

GUJARAT ELECTRICITY REGULATORY COMMISSION



Multi Year Tariff Order: Truing up for 2009-10,
Annual Performance Review for 2010-11,
Aggregate Revenue Requirement for the MYT Period
2011-16 and Determination of Tariff for 2011-12

For
**Gujarat Energy Transmission Corporation Limited
(GETCO)**

Case No.1062 of 2011

31st March 2011

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(GERC)**

AHMEDABAD

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CONTENTS

1. Background and Brief History	1
1.1 Background	1
1.2 Gujarat Energy Transmission Corporation Limited (GETCO) ...	2
1.3 Commission's Order for the first control period	2
1.4 Commission's orders on Truing up for FY 2008-09, APR for FY 2009-10 and ARR and tariff determination for FY 2010-11..	3
1.5 Admission of current petition and public hearing process	3
1.6 Contents of this order	4
1.7 Approach of this order.....	5
1.8 Business Plan	6
2. Summary of GETCO's ARR and Tariff Petition for FY 2011-12 to FY 2015-16	7
2.1 Aggregate revenue requirement (ARR)	7
2.2 Request of GETCO	8
3. Brief Outline of Objections raised, response from GETCO and Commission's view	10
3.1 Public response to the petition	10
4. Transmission System of GETCO and its performance....	13
4.1 Introduction	13
4.2 Transmission system (FY 2008-09).....	13
4.3 Additions to transmission system: Target and achievement in FY 2009-10	13
4.3.1 GETCO Transmission system at the end of FY 2009-10	14
4.3.2 Transmission capacity	14
4.3.3 Transmission system loading	15
4.3.4 Additional load to be handled by GETCO transmission system during FY 2009-10	16
4.3.5 Load handled by the GETCO system during FY 2009-10	17
4.3.6 Commission's analysis	18
4.3.7 Transmission system availability	19
4.3.8 Transmission loss – FY 2009-10	19
4.4 Operational performance parameters FY 2010-11	20
4.4.1 Transmission system during FY 2010-11	20
4.4.2 Loading of transmissions system	20
4.4.3 Transmission availability	22
4.4.4 Transmission loss	23
4.5 Transmission system during control period – FY 2011-12 to	



	2015-16	23
4.5.1	Additions to transmission system during the control period FY 2011-12 to FY 2015-16	24
4.5.2	Additional loading of transmission system during the control period for FY 2011-12 to 2015-16	25
4.5.3	Availability of the transmission system during the control period	28
4.5.4	Transmission loss for control period FY 2011-12 to 2015-16	29
5	Truing up for FY 2009-10	30
5.1	Introduction	30
5.2	Operation and maintenance (O&M) expenses for FY 2009-10..	30
5.2.1	Employee cost	31
5.2.2	Repairs and maintenance (R&M) expenses	32
5.2.3	Administration and general (A&G) expenses	34
5.3	Depreciation for FY 2009-10	35
5.4	Interest and finance charges for FY 2009-10	37
5.5	Return on equity (ROE) for FY 2009-10	39
5.6	Expenses capitalized for FY 2009-10	41
5.7	Provision for tax for FY 2009-10	42
5.8	Revenue from non-tariff income for FY 2009-10	43
5.9	Interest on working capital for FY 2009-10	44
5.10	Incentive for target availability for FY 2009-10	46
5.11	Gains / losses under 'Truing up'	47
5.12	Sharing of gains or losses for FY 2009-10	48
6	Annual Performance Review for FY 2010-11	50
6.1	Introduction	50
6.2	Operation and maintenance (O&M) expenses for FY 2010-11	50
6.2.1	Employee cost	50
6.2.2	Repairs and maintenance (R&M) expenses	52
6.2.3	Administration and general (A&G) expenses	53
6.3	Capital expenditure, capitalization and funding for FY 2010-11	55
6.4	Depreciation for FY 2010-11	57
6.5	Interest and finance charges for FY 2010-11	58
6.6	Return on equity for FY 2010-11	60
6.7	Interest on working capital for FY 2010-11	62
6.8	Expenses capitalized for FY 2010-11	63
6.9	Provision for tax for FY 2010-11	64
6.10	Revenue from other income for FY 2010-11	64
6.11	Incentive	65
6.12	Performance review for FY 2010-11	66



7	Determination of Aggregate Revenue Requirement (ARR) for the FY 2011-12 to FY 2015-16 and Transmission Charges for 2011-12	68
7.1	Introduction	68
7.2	Capital investment	68
7.3	Generation schemes and connected transmission lines planned during the control period FY 2011-12 to FY 2015-16..	70
7.4	Commission's analysis	71
7.5	Capital expenditure and capitalization	73
7.6	Fixed charges for the control period FY 2011-12 to FY 2015-16	75
7.6.1	Operational and maintenance (O&M) expenses	75
	(a) Employee cost	76
	(b) Repairs and maintenance (R&M) expenses	77
	(c) Administration and general (A&G) expenses	78
7.6.2	Depreciation for FY 2011-12 to FY 2015-16	80
7.6.3	Interest and finance charges for FY 2011-12 to FY 2015-16..	81
7.6.4	Return on equity for FY 2011-12 to FY 2015-16	83
7.6.5	Interest on working capital for FY 2011-12 to FY 2015-16	84
7.6.6	Tax on income for FY 2011-12 to 2015-16	85
7.6.7	Non-tariff income for FY 2011-12 to 2015-16	86
7.6.8	Expenses capitalized during the control period	87
7.6.9	Incentive for achieving target availability during the control period.....	88
7.6.10	Projected and approved fixed costs	88
7.7	Approved transmission charges for FY 2011-12 to 2015-16..	90
8	Compliance of Directives	92
8.1	Compliance of directives issued by the Commission	92
8.2	New Directives	95
	Commission's Order	98



TABLES

Table	Title	Page
2.1	Proposed Aggregate Revenue Requirement for FY 2011-12 to FY 2015-16	7
2.2	Proposed Transmission Tariff/charges	8
4.1	Transmission System of GETCO for FY 2008-09	13
4.2	Transmission Lines and substations: Targets and Achievements during FY 2009-10	14
4.3	Transmission Lines and Substations - FY 2009-10	14
4.4	Transmission Capacity as on 31 st March 2010	14
4.5	Load handled by GETCO System - FY 2008-09	15
4.6	Additional Load to be handled by the GETCO System during 2009-10	16
4.7	Load handled by GETCO System during 2009-10	17
4.8	Transmission System Availability - FY 2009-10	19
4.9	Network Additions during FY 2010-11	20
4.10	Transmission Loading FY 2010-11	20
4.11	Additional Loading of transmission system (October 2010 to March 2011)	22
4.12	Transmission Availability for FY 2010-11	22
4.13	Transmission Loss – 2010-11	23
4.14	Transmission Lines Planned for FY 2011-12 to FY 2015-16	24
4.15	Substations Planned for FY 2011-12 to FY 2015-16	24
4.16	Additional Loading of GETCO System during 2011-12	25
4.17	Additional Loading of GETCO System during FY 2012-13	26
4.18	Additional Loading of GETCO System during FY 2013-14	26
4.19	Additional Loading of GETCO System during FY 2014-15	27
4.20	Additional Loading of GETCO System during FY 2015-16	27
4.21	Total Loading of the GETCO System during FY 2011-12 to FY 2015-16 (Projected)	28
4.22	Availability of GETCO Transmission System (%) (Projected)	29
4.23	Transmission loss of GETCO system for FY 2011-12 to FY 2015-16 ...	29
5.1	O&M expenses claimed by GETCO	31
5.2	Deviation in O&M expenses claimed for FY 2009-10	31
5.3	Employee cost claimed by GETCO	31
5.4	Gain / Loss in Employee cost claimed for FY 2009-10	32
5.5	R&M expenses claimed by GETCO	33
5.6	Gain / Loss in R&M expenses claimed for FY 2009-10	33
5.7	Administration and General Expenses claimed by GETCO	34
5.8	Gain / Loss in Administration and General Expenses claimed for FY 2009-10	34
5.9	O&M expenses and gain / loss approved in Truing up for FY 2009-10..	35
5.10	Depreciation claimed by GETCO	35
5.11	Computation of Depreciation for FY 2009-10	35



Gujarat Energy Transmission Corporation Limited
Truing Up for 2009-10, APR for 2010-11, ARR for 2011-16, Determination of
Tariff for 2011-12

5.12	Gains / Losses from Depreciation claimed by GETCO	36
5.13	Depreciation approved in the Truing up for FY 2009-10	36
5.14	Gain/Loss due to Depreciation approved in the Truing up for FY 2009-10	37
5.15	Interest and Finance charges claimed by GETCO	37
5.16	Gain / Loss from Interest and Finance charges for FY 2009-10	37
5.17	Funding of CAPEX as per GETCO	38
5.18	Opening and closing Balance of Loans	38
5.19	Interest and Finance charges approved in Truing up for FY 2009-10....	39
5.20	Gains/ Losses approved in the Truing up for FY 2009-10	39
5.21	Return on Equity claimed by GETCO	40
5.22	Gain / Loss in Return on Equity claimed for FY 2009-10	40
5.23	Approved Return on Equity	41
5.24	Gains / Losses approved in the Truing up for FY 2009-10	41
5.25	Expenses Capitalized furnished by GETCO	42
5.26	Provision for Tax Claimed by GETCO	42
5.27	Gains / Losses approved in the Truing up for FY 2009-10	43
5.28	Other income claimed by GETCO	43
5.29	Interest on Working Capital Claimed by GETCO	44
5.30	Gain / loss in Interest on Working Capital for FY 2009-10	45
5.31	Interest on working capital approved by the Commission for FY 2009- 10 (Truing up)	45
5.32	Gain / Loss Interest on working capital approved in the Truing up for FY 2009-10	46
5.33	Incentive for target availability claimed by GETCO	46
5.34	Incentive for target availability approved by the Commission for FY 2009-10 (Truing up).....	47
5.35	Approved Fixed Charges - Truing up for FY 2009-10	47
5.36	Revenue Gap for FY 2009-10	49
6.1	O&M Expenses Claimed in the Review for FY 2010-11	50
6.2	Employee cost claimed by GETCO in RE for FY 2010-11	51
6.3	Employee cost considered in APR FY 2010-11	52
6.4	R&M Expenses claimed in the RE for FY 2010-11	52
6.5	R&M Expenses for FY 2010-11	52
6.6	R&M expenses considered for FY 2010-11	53
6.7	A&G Expenses claimed by GETCO in RE	53
6.8	A&G Expenses considered for FY 2010-11	54
6.9	O&M expenses considered for FY 2010-11 in APR	54
6.10	Capex, Capitalization and sources of funding estimated by GETCO	55
6.11	Capital expenditure during FY 2010-11	55
6.12	Funding of Capex	56
6.13	Capitalization and sources of funding considered for FY 2010-11 in APR	57
6.14	Depreciation claimed by GETCO in RE for FY 2010-11	57



Gujarat Energy Transmission Corporation Limited
Truing Up for 2009-10, APR for 2010-11, ARR for 2011-16, Determination of
Tariff for 2011-12

6.15	Details of Depreciation claimed by GETCO in RE for FY 2010-11	57
6.16	Depreciation considered for FY 2010-11 in APR	58
6.17	Interest and Finance Charges Claimed by GETCO in RE for FY 2010-11	58
6.18	Details of Interest and Finance charges claimed by GETCO in RE for FY 2010-11	59
6.19	Interest and Finance Charges considered for FY 2010-11	59
6.20	Return on Equity claimed by GETCO in the APR for FY 2010-11.....	60
6.21	Return on Equity Claimed by GETCO in RE for FY 2010-11.....	61
6.22	Return on Equity considered for FY 2010-11	61
6.23	Interest on working capital claimed by GETCO in RE for FY 2010-11...	62
6.24	Interest on working capital claimed by GETCO in RE for FY 2010-11...	62
6.25	Interest on Working Capital considered for FY 2010-11 in APR	63
6.26	Capitalization of other Expenses Estimated by GETCO in RE for FY 2010-11	63
6.27	Provision for tax claimed by GETCO in RE for FY 2010-11	64
6.28	Provision for tax claimed by GETCO in RE for FY 2010-11	65
6.29	Incentive considered for FY 2010-11 in APR	65
6.30	Fixed Charges Considered in the Performance Review for FY 2010-11	66
7.1	Network Additions during the control period (FY 2011-12 to FY 2015-16)	68
7.2	Additions of substations during the control period (FY 2011-12 to FY 2015-16)	69
7.3	Proposed Capital Investment for FY 2011-12 to 2015-16	69
7.4	Generating Stations from which Evacuation of Power is proposed	70
7.5	Transmission lines programmed during FY 2010-11 & FY 2011-12, Major EHV lines	72
7.6	Proposed capital expenditure and capitalization during the control period	73
7.7	Approved capital expenditure and capitalization for FY 2010-11 to FY 2015-16	74
7.8	Gross fixed assets for FY 2009-10 to 2015-16	75
7.9	Proposed O&M expenses for FY 2011-12 to 2015-16	75
7.10	Projected Employee Cost for control period	76
7.11	Proposed R&M expenses for FY 2011-12 to 2015-16	77
7.12	Proposed A&G cost for FY 2011-12 to FY 2015-16	78
7.13	O&M expenses norms for FY 2011-12 to FY 2015-16 in Rs. lakh/Bay and Rs. lakh / ckt. km.	78
7.14	Voltage-wise ckt. km. line and bays	79
7.15	Approved O&M expenses for FY 2011-12 to FY 2015-16	79
7.16	Proposed Depreciation for FY 2011-12 to 2015-16	80
7.17	Approved Depreciation for FY 2011-12 to 2015-16	81
7.18	Proposed Interest & Finance charges for FY 2011-12 to 2015-16	81
7.19	Approved Interest and Finance charges for FY 2011-12 to 2015-16	82



Gujarat Energy Transmission Corporation Limited
Truing Up for 2009-10, APR for 2010-11, ARR for 2011-16, Determination of
Tariff for 2011-12

7.20	Proposed Return on Equity for FY 2011-12 to 2015-16	83
7.21	Approved Return on Equity for FY 2011-12 to FY 2015-16	84
7.22	Proposed Interest on Working Capital for FY 2011-12 to 2015-16	84
7.23	Approved Interest on Working Capital for FY 2011-12 to 2015-16	85
7.24	Projected tax on income for FY 2011-12 to 2015-16	85
7.25	Approved Tax on income for FY 2011-12 to 2015-16	86
7.26	Projected other income for FY 2011-12 to 2015-16	86
7.27	Approved other income for FY 2011-12 to 2015-16	87
7.28	Expenses capitalized during the control period	87
7.29	Incentive for achieving target availability (Projected)	88
7.30	Proposed ARR by GETCO for FY 2011-12 to FY 2015-16	88
7.31	Approved ARR for FY 2011-12 to FY 2015-16	89
7.32	Transmission tariff estimated by GETCO for FY 2011-12 to FY 2012-13	90
7.33	Transmission tariff computed for FY 2011-12 to FY 2015-16	90



ABBREVIATIONS

A&G	Administration and General
APR	Annual Performance Review
ARR	Aggregate Revenue Requirement
CAPEX	Capital Expenditure
CEA	Central Electricity Authority
CERC	Central Electricity Regulatory Commission
Ckt-Km	Circuit Kilometer
CPP	Captive Power Plant
DGVCL	Dakshin Gujarat Vij Company Limited
FY	Financial Year
GEB	Gujarat Electricity Board
GERC	Gujarat Electricity Regulatory Commission
GETCO	Gujarat Energy Transmission Corporation Limited
GFA	Gross Fixed Assets
GIPCL	Gujarat Industries Power Company Limited
GMDC	Gujarat Mineral Development Corporation
GoG	Government of Gujarat
GPECL	Gujarat Powergen Energy Corporation Limited
GSECL	Gujarat State Electricity Corporation Limited
GSEGL	Gujarat State Energy Generation Limited
GUVNL	Gujarat Urja Vikas Nigam Limited
HRA	House Rent Allowance
HVDC	High Voltage Direct Current
IPTC	Independent Power Transmission Company
kV	Kilo Volt
kVA	Kilo Volt Ampere
kVAh	Kilo Volt Ampere Hour
kWh	Kilo Watt Hour
MAT Rate	Minimum Alternate Tax Rate
MGVCL	Madhya Gujarat Vij Company Limited
MU	Million Units
MVA	Mega Volt Ampere
MW	Mega Watt
MYT	Multi Year Tariff
NTPC	National Thermal Power Corporation
O&M	Operations & Maintenance
p.a.	Per annum
PGCIL	Power Grid Corporation of India Limited
PGVCL	Paschim Gujarat Vij Company Limited
PLR	Prime Lending Rate
R E	Revised Estimates
R&M	Repairs and Maintenance
ROE	Return on Equity
SBAR	State Bank Advance Rate
SLDC	State Load Despatch Centre
T.O.	Tariff Order
UGVCL	Uttar Gujarat Vij Company Limited
UMPP	Ultra Mega Power Projects
Wt. Av.	Weighted Average



**Before the Gujarat Electricity Regulatory Commission at
Ahmedabad**

Case No. 1062 of 2011

Date of the Order 31.03.2011

CORAM

Dr. P.K. Mishra, Chairman
Shri Pravinbhai Patel, Member
Dr. M.K. Iyer, Member

ORDER

1. Background and Brief history

1.1 Background

The Gujarat Energy Transmission Corporation Limited (hereinafter referred to as 'GETCO' or 'petitioner') has filed petition under Section 62 of the Electricity Act, 2003 read with Gujarat Electricity Regulatory Commission (Terms & Conditions of Tariff) Regulations, 2005 and Gujarat Electricity Regulatory Commission (Multi-Year-Tariff Framework) Regulations, 2007 (hereinafter referred to as 'MYT Regulations') on 30th December 2010 for Truing up of Aggregate Revenue Requirement (ARR) of FY 2009-10, Annual Performance Review (APR) of FY 2010-11 and ARR and determination of transmission fees and charges for the control period FY 2011-12 to FY 2015-16.

The Commission did a technical validation of the petition and admitted the petition on 3rd January, 2011.



1.2 Gujarat Energy Transmission Corporation Limited (GETCO)

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 Government of Gujarat vide notification dated 3rd October 2006 notified the final opening balance sheets of the transferee companies as on 1st April 2005, containing the value of assets and liabilities, which stand transferred from the erstwhile Gujarat Electricity Board to the transferee companies including Gujarat Energy Transmission Corporation Limited (GETCO). Assets and liabilities (gross block, loans and equity) as on the date mentioned in the notification have been considered by the Commission in line with the Financial Restructuring Plan (FRP) as approved by Government of Gujarat.

1.3 Commission's order for the first control period

Gujarat Energy Transmission Corporation Limited filed its petition under the Multi Year Tariff framework for the FY 2008-09, FY 2009-10 and FY 2010-11 on 31st July 2008 in accordance with the Gujarat Electricity Regulatory Commission (Multi-Year-Tariff Framework) Regulations, 2007 notified by GERC. The Commission, in exercise of the powers vested in it under Sections 61 to 64 of the Electricity Act, 2003 and all



other powers enabling it in this behalf and after taking into consideration the submissions made by GETCO, the objections by various stakeholders, response of GETCO, issues raised during the public hearing and all other relevant material, issued the Multi-Year-Tariff order on 17th January 2009 for the control period comprising FY 2008-09, FY 2009-10 and FY 2010-11.

1.4 Commission's orders on Truing up for FY 2008-09, APR for FY 2009-10 and ARR and tariff determination for FY 2010-11

The Commission issued the orders on Annual Performance Review for FY 2008-09 and determination of tariff for FY 2009-10 on 14th December 2009 and on Truing up for FY 2008-09, the first year of control period, Annual Performance Review for FY 2009-10, the second year of control period and tariff determination for FY 2010-11, the last year of control period on 31st March, 2010.

Subsequently, the Commission issued an order dated 3rd February, 2011 on a review petition of the Petitioner and revised the Annual Revenue Requirement for the FY 2010-11 from Rs. 1356.75 crore to Rs.1410.94 crore by reversing the deduction of interest capitalized from the ARR of FY 2010-11 in view of the normative calculation of term loan and interest and finance charges.

1.5 Admission of the current petition and the public hearing process

The Petitioner submitted the current petition for 'Truing up' of FY 2009-10, Annual Performance Review (APR) of FY2010-11 and the determination of Aggregate Revenue Requirement (ARR) for the transmission business for the period FY 2011-12 to FY 2015-16 i.e. the ensuing control period and determination of tariff for FY 2011-12. The Commission undertook the technical validation of the petition, and admitted the above petition (Case No.1062 of 2010) on 3rd January, 2011.

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 7th January 2011 inviting objections / suggestions from its stakeholders on the ARR petition filed by it.

1. Indian Express (English)
2. Sandesh (Gujarati)



The petitioner has also placed the public notice and the petition on the website (www.getcogujarat.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 7th February, 2011.

GETCO / Commission received objections / suggestions from one organization - the Gondal Chamber of Commerce and Industry, Gondal. The Commission examined the objections / suggestions received and fixed the date for public hearing for GETCO on 23rd February, 2011 at Commission's Office, Ahmedabad and subsequently a communication was sent to the objector to take part in the public hearing process for presenting their views in person before the Commission. The public hearing was conducted in Commission's Office in Ahmedabad as scheduled on the above date. The objector could not attend the public hearing, but intimated that they had already given a written submission, which may be considered during the hearing.

A short note on the main issues raised by the objector in the written submissions in respect to the petition along with the response of GETCO and the Commission's views on the responses are briefly given in Chapter 3.

1.6 Contents of this order

The order is divided into **eight** chapters as under:

1. The **first** chapter provides the background of the petitioner, the petition and details of the public hearing process and the approach adopted for this order.
2. The **second** chapter outlines the summary of GETCO's MYT Petition.
3. The **third** chapter provides a brief account of the public hearing process, including the objections raised by various stakeholders, GETCO's response and the Commission's views on the response.
4. The **fourth** chapter outlines the transmission system of GETCO and its performance.
5. The **fifth** chapter deals with the 'Truing up' for FY 2009-10.
6. The **sixth** chapter deals with Annual Performance Review (APR) for FY 2010-11.



7. The **seventh** chapter deals with the Aggregate Revenue Requirement (ARR) for FY 2011-12 to FY 2015-16 and tariff for transmission for FY 2011-12.
8. The **eighth** chapter deals with the compliance of directives.

1.7 Approach of this order

The MYT Regulations, 2007 provide for 'Truing up' of the previous year, Annual Performance Review (APR) for the current year and determination of tariff for the ensuing year. The Commission had approved the ARR for the three years of the first control period FY 2008-09 to FY 2010-11 in the MYT order dated 17th January 2009. The Commission had also approved the 'Truing up' for the year 2008-09 in the tariff order dated 31st March 2010.

The GETCO has approached the Commission with the present petition for 'Truing up' of the FY 2009-10, the performance review for the year 2010-11 and determination of ARR for the period FY 2011-12 to FY 2015-16, the control period and the tariff for the FY 2011-12.

