
	FY 2013-14	FY 2014-15	FY 2015-16
Opening Loans	326.07	408.05	887.96
Addition during the year	212.10	574.00	664.86
Repayment during the year	130.11	94.09	150.20
Closing Loan	408.05	887.96	1402.62
Average Loan		648.00	1145.29
Weighted Average rate of interest		10.78%	10.78%
Interest on Loan		69.85	123.46
Total Interest and Finance Charges		69.85	123.46

The Commission approves the interest and finance charges at Rs. 69.85 Lakh for FY 2014-15 and Rs. 123.46 Lakh for FY 2015-16 in the Mid-term Review.

3.6 Return on Equity

SLDC has projected the return on equity at Rs. 127.57 Lakh for FY 2014-15 and Rs. 168.64 Lakh for FY 2015-16 in the Mid-term Review. The return on equity approved for these years in the MYT Order dated 31st March, 2011 and now submitted by SLDC in the Mid-term Review are given in the Table below:



Table 3.11: Proposed Return on Equity for FY 2014-15 to FY 2015-16

Particulars	(Rs. Lakh)			
	FY 2014-15 Approved in the MYT Order	FY 2014- 15 Projected in the Mid- term Review	FY 2015-16 Approved in the MYT Order	FY 2015- 16 Projected in the Mid- term Review
Opening Equity Capital	731.84	757.39	791.54	1065.01
Equity Additions during the year	59.70	307.62	50.40	279.15
Closing Equity	791.54	1065.01	841.94	1344.16
Average Equity	761.69	911.20	816.74	1204.59
Rate of Return on the Equity	14%	14%	14%	14%
Return on Equity	106.64	127.57	114.34	168.64

Petitioner's submission

SLDC has submitted that the return on equity for the remaining control period under MYT has been worked out based on actual equity position in the beginning of FY 2012-13 and subsequent additions to equity during the remaining control period adopting the rate of return of 14%.

Commission's Analysis

The return on equity is to be considered on normative basis on the opening balance of equity and approved equity addition during the respective years. The rate of return on equity as per the GERC (MYT) Regulations, 2011, is 14% and SLDC has claimed the same rate. The Commission has approved the capitalisation, debt and equity portions of its funding the approved CAPEX in para 3.2 above. The closing equity Rs. 251.31 Lakh for FY 2012-13 has been considered as the opening equity for FY 2013-14. The equity additions are considered as approved in para 3.2 above. The Commission has computed the return on equity as detailed in the Table below:

Table 3.12: Approved Return on Equity in the Mid-term Review

Sl. No.	Particulars	(Rs. Lakh)		
		FY 2013-14	FY 2014-15	FY 2015-16
1	Opening Equity Capital	251.61	342.51	588.51
2	Equity Addition during the year	90.90	246.00	284.94
3	Closing Equity	342.51	588.51	873.45
4	Average Equity		465.51	730.98
5	Rate of Return on equity		14%	14%
6	Return on equity		65.17	102.33

The Commission approves to return on equity at Rs. 65.17 Lakh for FY 2014-15 and Rs. 102.33 Lakh for FY 2015-16 in the Mid-term Review.



3.7 Interest on Working Capital

SLDC has projected the interest on working capital at Rs. 41.87 Lakh for FY 2014-15 and Rs. 46.84 Lakh for FY 2015-16 in the Mid-term Review addendum petition. The interest on working capital approved for these years in the MYT Order dated 31st March, 2011 and now submitted by SLDC in the Mid-term Review are given in the Table below:

Table 3.13: Proposed Interest on Working Capital for FY 2014-15 to FY 2015-16

(Rs. Lakh)					
Sl. No.	Particulars	FY 2014-15 Approved in the MYT Order	FY 2014-15 Projected in the Mid-term Review	FY 2015-16 Approved in the MYT Order	FY 2015-16 Projected in the Mid-term Review
1	O&M Expenses (1 Month)	104.46	119.46	110.44	131.41
2	Maintenance Spares (1% of cost @ 6% Escalation)	23.72	34.43	25.71	45.80
3	Receivables (1 Months)	98.34	135.87	101.58	146.92
4	Total Working Capital	226.52	289.76	237.73	324.13
5	Rate of Interest on Working Capital	11.75%	14.45%	11.75%	14.45%
6	Interest on Working Capital	26.62	41.87	27.93	46.84

Petitioner's submission

SLDC has submitted that interest on working capital has been worked out based on the norms specified in the Regulations.

