

# **GUJARAT ELECTRICITY REGULATORY COMMISSION**



## **Multi-Year Tariff Order:**

Truing up for FY 2009-10,  
Annual Performance Review for FY 2010-11,  
Aggregate Revenue Requirement for FY 2011-12 to FY 2015-16  
and Tariff for FY 2011-12

For

**Madhya Gujarat Vij Company Limited**

**Case No. 1099 of 2011**

**6<sup>th</sup> September, 2011**

1<sup>st</sup> Floor, Neptune Tower, Opp: Nehru Bridge, Ashram Road  
Ahmedabad-380 009 (Gujarat), INDIA  
Phone: +91-79-26580350 Fax: +91-79-26584542  
E-mail: [gerc@gercin.org](mailto:gerc@gercin.org) Visit us: [www.gercin.org](http://www.gercin.org)





**GUJARAT ELECTRICITY REGULATORY COMMISSION  
(GERC)**

**AHMEDABAD**

**Multi-Year Tariff Order:**

Annual Performance Review for FY 2010-11,  
Aggregate Revenue Requirement for the MYT Period FY 2011-16  
and Determination of Tariff for FY 2011-12

For

**Madhya Gujarat Vij Company Limited**

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## CONTENTS

<b>1. Background and Brief History .....</b>	<b>1</b>
1.1 Background .....	1
1.2 Madhya Gujarat Vij Company Limited (MGVCL) .....	2
1.3 Commission's Orders for the First Control Period .....	2
1.4 Admission of Current Petition and Public Hearing Process .....	3
1.5 Approach of this Order .....	4
1.6 Contents of this Order .....	5
1.7 Business Plan .....	6
<b>2. Summary of ARR and Tariff Petition for FY 2011-12 to FY 2015-16 .....</b>	<b>8</b>
2.1 Aggregate Revenue Requirement (ARR) for the control period FY2011-12 to FY 2015-16 .....	8
2.2 Estimated Revenue Gap for FY 2011-12 .....	9
2.3 MGVCL's request to the Commission: .....	9
<b>3. Objections raised by various stakeholders, MGVCL's response and the Commission comments .....</b>	<b>11</b>
<b>4. Truing up for FY 2009-10 .....</b>	<b>50</b>
4.1 Energy sales .....	50
4.2 Distribution losses .....	51
4.3 Energy requirement .....	52
4.4 Power purchase cost .....	53
4.5 Fixed charges .....	56
4.5.1 Operation and Maintenance (O&M) expenses for FY 2009-10 .....	56
4.5.2 Employee cost .....	57
4.5.3 Repairs & Maintenance (R&M) expenses .....	58
4.5.4 Administration and General (A&G) expenses .....	59
4.5.5 Other Debits .....	60
4.5.6 Extraordinary items .....	60
4.5.7 Net prior period expenses / (income) .....	61
4.5.8 Other expenses capitalized .....	61
4.5.9 Capital expenditure, Capitalization and Funding of CAPEX .....	62
4.5.10 Depreciation .....	63
4.5.11 Interest and Finance charges .....	65
4.5.12 Interest on working capital .....	67
4.5.13 Provision for bad debts .....	69
4.5.14 Return on equity .....	71
4.5.15 Taxes .....	72
4.5.16 Non-tariff income .....	73
4.6 Revenue from sale of power .....	74
4.7 ARR approved in the truing up .....	76
4.8 Sharing of Gains / Losses for FY 2009-10 .....	77



4.9 Revenue gap / surplus for FY 2009-10 .....	78
<b>6. Annual Performance Review for FY 2010-11 .....</b>	<b>80</b>
5.1 Energy sales .....	80
5.2 Distribution losses .....	81
5.3 Energy requirement and Energy balance .....	81
5.4 Power purchase cost.....	82
5.5 Fixed charges .....	84
5.5.1 Operation and Maintenance (O&M) expenses .....	84
5.5.2 Employee cost.....	84
5.5.3 Repairs & Maintenance (R&M) expenses.....	85
5.5.4 Administration & General (A&G) expenses .....	86
5.5.5 Other Debits .....	86
5.5.6 Extra ordinary items .....	87
5.5.7 Net prior period expenses / (income).....	87
5.5.8 Other expenses capitalized.....	87
5.5.9 Capital expenditure .....	88
5.5.10 Depreciation .....	90
5.5.11 Interest and Finance charges .....	91
5.5.12 Interest on working capital .....	93
5.5.13 Provision for bad debts .....	94
5.5.14 Return on equity.....	95
5.5.15 Taxes.....	96
5.5.16 Non-tariff income .....	97
5.6 Revenue from sale of power .....	98
5.7 ARR considered in the APR.....	98
<b>5. Aggregate Revenue Requirement (ARR) for the control period FY</b>	
<b>2011-12 to FY 2015-16 and determination of tariff for FY 2011-12 ...</b>	<b>100</b>
6.1 Energy Sales .....	100
6.2.1 Overall approach to sales projections.....	101
6.2.2 Category-wise projected energy sales for the control period FY 2011-12 to FY	
2015-16.....	101
6.2.3 Consumers profile and connected load .....	102
6.2.4 Category-wise projected energy sales.....	103
6.2.5 Projection of consumers and connected load.....	104
6.3 Detailed Analysis of energy sales projected.....	105
6.4.1 Residential.....	105
6.4.2 Commercial .....	106
6.4.3 Industrial (LT) .....	107
6.4.4 Public water works .....	108
6.4.5 Agriculture (Irrigation pumpsets).....	109
6.2.6 Streetlights.....	112
6.2.7 Industrial (HT).....	113
6.2.9 Total Energy Sales .....	114