In this order the Commission has considered the 'Truing up' for the FY 2009-10, the performance review for the FY 2010-11, determination of ARR for the period FY 2011-12 to FY 2015-16, the control period and the tariff for the FY 2011-12.

The Commission has undertaken 'Truing up' for the FY 2009-10 and performance review for FY 2010-11 based on the submissions of the petitioner. The Commission has undertaken the computation of gains and losses for the FY 2009-10 based on the audited annual accounts made available. However, the Commission has not undertaken the computation of gains and losses for the FY 2010-11 as the audited accounts are not available. The computation of gains and losses would be undertaken for the FY 2010-11 based on audited annual accounts of the petitioner during the FY 2011-12 while finalizing the tariff order for FY 2012-13.

While considering the revision of the ARR the Commission has been primarily guided by the following principles:

1. Controllable parameters have been considered at the level approved under the MYT order unless the Commission considers that there are valid reasons for revision of the same.

2. Uncontrollable parameters have been revised based on the actual performance observed.

The Truing up for the FY 2009-10 and performance review for FY 2010-11 have been considered based on the GERC MYT Regulations, 2007. The determination of ARR for the period FY 2011-12 to FY 2015-16 and the tariff for FY 2011-12 have been considered as per GERC (MYT) Regulations, 2011. The first draft of these Regulations along with the discussion paper was circulated to all the stakeholders on 14th December 2010. Based on the comments / suggestions received from the stakeholders the Commission has notified these Regulations as GERC (Multi Year Tariff) Regulations, 2011 on 22nd March 2011.

Regulation 1.4 (a) of GERC (Multi Year Tariff) Regulations, 2011 reads as under:

“These Regulations shall be applicable for determination of tariff in all cases covered under these Regulations from 1st April, 2011 and onwards.”

1.8 Business Plan

GETCO has submitted the Business Plan for the control period of five (5) year from 1st April, 2011 to 31st March, 2016 in accordance with the directive of the Commission vide Letter No.GERC/MYT/Tariff-2010/1794 dated 12th November, 2010. It is observed that the assumptions used by the company in the Business Plan are in variance with the provisions of the MYT Regulations, 2011 based on which the MYT order is being issued.

GETCO has, to, therefore, revise the Business Plan in accordance with the provisions / norms in the MYT Regulations, 2011 and submit the same to the Commission within three months from the date issue of this order.



Chapter 2

Summary of GETCO ARR and Tariff Petition for FY 2011-12 to FY 2015-16

2.1 Aggregate Revenue Requirement (ARR) for the control period FY 2011-12 to FY 2015-16

Gujarat Energy Transmission Corporation Limited (GETCO) submitted the petition on 30th December 2010 seeking approval for Aggregate Revenue Requirement and determination of transmission charges for the control period FY 2011-12 to FY 2015-16. The transmission charges are to be recovered from the transmission system users as per the GERC Regulations in force.

GETCO has projected the revenue requirement for the control period as under:

Year	Rs. crore
2011-12	2122
2012-13	2378
2013-14	2828
2014-15	3278
2015-16	3684

The details of expenses under various heads are given in Table 2.1 below:

Table 2.1: Proposed Aggregate Revenue Requirement for FY 2011-12 to FY 2015-16 (Projected)

(Rs. in crores)						
Sr. No.	Particulars	FY 2011-12	FY 2012-13	FY 2013-14	FY 2014-15	FY 2015-16
1.	Operation and Maintenance Expenses	707	797	884	982	1091
1.1	Employee Cost	460	511	564	623	688
1.2	Repairs and Maintenance	187	220	248	282	319
1.3	Administrative and General charges	60	66	71	77	84
2.	Depreciation	499	615	735	855	964
3.	Interest and Finance charges	414	541	659	766	846
4.	Interest on working capital	52	64	76	88	99
5.	Return on Equity	389	486	585	685	775
6.	Total Fixed Costs	2061	2503	2939	3377	3775
7.	Less: Expenses capitalized	160	176	193	213	234



Gujarat Energy Transmission Corporation Limited
Truing Up for 2009-10, APR for 2010-11, ARR for 2011-16, Determination of
Tariff for 2011-12

Sr. No.	Particulars	FY 2011-12	FY 2012-13	FY 2013-14	FY 2014-15	FY 2015-16
8.	Add: Provision for Tax	77	97	117	136	154
9.	Total Transmission charges	1979	2424	2862	3300	3695
10.	Less: Other income	103	103	103	103	103
11.	Add: Incentive for achieving target availability	46	57	69	81	32
12.	Add: Revenue Gap of Truing up for FY 2009-10	200	-	-	-	-
13.	Aggregate Revenue Requirement	2122	2378	2828	3278	3684

The proposed transmission charges per MW per day based on the capacity to be handled and charges per kWh based on energy likely to be handled would be as under.

Table 2.2 : Proposed Transmission Tariff/charges

Sr. No.	Particulars	FY 2011-12	FY 2012-13	FY 2013-14	FY 2014-15	FY 2015-16
1	Annual Transmission charges (Rs. crore)	2122	2378	2828	3278	3684
2	Total MW allocation	16006	18510	20075	24939	30749
3	MUs Transferred at 80% PLF	112167	129719	140695	174774	215487
4	Transmission Tariff (Rs./MW/day)	3632	3520	3860	3602	3282
5	Transmission Tariff (paise/unit)	18.91	18.33	20.10	18.75	17.10

2.2 Request of GETCO:

1. To condone delay in filing of this petition:
2. To admit petition for Truing up for FY 2009-10, Annual Performance Review for FY 2010-11 and Aggregate Revenue Requirement for the control period FY 2011-12 to FY 2015-16.
3. To approve the gains/losses for the Truing up for FY 2009-10, Annual Performance Review for FY 2010-11 and allow sharing of such gains/losses as prescribed in the MYT Regulations.
4. To approve the Aggregate Revenue Requirement of control period FY 2011-12 to FY 2015-16.
5. To approve methodology for calculation of O&M costs.
6. To approve methodology for recovery of net annual transmission charges.
7. To approve proposed capital expenditure for control period FY 2011-12 to



FY 2015-16.

8. To approve incentive on availability as prayed.
9. To consider impact of Review Petition No. 1034/2010 filed before Commission against tariff order dated 31st March, 2010 for Annual Performance Review for FY 2009-10 and Aggregate Revenue Requirement for FY 2010-11.
10. To grant any other relief as the Commission may consider appropriate.
11. To allow further submissions, addition and alteration to this Petition as may be necessary from time to time.
12. To pass any other order as the Commission may deem fit and appropriate under the circumstances of the case and in the interest of justice.



Chapter 3

Brief outline of objections raised, response from GETCO and Commission's view

3.1 Public response to the petition

In response to the public notice inviting objections / suggestions from stakeholders on the petition filed by GETCO for Truing up of ARR of FY 2009-10, Annual Performance Review (APR) of FY 2010-11 and determination of Aggregate Revenue Requirement for the control period of FY 2011-12 to 2015-16 and transmission charges for FY 2011-12, one consumer organization viz. the Gondal Chamber of Commerce & Industry, filed their objections/suggestions in writing. Gondal Chamber of Commerce & Industry could not participate in the public hearing held on 23rd February, 2011.

The Commission considered the objections / suggestions and the issues presented before the commission and the, response by GETCO on the same.

The details of the submission made by the objector, response by the petitioner and the views of the Commission are summarized in the following sections.

Objection 1:

The GETCO has maintained the status of transmission loss as per norms, but Distribution loss from the sub-station point to electricity consumer's area is not under its control as per the prescribed norms.

Response of GETCO

The distribution loss is not under the purview of the transmission company. So GETCO can't comment on this.

Commission's view

The distribution losses fall under the purview of distribution companies. This issue may be raised when the distribution company (ies) file their petition (s).



Objection 2:

During the years 2009-10 and 2010-11 the fuel cost remained steady and for some period the cost was below the open market price. Despite an increase of the material cost which might have an effect on the transmission construction works, the average ratio of cost was balanced. Hence, the actual performance of the company remained stable during the last 2 years.

Response of GETCO

Point is noted.

Commission's view

The comments of the objector are noted.

Objection 3:

The ARR for the years 2011-12 to 2015-16 depends on project work and market trend, particularly of cost of steel and fuel. Therefore, the Gondal Chamber of Commerce & Industry suggests to the Commission to monitor the same.

Response of GETCO

No comments.

Commission's view

The controllable / uncontrollable costs will be dealt with as per the MYT Regulations.

Objection 4:

Gondal Chamber of Commerce & Industry requests the Commission to instruct GETCO to apply GERC procedure / system in their transmission construction project for the quality of work.

Response of GETCO

The Commission has its own Regulations, codes and procedures to regulate transmission business and GETCO follows all the procedures and guidelines / regulations of GERC. It takes care of quality of construction work through well established system.

Commission's view

The response of GETCO is noted. GETCO shall ensure effective supervision and control to maintain quality of construction.

Objection 5:

Gondal Chamber of Commerce & Industry suggests to the Commission to observe Hon'ble Supreme Court guidelines in case no. 3588 of 2002 dated 3rd October 2002 (para 86/88 relating to T&D losses as per norms).

Response of GETCO

GETCO takes note of Supreme Court guidelines in Case No. 3588 of 2002. For this the Commission has fixed target of transmission losses in tariff order and GETCO is faithfully fulfilling this by building up suitable transmission network and improve thereon time to time.

Commission's view

The transmission losses of GETCO are within the norm fixed by the Commission.

Chapter 4

Transmission System of GETCO and its Performance

4.1 Introduction

GETCO has submitted information on the transmission system owned and operated by it, which includes the details of transmission system in operation, capacity of the system, likely loading of the transmission system, proposed expansion / augmentation of the system, availability of the system and transmission loss levels. The information furnished on the transmission system and the performance parameters are discussed in the following sections.

4.2 Transmission System (FY 2008-09)

The transmission system of GETCO comprises of 66kV to 400kV voltage levels and a few 33kV level substation and line. The transmission lines and substations in operation as on 31st March 2009 are given in Table 4.1 below:

Table 4.1 : Transmission System of GETCO in FY 2008-09

Sr.No.	Voltage Class	Transmission lines (Ckt. Km)	Substations (Nos)
1	400kV	1912	9
2	220kV	12214	71
3	132kV	4581	48
4	66kV	18639	861
5	33kV	69	1
	Total	37415	990

4.3 Additions to Transmission system: targets and achievements in FY 2009-10

The transmission lines and substations proposed to be added during FY 2009-10 and actually achieved are given in Table 4.2 below:

Table 4.2 : Transmission lines and substations: Targets and Achievements during FY 2009-10

Sr. No.	Voltage Class	Target		Achievement	
		Transmission Lines	Substations (Nos.)	Transmission Lines	Substations (Nos.)
1	400 kV	1367	2	136	-
2	220 kV	781	3	868	2
3	132 kV	-	-	183	-
4	66 kV	709	50	917	58
	Total	2857	55	2104	60

4.3.1 GETCO Transmission System at the end of FY 2009-10

GETCO transmission system comprises of the transmission lines and substations as given in Table 4.3 below at the end of FY 2009-10.

Table 4.3 : Transmission Lines and Substations – FY 2009-10

Sr.No.	Voltage class	Transmission lines (Ckt. Km)	Substations (Nos)
1	400kV	2048	9
2	220kV	13082	73
3	132kV	4764	48
4	66kV	19556	919
5	33 kV	69	1
	Total	39519	1050

GETCO owned and operated the transmission system comprising of 39519 ckt. km. of transmission lines and 1050 substations at voltage levels 66 kV to 400 kV as on 31st March, 2010.

4.3.2 Transmission Capacity

The capacity of the transmission system in FY 2009-10 (as on 31st March, 2010) is given in Table 4.4 below:

Table 4.4 : Transmission Capacity as on 31st March 2010

Sr.No.	Voltage class	Capacity (in MVA)
1	400kV	7410
2	220kV	16900
3	132kV	5918
4	66kV	19632
	Total	49860



4.3.3 Transmission System Loading

The loading on the transmission system of GETCO during 2008-09 was 10981 MW as given in Table 4.5 below:

Table 4.5 : Load handled by GETCO System - FY 2008-09

Sr. No.	Station	Rated Capacity	Auxiliary Consumption (%)	Gujarat Share	Transmission Losses (%)	Total MW on GETCO System
A	GSECL Plants					
1	Ukai TPS	850	9	850	-	774
2	Ukai HPS	305	0.56	305	-	303
3	Gandhinagar TPS Unit 1-4	660	11	660	-	587
4	Gandhinagar TPS Unit-5	210	8	210	-	192
5	Wanakbori TPS Unit 1-6	1260	9	1260	-	1147
6	Wanakbori TPS Unit-7	210	8	210	-	192
7	Sikka TPS	240	10	240	-	214
8	Kutch Lignite TPS	215	12	215	-	189
9	Dhuvaran TPS-Old	220	11	220	-	195
10	Kadana Hydro	242	1	242	-	239
11	Utran Gas Based	135	4	135	-	128
12	Dhuvaran Gas Based-Stage-I	107	4	107	-	102
13	Dhuvaran Gas Based-Stage-II	113	4	113	-	108
	Total GSECL Plants			4767		4370
B	IPPs					
1	GIPCL Stage-I	145	2	145	-	142
2	ESSAR	300	2	300	-	292
3	GPEC	655	2	655	-	636
4	GIPCL Stage-II	165	2	165	-	160
5	GIPCL- SLPP	250	10	250	-	225
6	GSEG	156	2	156	-	151
7	GMDC-Akrimota	250	10	250	-	225
	Total IPPs plants			1921		1831
C	Share from Central Sector					
1	NPC-Tarapur 1&2	320	10	160	5	137
2	NPC-Kakrapar	440	12	131	5	109
3	NPC-Tarapur 3&4	1080	10	290	5	248
4	NTPC-Korba	2100	7	385	5	337
5	NTPC-Vindhychal-I	1260	9	248	5	214
6	NTPC-Vindhychal-II	1000	7	254	5	223
7	NTPC-Vindhychal-III	1000	7	281	5	247
8	NTPC-Kawas	656	3	197	5	181
9	NTPC-Jhanor	657	3	247	5	227
10	NTPC-Kahelgaon	1000	7	94	5	80
11	Sipat-II	1000	7	288	5	253



Gujarat Energy Transmission Corporation Limited
Truing Up for 2009-10, APR for 2010-11, ARR for 2011-16, Determination of
Tariff for 2011-12

Sr. No.	Station	Rated Capacity	Auxiliary Consumption (%)	Gujarat Share	Transmission Losses (%)	Total MW on GETCO System
12	SSNNL-Hydro	1450	0.50	232	-	219
	Total Central Sector Share			2794		2475
	Total					8676
	CPP Wheeling					820
	Wind Farm Capacity					1485
	Total for FY 2008-09 (MW)			9493		10981

4.3.4 Additional Load to be handled by GETCO Transmission System during FY 2009-10

As given in the MYT order FY 2008-11 the additional load to be handled by GETCO system during FY 2009-10 from various generating stations and sources are detailed in Table 4.6 below:

Table 4.6: Additional Load to be handled by the GETCO System during FY 2009-10

Sr. No.	Station	Rated Capacity	Gujarat Share	Auxiliary Consumption (%)	Transmission Losses	Total MW on GETCO System
A	GSECL Plants					
	Utran CCPP Gas based extension	374.6	374.6	4.90	0	356
	Total GSECL Plants					356
B	IPPs					
	GIPCL Expansion	125	125	9.50		113
	Adani Power					1000
	Aryan Coal Beneficiation Pvt. Ltd					100
	Total IPPs					1213
C	Share from Central Sector					
	Sipat State-I	1980	180	7.50	5	158
	NTPC-Barh-Unit-1	1980	0	7.50	6	0
	Total from Central Sector		180			158
	*Wind Farm capacity					200
	Additional of Loading in FY 2009-10 MW					1927



4.3.5 Load handled by the GETCO System during FY 2009-10

The load handled by GETCO system during FY 2009-10 from various generating stations and sources are given in Table 4.7 below:

Table 4.7 : Load handled by GETCO System during 2009-10

Sr. No.	Station	Rated Capacity	Auxiliary Consumption (%)	Gujarat Share	Trans. Losses (%)	Total MW on GETCO System
A	GSECL Plants					
1	Ukai TPS	850	9.00	850	-	774
2	Ukai HPS	305	0.56	305	-	303
3	Gandhinagar TPS Unit 1 to 4	660	11.12	660	-	587
4	Gandhinagar TPS Unit-5	210	8.50	210	-	192
5	Wanakbori TPS Unit 1 to 6	1260	9.00	1260	-	1147
6	Wanakbori TPS Unit-7	210	8.50	210	-	192
7	Sikka TPS	240	10.70	240	-	214
8	Kutch Lignite TPS	290	12.25	290	-	254
9	Dhuvaran TPS-Old	220	11.50	220	-	195
10	Kadana Hydro	242	1.11	242	-	239
11	Utran Gas Based	135	4.94	135	-	128
12	Utran CPP extension	374	4.90	374	-	356
13	Dhuvaran Gas Based-Stage-I	107	4.80	107	-	102
14	Dhuvaran Gas Based-Stage-II	113	4.00	113	-	108
	Total GSECL Plants			5216		4791
B	IPPs					
1	GIPCL Stage-I	145	2.90	145	-	141
2	ESSAR	515	2.80	300	-	292
3	GPEC	655	2.90	655	-	636
4	GIPCL Stage-II	165	2.90	165	-	160
5	GIPCL- SLPP	250	10.00	250	-	225
6	GIPCL SLPO Ext	250	9.5	250	-	226
7	GSEG	156	2.90	156	-	151
8	GMDC-Akrimota	250	10.00	250	-	225
	Total IPPs plants	660		2171		2056
C	Share from Central Sector					
1	NPC-Tarapur 1&2	320	10.00	160	-	137
2	NPC-Kakrapar	440	12.50	125	5	108
3	NPC-Tarapur 3&4	1080	10.00	274	5	248
4	NTPC-Korba	2100	7.93	360	5	337
5	NTPC-Vindhychal-I	1260	9.00	248	5	214
6	NTPC-Vindhychal-II	1000	7.50	254	5	223



Gujarat Energy Transmission Corporation Limited
Truing Up for 2009-10, APR for 2010-11, ARR for 2011-16, Determination of
Tariff for 2011-12

Sr. No.	Station	Rated Capacity	Auxiliary Consumption (%)	Gujarat Share	Trans. Losses (%)	Total MW on GETCO System
7	NTPC-Vindhychal-III	1000	7.50	281	5	247
8	NTPC-Kawas	656	3.00	192	5	177
9	NTPC-Jhanor	657	3.00	242	5	223
10	NTPC-Kahelgaon	1000	7.50	141	5	119
11	Sipat-II	1980	7.50	360	5	316
12	SSNNL-Hydro	1450	0.50	232	-	219
	Total Central Sector Share			2869		2568
	Total					8685
	CPP Wheeling					840
	Wind Farm Capacity					1935
	Total for FY 2009-10 (MW)			9337		12190

It is seen from Table 4.5 and Table 4.7 that the additional loading achieved by GETCO during FY 2009-10 was 1209 MW against anticipated loading of 1927 MW provided in the MYT order dated 17th January, 2009.

4.3.6 Commission's Analysis

The Commission has noted the submission made by the GETCO on transmission system additions, transmission capacity and transmission loading during FY 2009-10.

Transmission System Additions

It is observed that GETCO added 2104 ckt. km. of transmission lines and 60 substations during FY 2009-10 as against 2857 ckt. km. of transmission lines and 55 substations approved by the Commission in the MYT Order dated 17th January 2009. Whereas there is a shortfall in the addition of transmission lines by about 753 ckt. km. mostly 400 kV lines, there is an increase in the substations with the addition of 60 substations against 55 approved by the Commission.

Transmission Capacity

The transmission capacity of GETCO system by the end of March 2010 was 49860 MVA against transmission capacity of 47817 MVA, an increase of 2043 MVA.

Transmission Loading

The loading on the transmission system at the end of March 2010 was 12190 MW against 10981 MW during 2008-09. Additional loading achieved during 2009-10 is



about 1209 MW against additional loading of 1927 MW projected by the Commission in the MYT Order dated 17th January 2009.

4.3.7 Transmission System Availability

GETCO has submitted the transmission system availability at 99.62% for the FY 2009-10. The transmission system availability as provided in MYT Order dated 17th January 2009 and Tariff Order (TO) dated 31st March 2010 for 2010-11 are as given in Table 4.8 below:

Table 4.8 : Transmission System Availability - FY 2009-10

Sr.No.	Voltage class	MYT Order 17/01/2009	T.O. for 2010-11 31/03/2010	Projected for approval in the current petition (%)
1	400kV	99.39	99.5	99.46
2	220kV	98.94	99.0	99.16
3	132kV	98.94	99.45	99.48
4	66kV	99.66	99.70	99.72
5	substations	99.89	99.82	99.87
6	GETCO system availability	99.36	99.61	99.62

GETCO is required to support the availability with detailed calculations as per GERC Regulations, 2005, which is yet to be done.

4.3.8 Transmission Loss - FY 2009-10

GETCO has submitted that the transmission loss during FY 2009-10 was 4.30% as against the approved loss of 4.25% by the Commission in the Tariff Order of 14th December, 2009. It is stated by GETCO that the increase in loss during FY 2009-10 is due to (i) switching over of Daman & Diu loads in South Gujarat from GETCO system to PGCIL system and (ii) transfer of the Surat loads from GETCO system to SUGEN Power Plant of Torrent Power Ltd. Because of transfer of two major loads to other sources, the demand in South Gujarat has come down and the generation available in South Gujarat has to flow to the load centres in north and west. This has resulted in increased loss due to increase in transmission distance.

GETCO has submitted the energy balance for FY 2009-10 as given below:

1	Energy injected into the transmission system	68108.97 MU
2	Energy delivered by GETCO	65182.13 MU
3	Loss	2926.84 MU
4	Percentage loss	4.30%

The transmission loss during FY 2009-10 at 4.30% is approved by the Commission.