SLDC has adopted SBAR of as on 1st April, 2013, which was 14.45%, in working out the interest on working capital.

Commission's Analysis

SLDC has claimed interest on Working Capital of Rs. 41.87 Crore for FY 2014-15 and Rs., 46.84 Crore for FY 2015-16 in the addendum petition. The Commission while approving the truing up for FY 2011-12 in the Tariff Order for FY 2013-14 decided to consider the rate of SBAR prevailing on 1st April of the financial year concerned. SLDC has taken into consideration in the Mid-term Review the SBAR of 14.45% as on 1st April, 2013 for the remaining years of the control period. This is justified.

The Commission has computed the working capital and interest there on as detailed in the Table below:



Table 3.14: Interest on Working Capital approved in the Mid-term Review

(Rs. Lakh)			
Sl. No.	Particulars	FY 2014-15	FY 2015-16
1	O&M Expenses (1 Month)	110.35	116.66
2	Maintenance Spares (1% of Opening GFA)	10.74	18.94
3	Receivables (15 Days)	102.33	112.25
4	Total Working Capital	223.42	247.85
5	Rate of Interest on Working Capital	14.45%	14.45%
6	Interest on Working Capital	32.28	35.81

The Commission approves the interest on working capital as Rs. 32.28 lakhs for FY 2014-15 and Rs. 35.81 lakhs for FY 2015-16 respectively.

3.8 Income Tax

SLDC has projected the Income Tax at Rs. 25.52 Lakh for FY 2014-15 and Rs. 33.74 Lakh for FY 2015-16 in the Mid-term Review. The Income Tax approved for these years in the MYT Order dated 31st March, 2011 and now submitted by SLDC in the Mid-term Review are given in the Table below:

Table 3.15: Income Tax projected in the Mid-term Review

(Rs. Lakh)					
Sl. No.	Particulars	FY 2014-15		FY 2015-16	
		Approved in the MYT order	Projected in the Mid-term Review	Approved in the MYT order	Projected in the Mid-term Review
1	Tax on Income	21.25	25.52	22.79	33.74

Petitioner's submission

SLDC has submitted that it has estimated income tax and other taxes for FY 2014-15 and FY 2015-16 in line with return on equity proposed for respective year. SLDC has considered MAT of 20.008%.

Commission's Analysis

SLDC has claimed income tax at MAT rate of 20.008% including other taxes on the return on equity projected for the respective year. The Commission has also adopted the same principle for projecting income tax for FY 2014-15 and FY 2015-16. The Commission applied the MAT rate of 20.008% on the equity approved. The approved income tax for FY 2014-15 and FY 2015-16 is as shown in Table below:

Table 3.16: Income Tax approved in the Mid-term Review

(Rs. Lakh)			
Sl. No.	Particulars	FY 2014-15	FY 2015-16
1	Income Tax	13.03	20.47



3.9 RLDC, ULDC & SCADA Upgradation

SLDC has projected the above charges in the Mid-term Review for FY 2014-15 and FY 2015-16 as detailed in the Table below:

Table 3.17: Proposed RLDC, ULDC, SCADA Upgradation for FY 2014-15 to FY 2015-16

(Rs. Lakh)					
Sl. No.	Particulars	FY 2014-15 Approved in the MYT Order	FY 2014-15 Projected in the Mid-term Review	FY 2015-16 Approved in the MYT Order	FY 2015-16 Projected in the Mid-term Review
1	RLDC Fees and Charges	16.46	16.46	18.10	18.10
2	ULDC Charges	817.57	817.57	820.40	820.42
3	WAM Charges	22.66	-	22.66	-
4	SCADA Upgradation	-	483.00	-	483.00

Petitioner's submission

SLDC has submitted that the RLDC and ULDC charges projected in the Mid-term Review for FY 2014-15 and FY 2015-16 are the same as approved for these years in the MYT order dated 31st March 2011.