**Madhya Gujarat Vij Company Limited**  
**Truing up for FY 2009-10, APR for FY 2010-11,**  
**ARR for FY 2011-12 to FY 2015-16 and Tariff for FY 2011-12**

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6.3	Distribution losses .....	115
6.4	Energy requirement.....	116
6.7	Revenue Requirement for the control period FY 2011-12 to FY 2015-16 .....	118
6.8	Power purchase cost.....	119
6.8.1	Bulk supply tariff .....	119
6.8.2	Power purchase sources.....	119
6.8.3	Power purchase cost.....	124
6.8.4	Transmission charges .....	135
6.8.5	GUVNL cost.....	135
6.8.6	SLDC Fees and charges .....	136
6.8.7	Trading.....	136
6.8.8	Total power purchase cost .....	136
6.8.9	Net power purchase cost .....	137
6.8.10	Bulk supply arrangement .....	137
6.8.11	Power purchase sources and merit order despatch.....	139
6.8.12	Purchase in merit order .....	140
6.8.13	Power purchase during the control period FY 2011-12 to FY 2015-16 .....	141
6.8.14	Transmission costs.....	151
6.8.15	Trading.....	153
6.8.16	Fixed costs .....	153
6.8.17	Variable costs .....	154
6.8.18	Net power purchase cost .....	154
6.9	Fixed charges .....	155
6.9.1	Operation and Maintenance (O&M) expenses .....	155
6.9.2	Capital expenditure .....	157
6.9.3	Depreciation .....	160
6.9.4	Interest and Finance charges.....	161
6.9.5	Interest on working capital .....	163
6.9.6	Provision for bad and doubtful debts .....	164
6.9.7	Return on equity .....	165
6.9.8	Provision for Tax .....	166
6.9.9	Non-Tariff income.....	167
6.10	Annual Revenue Requirement (ARR) excluding power purchase cost .....	167
6.11	Revenue from existing tariff .....	169
6.12	Other consumer related income.....	170
6.13	Agriculture subsidy .....	171
6.14	Total revenue for the control period FY 2011-12 to FY 2015-16.....	172
6.15	Determination of differential Bulk Supply Tariff .....	172
6.15.1	Aggregate amount available with the four DISCOMs for Power Purchase.....	173
6.15.2	Calculation of Gap.....	173
6.15.3	Allocation of Gap.....	174
6.15.4	Bulk Supply Tariff .....	175
6.16	ARR for the control period FY 2011-12 to 2015-16.....	176
6.17	Estimated Revenue Gap for FY 2011-12 for MGVCCL .....	177



<b>7. Compliance of Directives .....</b>	<b>178</b>
7.1 Compliance of earlier Directives .....	178
7.2 Fresh Directives.....	188
<b>8. Fuel and Power Purchase Price Adjustment.....</b>	<b>190</b>
8.1 Fuel Price and Power Purchase Price Adjustment.....	190
8.2 Power Purchase Price Adjustment (FPPPA) .....	190
8.3 Base price of fuel of GSECL stations.....	195
<b>9. Wheeling charges and cross subsidy surcharge .....</b>	<b>198</b>
9.1 Allocation matrix .....	198
9.2 Wheeling charges.....	199
9.3 Cross subsidy charges .....	200
<b>10. Tariff philosophy and Tariff Proposals .....</b>	<b>203</b>
10.1 Introduction.....	203
10.2 Proposal of MGVL for tariff increase and changes in tariff structure.....	204
10.2.1 Tariff proposal.....	204
10.2.2 Proposed changes in the tariff structure (LT category) .....	204
10.2.3 HT category .....	206
10.3 Revenue Gap / Surplus.....	209
10.4 Impact of Electricity Duty.....	209
<b>COMMISSION'S ORDER .....</b>	<b>211</b>
<b>ANNEXURE: TARIFF SCHEDULE FOR FY 2011-12.....</b>	<b>213</b>