4.4 Operation Performance Parameters FY 2010-11

4.4.1 Transmission System during FY 2010-11

GETCO has furnished the additions to the system during FY 2010-11 as given in Table 4.9 below:

Table 4.9 : Network Additions during FY 2010-11

Sr. No.	Voltage	Transmission Lines (Ckt.km)		Substations (Nos.)	
		Planned in FY 2010-11	Achievement Upto Feb.2011	Planned in FY 2010-11	Achievement upto 19 th March 2011
1.	400 kV	740	516	2	1
2.	220 kV	2057	496	3	1
3.	132 kV	49	8	1	0
4.	66 kV	1813	623	134	120
5.	Total	4659	1643	140	122

4.4.2 Loading of Transmission System

GETCO has submitted in its petition that loading of its transmission system at the end of 2009-10 was 12190 MW. Actual loading of the system upto September, 2010 and additional loading anticipated from October 2010 to March 2011 are given in Tables 4.10 and 4.11 below:

Table 4.10 : Transmission Loading FY 2010-11

Load handled from various generating stations and sources (April-September, 2010)

Sr. No.	Station	Rated Capacity	Auxiliary Consumption (%)	Gujarat Share	Trans. Losses (%)	Total MW on GETCO System
A	GSECL Plants					
1	Ukai TPS	850	9.00	850	-	774
2	Ukai HPS	305	0.56	305	-	303
3	Gandhinagar TPS Unit 1 to 4	660	11.12	660	-	587
4	Gandhinagar TPS Unit-5	210	8.50	210	-	192
5	Wanakbori TPS Unit 1 to 6	1260	9.00	1260	-	1147
6	Wanakbori TPS Unit-7	210	8.50	210	-	192
7	Sikka TPS	240	10.70	240	-	214



Gujarat Energy Transmission Corporation Limited
Truing Up for 2009-10, APR for 2010-11, ARR for 2011-16, Determination of
Tariff for 2011-12

Sr. No.	Station	Rated Capacity	Auxiliary Consumption (%)	Gujarat Share	Trans. Losses (%)	Total MW on GETCO System
8	Kutch Lignite TPS	290	12.25	290	-	254
9	Dhuvaran TPS-Old	220	11.50	220	-	195
10	Kadana Hydro	242	1.11	242	-	239
11	Uggaran Gas Based	135	4.94	135	-	128
12	Uttaran CCPP Extension	374	4.90	374	-	356
13	Dhuvaran Gas Based-Stage-I	107	4.80	107	-	102
14	Dhuvaran Gas Based-Stage-II	113	4.00	113	-	108
	Total GSECL Plants			5216		4791
B	IPPs					
1	GIPCL Stage-I	145	2.90	145	-	141
2	ESSAR	515	2.8	300	-	292
3	GPEC	655	2.90	655	-	636
4	GIPCL Stage-II	165	2.90	165	-	160
5	GIPCL- SLPP	250	10.00	250	-	225
6	GIPCL- SLPP Extension	250	9.50	250	-	226
7	GSEG	156	2.90	156	-	151
8	CMDC-Akrimota	250	10.00	250	-	225
9	Adani Power	660	0.00	500	-	500
	Total IPPs plants			2671		2556
C	Share from Central Sector					
1	NPC-Tarapur 1&2	320	10.00	160	-	144
2	NPC-Kakrapar	440	12.50	125	5	103
3	NPC-Tarapur 3&4	1080	10.00	274	5	233
4	NTPC-Korba	2100	7.93	360	5	313
5	NTPC-Vindhychal-I	1260	9.00	230	5	198
6	NTPC-Vindhychal-II	1000	7.50	239	5	209
7	NTPC-Vindhychal-III	1000	7.50	266	5	233
8	NTPC-Kawas	656	3.00	187	5	172
9	NTPC-Jhanor	657	3.00	237	5	218
10	NTPC-Kahelgaon	1000	7.50	141	5	119
11	Sipat-II	1000	7.50	273	5	239
12	SSNNL-Hydro	1450	0.50	232	-	231
	Total Central Sector Share			2724		2412
	Total			10611		9759
	CPP Wheeling					838
	Wind Farm Capacity					1891
	Mini Hydel Projects					3
	Total for FY 2010-11 (April 10 to Sept. 10 (MW))			10611		12491



Table 4.11: Additional Loading of transmission system (October 2010 to March 2011)

Sr. No.	Station	Rated capacity	Auxiliary Consumption (%)	Gujarat Share	Trans. Losses (%)	Total MW on
A	GSECL Plants					
	Total GSECL Plants					
B	IPPs					
1	GSPC Pipavav	350	3.5	350	0	338
2	GSEG Hazira Extension	350	3.5	350	0	338
3	Adani Power	660	0	500	0	500
	Total IPPs plant			1200		1176
C	Share from Central Sector					
1	Sipat-I (Unit-1)	66	6.5	180	5	159
2	North Karanpura (Unit1&2)	1320	6.5	154	5	136
	Total Central sector			334		295
	Total			1534		1471
	CPP wheeling					-
	Wind farm capacity					200
	Solar Projects					46
	Mini Hydel Projects					3
	Total for FY 2010-11 (October 2010 to March 2011)			1534		1720

Commission's Analysis

The Commission has noted the actual transmission system additions and loading on the transmission system during April - September 2010 and anticipated transmission system additions and loading during October 2010 to March 2011.

4.4.3 Transmission Availability

GETCO has projected the transmission availability for the FY 2010-11 at 99.62%. Transmission availability approved by the Commission in the MYT order dated 17th January 2009, Tariff order for FY 2010-11 dated 31st March 2010 and projected by GETCO are given in Table 4.12 below:

Table 4.12 : Transmission Availability for FY 2010-11

Sr. No.	Voltage class	MYT Order 17/01/2009	T.O. for 2010-11 31/03/2010	Projected for approval in the current petition (%)
1	400kV	99.40	99.55	99.55
2	220kV	99.00	99.20	99.20
3	132kV	98.98	99.47	99.47
4	66kV	99.70	99.71	99.71



Gujarat Energy Transmission Corporation Limited
Truing Up for 2009-10, APR for 2010-11, ARR for 2011-16, Determination of
Tariff for 2011-12

Sr. No.	Voltage class	MYT Order 17/01/2009	T.O. for 2010-11 31/03/2010	Projected for approval in the current petition
5	Substations	99.94	99.83	99.83
6	GETCO system availability	99.40	99.62	99.62

Commission's Analysis

The Commission has noted the submission of GETCO regarding the availability of the transmission system for FY 2010-11. It is observed that GETCO is required to support the availability data with detailed calculations as per GERC Regulations, 2005 at the time of 'Truing up'.

4.4.4 Transmission Loss

GETCO has projected the transmission loss at 4.20% for the year 2010-11 (RE). The transmission loss as approved in the MYT Order dated 17th January, 2009, Tariff Order dated 31st March 2010 and projected in the current petition are given in Table 4.13 below:

Table 4.13 : Transmission Loss – FY 2010-11

Sr.No.	Particulars	Loss (%)
1.	MYT order dated 17 th January 2009	3.99
2.	Tariff Order dated 31/03/2010	4.2
3.	Current petition	4.2

Commission's Analysis

It is observed that, though, GETCO had earlier projected the loss level at 4.95% in its Tariff Petition for FY 2010-11, it is reduced to 4.2% in the current petition. This has become possible due to additional generation coming up in Kutch area, which is meeting the demand of PGVCL instead of power flowing from south and central Gujarat to meet PGVCL demand. As per the latest information submitted by GETCO on 18th March 2011, the actual loss upto Feb 2011 is 3.85%

4.5 Transmission System During Control Period FY 2011-12 to FY 2015- 16



**4.5.1 Additions to transmission system for the control period
FY 2011-12 to FY 2015-16.**

GETCO has furnished the details of additions to transmission system planned for the FY 2011-12 to FY 2015-16 as given in Tables 4.14 and 4.15 below:

Table 4.14 : Transmission Lines Planned for FY 2011-12 to FY 2015-16

Voltage class	2011-12	2012-13	2013-14	2014-15	2015-16	Total
765kV	-	-	20	20	25	65
400kV	913	1998	1177	1098	210	5396
220kV	2000	783	496	181	-	3460
132kV	129	134	-	-	-	263
66kV	1780	1487	1260	1092	1260	6879
Total	4822	4402	2953	2391	1495	16063

(km)

Table 4.15 : Substations Planned for FY 2011-12 to FY 2015-16

Voltage class	2011-12	2012-13	2013-14	2014-15	2015-16	Total
765kV	-	-	-	-	1	1
400kV	1	-	-	7	-	8
220kV	13	-	-	-	-	13
132kV	2	-	-	-	-	2
66kV	121	60	60	53	60	354
Total	137	60	60	60	61	378

It is seen from the tables above that the GETCO proposes to add 16063 ckt. km of transmission lines and 378 substations at voltages 66kV to 765kV. This is against the existing network size of about 39519 ckt. km. of transmission lines and 1050 substations in service as on 31st March 2010, and likely additions of 4659 ckt. km of transmission lines and 140 substations during FY 2010-11.

It is stated that the network expansion is mainly:

- for evacuation of power from new generating stations
- for transmission of power to various load centres
- for augmentation of transmission system (lines & substations) and
- additional substations to meet the demand growth

GETCO has given a detailed note in its petition explaining the need for the proposed additions to the transmission system.



4.5.2 Additional loading of transmission system during the control period for FY 2011-12 to 2015-16

GETCO has submitted that it is expecting additional loading 19788 MW from Central, State and Private Generating Stations during the control period (FY 2011-12 to FY 2015-16) which will take the total loading on GETCO system to 18258 MW during FY 2011-12, 21062 MW during 2012-13, 22829 MW during FY 2013-14, 27891 MW during FY 2014-15 and 34001 MW during FY 2015-16.

The expected additional loading on the GETCO system during the control period from 2011-12 to 2015-16 is given in Tables 4.16 to 4.20 below:

Table 4.16 : Additional Loading of GETCO System during 2011-12

Sr. No.	Station	Rated Capacity	Auxiliary Consumption (%)	Gujarat Share	Trans. Losses (%)	Total MW on GETCO System
A	GSECL Plants					
1	Ukai TPS	500	8.5	500		458
	Total GSECL Plants			500		458
B	IPPs					
1	GPPC, Pipavav 2 nd Unit	350	3.5	350	0	338
2	Adani, Mundra-V&VI	1320	0	1000	0	1000
3	Essar, Vadinar	1200	0	1000	0	1000
	Total IPPs plant			2350		2338
C	Share from Central Sector					
1	SIPAT-I (Unit-2&3)	1320	6.5	360	5	319
2	North Karanpura (Unit No.3)	660	6.5	77	5	68
3	UMPP, Mundra (Unit No.1&2)	1600	0	760	0	760
4	Vindhyachal-IV (Unit-1)	500	6.5	133	5	118
	Total			1330		1265
	Total			4180	0	4061
	CPP Wheeling*					-755
	Wind Farm Capacity					300
	Solar project					381
	Mini Hydel Project					0
	Bagasse project					60
	Total for FY 2011-12 (MW)			4180		4046

* The power which was being wheeled by Essar steel limited to its sister concern through the integrated system of GETCO is now being fed directly, thus reducing the loading of GETCO system.



Gujarat Energy Transmission Corporation Limited
Truing Up for 2009-10, APR for 2010-11, ARR for 2011-16, Determination of
Tariff for 2011-12

Table 4.17 : Additional Loading of GETCO System during FY 2012-13

Sr. No.	Station	Rated Capacity	Auxiliary Consumption (%)	Gujarat Share	Trans. Losses (%)	Total MW on GETCO System
	GSECL Plants					
1	Sikka Unit Nol.3	250	8.50	250	0	229
	Total GSECL Plants			250		229
	B IPPs					
1	BECL, Padav-Unit 1&2	600	11.00	600	0	534
2	Tilaiya UMPP (Reliance)			60	8	55
3	Akaltara UMPP			55	5	52
	Total IPPs plant			715		641
	C Share from Central Sector					
1	Barh-ER (Unit-1)	600	6.50	87	5	77
2	UMPP, Mundra (Unit 3,4&5)	2400	0.00	1140	0	1140
3	Vindhyachal-IV (Unit-2)	500	6.50	133	5	118
	Total			1360		1335
	Total			2325	0	2205
	CPP Wheeling					0
	Wind Farm Capacity					300
	Solar Project					300
	Mini Hydel Project					0
	Bagasse project					0
	Total for FY 2012-13 (MW)			2325		2805

Table 4.18 : Additional Loading of GETCO System during FY 2013-14

Sr. No.	Station	Rated Capacity	Auxiliary Consumption (%)	Gujarat Share	Trans. Losses (%)	Total MW on GETCO System
	A GSECL Plants					
1	Sikka Unit Nol.4	250	8.50	250	0	229
2	Dhuvaran CCPP-3	360	3.00	360	0	349
	Total GSECL Plants			610		578
	B IPPs					
1	Tilaiya UMPP (Reliance)			120	8	110
2	Akaltara UMPP			110	5	105
	Total IPPs plant			230		215
	C Share from Central Sector					
1	Barh-ER (Unit-2&3)	1320	6.50	173	5	153
2	Dhuvaran (NTPC Limited)	660	3.00	330	0	320
	Total			503		473
	Total			1343	0	1266
	CPP Wheeling					0
	Wind Farm Capacity					300
	Solar Project					200
	Mini Hydel Project					0
	Bagasse project					0
	Total for FY 2013-14 (MW)			1343		1766



Gujarat Energy Transmission Corporation Limited
Truing Up for 2009-10, APR for 2010-11, ARR for 2011-16, Determination of
Tariff for 2011-12

Table 4.19 : Additional Loading of GETCO System during FY 2014-15

Sr. No.	Station	Rated Capacity	Auxiliary Consumption (%)	Gujarat Share	Trans. Losses (%)	Total MW on GETCO System
A	GSECL Plants					
1	Wanakbori TPS (Unit 8)	800	9.00	800		728
2	Maniyari, Patan	1200		1200		1200
3	Bhadodara, Banaskantha	1200		1200		1200
	Total GSECL Plants			3200		3128
B	IPPs					
1	NTPL	270		270		270
2	OPG Power Gujarat Pvt. Ltd	300		300		300
3	Tilaiya UMPP (Reliance)			120	8	110
4	Akaltara UMPP			110	5	105
	Total IPPs plant			800		785
C	Share from Central Sector					
1	Dhuvaran (NTPC Limited)	1320	3.00	670		650
2	NPCIL Kakrapara Extension			*240	5	*228
	Total			670		650
	Total			4670		4563
	CPP Wheeling					0
	Wind Farm Capacity					300
	Solar Project					200
	Mini Hydel Project					0
	Bagasse project					0
	Total for FY 2014-15 (MW)			4670		5063

* These figures are not considered while totaling.

Table 4.20 : Additional Loading of GETCO System during FY 2015-16

Sr. No.	Station	Rated Capacity	Auxiliary Consumption (%)	Gujarat Share	Trans. Losses (%)	Total MW on GETCO System
A	GSECL Plants					
	Total GSECL Plants			-		-
B	IPPS					
1	Gandhinagar TPS (GPPC Conversion Project)	1372	3.00	1372		1330
2	Sikka TPS (GPPC Conversion Project)	457	3.00	457		443
3	Dhuvaran TPS (GPP Conversion Project)	457	3.00	457		443
4	Essar Salaya Phase II	1320		800		800
5	Shapoorji Pallonji, Kondinar	1320		800		800
6	KSK Mahanandi, Chhatisgarh	3600		1010		1010
	Total IPPs plant			4896		4826
C	Share from Central Sector					
1	NPCIL Kakrapar Extension			480	5	456
2	NTPC Kawas Expansion			238	5	226
	Total			718		682
	Total			5614		5508



Gujarat Energy Transmission Corporation Limited
Truing Up for 2009-10, APR for 2010-11, ARR for 2011-16, Determination of
Tariff for 2011-12

	CPP Wheeling					0
	Wind Farm Capacity					300
	Solar Project					300
	Mini Hydel Project					0
	Bagasse project					0
	Total for FY 2015-16 (MW)			5614		6108

Loading of GETCO System during the control period

The following table summarizes the total loading of the GETCO transmission system during the control period FY 2011-12 to 2015-16.

Table 4.21 : Total Loading of the GETCO System during FY 2011-12 to FY 2015-16 (Projected)

Sr. No	Particulars	2011-12	2012-13	2013-14	2014-15	2015-16
1	GSECL Plants	5249	5478	6056	9184	9184
2	IPPs	6070	6711	6926	7711	12538
3	Share from Central Sector	3972	5306	5780	6430	7112
4	CPP Wheeling	84	84	84	84	84
5	Wind Farm Capacity	2391	2691	2991	3291	3591
6	Solar Project	427	727	927	1127	1427
7	Mini Hydel Project	6	6	6	6	6
8	Bagasse Project	60	60	60	60	60
	Total Loading in MW	18258	21062	22829	27891	34001

The expected loading of the system mainly depends on the commissioning of various generating units / stations planned under state and central sectors, IPPs, CPP, wind, solar etc.

The transmission system planned during the control period is noted.

4.5.3 Availability of the Transmission System for the control period

GETCO has projected the availability of its transmission system during the control period (2011-12 to 2015-16). It has stated that the availability is better than the benchmark set by the Commission in the Regulation for recovery of full fixed cost/transmission charges (i.e. 98%)

The projected availability of the GETCO system for the control period FY 2011-12 to FY 2015-16 is given in Table 4.22.

Table 4.22 : Availability of GETCO Transmission System (%) (Projected)



Gujarat Energy Transmission Corporation Limited
Truing Up for 2009-10, APR for 2010-11, ARR for 2011-16, Determination of
Tariff for 2011-12

Sr. No.	Description	2011-12	2012-13	2013-14	2014-15	2015-16
1	400 kV	99.56	99.56	99.57	99.58	99.58
2	220 kV	99.21	99.22	99.22	99.24	99.25
3	132 kV	99.48	99.48	99.49	99.49	99.50
4	66 kV	99.72	99.72	99.73	99.74	99.74
5	Substations	99.83	99.83	99.83	99.83	99.83
6	GETCO System Availability	99.64	99.64	99.65	99.65	99.66

Commission's Analysis

GETCO has been maintaining a high level of availability of its transmission system. The Commission has noted the availability projected by GETCO for the control period. The actual availability shall be supported by detailed calculations as per GERC (Multi-Year Tariff) Regulations, 2011 for verification. Based on the calculations furnished, the availability will be reviewed during the 'Truing up' exercise.

4.5.4 Transmission Loss for the Control Period FY 2011-12 to FY 2015-16

GETCO has projected the Transmission loss for the control period of FY 2011-12 to FY 2015-16 as under:

Table 4.23: Transmission loss of GETCO system for FY 2011-12 to FY 2015-16

Sr. No.	Description	2011-12	2012-13	2013-14	2014-15	2015-16
1	Transmission loss (%)	4.18	4.15	4.10	4.10	4.10

It is stated that the transmission loss is reduced due to gradual increase in efficiency.

Commission's Analysis

The projected loss level for FY 2010-11 of GETCO is 4.2%. With the substantial additional generation coming up in Kutch area and Western Gujarat, the entire western Gujarat, which was earlier being fed from the generating stations in South and Central Gujarat, will be fed from the generating stations in Kutch and Western Gujarat area, and would result in reduction of transmission loss. In fact according to the latest data provided by GETCO on 18th March, 2011, the transmission loss upto February, 2011 works out to 3.85%. The Commission will take a view on the future projections, when data for the entire year is made available.



Chapter 5

Truing up for FY 2009-10

5.1 Introduction

This chapter deals with the 'Truing up' of FY 2009-10 of GETCO.

The Commission while considering the Annual Performance Review for the FY 2008-09 in the tariff order dated 14th December, 2009 had observed that though the Regulation 9.6.2 (e) of MYT Regulation 2007 considers depreciation as a controllable item, it was of the view that the amount of depreciation is dependent on the amount of capitalization and that any variance in the amount of capitalization would have an impact on depreciation. As such the parameters which impact depreciation should be treated as uncontrollable and dealt with accordingly. Similarly the interest and finance charges and return on equity which are also dependent on the amount of capitalization are treated as uncontrollable and accordingly dealt with.

The change in capitalization during FY 2008-09 which had changed the value of gross fixed assets at the end of FY 2008-09 resulted in change in gross fixed assets, depreciation, interest and finance charges, return on equity etc. in the FY 2009-10.

While doing 'Truing up' of the various components of ARR for FY 2009-10, the actuals for FY 2009-10 are compared with the approval as per tariff order for FY 2009-10 issued on 14th December, 2009 and not with the MYT order.

The Commission has analyzed each of the components of the ARR for the FY 2009-10 in the following sections.

5.2 Operation and Maintenance (O&M) Expenses for FY 2009-10

GETCO has claimed Rs.601.00 crore towards actual O&M expenses in the Truing up for FY 2009-10 against Rs. 432.28 crore approved in the Tariff Order dated 14th December, 2009. The O&M expenses approved for FY 2009-10 by the Commission in the MYT Order FY 2008-11, in the Tariff Order for FY 2009-10 and considered in APR for FY 2009-10 and claimed by GETCO as actuals are as tabulated below:



Table 5.1: O&M Expenses claimed by GETCO

(Rs. crores)

Particulars	MYT Order	T.O FY 2009-10	APR FY 2009-10	Claimed for FY 2009-10 (Truing up)
Employee cost	290.92	290.92	411.23	423.00
Repairs & Maintenance	97.36	97.25	97.36	128.00
Administration & General charges	47.57	44.11	47.57	50.00
O&M expenses	435.85	432.28	556.16	601.00

Petitioners Submission

GETCO has compared the O&M charges actually incurred during FY 2009-10 with the value approved by the Commission in the Annual Performance Review for FY 2009-10 and arrived at a loss of Rs.45 crore as detailed in the Table 5.2 below:

Table 5.2: Deviation in O&M Expenses claimed for FY 2009-10

(Rs. crores)

Particulars	FY 2009-10 (APR)	FY 2009-10 (Actual)	Deviation
Employee cost	411	423	(12)
Repairs & Maintenance	97	128	(31)
Administration & General charges	48	50	(3)
O&M expenses	556	601	(45)

The O&M expenses are discussed component wise in the following paras.

5.2.1 Employee Cost

GETCO has claimed Rs. 423 crore towards actual employee cost in the 'Truing up' for FY 2009-10. The employee cost approved for FY 2009-10 in the MYT Order, in Tariff Order for FY 2009-10, considered in APR for FY 2009-10 and claimed by GETCO are as tabulated below:

Table 5.3: Employee Cost claimed by GETCO

(Rs. crores)

Particulars	MYT Order FY 2008-11	T.O FY 2009-10	APR FY 2009-10	Claimed for FY 2009-10 (Truing up)
Employee cost	290.92	290.92	411.23	423.00



Petitioner's submission

GETCO has submitted that the increase in employee cost is mainly on account of the impact of the Sixth Pay Commission recommendations and due to increase in dearness allowance in FY 2009-10 which is a statutory requirement. GETCO has mentioned that it has resulted in an uncontrollable loss of Rs. 12 crore in FY 2009-10 as detailed in the Table below:

Table 5.4: Gain / Loss in Employee cost claimed for FY 2009-10

(Rs. crores)				
Particulars	FY 2009-10 (APR)	FY 2009-10 (Actual)	Gain / (loss) due to controllable factor	Gain / (loss) due to uncontrollable factor
Employee cost	411	423	-	(12)

Commission's analysis

GETCO has compared the actual employee cost of Rs.423 crore incurred during FY 2009-10 with Rs.411 crore considered by the Commission in the Annual Performance Review for FY 2009-10. The GETCO has arrived at the loss of Rs.12 crore for FY 2009-10 in Truing up. The Commission has approved the employee cost at Rs.290.92 crore in the Tariff Order for FY 2009-10. The employee cost as per audited annual accounts for FY 2009-10 is Rs.423 crore. The increase is mainly on account of the impact of the Sixth Pay Commission recommendations and due to increase in dearness allowance.

The Commission considers the employee cost as a controllable expense, which is in line with the MYT Regulations. However, in view of additional expenses on account of implementation of Sixth Pay Commission recommendations, the Commission allows it to be treated as an uncontrollable expense.