SLDC has further submitted that existing SCADA/EMS software has been installed and commissioned since 2004 and now it is necessary to upgrade/expansion of the existing SCADA system software with advanced technology. As the hardware are at end of life cycle and needs up-gradation/replacement, it was decided in 16th WRPC meeting to phased out the existing ULDC system at the end of 5 year LTSA (i.e. by date 14th Oct. 2014). Also the new and old ULDC would operate in parallel for a year so as to evaluate the new system for its stability and reliability. A paradigm shift is expected in the SCADA/EMS system methodology as new regulations like WIND Generation forecasting, REC mechanism, POC charges, incorporation of WIND/SOLAR generation, increase in Open Access Users are SLDC's forthcoming challenges. Hence, this may lead to expansion/up-gradation SCADA/EMS system with high standard in terms of latest technology, handling large volume of data storage, its processing for various reports, high speed data retrieval, high accuracy and elevated security, etc. Keeping the ULDC philosophy, on request of constituents of Western Region, WRLDC has proposed the up-gradation / replacement of existing SCADA/EMS system. With the increased complexity of grid and advancement of IT system it is utmost necessary to adopt the latest available software/hardware for the SCADA system. Bids for the same have been invited and they are under technical scrutiny. Finalization of the order will be done shortly.



Commission's Analysis

The Commission has observed that the RLDC & ULDC charges claimed in the Mid-term Review for FY 2014-15 and FY 2015-16 are the same as approved for these years in the MYT order. Though WAM charges were approved at Rs. 22.66 Lakh for each year of the control period for FY 2011-12 to FY 2015-16, SLDC has not claimed any WAM charges in the Mid-term Review. SLDC has projected Rs. 483 Lakh per annum towards SCADA upgradation in the Mid-term Review for FY 2014-15 and FY 2015-16. SLDC has submitted that WRLDC has proposed the upgradation / replacement of existing SCADA / DMS system. The Commission considers these charges in the Mid-term Review as projected by SLDC. The approved charges are given in the Table below:

**Table 3.18: Approved RLDC, ULDC, SCADA Up gradation for FY 2014-15 to FY 2015-16
(Rs. Lakh)**

Sl. No.	Particulars	FY 2014-15		FY 2015-16	
		Projected in the Mid-term Review	Approved in the Mid-term Review	Projected in the Mid-term Review	Approved in the Mid-term Review
1	RLDC Fees and Charges	16.46	16.46	18.10	18.10
2	ULDC Charges	817.57	817.57	820.42	820.42
3	WAM Charges	-	-	-	-
4	SCADA Upgradation	483.00	483.00	483.00	483.00

3.10 Other Income

SLDC has estimated the Other Income at Rs. 108.72 Lakh for FY 2014-15 and Rs. 108.72 Lakh for FY 2015-16 in the Mid-term Review. The Other Income approved for these years in the MYT Order dated 31st March, 2011 and now submitted by SLDC in the Mid-term Review are given in the Table below:

**Table 3.19: Proposed Revenue from Other Income for FY 2014-15 to FY 2015-16
(Rs. Lakh)**

Sl. No.	Particulars	FY 2014-15 Approved in the MYT Order	FY 2014-15 Projected in the Mid-term Review	FY 2015-16 Approved in the MYT Order	FY 2015-16 Projected in the Mid-term Review
1	Interest on Staff Loans & Advances	8.63	6.20	9.32	6.20
2	Miscellaneous Receipts	2.93	102.52	3.16	102.52
3	Scheduling Charges	129.21	-	142.13	-
4	Grid Connection Fees	37.65	-	41.42	-
5	Net Other Income	178.42	108.72	196.03	108.72



Petitioner's submission

SLDC has submitted that it has estimated Other Income for FY 2014-15 and FY 2015-16 same as actual of FY 2012-13 as per audited accounts

Commission's Analysis

The Commission has observed that the actual Other Income during FY 2012-13 was Rs. 1055.31 Lakh which includes other operating income of Rs. 946.59 Lakh. SLDC has mentioned in the True-up petition that income from Scheduling Charges and application charges from Short-Term Open Access users will not be part of Other Income as per SLDC "Levy and Collection of Fees and Charges" Regulations 2005.