## TABLES

Table 2.1: ARR proposed by MGVCCL for the control period FY 2011-12 to FY 2015-16.....	8
Table 2.2: Estimated revenue gap for FY 2011-12 at existing tariff.....	9
Table 4.1: Category-wise actual energy sales for FY 2009-10.....	50
Table 4.2: Energy sales approved in the truing up for FY 2009-10.....	51
Table 4.3 Distribution Losses approved for truing up for FY 2009-10.....	52
Table 4.4: Energy requirement as submitted by MGVCCL for FY 2009-10.....	52
Table 4.5: Energy requirement approved for truing up for FY 2009-10.....	53
Table 4.6: Power purchase cost claimed by MGVCCL for FY 2009-10.....	54
Table 4.7: Power purchase cost approved by the Commission for truing up for FY 2009-10.....	55
Table 4.8: Gain/(loss) on account of distribution losses for FY 2009-10.....	55
Table 4.9 Approved gain/ (loss) – power purchases expenses for truing up for FY 2009-10.....	56
Table 4.10: O&M expenses claimed in the truing up for FY 2009-10.....	56
Table 4.11: O&M expenses and gains / losses claimed in the truing up for FY 2009-10.....	57
Table 4.12: Employee cost claimed by MGVCCL in the truing up for FY 2009-10.....	57
Table 4.13: R&M expenses claimed by MGVCCL for the truing up for FY 2009-10.....	58
Table 4.14: A&G expenses claimed by MGVCCL in the truing up for FY 2009-10.....	59
Table 4.15: Approved O&M expenses and gains / loss in the truing up for FY 2009-10.....	62
Table 4.16: Capital expenditure claimed by MGVCCL for FY 2009-10.....	62
Table 4.17: Approved Capitalization and sources of funding in the truing up for FY 2009-10.....	63
Table 4.18: Depreciation claimed by MGVCCL in the truing up for FY 2009-10.....	63
Table 4.19: Fixed assets and depreciation computed by MGVCCL for FY 2009-10.....	64
Table 4.20: Gain / loss due to deprecation claimed in the truing up for FY 2009-10.....	64
Table 4.21: Approved depreciation in the truing up for FY 2009-10.....	65
Table 4.22: Gain / loss due to deprecation approved in the truing up for FY 2009-10.....	65
Table 4.23: Interest and Finance charges claimed by MGVCCL in the truing up for FY 2009-10.....	65
Table 4.24: Interest and Finance charges claimed in the truing up for FY 2009-10.....	66
Table 4.25: Gains / (Loss) claimed due to interest & finance charges for FY 2009-10.....	66
Table 4.26: Interest and Finance charges approved by the Commission in the truing up for FY 2009-10.....	67
Table 4.27: Gain / loss approved in the truing up for FY 2009-10.....	67
Table 4.28: Interest on working capital claimed by MGVCCL in the truing up for FY 2009-10.....	68
Table 4.29: Interest on working capital claimed by MGVCCL in the truing up for FY 2009-10.....	68
Table 4.30: Gains / (Loss) claimed due to interest on working capital for FY 2009-10.....	68
Table 4.31: Interest on working capital approved in the truing up for FY 2009-10.....	69
Table 4.32: Gain / loss approved in the truing up for FY 2009-10.....	69
Table 4.33: Provision for bad debts claimed by MGVCCL in the truing up for FY 2009-10.....	70
Table 4.34: Provision for bad debts for FY 2009-10.....	70
Table 4.35: Gain / loss due to bad debts approved in the truing up for FY 2009-10.....	71
Table 4.36: Return on equity claimed by MGVCCL in the truing up for FY 2009-10.....	71
Table 4.37: Return on equity claimed by MGVCCL in the truing up for FY 2009-10.....	71
Table 4.38: Return on equity approved for FY 2009-10.....	72
Table 4.39: Approved gains / losses due to return on equity in the truing up for FY 2009-10.....	72
Table 4.40: Taxes claimed by MGVCCL in the truing up for FY 2009-10.....	72
Table 4.41: Gains / (Loss) claimed due to provision for taxes for FY 2009-10.....	73
Table 4.42: Approved gains / losses due to tax in the truing up for FY 2009-10.....	73
Table 4.43: Non-tariff income claimed by MGVCCL in the truing up for FY 2009-10.....	74
Table 4.44: Gains / (Loss) claimed due to non-tariff income for FY 2009-10.....	74
Table 4.45: Approved gains / losses due to non-tariff income in the truing up for FY 2009-10.....	74
Table 4.46: Revenue claimed in the truing up for FY 2009-10.....	75
Table 4.47 : Category-wise sales and revenue for FY 2009-10.....	75
Table 4.48: Revenue approved in the truing up for FY 2009-10.....	75
Table 4.49: ARR approved in truing up for FY 2009-10.....	76
Table 4.50: Projected Revenue gap / (surplus) FY 2009-10.....	78
Table 4.51: Revenue gap / (surplus) approved in the truing up for FY 2009-10.....	79