The Commission approves the employee cost at Rs.423 crore in Truing up for FY 2009-10.

5.2.2 Repair and Maintenance (R&M) Expenses

GETCO has claimed Rs.128.00 crore towards R&M expenses in the Truing up for FY 2009-10. The R&M expenses approved for FY 2009-10 in the MYT Order, in Tariff Order for FY 2009-10, considered in APR for FY 2009-10 and claimed by GETCO are as tabulated below:



Table 5.5: R&M expenses claimed by GETCO

Particulars	T.O FY 2009-10	APR FY 2009-10	(Rs. crores)
			Claimed for FY 2009-10 (Truing up)
R&M expenses	97.25	97.36	128.00

Petitioner's submission

GETCO has claimed Rs. 31 crore towards loss in R&M expenses as detailed in the Table below:

Table 5.6: Gain / Loss in R&M expenses claimed for FY 2009-10

Particulars	FY 2009-10 (APR)	FY 2009-10 (Actual)	(Rs. crores)	
			Gain / (loss) due to controllable factor	Gain / (loss) due to uncontrollable factor
R&M expenses	97	128	(31)	-

GETCO has submitted that during the last three years R&M expenses have increased due to:

- (1) Increase in auxiliary consumption costs on account of increase in substations and increase in cost of power.
- (2) Increase in maintenance cost of transformers and its auxiliaries, overhauling of old transformers, repairing of OLTC etc.
- (3) Increased maintenance requirement of aged transmission lines and equipments.
- (4) Outsourcing of substation O&M.

Commission's Analysis

The actual R&M expenses incurred during FY 2009-10 is Rs.128 crore as per the audited annual accounts. In view of the circumstances explained by the petitioner the Commission, takes into consideration the amount of Rs.128 crore in the Truing up for FY 2009-10.

The R&M expense is controllable item of expenditure under the MYT Regulations, 2007. There is an increase in R&M expenses of Rs.30.75 crore over Rs.97.25 crore approved in the Tariff Order dated 14th December, 2009 for FY 2009-10.

The Commission accordingly approves the R&M expenses at Rs. 128 crore for Truing up for FY 2009-10.

5.2.3 Administration and General (A&G) Expenses

GETCO has claimed Rs.50 crore towards A&G expenses in the Truing up for FY 2009-10. The A&G expenses approved for FY 2009-10 in the MYT Order, in the Tariff Order for FY 2009-10, considered in APR for FY 2009-10 and claimed by GETCO are as tabulated below:

Table 5.7: Administration and General Expenses claimed by GETCO

(Rs. crores)			
Particulars	T.O FY 2009-10	APR FY 2009-10	Claimed for FY 2009-10 (Truing up)
A&G expenses	44.11	47.57	50.00

Petitioner's submission

GETCO has claimed that it has incurred a loss of Rs. 3 crore due to controllable factor towards A&G expenses during FY 2009-10 as detailed in the Table below:

Table 5.8: Gain / Loss Administration and General expenses claimed for FY 2009-10

(Rs. crores)				
Particulars	FY 2009-10 (APR)	FY 2009-10 (Actual)	Gain / (loss) due to controllable factor	Gain / (loss) due to uncontrollable factor
A&G expenses	48	50	(3)	-

Commission's Analysis

The Commission thus approves that the actual A&G expenses are Rs. 50 crore as per the audited annual accounts.

The Commission approves the A&G expenses at Rs.50 crore in the Truing up for FY 2009-10.

The Commission is of the view that parameters impacting A&G expenses are controllable in nature and hence considered as controllable expenses as specified in MYT Regulations, 2007.

The total O&M expenses and gain / loss considered in the Truing up for FY 2009-10 are summarized in Table 5.9 below:



Table 5.9: O&M expenses and gain / loss approved in Truing up for FY 2009-10

(Rs. crores)

Particulars	As per T.O. FY 2009-10	Approved in Truing up for FY 2009-10	Deviation	Gain / (loss) due to controllable factor	Gain / (loss) due to uncontrollable factor
Employee cost	290.92	423	(132.08)	-	(132.08)
R&M	97.25	128	(30.75)	(30.75)	-
A&G expenses	44.11	50	(5.89)	(5.89)	-
Total O&M expenses	432.28	601	(168.72)	(36.64)	(132.08)

5.3 Depreciation for FY 2009-10

GETCO has claimed Rs.322.00 crore towards depreciation in the Truing up for FY 2009-10. The depreciation charges approved for FY 2009-10 in the MYT Order, in the Tariff Order for FY 2009-10, considered in APR for FY 2009-10 and claimed by GETCO are as tabulated below:

Table 5.10: Depreciation claimed by GETCO

(Rs. crores)

Particulars	T.O FY 2009-10	APR FY 2009-10	Claimed for FY 2009-10 (Truing up)
Depreciation	340.08	337.10	322.00

Petitioner's submission

GETCO has submitted that actual depreciation charges for FY 2009-10 are Rs.322 crore as against Rs.337 crore approved by the Commission in APR and the weighted average rate of depreciation based on rates approved by CERC works out to 5.01% as detailed in the Table below:

Table 5.11 : Computation of Depreciation of FY 2009-10

(Rs. crores)

Particulars	FY 2009-10 (APR)	FY 2009-10 (Actual)	Deviation
Gross block in beginning of the year	6071	6066	
Additions during the year	1156	696	
Depreciation for the year	337	322	16
Average rate of depreciation	5.07%	5.01%	



GETCO has submitted that there is uncontrollable gain of Rs.16 crore in depreciation as detailed in the Table below:

Table 5.12: Gains / Losses from Depreciation claimed by GETCO

(Rs. crores)

Particulars	FY 2009-10 (Approved)	FY 2009-10 (Actual)	Gain / (loss) due to controllable factor	Gain / (loss) due to uncontrollable factor
Depreciation	337	322	-	16

Commission's Analysis

The Commission has noted that the actual depreciation as per the audited annual accounts for FY 2009-10 is Rs. 321.54 crore after segregating the depreciation of SLDC. The weighted average rate of depreciation works out to be 5.01% as detailed in the table below:

Table 5.13 : Depreciation approved in the Truing up for FY 2009-10

(Rs. crores)

GFA at the beginning of the year	6064.19
Additions during the year	695.99
GFA at the end of the year	6760.18
Average assets	6412.19
Depreciation	321.54
Weighted average rate of depreciation	5.01%

The Commission approves the depreciation at Rs.321.54 crore in the Truing up for FY 2009-10.

In regard to the computation of gains / losses, Regulation 9.6.2 (e) considers depreciation as a controllable expense. However, the Commission is of the view that the amount of depreciation is dependent on the quantum of capitalization, rate of depreciation and disposal of existing assets. The Commission is, therefore, of the view that the parameters which impact depreciation should be treated as uncontrollable.

The Commission accordingly, approves the gains / losses on account of depreciation in the Truing up for FY 2009-10 as detailed below:



Table 5.14 : Gain / Loss due to Depreciation approved in the Truing up for FY 2009-10

(Rs. crores)

Particulars	As per T.O. FY 2009-10	Approved in Truing up for FY 2009-10	Deviation	Uncontrollable gain / (Loss)
Depreciation	340.08	321.54	18.54	18.54

5.4 Interest and Finance Charges for FY 2009-10

GETCO has claimed Rs.223 crore towards interest and finance charges in the Truing up for FY 2009-10. The interest and finance charges approved for FY 2009-10 in the MYT Order, in the Tariff Order for FY 2009-10, considered in APR for FY 2009-10 and claimed by GETCO are as tabulated below:

Table 5.15: Interest and Finance Charges claimed by GETCO

(Rs. crores)

Particulars	T.O FY 2009-10	APR FY 2009-10	Claimed for FY 2009-10 (Truing up)
Interest and Finance charges	206.73	201.25	223.00

Petitioner's submission

GETCO has submitted that interest and finance charges approved by the Commission and those actually incurred resulted in a loss of Rs.22 crore and this can be considered as a loss on account of uncontrollable factor. The detailed computation of interest and finance charges submitted by GETCO is given in the Table below:

Table 5.16 : Gain / Loss from Interest and Finance Charges claimed for FY 2009-10

(Rs. crores)

Particulars	APR FY 2009-10 (Approved)	FY 2009-10 (Actual)	Deviation	Gain / (Loss) due to uncontrollable factor
Opening loans	1643	2271		
Loan additions during the year	809	1398		
Repayment during the year	164	739		
Closing loan	2288	2930		
Average loan	1965	2600		
Interest on loan	197	219		
Guarantee charges	4	3		
Total Interest and Finance charges	201	223	22	(22)
Weighted average rate of interest on loan	10.02%	8.44%		



Commission's Analysis

The Commission has observed that the loan additions are taken as Rs. 1398 crore in the actuals, whereas, the loan additions should be taken as per the capitalization of capital expenditure.

The actual capital expenditure and capitalization and funding as filed in the petition of GETCO are given in the Table 5.17 below:

Table 5.17: Funding of CAPEX as per GETCO

Particulars	(Rs. crores)	
	FY 2009-10(Actual)	
Capex for the year	1205	
Capitalization	696	
Debt	306	
Equity	131	
Grants	259	

The Commission has recalculated the opening balance of loan as on 1st April, 2009 with reference to the audited annual accounts for the FY 2008-09 and FY 2009-10 and actual capitalization achieved during these years as detailed in the Table 5.18 below:

Table 5.18: Opening and Closing Balance of Loans

(Rs. crores)		
Opening balance as on 01/04/2009 (excluding working capital and CWIP loans)		1800.82
Capex during 2009-10	1204.90	
Capitalized in 2009-10	695.99	
Less: Grants	259.00	
Balance Capex	436.99	
Debt (70%)	305.89	305.89
Equity (30%)	131.10	
Repayment during 2009-10		180.08
Closing balance of loan as on 31/03/2010		1926.63

Based on the actual capitalization achieved during FY 2009-10 and normative borrowing the Commission has computed the interest and finance charges as detailed in the Table 5.19 below:



Table 5.19: Interest and Finance charges approved in Truing up for FY 2009-10
(Rs. crores)

Sr. No.	Particulars	Actual claimed for FY 2009-10	Approved in Truing up FY 2009-10
1.	Opening loan	2271.00	1800.82
2.	Loan additions during the year	1398.00	305.89
3.	Repayment during the year	739.00	180.08
4.	Closing loan	2930.00	1926.63
5.	Average loan	2600.00	1863.73
6.	Interest on loan	219.00	157.30
7.	Guarantee charges	3.00	3.00
8.	Total interest and finance charges (6+7)	223.00	160.30
9.	Weighted average rate of interest on loan	8.44%	8.44%

The Commission accordingly approves the interest and finance charges at Rs.160.30 crore in the Truing up for FY 2009-10.

In regard to the computation of gains / losses, Regulation 9.6.2 (e) considers interest and finance charges as a controllable expense. The Commission has observed that the amount of interest and finance charges is dependent on the amount of capital expenditure, capitalization and the extent of borrowing considered during the financial year. The Commission therefore is of the view that the parameters which impact interest and finance charges should be treated as uncontrollable.

The Commission, accordingly approves the gains / losses on account of interest and finance charges in the Truing up for FY 2009-10 as detailed in the Table below:

Table 5.20 : Gains/Losses approved in the Truing up for FY 2009-10
(Rs. crores)

Particulars	As per T.O. FY 2009-10	Approved in Truing up for FY 2009-10	Deviation	Uncontrollable gain / (Loss)
Interest and Finance charges	206.73	160.30	46.43	46.43

5.5 Return on Equity (ROE) for FY 2009-10

GETCO has claimed Rs.261 crore towards return on equity in the Truing up for FY 2009-10. The ROE approved for FY 2009-10, in the MYT Order, in the Tariff Order

for FY 2009-10, considered in APR for FY 2009-10 and claimed by GETCO are given in the Table 5.21 below:

Table 5.21: Return on Equity claimed by GETCO

(Rs. crores)

Particulars	T.O FY 2009-10	APR FY 2009-10	Claimed for FY 2009-10 (Truing up)
Return on equity	261.02	258.76	261.00

Petitioner's submission

GETCO has submitted that return on equity has been computed based on a rate of return of 14% as provided in the Tariff Regulations. It is further submitted that comparison between the actual value of return on equity for FY 2009-10 with the value approved in the Tariff Order dated 31st March, 2010 for APR for FY 2009-10 and actual indicates a loss of Rs.2 crore.

GETCO has claimed that it has incurred a loss of Rs.2 crore on account of Return on Equity for FY 2009-10 as detailed in the Table 5.22 below:

Table 5.22: Gain / Loss in Return on Equity for claimed for FY 2009-10

(Rs. crores)

Particulars	FY 2009-10 (APR)	FY 2009-10 (Actual)	Deviation	Gain/(Loss) due to controllable factor	Gain / (Loss) due to uncontrollable factor
Opening equity capital	1675	1800	-	-	-
Equity additions during the year	347	131	-	-	-
Closing equity	2022	1931	-	-	-
Average equity	1848	1865	-	-	-
Rate of Return on equity	14%	14%	-	-	-
Return on equity	259	261	2	(2)	-

Commission's Analysis

The Commission has examined the submission of GETCO. The return on equity is being allowed on a normative basis and the quantum of equity addition in the year depends upon the capital expenditure and capitalization achieved during the year. The closing equity of the previous year is considered as opening equity of the year concerned and the closing equity of previous year is on estimated basis. Thus there



will be a difference in the opening and closing equities as per the Audited Accounts. The Commission has approved the opening equity at Rs.1623 crore in the APR for FY 2008-09 in the Tariff Order dated 14th December, 2009. The opening balance and closing balance of equity for FY 2009-10 is arrived at as detailed below based on the actual capitalization and funding during FY 2008-09 and FY 2009-10 as per audited annual accounts.

Table 5.23: Approved Return on Equity

(Rs. crores)	
Closing equity for FY 2008-09	1705.00
Less: Segregated opening equity of SLDC for FY 2009-10	1.61
Opening equity of GETCO for FY 2009-10	1703.39
Equity additions during 2009-10 based on capitalization	131.10
Closing equity for FY 2009-10	1834.49
Average equity	1,768.94
Return on equity @ 14%	247.65

The Commission accordingly approves the return on equity at Rs.247.65 crore in the Truing up for FY 2009-10.

The Regulation 9.6.2 (e) of the MYT Regulations 2007 considers the parameters impacting the variance in the return on equity as controllable. However, the Commission is of the view that the return on equity depends on the amount of capitalization and the debt equity ratio considered during the financial year and these parameters are uncontrollable in nature. The variance in the amount of return on equity is therefore treated as uncontrollable.

The Commission, accordingly approves the gains / losses on account of return on equity in the Truing up for FY 2009-10 as detailed below:

Table 5.24 : Gains/Losses approved in the Truing up for FY 2009-10

(Rs. crores)				
Particulars	As per T.O. FY 2009-10	Approved in FY 2009-10 Truing up	Deviation	Uncontrollable gain / (Loss)
Return on equity	261.02	247.65	13.37	13.37

5.6 Expenses Capitalized for FY 2009-10

GETCO has furnished the expenses capitalized at Rs.132.00 crore in the Truing up for FY 2009-10. The capitalization of expenses approved for FY 2009-10 by the



Commission in the MYT Order, in the Tariff Order for FY 2009-10, considered in APR for FY 2009-10 and actuals furnished by GETCO are given in Table 5.25 below:

Table 5.25: Expenses Capitalized furnished by GETCO

(Rs. crores)

Particulars	T.O FY 2009-10	APR FY 2009-10	Claimed for FY 2009-10 (Truing up)
Expenses capitalized	119.67	194.54	132.00

Petitioner's submission

GETCO has submitted that the actual capitalization of expenses are Rs.132 crore against the approved capitalized expenses of Rs.195 crore resulting into uncontrollable gain of Rs.62 crore.

Commission's Analysis

The capitalization of other expenses relate to capitalization of Employee Cost, A&G expenses, R&M expenses, interest and related costs. The actual 'other expenses capitalized' are Rs.132.08 crore as per the audited annual accounts for FY 2009-10.

The Commission accordingly approves the capitalization of 'other expenses' at Rs.132.08 crore as per the audited annual accounts in the Truing up for FY 2009-10. The Commission considers the capitalization of 'other expenses' as uncontrollable.

5.7 Provision for Tax for FY 2009-10

GETCO has furnished the actual tax at Rs. 15.00 crore in the Truing up for FY 2009-10 against Rs. 31.87 crore approved in the Tariff Order dated 14th December, 2009 for FY 2009-10. The provision for tax approved in the Tariff Order for FY 2009-10, considered in APR for FY 2009-10, and actual claimed by GETCO are as tabulated below:

Table 5.26: Provision for Tax Claimed by GETCO

(Rs. crores)

Particulars	T.O FY 2009-10	APR FY 2009-10	Claimed for FY 2009-10 (Truing up)
Provision for tax	31.87	31.87	15.00



Petitioner’s submission

GETCO has submitted that actual tax worked out to Rs.15 crore as against approved tax of Rs.32 crore resulting in uncontrollable gain of Rs.16 crore.

Commission’s Analysis

The Commission has verified and found that the provision for tax is Rs.15.37 crore as per the audited annual accounts.

The Commission accordingly approves the provision for tax at Rs.15.37 crore in the Truing up for FY 2009-10.

In regard to the computation of gains / losses, Regulation 9.6.1 (d) considers variation in Taxes on income as uncontrollable.

The Commission accordingly approves the gains / losses on account of tax on income in the Truing up for FY 2009-10 as detailed in the Table 5.27 below:

Table 5.27: Gains/Losses approved in the Truing up for FY 2009-10

(Rs. crores)

Particulars	As per T.O. FY 2009-10	Approved in Truing up FY 2009-10	Deviation	Uncontrollable Gain / (Loss)
Tax on income	31.87	15.37	16.50	16.50

5.8 Revenue from Non Tariff Income for FY2009-10

GETCO has claimed the actual ‘other income’ at Rs.103.00 crore in the Truing up for FY 2009-10. The other income approved for FY 2009-10, in the MYT Order, in the Tariff Order for FY 2009-10, considered in APR for FY 2009-10 and furnished by GETCO are as tabulated below:

Table 5.28: Non Tariff income claimed by GETCO

(Rs. crores)

Particulars	MYT approved FY 2008-11	T.O FY 2009-10	APR FY 2009-10	Claimed for 2009-10 (Truing up)
Other income	45.14	64.60	78.06	103.00



Petitioner's submission

GETCO has submitted that the other income includes interest on staff loans, interest on investment, income from sale of stores and this is Rs.103 crore for FY 2009-10 against Rs.78.00 crore approved in APR for FY 2009-10 which resulted in controllable loss of Rs.25 crore.

Commission's Analysis

The Commission has verified and found that the actual 'other income' is Rs.103.92 crore as per the audited annual accounts.

The Commission accordingly approves the other income at Rs.103.92 crore as actual as per the audited annual accounts in the Truing up for FY 2009-10. The Commission considers the other income as uncontrollable.

5.9 Interest on Working Capital for FY 2009-10

GETCO has claimed Rs.35.00 crore towards interest on working capital in the Truing up for FY 2009-10 against Rs.33.00 crore approved in the APR for FY 2009-10. The interest on working capital approved for FY 2009-10 in the MYT Order, in the Tariff Order for FY 2009-10, considered in APR for FY 2009-10 and furnished by GETCO are given in the Table 5.29 below:

Table 5.29: Interest on Working Capital Claimed by GETCO

(Rs. crores)

Particulars	T.O FY 2009- 10	APR FY 2009- 10	Claimed for FY 2009-10 (Truing up)
Interest on working capital	35.86	32.84	35.00

Petitioner's submission

GETCO has submitted that it has considered the SBI PLR as on 1st April 2004 i.e 10.25% for the purpose of computation of interest on working capital. It is further submitted that comparison of actual value of interest on working capital based on the above methodology and the value approved by the Commission resulted in an uncontrollable loss of Rs.2 crore as detailed in the Table 5.30 below:

Table 5.30: Gain / Loss in Interest on Working Capital for FY 2009-10

					(Rs. crores)
Sr. No.	Particulars	FY 2009-10 (Approved)	FY 2009-10 (Actual)	Deviation	Uncontrollable gain / (loss)
1.	O&M expenses (1 month)	46	50		
2.	Maintenance spares (1% of cost @ 6% escalation)	82	78		
3.	Receivables (2 months)	192	209		
4.	Total Working capital	320	337		
5.	Rate of Interest on working capital	10.25%	10.25%		
6.	Interest on working capital	33	35	(2)	(2)

Commission's Analysis

The Commission has examined the computation of normative working capital and interest thereon under GERC (Terms and Conditions for Determination of Tariff) Regulations, 2005. Based on the O&M expenses approved in the Truing up and other components of ARR in the Truing up for 2009-10 the Commission has computed the working capital and interest thereon as detailed in the Table 5.31 below:

Table 5.31 : Interest on working capital approved by the Commission for FY 2009-10 (Truing up)

			(Rs. crores)
Sr. No.	Particulars	For FY 2009-10 (Truing up)	
1.	O&M expenses (1 month)	50.08	
2.	Maintenance spares (1% of GFA)	60.64	
3.	Receivables (2 months)	190.03	
4.	Working capital	300.75	
5.	Interest @ 10.25%	30.83	

The Commission accordingly approves the interest on working capital at Rs.30.83 crore in the Truing up for FY 2009-10.

GETCO has requested to consider the variation in interest on working capital as uncontrollable, the Commission considers the interest on working capital as uncontrollable as the components contributing for working capital are mostly uncontrollable.

The Commission accordingly approves the gains / losses on account of interest on working capital in the Truing up for FY 2009-10 as detailed in the Table 5.32 below:



Table 5.32: Gain / Loss in Interest on working capital approved in the Truing up for FY 2009-10

(Rs. crores)

Particulars	As per T.O. FY 2009-10	Approved in Truing up For FY 2009-10	Deviation	Uncontrollable gain / (Loss)
Interest on working capital	35.86	30.83	5.03	5.03

5.10 Incentive for Target availability for FY 2009-10

GETCO has claimed incentive for target availability at Rs. 30 crore in the Truing up for FY 2009-10. The incentive approved in the Tariff Order for FY 2009-10, APR for FY 2009-10 and claimed by GETCO in the Truing up are given in the Table 5.33 below:

Table 5.33: Incentive for Target Availability claimed by GETCO

(Rs. crores)

Particulars	T.O FY 2009-10	APR FY 2009-10	Claimed for FY 2009-10 (Truing up)
Incentive for target availability	-	4.62	30.00

Petitioner's submission

The petitioner has simply included the claim for Rs. 30 crore incentive in Table 26 of the petition without any explanation.