However, the Commission has taken into consideration the actual Other Income of Rs. 1055.31 Lakh in the truing up for FY 2012-13. The Commission observes that scheduling charges depend on the number of Open Access customers and the energy wheeled which is subject to large variance. It is not sure that the other operating income accounted for FY 2012-13 will be the same in the following years. The Commission, therefore, is of the opinion that the Other Income may be considered based on the average of the last three years. The average of Other Income for the previous three years is given below:

Table 3.20: Average Other Income of last three years

(Rs. Lakh)	
Year	Other Income
FY 2010-11	10.55
FY 2011-12	312.88
FY 2012-13	1055.31
Average	459.58

The Commission accordingly considers the revenue from Other Income at Rs. 459.58 Lakh for FY 2014-15 and FY 2015-16 in the Mid-term Review as detailed below:

Table 3.21: Approved Revenue from Other Income in the Mid-term Review

(Rs. Lakh)			
Sl. No.	Particulars	FY 2014-15	FY 2015-16
1	Other Income	459.58	459.58

3.11 Approved ARR for SLDC

The ARR projected and approved in the in the Mid-term Review for FY 2014-15 and FY 2015-16 are summarised in the Table below:



**State Load Dispatch Centre
Mid-term Review of Business Plan**

Table 3.22: Approved ARR for SLDC

Sl. No.	Particulars	(Rs. Lakh)					
		Approved in MYT Order		Projected in the Mid-term Review		Approved in the Mid-term Review	
		FY 2014-15	FY 2015-16	FY 2014-15	FY 2015-16	FY 2014-15	FY 2015-16
1	O&M Expense	1253.56	1325.27	1433.56	1576.92	1324.17	1399.91
1.1	Employee Cost	916.85	969.3	1163.61	1279.97	1074.82	1136.30
1.2	R&M Cost	47.86	50.6	49.07	53.97	45.32	47.91
1.3	A&G Cost	288.85	305.37	220.89	242.97	204.03	215.70
2	Interest on Working Capital	26.62	27.93	41.87	46.84	32.28	35.81
3	WRPC/RLDC Fees and charges	16.46	18.1	16.46	18.10	16.46	18.10
4	ULDC Charges	817.57	820.4	817.57	820.42	817.57	820.42
5	WAM charges	22.66	22.66	0	0	0	0
6	SCADA Upgradation			483	483	483	483
7	Less: Other Income	178.42	196.03	108.723	108.72	459.58	459.58
8	Operating Expenses (a)	1,958.45	2,018.33	2,683.74	2,836.55	2,213.91	2,297.66
9	Depreciation	144.82	155.57	237.28	245.98	94.09	150.20
10	Interest & Finance Charges	129.2	126.93	186.69	241.06	69.85	123.46
11	Return on Equity	106.64	114.34	127.57	168.64	65.17	102.33
12	Less: Expenses Capitalised	0	0	0	0	0	0
13	Add: Provision for tax	21.25	22.79	25.52	33.74	13.03	20.45
14	Expenses related to Capital Work (b)	401.91	419.63	577.06	689.42	242.14	396.44
15	Total Revenue Requirement (a+b)	2,360.36	2,437.96	3,260.80	3,525.98	2,456.05	2,694.10



COMMISSION'S ORDER

The Commission approves the Aggregate Revenue Requirement for SLDC in Mid-term Review for FY 2014-15 and FY 2015-16 as indicated below:

Approved ARR for SLDC for FY 2014-15 and FY 2015-16

(Rs. Lakh)

Sl. No.	Particulars	Approved in the Mid-term Review	
		FY 2014-15	FY 2015-16
1	O&M Expense	1324.17	1399.91
1.1	Employee Cost	1074.82	1136.30
1.2	R&M Cost	45.32	47.91
1.3	A&G Cost	204.03	215.70
2	Interest on Working Capital	32.28	35.81
3	WRPC/RLDC Fees and charges	16.46	18.10
4	ULDC Charges	817.57	820.42
5	WAM charges	0	0
6	SCADA Upgradation	483	483
7	Less: Other Income	459.58	459.58
8	Operating Expenses (a)	2,213.91	2,297.66
9	Depreciation	94.09	150.20
10	Interest & Finance Charges	69.85	123.46
11	Return on Equity	65.17	102.33
12	Less: Expenses Capitalised	0	0
13	Add: Provision for tax	13.03	20.45
14	Expenses related to Capital Work (b)	242.14	396.44
15	Total Revenue Requirement (a+b)	2,456.05	2,694.10

Sd/-

DR. M.K. IYER
Member

Sd/-

SHRI PRAVINBHAI PATEL
Chairman

Place: Gandhinagar

Date: 29/04/2014