**Madhya Gujarat Vij Company Limited**  
**Truing up for FY 2009-10, APR for FY 2010-11,**  
**ARR for FY 2011-12 to FY 2015-16 and Tariff for FY 2011-12**

Table 5.1: Category-wise sales for FY 2010-11 .....	80
Table 5.2: Distribution losses for FY 2010-11 .....	81
Table 5.3: Energy requirement and Energy balance as submitted by MGVL for FY 2010-11 .....	81
Table 5.4: Energy requirement considered for FY 2010-11 .....	82
Table 5.5: Power purchase cost as submitted by MGVL for FY 2010-11 .....	83
Table 5.6: Quantum of power purchase and power purchase cost considered for APR for FY 2010-11 .....	83
Table 5.7: Estimated O&M expenses in the APR for FY 2010-11 .....	84
Table 5.8: Employee cost considered in the APR for FY 2010-11 .....	85
Table 5.9: R&M expenses considered in the APR for FY 2010-11 .....	86
Table 5.10: A&G expenses considered in the APR for FY 2010-11 .....	86
Table 5.11: O&M expenses considered in the APR for FY 2010-11 .....	87
Table 5.12: Capital expenditure projected in the RE for FY 2010-11 .....	88
Table 5.13: Funding of capital expenditure projected in the APR for FY 2010-11 .....	89
Table 5.14: Capitalization and sources of funding considered in the APR for FY 2010-11 .....	90
Table 5.15: Fixed Assets and Depreciation projected in the APR for FY 2010-11 .....	90
Table 5.16: Gains / (Loss) due to deprecation claimed in the APR for FY 2010-11 .....	90
Table 5.17: Depreciation considered in the APR for FY 2010-11 .....	91
Table 5.18: Interest & Finance charges claimed in the APR for FY 2010-11 .....	91
Table 5.19: Gain / (Loss) due to interest & financial charges claimed in the APR for FY 2010-11 .....	92
Table 5.20: Interest and Finance charges considered in the APR for FY 2010-11 .....	92
Table 5.21: Interest on Working Capital claimed in the APR for FY 2010-11 .....	93
Table 5.22: Treatment of Interest on Working Capital .....	93
Table 5.23: Interest on working considered in the APR for FY 2010-11 .....	94
Table 5.24: Treatment of Provision for bad debts .....	94
Table 5.25: Provision for bad debts considered in the APR for FY 2010-11 .....	95
Table 5.26: Return on Equity claimed in the APR for FY 2010-11 .....	95
Table 5.27: Treatment of return on equity .....	96
Table 5.28: Return on equity considered in the APR for 2010-11 .....	96
Table 5.29: Provision for taxes claimed in the APR for FY 2010-11 .....	96
Table 5.30: Provision for taxes considered in the APR for FY 2010-11 .....	97
Table 5.31: Non-tariff income claimed in the APR for FY 2010-11 .....	97
Table 5.32: Non-tariff income considered in the APR for FY 2010-11 .....	97
Table 5.33: Revenue claimed in the APR for FY 2010-11 .....	98
Table 5.34: ARR considered in the APR for FY 2010-11 .....	99
Table 6.1: Historical data on category-wise energy sales .....	101
Table 6.2: Category-wise growth rates of energy sales .....	102
Table 6.3: Category-wise number of consumers .....	102
Table 6.4: Growth rate of number of consumers .....	102
Table 6.5: Category-wise connected load .....	103
Table 6.6: Growth rate for connected load .....	103
Table 6.7: Projected energy sales for the control period FY 2011-12 to FY 2015-16 .....	104
Table 6.8: Projection of number of consumers for the control period FY 2011-12 to FY 2015-16 .....	104
Table 6.9: Projection of connected load for the control period FY 2011-12 to FY 2015-16 .....	104
Table 6.10: Energy sales projected for the residential category during the control period FY 2011-12 to FY 2015-16 .....	106
Table 6.11 : Energy sales approved for the residential category during the control period .....	106
Table 6.12 : Energy sales projected for the Commercial category during the control period FY 2011-12 to FY 2015-16 .....	106
Table 6.13: Energy sales approved for Commercial category for the control period FY 2011-12 to FY 2015-16 .....	107
Table 6.14: Energy sales projected for