Commission's Analysis

The Commission has noted that the GETCO has estimated the incentive Rs.30 crore for FY2009-10 comparing with a base target availability of 98%.The Commission has observed that the target availability for FY 2009-10 approved under MYT order is 99.36%. The Commission has also noted that the in accordance to the Regulation 8.2 of MYT Regulations, the trajectory specified under MYT regulations shall replace the trajectories fixed under any other regulation. The availability during FY 2009-10 is 99.62%. The incentive amount, therefore, works out as under:



Gujarat Energy Transmission Corporation Limited
Truing Up for 2009-10, APR for 2010-11, ARR for 2011-16, Determination of
Tariff for 2011-12

Table 5.34: Incentive for Target Availability approved by the Commission for FY 2009-10

Sr.No.	Particulars	
1	Target Availability approved in T.O. for FY 2009-10	99.36%
2	Actual availability during FY 2009-10	99.62%
3	Average equity arrived for FY 2009-10	Rs. 1,768.94 crores
4	Incentive for target availability for FY 2009-10 (3*(2-1))/100	Rs. 4.60 crores

The Commission, therefore, approves the incentive at Rs 4.60 crore in Truing up for FY 2009-10.

5.11 Gains/Losses under 'Truing up'

The Commission has reviewed the performance of GETCO under Regulation 9.3 of MYT Regulations, 2007 with reference to audited annual accounts for FY 2009-10.

The Commission has computed the sharing of gains and losses for FY 2009-10 based on Truing up for each of the components discussed in the above paragraphs.

The fixed charges approved in the MYT Tariff Order, Tariff Order dated 14th December, 2009, APR for 2009-10, claimed by GETCO in Truing up, (losses/ gains) computed in accordance with the MYT Regulations are given in the Table 5.34 below:

Table 5.35 : Approved Fixed Charges in Truing up for FY 2009-10

(Rs. crore)							
Sr. No.	Fixed Charges	Tariff Order 2009-10 (14-12-2009)	Actual claimed in Truing up	Approval for Truing up	Deviation (5-3)	Controllable (Loss)/ Gain	Uncontrollable (Loss)/Gain
1	2	3	4	5	6	7	8
1	Operation & Maintenance Expenses	432.28	601.00	601.00	168.72		
1.1	Employee Cost	290.92	423.00	423.00	132.08		(132.08)
1.2	Repair & Maintenance	97.25	128.00	128.00	30.75	(30.75)	
1.3	Administration & General Charges	44.11	50.00	50.00	5.89	(5.89)	
2	ULDC Charges						
3	Depreciation	340.08	322.00	321.54	(18.54)		18.54
4	Advance Against Depreciation						
5	Interest & Finance Charges	206.73	223.00	160.30	(46.43)		46.43
6	Interest on Working Capital	35.86	35.00	30.83	(5.03)		5.03
7	Return on Equity	261.02	261.00	247.65	(13.37)		13.37
8	Total Fixed Costs	1275.97	1442.00	1361.32	85.35	(36.64)	(48.71)
9	Less: Expenses	119.67	132.00	132.08	12.41		(12.41)



Gujarat Energy Transmission Corporation Limited
Truing Up for 2009-10, APR for 2010-11, ARR for 2011-16, Determination of
Tariff for 2011-12

	Capitalized						
10	Add: Provision for Tax	31.87	15.00	15.37	(16.50)		16.50
11	Total Transmission Charges	1188.17	1325.00	1244.61	56.44	(36.64)	(19.80)
12	Less: Other Income	64.6	103.00	103.92	39.32		(39.32)
13	Aggregate Revenue Requirement	1123.57	1222.00	1140.69	17.12	(36.64)	19.52
14	Add: Incentive for target availability	0.042	30.00	4.6	4.56		(4.56)
15	Net Aggregate Revenue Requirement	1123.61	1252.00	1145.29	21.67	(36.64)	14.97

The Truing up exercise carried out indicates a revenue gap of Rs. 21.67 crore against ARR of Rs.1123.61 crore approved in the Tariff Order dated 14th December 2009. The loss / gain on account of controllable factors and uncontrollable factors is also indicated in the above Table 5.34.

The table indicates a controllable loss of Rs.36.64 crore and the uncontrollable gain of Rs. 14.97 crore.

5.12 Sharing of Gains or Losses for FY 2009-10

The Commission has analyzed the gains / losses on account of controllable and uncontrollable factors.

The relevant Regulations are extracted below:

Regulation 11.1 “ The approved aggregate gain to the Generating Company or Licensee on account of controllable factors shall be dealt with in the following manner:

- (a) One third of the amount of such gain shall be passed on as a rebate in tariffs over such period as may be specified in the Order of the Commission under Regulation 9.7;*
- (b) One third of the amount of such gain shall be retained in a special reserve by the Generating Company or Licensee for the purpose of absorbing the impact of any future losses on account of controllable factors under clause (b) of Regulation 11.2; and*
- (c) The balance amount of gain may be utilized, at the discretion of the Generating Company or Licensee”.*



Regulation 10.1 “ The approved aggregate gain or loss to the Generating Company or Licensee on account of uncontrollable factors shall be passed through as an adjustment in the tariff of the Generating Company or Licensee over such period as may be specified in the Order of the Commission passed under Regulation 9.7 (a)”.

Regulation 11.2 The approved aggregate loss to the Generating Company or Licensee on account of controllable factors shall be dealt in the following manner:

- (a) One-third of the amount of such loss may be passed on as an additional charge in tariffs over such period as may be specified in the order of the Commission under Regulation 9.7 ; and*
- (b) The balance amount of loss shall be absorbed by the Generating Company or licensee.*

The loss on account of controllable factors is arrived at Rs.36.64 crore for FY 2009-10. Out of this 1/3rd loss is to be passed on as an additional charge in tariffs, and balance amount of loss shall be absorbed by GETCO. The entire gain of Rs. 14.97 crore on account of uncontrollable factors shall be passed through as an adjustment in the Tariff. The revenue gap as compared to the ARR approved in the tariff order dated 14th December, 2009 is summarized in Table 5.35 below:

Table 5.36: Revenue Gap for FY 2009-10

		(Rs crores)
Sr. No.	Particulars	FY 2009-10
1	ARR approved in the Tariff order for FY 2009-10 (T.O. dated 14/12/2009)	1123.61
2	Add: Loss on account of controllable factor to be passed on to the consumers (1/3 rd)	12.21
3	Less: Gain on account of uncontrollable factor to be passed on to the consumers	14.97
4	Revised ARR for FY 2009-10	1120.85
5	Net (gap)/surplus (4-1)	2.76

It may be mentioned that the effect of surplus on account of truing up should be considered at the end of truing up of 2010-11.



CHAPTER 6

Annual Performance Review for FY 2010-11

6.1 Introduction

This chapter deals with the Annual Performance Review (APR) for FY 2010-11 for GETCO. The Commission has analyzed each of the components of the ARR for the FY 2010-11 in the following sections.

6.2 Operation and Maintenance (O&M) Expenses for FY 2010-11

GETCO has claimed Rs. 617.00 crore towards O&M expenses in the Review for FY 2010-11. The O&M expenses approved by the Commission in the MYT order for FY 2010-11, Tariff order for FY 2010-11 and claimed by GETCO in the RE are tabulated below:

Table 6.1 : O&M Expenses Claimed in the Review for FY 2010-11

(Rs. crores)

Particulars	MYT Order for FY 2010-11	T.O for FY 2010-11	H1 Actual for FY 201-11	Claimed by GETCO for FY 2010-11 (RE)
Employee cost	276.42	398.71	239.00	412.00
R&M Expenses	103.20	103.20	73.00	151.00
A&G Expenses	47.78	47.78	30.00	55.00
Total O&M Expenses	427.40	549.69	342.00	617.00

The O&M expenses comprise Employee cost, R&M expenses and A&G expenses. The O&M expenses are discussed component wise in the following paras.

6.2.1 Employee Cost

GETCO has claimed Rs. 412.00 crore in the RE for FY 2010-11. The employee cost approved for FY 2010-11 in the MYT order 2008-11 in the Tariff Order for FY 2010-11 and claimed by GETCO in the RE are given in the Table 6.2 below:

Table 6.2 : Employee cost claimed by GETCO in RE for FY 2010-11

(Rs. crores)

Particulars	MYT Order for FY 2010-11	T.O for FY 2010-11	H1 actual for FY 2010-11	Claimed by GETCO (RE)
Employee cost	276.42	398.71	239.00	412.00

Petitioner's submission

GETCO has submitted that it has taken a growth rate of 10% over the actual employee cost of Rs.423 crore during FY 2009-10 in projecting the employees cost in the RE for FY 2010-11. GETCO has also submitted that additional provision of gratuity of Rs. 51.17 crore is not considered while escalating employee cost of FY 2009-10. The revised employee cost is arrived at Rs.412 crore against 399 crore approved in the Tariff Order for FY 2010-11. GETCO further stated that it is adding new substations and lines thus increasing O&M cost over and above normal growth rate and quantified that there will be an additional cost to the extent of Rs.2 crore in employee cost on this account. GETCO further submitted that the remaining increase in employee cost is largely due to increase in DA in FY 2010-11, which is a statutory requirement and therefore treated it as uncontrollable factor and indicated a loss of Rs.13 crore.

Commission's Analysis

The Commission has noted the increase in the employee cost is due to increase in Dearness Allowance, Sixth pay Commission hike etc and permitted 6% escalation on FY 2009-10 employee cost of Rs.376.13 crore. Thus the employee cost of Rs.398.71 crore was approved in the Tariff Order for FY 2010-11. The employee cost for FY 2009-10 excluding the additional gratuity provision of Rs. 51.17 crore works out 371.83 crore (Rs.423-51.17 crore) and the approved employee cost in the Tariff Order dated 31.03.2010 of Rs. 398.71 works out 7% escalation over the actual employee cost incurred during 2009-10. The Commission is of the opinion that the employee cost of Rs. 398.71 crore approved in the Tariff order for FY 2010-11 requires no revision which is subject to Truing up when the audited annual accounts for FY 2010-11 are made available.

The Commission accordingly retains the employee cost at Rs. 398.71 crore in the Review for FY 2010-11 as given below:

Table 6.3 : Employee cost considered in APR FY 2010-11

(Rs. crores)

Particulars	MYT Order for FY 2010-11	Tariff order for FY 2010-11	Claimed in RE for FY 2010-11	Considered for APR FY 2010-11
Employee cost	276.42	398.71	412.00	398.71

6.2.2 Repair and Maintenance (R&M) Expenses

GETCO has claimed Rs. 151.00 crore towards R&M expenses in the review (RE) for FY 2010-11. The R&M expenses approved for 2010-11 by the Commission in the MYT Order 2008-11, in Tariff order for FY 2010-11 and claimed by GETCO in the RE given are in Table 6.4 below:

Table 6.4 : R&M Expenses claimed in the RE for FY 2010-11

(Rs. crores)

Particulars	MYT Order for FY 2010-11	T.O for FY 2010-11	H1 Actual for FY 2010-11	Claimed by GETCO (RE)
R&M Expenses	103.20	103.20	73.00	151.00

Petitioner's submission

GETCO has submitted that substantial assets are old and require regular maintenance to ensure uninterrupted operation and therefore projected Rs. 151 crore in the RE considering a growth rate of 10% over the actual R&M cost of Rs.128 crore for FY 2009-10. GETCO has further submitted that they are adding new substations and lines, which is increasing their R&M cost over and above normal growth and quantified the additional cost on this account to the extent of Rs. 10 crore. GETCO has claimed that it is required to undertake emergency / urgent repairs of equipments to ensure smooth operation and requested to consider the expenditure on R&M as uncontrollable in nature though it is a controllable expenditure as per MYT Regulations. GETCO has claimed that RE resulted in uncontrollable loss of Rs. 47 crore as indicated in the Table 6.5 below:

Table 6.5 : R&M Expenses for FY 2010-11

(Rs. crores)

Particulars	Tariff Order FY 2010-11	FY 2010-11 (RE)	Gain / (loss) due to controllable factor	Gain / (loss) due to uncontrollable factor
R&M	103	151	(47)	-



Commission's Analysis

The Commission has examined the submission made by GETCO. GETCO has claimed 47% extra over and above the R&M expenses approved in the Tariff Order for FY 2010-11. This is a controllable item of expenditure and the level of increase projected in the RE is not justified.

The Commission has approved Rs.128 crore in the Truing up for FY 2009-10. The Commission has considered 6% escalation in the Tariff Order dated 14th December 2009. The Commission is of the view that R&M expenses shall be considered with 6% escalation of the R&M expenses approved in the Truing up for FY 2009-10.

The Commission accordingly considers the R&M charges at Rs. 135.68 crore in the Review for FY 2010-11, which will be examined further at the time of Truing up based on the Audited Annual Accounts for FY 2010-11. The approved R&M expenses are given in the Table 6.6 below:

Table 6.6 : R&M expenses considered for FY 2010-11

(Rs. crores)

Particulars	MYT Order for FY 2010-11	Tariff order for FY 2010-11	Claimed in RE for FY 2010-11	Considered for APR FY 2010-11
R&M Expenses	103.20	103.20	151.00	135.68

6.2.3 Administration and General (A&G) Expenses

GETCO has claimed Rs. 55.00 crore towards A&G expenses in the review for FY 2010-11. The A&G expenses approved for FY 2010-11 by the Commission in the MYT order FY 2008-11, in Tariff order for FY 2010-11 and claimed by GETCO in the RE are given in Table 6.7 below:

Table 6.7 : A&G Expenses claimed by GETCO in RE

(Rs. crore)

Particulars	MYT Order for FY 2010-11	T.O for FY 2010-11	H1 Actual for FY 2010-11	Claimed by GETCO (RE)
A&G Expenses	47.78	47.78	30.00	55.00



Petitioner's submission

GETCO has submitted that comparison of revised estimate with that approved in Tariff Order for FY 2010-11 resulted in a loss of Rs. 7.00 crore on account of controllable factor.

Commission's Analysis

The A&G expenses are categorized as controllable expenses in the Regulations. The Commission took into consideration 6% escalation in the MYT order for FY 2008-11. The A&G expenses have been approved at Rs.50 crore in the Truing up for FY 2009-10. The Commission is of the view that A&G expenses shall be considered with 6% escalation over the expenses approved in the Truing up for FY 2009-10.

The Commission accordingly considers the A&G expenses at Rs. 53 crore in the review for FY 2010-11 against Rs. 55.00 crore claimed by GETCO in the RE. The A&G expenses considered are given in the Table 6.8 below:

Table 6.8 : A&G expenses considered for FY 2010-11

(Rs. crores)

Particulars	MYT Order for FY 2010-11	T.O for FY 2010-11	Claimed in RE for FY 2010-11	Considered for APR FY 2010-11
A&G expenses	47.78	47.78	55.00	53.00

The total O&M expenses considered in the APR for FY 2010-11 are summarized in the Table 6.9 below:

Table 6.9 : O&M expenses considered for FY 2010-11 in APR

(Rs. crores)

Particulars	MYT Order for FY 2010-11	T.O for FY 2010-11	Claimed in RE for FY 2010-11	Considered for APR FY 2010-11
Employee cost	276.42	398.71	412.00	398.71
R&M Expenses	103.20	103.20	151.00	135.68
A&G expenses	47.78	47.78	55.00	53.00
O&M expenses	427.40	549.69	618.00	587.39



6.3 Capital Expenditure, Capitalization and Funding for FY 2010-11

GETCO has estimated a capital expenditure of Rs. 2036.00 crore in the RE for FY 2010-11. The Capex, Capitalization and funding approved for FY 2010-11 in the MYT order FY 2008-11, in Tariff Order for FY 2010-11 and revised estimate by GETCO are given in the Table 6.10 below:

Table 6.10 : Capex, Capitalization and sources of funding estimated by GETCO
(Rs. crores)

Particulars	MYT Order for FY 2010-11	T.O for FY 2010-11	Claimed by GETCO (RE)
Capital expenditure	1435.34	1975.04	2036.00
Capitalization	-	1542.93	1995.00
Debt	1004.74	1080.05	1200.00
Equity	430.60	462.88	514.00
Grants	-	-	280.00

Petitioner's submission

GETCO has submitted that it has envisaged a total capital expenditure of Rs.2036 crore during FY 2010-11 to strengthen and improve availability of transmission network. The details of the capital expenditure planned to incur during FY 2010-11 as furnished by GETCO are given in the Table 6.11 below:

Table 6.11 : Capital expenditure during FY 2010-11
(Rs. crores)

Particulars	FY 2010-11 (Approved)	FY 2010-11 (H1)	FY 2010-11 (RE)
New projects			
765kV substations	-	-	-
765kV lines	-	-	-
400kV substations	129	54	150
400kV lines	704	90	265
220kV substations	207	31	247
220kV lines	300	72	227
132kV lines	6	1	10
132kV substations	11	-	0
66kV substations	236	106	377
66kV lines	179	22	343
Bus reactor	25	-	-
Transformer bay	-	-	-
Shunt capacitor	-	-	-
Augmentation of SS/lines	55	19	80
City / development plan	-	-	34
Total of new projects	1853	395	1733
R&M			



Gujarat Energy Transmission Corporation Limited
Truing Up for 2009-10, APR for 2010-11, ARR for 2011-16, Determination of
Tariff for 2011-12

Particulars	FY 2010-11 (Approved)	FY 2010-11 (H1)	FY 2010-11 (RE)
Renovation & Modernization	122	64	270
Vadodara city development plan	-	12	33
TOTAL R&M	122	76	303
Total	1975	471	2036

GETCO has submitted the funding of the projected Capex as detailed in the Table 6.12 below:

Table 6.12 : Funding of Capex

Particulars	(Rs. crores)
	FY 2010-11 (RE)
Capex for the year	2036
Capitalization	1995
Debt	1200
Equity	514
Grants	280

Commission's Analysis

The Commission has examined the revised estimates of Capex for FY 2010-11. The Capex projected in the RE for FY 2010-11 is 3% higher over the Capex considered in the Tariff Order FY 2010-11. The projected capitalization is Rs. 1995 crore in the RE against Rs. 1542.93 crore approved in the Tariff Order dated 31st March, 2010. This is about 29% higher involving higher debt servicing, higher equity and ROE as well as higher depreciation. The Capital expenditure incurred during the first half year of the current year as Rs. 471 crore which is about 23% of the proposed Capex. The actual Capital expenditure incurred during FY 2009-10 was Rs. 1204.90 crore and the Capitalization was Rs. 695.99 Crore. The Commission has observed that GETCO has estimated the funding of Capex partially through grants, which was not indicated in the Tariff Order dated 31st March, 2010. The Commission is of the view that the Capex and Capitalization approved in the Tariff Order for FY 2010-11 require no revision as it is subject to Truing up when the Audited Annual Accounts are made available to the Commission. The Commission however considers funding of Capex through grants. The grants projected by GETCO are Rs. 280 crore in the RE for FY 2010-11 against the proposed capex of Rs. 2036. The Commission takes into consideration the grants for the approved capex at Rs. 280 crore and approves the amount of capitalization and the source of funding as detailed in the Table 6.13 below:

Table 6.13 : Capitalization and sources of funding considered for FY 2010-11 in



APR

(Rs. crores)

Particulars	T.O for FY 2010-11	Claimed by GETCO (RE)	Approved in the Review
Capital expenditure	1975.04	2036.00	1975.04
Capitalization	1542.93	1995.00	1542.93
Grants	-	280.00	280.00
Balance Capitalization		1715.00	1262.93
Debt (70%)	1080.05	1200.00	884.05
Equity (30%)	462.88	514.00	378.88

The Capitalization, the debt and equity approved above shall form the basis for allowing Interest and finance charges, return on equity and depreciation for FY 2010-11.

6.4 Depreciation for FY 2010-11

GETCO has estimated the depreciation charges at Rs. 392 crore in the RE for FY 2010-11. The depreciation approved for FY 2010-11 by Commission in MYT order dated 17th January, 2009, in the Tariff Order for FY 2010-11 and claimed in the review are given in the Table 6.14 below:

Table 6.14 : Depreciation claimed by GETCO in RE for FY 2010-11

(Rs. crores)

Particulars	MYT Order for FY 2010-11	T.O for FY 2010-11	H1 Actual for FY 2010-11	Claimed by GETCO (RE)
Depreciation	221.09	405.52	201	392.00

Petitioner's Submission

GETCO has submitted that as per the revised estimate the depreciation works out to Rs.392 crore based on the rates of depreciation approved by CERC and the weighted average rate of depreciation works out to 5.06%. The gain on account of the revised estimate of depreciation works out to Rs.13 crore and this is considered on account of uncontrollable factor as detailed in the Table 6.15 below:

Table 6.15 : Details of Depreciation claimed by GETCO in RE for FY 2010-11

(Rs. crores)

Sr. No.	Particulars	2010-11 (Approved)	2010-11 (RE)	Deviation
1	Gross block in beginning of the year	7227	6762	
2	Additions during the year (Net)	1543	1995	



Gujarat Energy Transmission Corporation Limited
Truing Up for 2009-10, APR for 2010-11, ARR for 2011-16, Determination of
Tariff for 2011-12

Sr. No.	Particulars	2010-11 (Approved)	2010-11 (RE)	Deviation
3	Depreciation for the year	406	392	13
4	Average rate of depreciation	5.07%	5.06%	

Commission's Analysis

GETCO has computed the depreciation taking into consideration the opening GFA and the proposed Capitalization estimated in RE for FY 2010-11. The Capital expenditure and capitalization for FY 2010-11 are considered in para 6.3 above after taking into consideration the grants of Rs. 280 crore for FY 2010-11. The weighted average rate of depreciation for FY 2009-10 worked out to 5.01%. The Commission has calculated the depreciation adopting this weighted average rate of 5.01% as detailed in table 6.16.

Table 6.16 : Depreciation considered for FY 2010-11 in APR

(Rs. crores)

Sr. No.	Particulars	Claimed in RE FY 2010-11	Approved in APR FY 2010-11
1	GFA at the beginning of the year	6762.00	6760.18
2	Additions during the year	1995.00	1542.93
3	Closing GFA	8757.00	8303.11
4	Average gross block	7759.00	7531.65
5	Depreciation rate	5.06%	5.01%
6	Depreciation for the year	392.00	377.34

The Commission accordingly considers the depreciation charges at Rs. 377.34 crore in the APR for FY 2010-11.

6.5 Interest and Finance Charges for FY 2010-11

GETCO has estimated the interest and finance charges at Rs. 301 crore in the RE for FY 2010-11. The interest and finance charges approved for FY 2010-11 by the Commission in the MYT order 2008-11, in the Tariff Order for FY 2010-11 and claimed by GETCO in the RE are given in the Table 6.17 below:

Table 6.17 : Interest and Finance Charges Claimed by GETCO in RE for FY 2010-11

(Rs. crores)

Particulars	MYT Order for FY 2010-11	T.O for FY 2010-11	H1 Actual for FY 2010-11	Claimed by GETCO (RE)
Interest & Finance charges	362.63	278.19	156.00	301.00

Petitioner's Submission



GETCO has submitted that in calculating interest on loan the weighted average rate of interest of 10.5% has been considered for new loans. It is further submitted that GETCO has compared revised estimates vis-à-vis the approved expenses and worked out the loss on account of uncontrollable factors as detailed in the Table 6.18 below:

Table 6.18 : Details of Interest and Finance charges claimed by GETCO in RE for FY 2010-11

(Rs. crores)					
Sr. No.	Particulars	2010-11 (Approved)	2010-11 (RE)	Gain / (loss) due to controllable factor	Gain / (loss) due to uncontrollable factor
1.	Opening loan	2288	2930		
2.	Loan additions during the year	1080	1200		
3.	Repayment during the year	229	293		
4.	Closing loans	3139	3837		
5.	Average loans	2713	3383		
6.	Interest on loan	274	298		
7.	Guarantee charges	4	3		
8.	Total Interest & Finance charges	278	301		(23)
9.	Weighted average rate of interest on loan	10.11%	8.80%		

Commission's Analysis

Commission has examined the interest and finance charges estimated by the GETCO for FY 2010.11. The opening balance of loans for the FY 2010-11 is taken at Rs. 2930 crore being the closing balance of loans furnished in the Truing up for FY 2009-10 based on capitalization of Capex. As discussed in para 6.3 above the capitalization approved for FY 2010-11 is Rs. 1542.93 crore and the Debt portion is Rs. 884.05 crore. The Commission has arrived at Rs. 1926.63 crore as the closing balance of loan in Table 5.19 in Chapter 5. The Commission has calculated the interest and finance charges in the APR for FY 2010-11 as detailed in the Table 6.19 below:

Table 6.19 : Interest and Finance Charges considered for FY 2010-11

(Rs. crores)		
Particulars	FY 2010-11 Claimed by GETCO in RE	Approved in APR for FY 2010-11
Opening loans	2930.00	1926.63
Loan additions during the year	1200.00	884.05



Gujarat Energy Transmission Corporation Limited
Truing Up for 2009-10, APR for 2010-11, ARR for 2011-16, Determination of
Tariff for 2011-12

Particulars	FY 2010-11 Claimed by GETCO in RE	Approved in APR for FY 2010-11
Repayment during the year	293.00	192.66
Closing loan	3837.00	2618.02
Average loan	3383.00	2272.32
Interest on loan	298.00	199.96
Guarantee charges	3.00	3.00
Total Interest & Finance charges	301.00	202.96
Weighted average rate of Interest on loan	8.80%	8.80%

The Commission accordingly considers the interest and finance charges at Rs.202.96 crore in the APR for FY 2010-11.

6.6 Return on Equity for FY 2010-11

GETCO has estimated the return on equity at Rs. 306.00 crore in the review for FY 2010-11. The return on equity approved for FY 2010-11 by the Commission in the MYT order 2008-11, in the Tariff Order for FY 2010-11 and claimed by GETCO in the RE are given in the Table 6.20 below:

Table 6.20 : Return on Equity claimed by GETCO in the APR for FY 2010-11

Particulars	MYT Order for FY 2010-11	T.O for FY 2010-11	Claimed by GETCO (RE)
Return on Equity (ROE)	380.74	315.44	306.00

(Rs. crores)

Petitioner's Submission

GETCO has submitted the revised estimates of equity for FY 2010-11 based on closing equity as per audited accounts for FY 2009-10. The ROE is calculated at 14% as provided in the Regulations. The comparison between the values of revised estimates of ROE on Equity for FY 2010-11 with the values approved in the Tariff Order results into a gap of Rs.9 crore on account of controllable factor as indicated in the Table 6.21 below:

Table 6.21 : Return on Equity claimed by GETCO in RE for FY 2010-11



Gujarat Energy Transmission Corporation Limited
Truing Up for 2009-10, APR for 2010-11, ARR for 2011-16, Determination of
Tariff for 2011-12

(Rs. crores)

Sr. No.	Particulars	2010-11 (Approved)	2010-11 (RE)	Gain / (loss) due to controllable factor	Gain / (loss) due to uncontrollable factor
1.	Opening equity capital	2022	1931		
2.	Equity additions during the year	463	514		
3.	Closing equity	2485	2445		
4.	Average equity	2253	2188		
5.	Rate of return on equity	14%	14%		
6.	Return on equity	315	306	9	-

Commission's Analysis

The Commission has examined the submission of GETCO. It is observed that the ROE estimated by GETCO is on lower side compared the ROE approved in the Tariff Order for FY 2010-11. GETCO has shown the opening balance of equity for FY 2010-11 at Rs. 1931 crore and equity additions at Rs. 514 Crore during the year. The Commission has computed the closing equity at Rs. 1919.71 crore in the Truing up for FY 2009-10 in para 5.4 of chapter 5. Taking this as opening equity for FY 2010-11 and the equity addition of Rs. 378.88 crore determined in para 6.3 above the ROE is computed as detailed in the Table 6.21 below for FY 2010-11 (APR).

Table 6.22 : Return on Equity considered for FY 2010-11

(Rs. crores)

Sr.No	Particulars	FY 2010-11 Claimed by GETCO in RE	Considered in APR for FY 2010-11
1	Opening equity	1931.00	1834.49
2	Equity additions during the year	514.00	378.88
3	Closing Equity	2445.00	2213.37
4	Average equity	2188.00	2023.93
5	Rate of Return on Equity	14%	14%
6	Return on equity	306.00	283.35

The Commission accordingly considered the Return on Equity at Rs.283.35 crore in the APR for FY 2010-11.

6.7 Interest on Working Capital for FY 2010-11



GETCO has estimated the interest on working capital at Rs. 42.00 crore in the RE for FY 2010-11. The interest on working capital approved by the Commission in the MYT order FY 2008-011, Tariff Order for FY 2010-11 and claimed by GETCO in the RE are given in the Table 6.23 below:

Table 6.23 : Interest on working capital claimed by GETCO in RE for FY 2010-11

(Rs. crores)

Particulars	MYT Order for FY 2010-11	T.O for FY 2010-11	H1 Actual for FY 2010-11	Claimed by GETCO (RE)
Interest on working capital	36.95	38.40	19.00	42.00

Petitioner's Submission

GETCO has submitted that it has considered the SBI PLR as on 1st April, 2004 i.e 10.25% for the purpose of computation of interest on working capital. GETCO has further submitted that comparison of interest on working capital based on the above methodology and the value approved by the Commission resulted in uncontrollable loss of Rs.3 Crore as detailed in the Table 6.24 below:

Table 6.24 : Interest on working capital claimed by GETCO in RE for FY 2010-11

(Rs. crores)

Sr. No.	Particulars	2010-11 (Approved)	2010-11 (RE)	Gain / (loss) due to controllable factor	Gain / (loss) due to uncontrollable factor
1.	O&M expenses (1 month)	46	51		
2.	Maintenance spares (1% of cost @ 6% escalation)	103	102		
3.	Receivables (2 months)	226	251		
4.	Total working capital	375	405		
5.	Rate of interest on working capital	10.25%	10.25%		
6.	Interest on working capital	38	42	-	(3)

Commission's Analysis

The Commission has examined the computation of normative working capital and interest thereon under GERC (Terms and Conditions for Determination of Tariff) Regulations, 2005. Based on the O&M expenses approved in the Annual



Performance Review and other components of ARR the Commission has computed the working capital and interest thereon as detailed in the Table 6.25 below:

Table 6.25: Interest on Working Capital considered for FY 2010-11 in APR

(Rs. crores)		
Sr.No.	Particulars	Approved in APR for FY 2010-11
1	O&M expenses (1 Month)	48.95
2	Maintenance Spares (1% of GFA)	67.60
3	Receivables (2 Months)	212.71
4	Working Capital	329.26
5	Interest @ 10.25%	33.75

The Commission accordingly considers the interest on working capital at Rs. 33.75 crore in the APR for FY 2010-11.

6.8 Expenses Capitalized for FY 2010-11

Petitioner's Submission

GETCO has estimated the capitalization of expenses at Rs. 145 crore in the RE against Rs. 206 crore approved in the Tariff Order dated 31st March, 2010. The capitalization expenses approved for FY 2010-11 in the MYT order, in the Tariff Order for FY 2010-11 and claimed by GETCO in the RE are detailed in the Table 6.26 below:

Table 6.26 : Capitalization of other expenses estimated by GETCO in RE for FY 2010-11

(Rs. crores)			
Particulars	MYT Order for FY 2010-11	T.O for FY 2010-11	Claimed by GETCO (RE)
Expenses capitalized	86.32	153.08	145.00

Commission's Analysis

The other expenses capitalized as per the tariff order dated 31st March, 2010 for FY 2010-11 was Rs. 206.35 crore based on the review petition filed by GETCO, these expenses are revised to Rs. 153.08 crore for FY 2010-11.

The Capitalization of other expenses relates to Capitalization of Employee Cost, A&G expenses, R&M expenses, interest and related costs.



The Commission accordingly considers the Capitalization of other expenses at Rs. 145 crore in the APR for FY 2010-11 as estimated by GETCO.

6.9 Provision for Tax for FY 2010-11

GETCO has estimated the provision for Tax at Rs. 61.00 crore in the RE for FY 2010-11. The provision for tax approved for FY 2010-11 by the Commission in the MYT order FY 2008-11, in the Tariff Order for FY 2010-11 and claimed by GETCO in the RE are given in the Table 6.27 below:

Table 6.27 : Provision for tax claimed by GETCO in RE for FY 2010-11

(Rs. crores)

Particulars	MYT Order for FY 2010-11	T.O for FY 2010-11	H1 Actual for FY 2010-11	Claimed by GETCO (RE)
Provision for tax	-	48.73	10.00	61.00

Petitioner's Submission

GETCO has submitted that the Tax is estimated at Rs.61.00 crore against Rs. 49.00 crore approved in the Tariff Order dated 31st March 2010 resulting in uncontrollable loss of Rs.12 crore.

Commission's Analysis

The Commission has examined the submission of the petitioner. The provision of Tax approved in the T.O for FY 2010-11 is at the MAT rate of 15.45% on the ROE. The applicable MAT rate is 19.934%. The provision for tax is computed at this MAT Rate of 19.934% on approved ROE of Rs.283.35 crore considered in the APR for FY 2010-11, which works out to Rs. 56.48 crores.

The Commission considers the provision for tax at Rs.56.48 crore in the APR for FY 2010-11.

6.10 Revenue from other Income for FY 2010-11

GETCO has estimated the other income at Rs. 103.00 crores in the RE for FY 2010-11. The other income approved in the MYT order for FY 2010-11, Tariff Order for FY 2010-11 and claimed by GETCO in the RE are given in the Table 6.28 below:

Table 6.28 : Provision for tax claimed by GETCO in RE for FY 2010-11

(Rs. crores)

Particulars	MYT Order for FY 2010-11	T.O for FY 2010-11	H1 Actual for FY 2010-11	Claimed by GETCO (RE)
Other Income	45.13	77.83	41.00	103.00

Petitioner's Submission

GETCO has submitted that the other income includes interest on staff loans interest on investment and income from sale of stores etc against Rs.78.00 crore approved in the T.O resulting in controllable gain of Rs.25 crore.

Commission's Analysis

The other income of Rs. 103 crore estimated in the RE is higher than the other income approved at Rs.77.83 crore in the Tariff Order for FY 2010-11 and the increase is a gain, which is termed as loss by GETCO in the petition.

The Commission considers the other income at Rs. 103.00 crore in the APR for FY 2010-11 as estimated by GETCO.

6.11 Incentive

Petitioner's Submission

GETCO has claimed Rs.35 crores as incentive in the APR for FY 2010-11 against Rs. 5crore approved in the tariff order FY 2010-11 as detailed in the table below:

Table 6.29: Incentive considered for FY 2010-11 in APR

(Rs. crores)

Particulars	T.O for FY 2010-11	H1 Actual for FY 2010-11	Claimed by GETCO (RE)
Other Income	5.00	-	35.00

Commission's Analysis

The Commission is of the view that incentive approved in tariff order FY 2010-11 needs no revision as the incentive depends on actual availability at the end of the year, the same shall be considered at the time of truing up duly supported by detailed calculations.

6.12 Performance Review for FY 2010-11



Gujarat Energy Transmission Corporation Limited
Truing Up for 2009-10, APR for 2010-11, ARR for 2011-16, Determination of
Tariff for 2011-12

The fixed charges approved in the MYT order for FY 2008-11, in the Tariff Order dated 31st March, 2010, proposed by GETCO in the RE for FY 2010-11 and considered by the Commission in the performance review for FY 2010-11 are given in the Table 6.29 below:

Table 6.30 : Fixed Charges Considered in the Performance Review for
FY 2010-11

(Rs. crores)

S.No	Fixed Charges	MYT Approved	Tariff Order 2010-11 (31-03-2010)	Claimed by GETCO in APR (2010-11)	Considered in APR	Deviation (6-4)	Controllable (Loss)/Gain	Uncontrollable (Loss)/Gain
1	2	3	4	5	6	7	8	9
1	Operation & Maintenance Expenses	427.40	549.69	618.00	587.39	37.70		
1.1	Employee Cost incl. Impact on account of provisions of 6th Pay Commission for FY 2007-08 & FY 2008-09	276.42	398.71	412.00	398.71	0.00		0.00
1.2	Repair & Maintenance	103.20	103.20	151.00	135.68	32.48	(32.48)	
1.3	Administration & General Charges	47.78	47.78	55.00	53.00	5.22	(5.22)	
2	ULDC Charges	15.36						
3	Depreciation	221.09	405.52	392.00	377.34	-28.18		28.18
4	Advance Against Depreciation	103.40						
5	Interest & Finance Charges	362.63	278.19	300.75	202.96	-75.23		75.23
6	Interest on Working Capital	36.95	39.33	42.00	33.75	-5.58		5.58
7	Return on Equity	380.74	315.44	306.00	283.35	-32.09		32.09
8	Total Fixed Costs	1547.57	1588.17	1658.75	1484.79	-103.38	(37.70)	141.08
9	Less: Expenses Capitalized	86.32	153.08	145	145.00	-8.08		8.08
10	Add: Provision for Tax	-	48.73	61	56.48	7.75		-7.75
11	Total Transmission Charges	1461.25	1483.82	1574.75	1396.27	-87.55	(37.70)	125.25
12	Less: Other Income	45.13	77.83	103	103.00	25.17		-25.17



Gujarat Energy Transmission Corporation Limited
Truing Up for 2009-10, APR for 2010-11, ARR for 2011-16, Determination of
Tariff for 2011-12

13	Aggregate Revenue Requirement	1416.12	1405.99	1471.75	1293.27	-112.72	(37.70)	150.42
14	Add: Incentive for target availability		4.96	35.00	4.96	0.00	0.00	
15	Aggregate Revenue Requirement	1416.12	1410.95	1506.75	1298.23	-112.72	(37.70)	150.42

The Commission has not considered any loss / gain in the performance review. The actual performance for FY 2010-11 will be reviewed with reference to the audited annual accounts for FY 2010-11 and any sharing of loss / gain as per GERC Regulations will be considered at the time of Truing up for FY 2010-11.



Chapter 7

Determination of Aggregate Revenue Requirement (ARR) for the FY 2011-12 to FY 2015-16 and Transmission Charges for FY 2011-12

7.1 Introduction

The determination of Aggregate Revenue Requirement (ARR) for the control period FY 2011-12 to FY 2015-16 and the transmission charges for the FY 2011-12 are taken up in this chapter.

7.2 Capital Investment

GETCO has proposed capital investment of Rs.10723 crore for expansion / augmentation of its transmission system for evacuation of power from additional generation capacity coming up during the control period, strengthening of the existing transmission system etc.

GETCO has proposed to add 16063 ckt. km. of network and 378 substations to the transmission system during the control period FY 2011-12 to FY 2015-1 as detailed in Tables 7.1 and 7.2 below:

Table 7.1: Network Additions during the control period (FY 2011-12 to FY 2015-16)

Voltage class	2011-12	2012-13	2013-14	2014-15	2015-16	Total
765kV	-	-	20	20	25	65
400kV	913	1998	1177	1098	210	5396
220kV	2000	783	496	181	-	3460
132kV	129	134	-	-	-	263
66kV	1780	1487	1260	1092	1260	6879
Total	4822	4402	2953	2391	1495	16063

(ckt. km)



Table 7.2: Addition of Substation during the control period (FY 2011-12 to FY 2015-16)

						(Nos.)
Voltage class	2011-12	2012-13	2013-14	2014-15	2015-16	Total
765kV	-	-	-	-	1	1
400kV	1	-	-	7	-	8
220kV	13	-	-	-	-	13
132kV	2	-	-	-	-	2
66kV	121	60	60	53	60	354
Total	137	60	64	60	61	378

GETCO has proposed to phase the capital investment of Rs. 10723 crore over the control period to create the additional network and substations detailed in Table 7.1 and 7.2 above as given in Table 7.3 below:

Table 7.3 : Proposed Capital Investment for FY 2011-12 to 2015-16

						(Rs. crores)
Particulars	2011-12	2012-13	2013-14	2014-15	2015-16	
New Projects						
765kV SS	-	-	198	264	198	
765kV lines	-	-	89	118	89	
400kV SS	76	212	237	221	27	
400kV lines	684	1076	1181	1172	270	
220kV SS	198	20	10	7	4	
220kV lines	343	244	116	48	12	
132kV SS	13	-	-	-	-	
132kV lines	16	-	-	-	-	
66kV SS	458	180	180	156	180	
66kV lines	262	179	104	90	104	
Bus reactor / Shunt capacitor	20	15	15	15	-	
Augmentation of SS / Lines	70	-	-	-	-	
City development plan	33	-	-	-	-	
Total of new projects	2172	1925	2130	2092	883	
R&M						
Renovation & Modernization	259	298	298	281	281	
Vadodara city development plan	50	54	-	-	-	
Total of R&M	309	352	298	281	281	
Total	2481	2277	2428	2373	1164	



7.3 Generation Schemes and connected Transmission Lines planned during the control period FY 2011-12 to FY 2015-16

GETCO has furnished the details of major schemes of transmission lines and substations proposed to be constructed during the control period (FY 2011-12 to FY 2015-16) with the capital investment proposed above.

The additions proposed are mainly:

- for evacuation of power from additional generation coming up in the state and share from central generating stations
- to meet the demand and load growth
- to reduce the load on existing substations and transmission lines
- for augmentation of lines and substations
- for expansion of 66kV system to reduce the load / length of 11kV feeders to improve the voltage profile

GETCO has furnished a list of generating stations which are programmed to be commissioned during the control period and the transmission lines and substations required to evacuate power from these generating stations to various load centres down stream. The generating stations are given in Table 7.4 below:

Table 7.4 : Generating Stations from which Evacuation of Power is proposed

Sr. No.	Stations	Capacity (MW)	Commissioning schedule
	GSECL		
1.	Ukai TPS	500	2011-12
2.	Sikka unit 3	250	2012-13
3.	Sikka unit 4	250	2013-14
4.	Wanakbori unit 8	800	2014-15
5.	Maniyar – Patan	1200	2014-15
6.	Badodara – Banaskantha	1200	2014-15
	IPPs		
7.	GPPC, Pipava 2 nd unit	350	2011-12
8.	APPL, Mundra (units 5 & 6)	1320	2011-12
9.	Essar, Vadinar	1200	2011-12
10.	BECL, Padra (units 1 & 2)	600	2012-13
11.	Tilaya UMPP (Reliance)	60	2012-13
12.	Akaltarau UMPP	55	2012-13
	Akaltarau UMPP	110	2013-14
	Akaltarau UMPP	110	2014-15



Gujarat Energy Transmission Corporation Limited
Truing Up for 2009-10, APR for 2010-11, ARR for 2011-16, Determination of
Tariff for 2011-12

Sr. No.	Stations	Capacity (MW)	Commissioning schedule
13.	Gandhinagar TPS (GPCC Conversion project)	1372	2015-16
14.	Sikka TPS (GPCC Conversion project)	457	2015-16
15.	Essar, Salaya Phase II	1320	2015-16
16.	Shapoorj Pallonji, Kodinar	1320	2015-16
17.	KSK, Mahanandi, Chattisgarh	3600	2015-16
	Share from central generating stations		
18.	Sipat – I (Unit 2&3)	360	2011-12
19.	North Karanpura (Unit 3)	77	2011-12
20.	UMPP Mundra (Unit 1&2)	760	2011-12
21.	UMPP Mundra (Units (3,4 & 5)	1140	2012-13
22.	Vindhyachal (Unit 1)	133	2011-12
23.	Barh ER (Unit 1)	87	2012-13
24.	Barh ER (Unit 2 & 3)	173	2013-14
25.	Dhuvaran – NTPC	330	2013-14
26.	Dhuvaran – NTPC	670	2014-15
27.	NPCIL, Kakrapar Ext	240	2014-15
28.	NPCIL, Kakrapar Ext	480	2015-16
29.	NTPC, Kawas Expansion	238	2015-16
30.	764mW solar power at different locations (tentative)		
31.	1090mW of solar power 590 mW of solar park – 1 + 500 MW of solar park – 2 (tentative)		
32.	Additional 400kV & 220kV lines for strengthening the system		
33.	Renovation and modernization of transmission system		
34.	City development plans		

7.4 Commission's Analysis

GETCO has projected an ambitious plan for transmission system development with an addition of about 16,063 ckt km transmission lines and 378 substations of 66 kV to 765 kV at a total investment of about Rs.10, 723 crore during the control period (FY2011-12 to FY 2015-16). The transmission additions are for evacuation of power from the new generating stations coming up during the control period, downstream transmission of power to load centres and strengthening of transmission system to transmit the additional power. The transmission plan covers also renovation and modernization of the transmission system and city development plans. GETCO projected the capital investment during each year of control period, but it has not



Gujarat Energy Transmission Corporation Limited
Truing Up for 2009-10, APR for 2010-11, ARR for 2011-16, Determination of
Tariff for 2011-12

given the likely physical achievements of transmission system during the corresponding years.

However, GETCO in its presentation on its ARR to the Commission on 10th January 2011 has indicated the 400 and 220 kV lines targeted during FY 2010-11 and FY 2011-12 as detailed in Table 7.5 below:

Table 7.5 : Transmission lines programmed for FY 2010-11 & FY 2011-12
Major EHV lines

Sr. No.	Name of transmission line	Line length in Ckm.	Revised target
1.	400kV DC Varsana - Hadala line	2X158.663	Completed
2.	400kV D/C Mundra – Varsana line	2X84.143	Jan 11
3.	400kV Asoj Ukai LILO to Kosamba	2X32	Mar 11
4.	400kV D/C Vadinar – Hadala line	2X113	Mar 11
5.	220kV D/C GSEG (Hazira) – Kosamba line	2X62	Mar 11
6.	220kV D/C Kosamba – Jagadia line	2X50	Mar 11
7.	220kV LILO to Bhaimasar from Morbi - Halvad line No. 1	2X107.5	Mar 11
8.	220kV LILO to Bhaimasar from Morbi - Halvad line No. 2	2X105	Mar 11
9.	220kV D/C GSEG(Hazira) - Mota line (with A1-59 Conductor)	2X55.53	Mar 11
10.	220kV D/C Nakhatrana - Varsana line (with A1-58 Conductor)	2X106.88	Mar 11
11.	400kV D/C Mundra – Zerda line No. 2	2X331	Oct 11
12.	220kV D/C Hadala – Halvad line	2X80.776	July 11
13.	220kV D/C Kosamba - Mobha line	2X8804	May -11
14.	220kV Savarkundla – Otha Ckt No. 1 LILO to GPPC	2X46050	May - 11
15.	400kV D/C Kosamba – Chorania (Package – 1) Chorania To Ap-54)	2X111.2	Jul - 11
16.	400kV D/C Kosamba – Chorania Line (Package – 1i) Chorania To Ap-54)	2X117.30	Jul - 11
17.	400kV D/C Ukai –Kosamba line	2X68.10	Aug - 11
18.	400kV D/C Vadinar – Amreli Line (Pkg-I)	2X60.112	Sep - 11
19.	400kV D/C Vadinar – Amreli Line (Pkg-I)	2X60.222	Sep - 11
20.	400kV D/C Vadinar – Amreli Line (Pkg-I)	2X59.857	Sep - 11

The lines are mostly for evacuation of power from Adani Power Pvt. Ltd., Essar Power Plant at Vadinar, GSPCL, GSECL, UMPL, GPPL power plants and share from central generating stations etc. These stations are mostly programmed to be commissioned during FY 2011-12, FY 2012-13 & FY 2013-14. Capital expenditure for the transmission lines already completed during 2010-11 (upto March 2011)



would have been incurred during 2010-11 except for some balance payments. The lines programmed during FY 2011-12 and FY 2012-13 have to be funded during 2011-12 and 2012-13.

A 765 kV substation at Kheda along with connected 65Km line is provided in the transmission plan. It is stated that the 765 kV substation is proposed to be established according to system requirement. This requires adequate justification duly supported by system studies. This requires further review.

A number of generating stations are programmed to be commissioned during FY 2014-15 and FY 2015-16, some of which may not be commissioned during this period. However, the transmission plan of GETCO for the control period (FY 2011-12 to FY 2015-16) is provisionally approved subject to review during FY 2013-14.

This will be reviewed along with tariff order for FY 2013-14 and firmed up. The capital expenditure for FY 2011-12 is, however, approved separately.

Meanwhile GETCO is directed to submit a cost-benefit analysis for each of the schemes or group of schemes other than those required for evacuation of power from generating stations for approval of the Commission.

7.5 Capital Expenditure and Capitalization

GETCO has proposed capital expenditure, capitalization and funding during the control period as given in Table 7.6 below:

Table 7.6 : Projected Capital expenditure and capitalization during the control period

Particulars	(Rs. crores)				
	FY2011-12	FY2012-13	FY2013-14	FY2014-15	FY2015-16
Capex for the year	2481	2277	2428	2373	1164
Capitalization	2214	2399	2397	2406	1889
Debt (70%)	1550	1680	1636	1684	1322
Equity (30%)	664	720	701	722	567
Grants	-	-	-	-	-

As discussed in para 7.4 above, most of the transmission lines are for evacuation of power from APPL, Essar, GSPCL, GSECL, BECL generating stations and share from central generating stations that are likely to be commissioned during FY 2011-12, FY



Gujarat Energy Transmission Corporation Limited
Truing Up for 2009-10, APR for 2010-11, ARR for 2011-16, Determination of
Tariff for 2011-12

2012-13 and FY 2013-14. Hence the main transmission lines for evacuation of power from the generating stations and downstream lines and substations are to be completed in advance during FY 2010-11, FY 2011-12 and FY 2012-13 as the generating stations are programmed to be commissioned during FY 2011-12, FY 2012-13 and FY 2013-14.

The Commission is of the opinion that the proposed Capex is quite ambitious and requires a detailed review as stated in para 7.4 above. However, at this stage the Commission would not like to prune down, pending a review, the proposed capital investment,

Taking into consideration the transmission lines programmed to be commissioned during FY 2011-12, FY 2012-13 and subsequent years, capitalization is provisionally approved taking 40% of the opening balance of works-in-progress and 60% of capex projected by GETCO during each year of the control period. As mentioned earlier, the capitalization will be revised based on the review in FY 2013-14. The Capex and capitalization approved by the Commission is given in Table 7.7 below:

Table 7.7 : Approved Capital Expenditure and Capitalization for FY 2010-11 to 2015-16

(Rs. crores)

Particulars	2009-10 (Actual)	2010-11 (RE)	2011-12	2012-13	2013-14	2014-15	2015-16
Opening Balance	673.36	1182.27	1614.38	1960.98	2087.50	2223.54	2283.15
Add New Investment	1204.90	1975.04	2480.89	2277.27	2427.59	2372.56	1164.12
Total	1878.26	3157.31	4095.27	4238.25	4515.09	4596.10	3447.27
Less: Investment Capitalized	695.99	1542.93	2134.29	2150.76	2291.55	2312.95	1611.73
Closing Balance	1182.27	1614.38	1960.98	2087.50	2223.54	2283.15	1835.54
Funding of Capex							
Capitalization	695.99	1542.93	2134.29	2150.76	2291.55	2312.95	1611.73
Less Grants	259.00	280.00	0.00	0.00	0.00	0.00	0.00
Balance Capitalisation	463.99	1262.93	2134.29	2150.76	2291.55	2312.95	1611.73
Debit (70%)	305.89	884.05	1494.00	1505.53	1604.09	1619.07	1128.21
Equity (30%)	131.10	378.88	640.29	645.23	687.47	693.89	483.52

The Commission has arrived at the opening and closing balance of GFA taking into consideration the capitalization approved in the above para as detailed in the Table 7.8 below:



Table 7.8 : Gross Fixed Assets for FY 2009-10 to 2015-16

(Rs. crores)

Year	Opening balance	Additions during the year	Closing balance
FY 2009-10 (Actual)	6064.19	695.99	6760.18
FY 2010-11 (RE)	6760.18	1542.93	8303.11
FY 2011-12	8303.11	2134.29	10437.40
FY 2012-13	10437.40	2150.76	12588.15
FY 2013-14	12588.15	2291.55	14879.70
FY 2014-15	14879.70	2312.95	17192.65
FY 2015-16	17192.65	1611.73	18804.38

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

7.6 Fixed Charges for the Control Period 2011-12 to 2015-16

Total fixed charges for the control period have been categorized by the GETCO into following elements:

- O&M expenses
 - Employee cost
 - Administrative and General expenses
 - Repairs and Maintenance expenses
- Depreciation
- Interest and Financing charges
- Return on equity
- Interest on working capital

7.6.1 Operation and Maintenance (O&M) Expenses

GETCO has projected the O&M expenses at Rs.4461 crore for the control period from FY 2011-12 to FY 2015-16 as detailed in the Table 7.9 below:

Table 7.9 : Proposed O&M expenses for FY 2011-12 to 2015-16

(Rs. crores)

Particulars	2011-12	2012-13	2013-14	2014-15	2015-16
Employee cost	460	511	564	623	688
Repairs & Maintenance	187	220	248	282	319
Adm. & General charges	60	66	71	77	84
O&M expenses	707	797	883	982	1091



The O&M expenses comprise of employee cost, A&G expenses and R&M expenses.

Petitioner's submission

GETCO has submitted that it has taken the revised estimates of FY 2010-11 as base in working out the projections for the control period FY 2011-12 to 2015-16 with an escalation of 10% P.A. in the case of Employee cost and R&M expenses and 8% escalation P.A. in the case of A&G expenses. In addition to the above escalation GETCO has also worked out increase in cost due to increase in number of substations and lines. GETCO has further submitted that it is adding large number of substations and lines in the system and therefore requires additional O&M cost to cater to this demand and the total O&M cost is worked out with the help of growth in past cost and cost due to increase in substations and lines.

The O&M expenses projected by GETCO are discussed component wise in the following paras.

(a) Employee Cost

GETCO has projected the employee cost of Rs. 2846.00 for the control period for FY 2011-12 to 2015-16 as detailed in the Table 7.10 below:

Table 7.10 : Projected Employee Cost for control period

Particulars	(Rs. crores)				
	2011-12	2012-13	2013-14	2014-15	2015-16
Employee cost	450	495	545	599	659
Incremental cost	10	16	20	24	29
Total Employee cost	460	511	564	623	688

GETCO has submitted that employee cost has been estimated considering trends of past years' employee cost, increase in dearness allowance and its impact on other allowances such as HRA, field allowances, PF, CPF etc. Taking these into consideration, it is stated that GETCO has adopted 10% escalation on the revised estimates for FY 2010-11 in projecting the employee cost for the control period. GETCO has further worked out operation cost per substation and maintenance cost per Ckt Km of line for FY 2011-12 at different voltage levels and then escalated this cost at 5% for remaining years of control period.



GETCO has requested to approve the proposed employee cost for the control period without any disallowance.

(b) Repairs and Maintenance (R&M) Expenses

GETCO has projected the R&M expenses at Rs.1256 crore for the control period for FY 2011-12 to 2015-16 as detailed in the Table 7.11 below:

Table 7.11 : Proposed R&M Expenses for FY 2011-12 to 2015-16

Particulars	(Rs. crores)				
	2011-12	2012-13	2013-14	2014-15	2015-16
R&M cost	155	170	187	206	227
Incremental cost	32	50	61	76	92
Total R&M cost	187	220	248	282	319

Petitioner's submission

GETCO has submitted that the major components of R&M cost are substation equipment and transformer maintenance cost, line maintenance cost, auxiliary consumption charges, substation maintenance (O&M) charges and general civil maintenance of substation infrastructure and buildings.

GETCO has submitted that 30% of lines and substations are more than 25 years old and therefore their cost of maintenance will also increase over the years.

It is further submitted that during the last three years GETCO has added 171 new substations and 4293 Ckt Km lines.

GETCO has submitted further that during the last three years the auxiliary consumption of substation and cost of transformer and its auxiliaries and substation maintenance (O&M) of new substation outsourced have increased substantially.

GETCO has requested to note that R&M expenses are directly related to age of assets and its wear and tear during the period and taking all these factors into consideration. R&M expenses have been escalated @ 10% on the RE for FY 2010-11. Over and above this GETCO has projected R&M cost due to auxiliary consumption cost of new substations and maintenance of new substation and escalated the cost at 5% for remaining years of the control period. GETCO has worked out the proposed auxiliary consumption charges per substation, incremental



auxiliary consumption cost of new substations, proposed maintenance charges per substation and incremental maintenance cost of new substations.

GETCO has stated that realistic R&M expenses have been disallowed during the years 2008-09 and 2009-10 and pleaded to approve the realistic R&M expenses for the control period.

(c) Administration and General (A&G) Expenses

GETCO has projected the A&G expenses at Rs. 358crore for the control period for FY 2011-12 to 2015-16 as detailed in the Table 7.12 below:

Table 7.12 : Proposed A&G cost for FY 2011-12 to 2015-16

Particulars	(Rs. crores)				
	2011-12	2012-13	2013-14	2014-15	2015-16
A&G cost	59	64	69	74	80
Incremental cost	1	2	3	3	4
Total A&G cost	60	66	71	77	84

GETCO has submitted that A&G expenses mainly comprise of rents, telephone and other communication expenses, professional charges, conveyance and traveling expenses etc. GETCO has considered 8% escalation P.A during the control period for FY 2011-12 to 2015-16. In addition to this GETCO has projected increase in A&G cost due to vehicle requirement cost of new substations and escalated this by 5% P.A.

Commission’s analysis

The Commission has examined the submissions made by GETCO. GETCO has projected the O&M expenses with an annual escalation varying from 11 to 15% for the control period for FY 2011-12 to 2015-16. However, GERC has already notified the MYT Regulations, 2011 where the O&M expenses for the existing transmission licensee is specified in Regulation 71.5.1 as detailed in Table 7.13 below:

Table 7.13 : O&M expenses norms from FY 2011-12 to 2015-16 in Rs. lakh / Bay and Rs. lakh / Ckt. Km.

Particulars	FY 2011-12	FY 2012-13	FY 2013-14	FY 2014-15	FY 2015-16
O&M expenses / Bay	5.76	6.09	6.44	6.81	7.19
O&M expenses / Ckt. Km.	0.49	0.52	0.55	0.58	0.61



Gujarat Energy Transmission Corporation Limited
Truing Up for 2009-10, APR for 2010-11, ARR for 2011-16, Determination of
Tariff for 2011-12

The Commission has obtained details of total number of bays and ckt. km. of lines from GETCO. The year-wise, voltage-wise ckt. km. line and Bays furnished by GETCO in letter dated 29/01/2011 are given in the Table 7.14 below:

Table 7.14: Voltage-wise Ckt. Km. Line and Bays

Year	400KV line	220KV line	132KV line	66KV line	33KV line	Total line	Total Bay
	Ckt. Km.	Ckt. Km.	Ckt. Km.	Ckt. Km.	Ckt. Km.	Ckt. Km.	
2005-06	1695.0	11334.1	4550.0	16368.8	69.0	34016.9	-
2006-07	1846.7	11895.1	4551.5	16807.1	69.0	35169.4	6899
2007-08	1911.6	12019.7	4553.2	17834.5	69.0	36387.9	7176
2008-09	1912.0	12214.1	4581.2	18638.9	69.0	37415.2	7493
2009-10	2047.8	13081.7	4764.4	19555.9	69.0	39518.8	7830
2010-11	2787.8	15138.7	4813.4	21368.9	69.0	44177.7	8097
2011-12	3700.8	17138.7	4942.4	23148.9	69.0	48999.7	8587
2012-13	5629.1	17922	5076.4	24635.9	69.0	53332.3	8987
2013-14	6555.9	18377.5	5076.4	25895.9	69.0	55974.6	9322
2014-15	7383.8	18518.5	5076.4	26987.9	69.0	58035.5	9667
2015-16	7383.8	18518.5	5076.4	28247.9	69.0	59295.5	10025

The O&M charges for the GETCO are calculated in accordance with Regulation 71.5.1 of GERC (MYT) Regulations, 2011 as detailed in the Table 7.15 below:

Table 7.15 : Approved O&M expenses for FY 2011-12 to FY 2015-16

Year	O&M Expenses for substations			O&M Expenses for lines			Total O&M expense
	O&M expenses per Bay (Rs. lakh/bay)	Average number of Bays	Total expense of bay per year (Rs. crore)	O&M expenses per CKT km (Rs. lakh/ckt km)	Average Ckt km of lines	Total expense of Ckt lines (Rs. crore)	
2011-12	5.76	8342	480.50	0.49	46589	228.29	708.79
2012-13	6.09	8787	535.13	0.52	51166	266.06	801.19
2013-14	6.44	9155	589.58	0.55	54653	300.59	890.17
2014-15	6.81	9495	646.61	0.58	57005	330.63	977.24
2015-16	7.19	9846	707.93	0.61	58666	357.86	1065.79

The ckt. km. of lines and substations considered for calculating the O&M expenses are based on the average ckt. km. of lines and average number of bays in substations in a year.

The Commission, accordingly approves the O&M expenses for the control period for FY 2011-12 to FY 2015-16 as detailed in the Table 7.15 above.



7.6.2 Depreciation for FY 2011-12 to FY 2015-16

GETCO has projected the depreciation charges at Rs. 3668 crore for the control period for FY 2011-12 to 2015-16. The details of depreciation submitted by GETCO are given in Table 7.16 below:

Table 7.16 : Proposed Depreciation for FY 2011-12 to 2015-16

Particulars	(Rs. crores)				
	2011-12	2012-13	2013-14	2014-15	2015-16
Gross block in the beginning of the year	8757	10971	13371	15708	18114
Additions during the year (Net)	2214	2399	2337	2406	1889
Depreciation for the year	499	615	735	855	964
Average rate of depreciation	5.06%	5.06%	5.06%	5.06%	5.06%

Petitioner's submission

GETCO has submitted that Gross Fixed Assets and Depreciation for the control period have been computed on the basis of revised estimates of FY 2010-11 taking the value of assets as per balance sheet for FY 2009-10 and estimated addition in FY 2010-11 and proposed capitalization during the control period. It is further submitted that depreciation charges have been estimated as per the CERC Regulations which were revised effective from 1st April, 2009.

Commission's Analysis

GETCO has computed the depreciation taking into consideration the opening GFA and the proposed capitalization for the control period adopting the weighted average rate of depreciation of 5.06%. GETCO has applied this rate of 5.06% on gross block of assets. The actual weighted average rate of depreciation for FY 2009-10 worked out to 5.01%.

The Commission has computed the depreciation charges applying the weighted average rate of depreciation at 5.01% for the control period. The opening block of assets and addition of assets on account of capitalization of capital expenditure are approved for the control period for FY 2011-12 to 2015-16 in Table 7.6 above.

The Commission, approves the depreciation charges for the control period for FY 2011-12 to 2015-16 as detailed in the Table 7.17 below:



Table 7.17 : Approved Depreciation for FY 2011-12 to 2015-16

(Rs. crores)

Particulars	2011-12	2012-13	2013-14	2014-15	2015-16
Gross block in the beginning of the year	8,303.11	10,437.40	12,588.15	14,879.70	17,192.65
Additions during the year (Net)*	2,134.29	2,150.76	2,291.55	2,312.95	1,611.73
Gross Block at the end of the year	10473.40	12588.16	14879.70	17192.65	18804.38
Average Gross Block	9370.25	11512.77	13733.93	16036.18	17998.52
Depreciation for the year	469.45	576.79	688.07	803.41	901.73
Average rate of depreciation	5.01%	5.01%	5.01%	5.01%	5.01%

*As given in Table 7.8 above.

7.6.3 Interest and Finance charges for FY 2011-12 to 2015-16

GETCO has projected the interest and finance charges at Rs. 3226 crore for the control period for FY 2011-12 to 2015-16 as detailed in the Table 7.17 below:

Table 7.18 : Proposed Interest and Finance charges for FY 2011-12 to 2015-16

(Rs. crores)

Particulars	2011-12	2012-13	2013-14	2014-15	2015-16
Opening loans	3837	5003	6183	7200	8164
Loan additions during the year	1550	1680	1636	1684	1322
Repayment during the year	384	500	618	720	816
Closing loans	5003	6183	7200	8164	8670
Average loans	4420	5593	6692	7682	8417
Interest on loan	412	538	657	764	844
Guarantee charges	3	2	2	2	2
Total Interest & Finance charges	414	541	659	766	846
Cost of addition loan	10.50%	10.50%	10.50%	10.50%	10.50%
Weighted average rate of interest on loan	9.31%	9.62%	9.81%	9.95%	10.03%

Petitioner's submission

GETCO has submitted that it has considered the actual weighted average rate of interest at 8.80% on the carry forward loans from FY 2010-11. The funding for new capital expenditure has been assumed to be undertaken at a normative debt equity ratio of 70:30. The interest on the new loans is considered at 10.50% in line with the present market conditions. The average tenure of the loans has been assumed as 10 years for repayment.



GETCO has further submitted that it has to pay guarantee charges on the legacy loans which have been transferred from erstwhile GEB.

Commission's Analysis

Commission has examined the interest and finance charges projected by GETCO for the control period for FY 2011-12 to 2015-16. The closing loan has been approved at Rs.2851.11 crore in the APR for FY 2010-11 in para 6.4 Chapter 6 and this is taken as the opening balance of loan for FY 2011-12. The Commission has analyzed the capitalization of capital expenditure proposed by GETCO and approved the capitalization and funding of the Capex i.e debt and equity. GETCO has taken into consideration the weighted average rate of interest on the existing loan and for the new loans, the interest is considered at 10.50% which is in line with present market rates. In respect of repayment of loans GETCO has assumed the tenure of loans as 10 years and repayment is worked out accordingly. GERC has notified the MYT Regulations, 2011. Regulation 39.3 specified that repayment for the year during the tariff period from FY 2011-12 to FY 2015-16 shall be deemed to be equal to the depreciation allowed for that year. The year wise depreciation approved in para 7.6.2 above is taken to consider repayment of loan in the corresponding year. The Commission has accordingly computed the interest charges on the opening loan and debt approved for the control period as detailed in the Table 7.19 below: The guarantee charges are considered as proposed by GETCO.

Table 7.19 : Approved Interest and Finance charges for FY 2011-12 to FY 2015-16

Particulars	FY 2011-12	FY 2012-13	FY 2013-14	FY 2014-15	FY 2015-16
Opening Loans	2,618.02	3,642.57	4,571.31	5,487.33	6,302.98
Loan Additions during the year	1,494.00	1,505.53	1,604.09	1,619.07	1,128.21
Repayment during the year	469.45	576.79	688.07	803.41	901.73
Closing Loans	3,642.57	4,571.31	5,487.33	6,302.98	6,529.46
Average Loans	3,130.29	4,106.94	5,029.32	5,895.15	6,416.22
Interest on Loan	291.43	395.09	493.38	586.57	643.55
Guarantee Charges	3.00	2.00	2.00	2.00	2.00
Total Interest & Finance Charges	294.43	397.09	495.38	588.57	645.55
Weighted Average Rate Interest on Loan	9.31%	9.62%	9.81%	9.95%	10.03%



The Commission approves the interest and finance charges as detailed in the above table for the control period for FY 2011-12 to 2015-16.

7.6.4 Return on Equity for FY 2011-12 to 2015-16

GETCO has projected the return on equity at Rs. 2920 crore for the control period for FY 2011-12 to 2015-16 as detailed in the Table 7.20 below:

Table 7.20 : Proposed Return on Equity for FY 2011-12 to 2015-16

(Rs. crores)

Sr. No.	Particulars	2011-12	2012-13	2013-14	2014-15	2015-16
1	Opening Equity Capital	2445	3109	3829	4530	5252
2	Equity Additions during the year	664	720	701	722	567
3	Closing Equity	3109	3829	4530	5252	5819
4	Average Equity	2777	3469	4180	4891	5535
5	Rate of Return on the Equity	14%	14%	14%	14%	14%
6	Return on Equity	389	486	585	685	775

Petitioner's submission

GETCO has submitted that the return on equity has been worked out based on the actual equity position in the beginning of FY 2009-10 and subsequent addition to equity during FY 2009-10, FY 2010-11 and the control period for FY 2011-12 to 2015-16 at 14% rate of return as per the GERC (Terms and Conditions for Determination of Tariff) Regulations, 2005.

Commission's Analysis

The Commission has examined the submission made by GETCO. 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 i.e. 14% is the same as claimed by GETCO. The Commission has approved the capitalization, debt and equity portions of funding the approved Capex in para 7.5 (Table 7.7) above. The closing balance of equity for the FY 2010-11 has been considered at Rs.2298.59 crore in the APR for FY 2010-11. Taking this as opening balance of equity for FY 2011-12 and the equity additions



approved for the control period in Table 7.7 above, the Commission has computed the return on equity as detailed in the Table 7.21 below:

Table 7.21 : Approved Return on Equity for FY 2011-12 to FY 2015-16

(Rs. crores)

Sr. No.	Particulars	2011-12	2012-13	2013-14	2014-15	2015-16
1	Opening Equity Capital	2,213.37	2,853.65	3,498.88	4,186.34	4,880.23
2	Equity Additions during the year	640.29	645.23	687.47	693.89	483.52
3	Closing Equity	2,853.65	3,498.88	4,186.34	4,880.23	5,363.75
4	Average Equity	2,533.51	3,176.27	3,842.61	4,533.29	5,121.99
5	Rate of Return on the Equity	14%	14%	14%	14%	14%
6	Return on Equity	354.69	444.68	537.97	634.66	717.08

The Commission approves the return on equity as detailed in the above Table 7.21 for the control period for FY 2011-12 to 2015-16.

7.6.5 Interest on working capital for FY 2011-12 to FY 2015-16

GETCO has projected the interest on working capital at Rs. 379.00 crore for the control period for FY 2011-12 to 2015-16 as detailed in the Table 7.22 below:

Table 7.22 : Proposed Interest on Working Capital for FY 2011-12 to 2015-16

(Rs. crores)

Sr. No.	Particulars	2011-12	2012-13	2013-14	2014-15	2015-16
1	O & M Expenses (1 Month)	59	66	74	82	91
2	Maintenance Spares (1% of Cost @ 6% Escalation)	131	163	196	231	264
3	Receivables (2 Months)	320	396	471	546	614
4	Total Working Capital	510	625	741	860	969
5	Rate of Interest on Working Capital	10.25%	10.25%	10.25%	10.25%	10.25%
6	Interest on Working Capital	52	64	76	88	99

Petitioner's submission

GETCO has submitted that interest on working capital has been worked out on normative basis as per the norms specified under GERC Tariff Regulations, 2005. The rate of interest on working capital is adopted at 10.25%. The Short-Term Prime



Lending Rate of SBI on 1st April, 2004 which was considered in the MYT Order for FY 2008-11.

Commission's Analysis

GERC has notified the MYT Regulations, 2011. The Commission has calculated the working capital and interest on working capital in accordance with Regulation 41.2 of GERC (MYT) Regulations, 2011. GETCO has not furnished the security deposits held other than in the form of Bank Guarantee and also not claimed any interest on security deposits. The SBAR as on 01/04/2010 is 11.75%. The Commission has calculated the working capital and interest on working capital for the control period for FY 2011-12 to 2015-16 in accordance with Regulation 41.2 as detailed in the Table 7.23 below:

Table 7.23 : Approved Interest on Working Capital for FY 2011-12 to 2015-16
(Rs. crores)

Sr. No.	Particulars	2011-12	2012-13	2013-14	2014-15	2015-16
1	O&M Expenses (1 Month)	59.07	66.77	74.18	81.44	88.82
2	Maintenance Spares (1% of GFA)	83.03	104.37	125.88	148.80	171.93
3	Receivables (1 Months)	134.32	166.28	198.11	229.73	255.72
4	Total Working Capital	276.42	337.42	398.17	459.96	516.46
5	Rate of Interest on Working Capital	11.75%	11.75%	11.75%	11.75%	11.75%
6	Interest on Working Capital	32.48	39.65	46.78	54.05	60.68

The Commission approves the interest on working capital as detailed in the above Table 7.23 for the control period for FY 2011-12 to 2015-16.

7.6.6 Tax on Income for FY 2011-12 to 2015-16

GETCO has projected the tax on income for the control period for FY 2011-12 to 2015-16 as detailed in the Table 7.24 below:

Table 7.24 : Projected tax on income for FY 2011-12 to 2015-16
(Rs. crores)

Particulars	2011-12	2012-13	2013-14	2014-15	2015-16
Tax on income	77.00	97.00	117.00	136.00	154.00

Petitioner's submission

GETCO has submitted that as per the Terms and Conditions of Tariff, Tax on income streams of transmission licensee from its core business shall be computed as an expense and shall be recovered from the beneficiaries. GETCO is paying the tax and therefore proposed to recover the same. The tax on income is proposed at MAT rate of 19.93% on return on equity to allow the tax to be recovered from the beneficiaries.

Commission's Analysis

The Commission is of the opinion that tax on income shall be allowed as per GERC (MYT) Regulations, 2011. The Commission provisionally approves the income tax payable for each year of the control period based on the actual income tax paid as per the latest audited accounts available for the applicant in accordance with the Regulation 42 of GERC (MYT) Regulations, 2011. The actual income tax as per audited accounts for FY 2009-10 was Rs. 15.37 crore.

The Commission accordingly approves the provision for income tax for the control period for FY 2011-12 to FY 2015-16 as per audited accounts for FY 2009-10. Any variation in income tax actually paid and approved shall be reimbursed based on documentary evidence at the time of truing up for each year of the control period in accordance with Regulation 42.2 of GERC (MYT) Regulations, 2011.

Table 7.25 : Approved Tax on income for FY 2011-12 to 2015-16

(Rs. crores)					
Particulars	2011-12	2012-13	2013-14	2014-15	2015-16
Tax on income	15.37	15.37	15.37	15.37	15.37

The Commission approves the tax on income as detailed in the above Table 7.38 above for the control period for FY 2011-12 to 2015-16.

7.6.7 Non-tariff income for FY 2011-12 to 2015-16

GETCO has projected the other income for the control period for FY 2011-12 to 2015-16 as detailed in the Table 7.26 below:

Table 7.26 : Projected other income for FY 2011-12 to 2015-16

(Rs. crores)					
Particulars	2011-12	2012-13	2013-14	2014-15	2015-16
Other income	103.00	103.00	103.00	103.00	103.00



Petitioner's submission

GETCO has submitted that the revenue from other sources include interest on staff loans, interest on investments, income from sale of stores etc. It is further submitted that the actual 'other income' for FY 2009-10 is Rs. 103.00 crores and estimated the other income to remain same during the control period.

Commission's Analysis

The Commission has examined the submission of GETCO. GETCO has taken the actual Non tariff income during FY 2009-10 to remain constant during the control period. The commission takes into consideration the Non -tariff income as projected by GETCO for the control period (FY 2011-12 to FY 2015-16) as detailed in the Table 7.27 below:

Table 7.27 : Approved other income for FY 2011-12 to 2015-16

(Rs. crores)

Particulars	2011-12	2012-13	2013-14	2014-15	2015-16
Other income	103.00	103.00	103.00	103.00	103.00

The Commission approves other income as detailed in the above Table 7.41 for the control period for FY 2011-12 to 2015-16.

7.6.8 Expenses capitalized during the control period

Petitioner's submission

GETCO has projected the capitalization of expenses at Rs. 976 crores for the control period FY 2011-12 to FY 2015-16 as detailed in the Table 7.28 below:

Table 7.28 : Expenses capitalized during the control period

(Rs. crores)

Particulars	2011-12	2012-13	2013-14	2014-15	2015-16
Expenses capitalized	160	176	193	213	234

Commission's Analysis

The Commission approves the capitalization of other expenses as projected by GETCO for the control period as given in Table 7.28 above.



7.6.9 Incentive for achieving target availability during the control period

GETCO has computed incentive based on the methodology given in the GERC Regulations, 2005 as given in Table 7.29 below and requested to allow the same as a component of aggregate revenue requirement of GETCO for the control period FY 2011-12 to FY 2015-16.

Table 7.29: Incentive for achieving target availability (Projected)

Particulars	(Rs. crores)				
	2011-12	2012-13	2013-14	2014-15	2015-16
Incentive for achieving target availability	46	57	69	81	92

Commission's Analysis

Incentive depends on the actual availability at the end of the year, the same shall be considered at the time of truing up duly supported by detailed calculations.

7.6.10 Projected and Approved Fixed Costs

Based on the Commission's analysis and decisions the approved fixed charges for the control period for FY 2011-12 to 2015-16 are determined.

The ARR as projected by the GETCO and ARR as approved by the Commission for the control period from FY 2011-12 to 2015-16 are given in the two tables 7.29 & 7.30 below:

Table 7.30 : Proposed ARR by GETCO for FY 2011-12 to 2015-16

Sr. No.	Fixed Charges	(Rs. in crores)				
		FY 2011-12 (Projected)	FY 2012-13 (Projected)	FY 2013-14 (Projected)	FY 2014-15 (Projected)	FY 2015-16 (Projected)
1	Operation & Maintenance Expenses	707.00	797.00	883.00	982.00	1,091.00
1.1	Employee Cost	460.00	511.00	564.00	623.00	688.00
1.2	Repair & Maintenance	187.00	220.00	248.00	282.00	319.00
1.3	Administration & General Charges	60.00	66.00	71.00	77.00	84.00
2	Depreciation	499.00	615.00	735.00	855.00	964.00
3	Interest & Finance Charges	415.00	540.00	659.00	766.00	846.00
4	Interest on Working Capital	52.28	64.06	75.95	88.05	99.32
5	Return on Equity	388.78	485.66	585.20	684.74	774.90
6	Total Fixed Costs	2,062	2,502	2,938	3,376	3,775
7	Less: Expenses	160	176	193	213	234



Gujarat Energy Transmission Corporation Limited
Truing Up for 2009-10, APR for 2010-11, ARR for 2011-16, Determination of
Tariff for 2011-12

Sr. No.	Fixed Charges	FY 2011-12 (Projected)	FY 2012-13 (Projected)	FY 2013-14 (Projected)	FY 2014-15 (Projected)	FY 2015-16 (Projected)
	Capitalized					
8	Add: Provision for Tax	77	97	117	136	154
9	Total Transmission Charges	1,979	2,423	2,862	3,299	3,695
10	Less: Other Income	103.00	103.00	103.00	103.00	103.00
11	Aggregate Revenue Requirement	1,876.06	2,319.72	2,759.15	3,195.79	3,592.22
12	Add: Incentive for achieving target availability	46.00	57.00	69.00	81.00	92.00
13	Add: Revenue Gap of True up of FY 2009-10	200.00				
14	Total Revenue Requirement	2,122.06	2,376.72	2,828.15	3,276.79	3,684.22

Table 7.31 : Approved ARR for FY 2011-12 to 2015-16

(Rs. crore)

Sr. No.	Fixed Charges	FY 2011-12	FY 2012-13	FY 2013-14	FY 2014-15	FY 2015-16
1	Operation & Maintenance Expenses	708.79	801.19	890.17	977.24	1,065.79
2	Depreciation	469.45	576.79	688.07	803.41	901.73
3	Interest & Finance Charges	294.43	397.09	495.38	588.57	645.55
4	Interest on Working Capital	32.48	39.65	46.78	54.05	60.68
5	Return on Equity	354.69	444.68	537.97	634.66	717.08
6	Total Fixed Costs	1,859.84	2,259.39	2,658.37	3,057.92	3,390.83
7	Less: Expenses Capitalized	160.00	176.00	193.00	213.00	234.00
8	Add: Provision for Tax	15.37	15.37	15.37	15.37	15.37
9	Total Transmission Charges	1,715.21	2,098.76	2,480.74	2,860.29	3,172.20
10	Less: Other Income	103.00	103.00	103.00	103.00	103.00
11	Aggregate Revenue Requirement	1,612.21	1,995.76	2,377.74	2,757.29	3,069.20
12	Add: Incentive for achieving target availability	0.00	0.00	0.00	0.00	0.00
13	Add: Revenue Gap of True up of FY 2009-10	0.00	0.00	0.00	0.00	0.00
14	Add: Revenue Gap of SLDC true up for FY 2009-10*	13.48				
15	Total Revenue Requirement	1,625.69	1,995.76	2,377.74	2,757.29	3,069.20

* Prior to January 2010, the SLDC charges were being recovered by GETCO, which has resulted in a gap of Rs. 13.48 crore in the ARR of SLDC for FY 2009-10. As such, the Commission decided to include this gap in the tariff determination of GETCO.

7.7 Approved Transmission Charges for FY 2011-12 to FY2015-16



Petitioners Submission

The petitioner has submitted a transmission tariff based on the transmission costs estimated for FY 2011-12 to 2015-16. The transmission tariff for the year 2011-12 to 2015-16 as projected by GETCO are given in Table 7.32 below:

Table 7.32: Transmission tariff estimated by GETCO for FY 2011-12 to FY 2012-13

Sr.No	Particulars	FY 2011-12	FY 2012-13	FY 2013-14	FY 2014-15	FY 2015-16
1	Annual Transmission costs (Rs. Crore)	1,628.45	1,995.76	2,377.74	2,757.29	3,069.20
2	Total MW allocation	16006	18510	20076	24939	30749
3	Energy in MUs at 80% PLF	112167	129710	140695	174774	215487
4	Transmission tariff Rs/MW/day	2779.77	2953.99	3244.85	3029.08	2727.17
5	Transmission Tariff Paise / Unit	14.52	15.39	16.90	15.78	14.24

Commission's Analysis

The Commission has taken note of the submission made by the petitioner. It is observed that the load level of wind farms and solar projects commissioned after September 2009 has been considered by GETCO as per order of the Commission.

Based on the Commission's analysis the transmission charges for the control period are estimated as given in Table 7.33 below:

Table 7.33 : Transmission Tariff computed for FY 2011-12 to FY 2015-16

Sr. No.	Particulars	FY 2011-12	FY 2012-13	FY 2013-14	FY 2014-15	FY 2015-16
1	Annual Transmission costs (Rs. Crore)	1,625.69	1,995.76	2,377.74	2,757.29	3,069.20
2	Total MW allocation	16006	18510	20076	24939	30749
3	Energy in MUs at 80% PLF	112167	129710	140695	174774	215487
4	Transmission tariff Rs/MW/day	2775.06	2953.99	3244.85	3029.08	2727.17



Gujarat Energy Transmission Corporation Limited
Truing Up for 2009-10, APR for 2010-11, ARR for 2011-16, Determination of
Tariff for 2011-12

Sr. No.	Particulars	FY 2011-12	FY 2012-13	FY 2013-14	FY 2014-15	FY 2015-16
5	Transmission Tariff Paise / Unit	14.49	15.39	16.90	15.78	14.24

The Commission accordingly approves the annual tariff for transmission for FY 2011-12 as above.



Chapter 8

Compliance of Directives

8.1 Compliance of Directives issued by the Commission

The Commission in its MYT order dated 17th January 2009 and Tariff Orders dated 14th December 2009 and 31st March 2010 had issued various directives some of which had been complied with. GETCO has submitted a report on compliance of the Directives issued by the Commission. The comments of the Commission on the submission / compliance of the GETCO are given below:

Directive 1: Calculation of Depreciation

The Petitioner should submit details of depreciation in all its future submissions in accordance with Clause 17 of Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2009.

Compliance:

In compliances to the above directive it is to clarify that Clause 17 point 4 of CERC (Terms and Conditions of Tariff) Regulations, 2009 stipulates as under:

"The depreciation is to be calculated annually based on Straight Line Method and at rates specified in Appendix-III to these regulations for the assets of the generating station and transmission systems."

Further it is provided that:

"The remaining depreciable value as on 31st March of the year closing after a period of 12 years from the date of commercial operations shall be spread over the balance useful life of the assets."

In this regard it is to state that, at the time of unbundling of erstwhile Gujarat Electricity Board, Government of Gujarat had issued a notification wherein opening balance-sheet, the gross values of assets and accumulated depreciation have been mentioned.

Thus as per the notification of Government of Gujarat, asset-wise details which have completed a period of 12 years from the date of commercial operation, gross value, cumulative depreciation was not specified. So the exact details as per Clause No.17 of CERC (Terms and Conditions of Tariff) Regulations, 2009 cannot be made available.

GETCO has started commercial operation w.e.f. 1st April 2005. The Government of Gujarat has notified that from the FY 2005-06 GETCO has to provide depreciation at the rates notified by CERC / GERC.

Under the circumstances the methodology of computing depreciation in line with the directive issued by the Commission would be as under:

The depreciation has to be provided up to a period of 12 years from 01.04.2005 on block of assets which have been added in the asset-grouping after 01.04.2005 and thereafter the depreciation will be on the balance useful life of the assets, and in case of existing projects, the balance depreciable value as on 01.04.2009 shall be worked out by deducting the cumulative depreciation upto 31.03.2009 from the gross depreciable value of the assets.

Therefore, the Commission is requested to allow GETCO to compute the depreciation at rates notified by regulations and to provide it upto a period of 12 years from 01.04.2005 and thereafter to work out the depreciation on the balance useful life of the assets.

Commission's comments:

The explanation of GETCO on the issue is noted. This is dealt in the MYT Regulations, 2011 issued by GERC. GETCO shall follow the provisions in the Regulations.

Directive 2: Submission of Financial Figures in rupees crore

GETCO is directed to submit all financial figures in its future ARR and APR petitions in units of rupees crore. The Commission has taken note of the submission of the petitioner. However, the Commission directs the petitioner that it should submit all financial figures in its future ARR and APR petitions in units of rupees crore.

Compliance:

The Petitioner has submitted all the financial figures in terms of Rs. crore in this Petition.

Commission's comments

Action taken is noted. This shall be followed in future filings also.

Directive 3: Reactive Compensation

The Commission has taken note of the submission made by the Petitioner. The Commission observes that the pace of installation of 11 kV capacitors is slow. The Commission therefore directs the Petitioner to expedite this work and to submit a status report on the work in progress (quarterly).

Compliance:

1. The status of work completed/ Action plan for completion of installation of capacitor work is as under:

Sr. No.	Work Planned	Current Status
1	To install 5 No. of 20 MVAR Capacitor banks of 132 kV: 100 MVAR	Installation work has been completed and the banks are in service w.e.f 28th August, 2009
2	To install 11 kV capacitors: 2476 MVAR	It is decided to complete the installation of 630 MVAR at different 233 location of Gujarat on Turnkey basis. Out of 233 locations, 143 nos. of location has completed for civil work. Major equipment is received at site and Erection activity is also going on in parallel. 50 % installation work will be completed by end of January 2011 and balance by March 2011. Requirement of capacitors to be available in 2012 onwards is being planned.
3	To Install Line Reactors 1. 400 kV Mundra - Zerda (2x D/C) lines - 4X50 MVAR 2. 400 kV Mundra - Varsana (2XD/C) -1 X50 MVAR	50 MVAR x 4 =200 MVAR will be installed along with completion of line work by June, 2011. 50 MVAR x 1 =50 MVAR will be installed along with completion of line work by February, 2011.

2. Work completed/ Action plan for installation of Bus/Line Reactor:

Sr. No.	Name of Sub-Station	MVAR	Status/Installed
1	400 kV Kasor	125	Bay erection work is under progress and installation of reactor will be completed in January, 2011.



2	400 kV Soja	80	Work under progress. Target January, 2011.
3	400 kV Kosamba	50	Work under progress. Target March, 2011.
4	400 kV Halvad	50	Purchased order placed

We would also like to submit to the Commission that the reactive power management is taken care as per the system study and subsequently action shall also be taken from time-to-time based on the real time data.

Commission's comments:

Action taken is noted. GETCO shall report the progress of further reactive compensation on a quarterly basis.

8.2 New Directives

Directive 1: Transmission System Availability

GETCO has furnished the transmission system availability figures in its ARR and Tariff petition for Truing up for FY 2009-10 and Performance Review for FY 2010-11. The availability is required to be supported by detailed calculations as required by GERC Regulations, 2005. The detailed calculation for the availability of transmission system for FY 2009-10 and FY 2010-11 shall be furnished by April 2011. The claim of incentive for FY 2011-12 to FY 2015-16 shall be supported by detailed calculation as per GERC (MYT) Regulations, 2011. These calculations shall be submitted to the Commission within three months after the end of the relevant year.

Directive 2: Transmission Loss

- a. GETCO has projected in its petition a transmission loss of 4.2% for the FY 2010-11. However, according to the latest information provided by GETCO in March 2011, the transmission loss upto Feb 2011 works out to 3.85%. GETCO should furnish, by the end of April 2011, the actual transmission loss for the year 2010-11 supported with energy accounting (Energy input to the system less energy supplied to the beneficiaries).
- b. The transmission loss for the various years of the control period FY 2011-12 to FY 2015-16 shall be supported by system studies and submitted along with the business plan.

Directive 3: Cost Benefit Analysis for the Transmission projects for the control period FY 2011-12 to FY 2015-16

GETCO has submitted Transmission Plan for the Control Period FY 2011-12 to FY 2015-16 covering about 16063 Ckt. Km. of transmission lines and 378 sub-stations at 400 kV, 220 kV and 66 kV voltages at a total cost of over Rs.10723 crore. Though the Commission has provisionally approved, this requires to be support by detailed cost-benefit analysis to justify such massive investment.

GETCO is directed to submit a detailed cost-benefit analysis for each of the schemes or a group of schemes with detailed justification for each of the lines and sub-stations. The analysis shall be duly supported by system studies based on realistic generation programme and the load profile for each year of the control period.

Directive 4: Outsourcing of operation and maintenance of EHV substations

GETCO has stated that the operation and maintenance of some of the EHV substations are being outsourced. GETCO is directed to provide justification for outsourcing the O&M of sub-stations with cost-benefit analysis. GETCO is also directed to furnish the following and other relevant information on outsourcing of O&M of sub-station.

- i) Voltage class of sub-stations that are outsourced.
- ii) System of monitoring, whether the Agency is providing adequate number of persons with required qualifications as provided in the contract.
- iii) The experience so far on outsourcing.

Directive 5 : Business Plan

GETCO has submitted a “Business Plan” for the control period of five (5) years from FY 2011-12 to FY 2015-16 in accordance with the directive of the Commission vide Letter No.GERC/MYT/Tariff-2010/1794 dated 12th November, 2010. It is observed that the assumptions made by GETCO in the Business Plan for projection of various components of ARR are as per the GERC Regulations, 2005 and MYT Regulations, 2007. As the MYT Regulations, 2011 are applicable for determination of tariff during the control period, the projections for various components of ARR in the “Business Plan” should be as per the provisions of the Regulations.

Gujarat Energy Transmission Corporation Limited
Truing Up for 2009-10, APR for 2010-11, ARR for 2011-16, Determination of
Tariff for 2011-12

The GETCO is directed to revise the “Business Plan” for the control period from FY 2011-12 to FY 2015-16 in line with the provisions of the above Regulations and submit the same by July, 2011.



COMMISSION'S ORDER

The Commission approves the components of transmission charges and the Transmission tariff for FY 2011-12, as shown in the tables below:

(Rs. crores)

Sr.No	Particulars	Approved for FY 2011-12
1	Operations & Maintenance Expenses	708.79
2	Depreciation	469.45
3	Interest & Finance Charges	294.43
4	Interest on Working Capital	32.48
5	Return on Equity	354.69
6	Total Fixed Costs	1,859.84
7	Less: Expenses Capitalized	160.00
8	Add: Provision for Tax	15.37
9	Total Transmission Charges	1715.21
10	Less: Other Income	103.00
11	Aggregate Revenue Requirement	1,612.21
12	Add: Revenue gap of Truing up of FY 2009-10	0
13	Add: Revenue Gap of SLDC Truing up of FY 2009-10	13.48
14	Total Aggregate Revenue Requirement	1625.69

Transmission Tariff

S.No	Particulars	Unit	FY 2011-12
1	Transmission Tariff	Rs./MW/day	2775

The order shall come into force with effect from 1st April, 2011.

Sd/-

DR. P.K. MISHRA
Chairman

Sd/-

SHRI PRAVINBHAI PATEL
Member

Sd/-

DR. M.K. IYER
Member

Date: 31st March 2011
Ahmedabad

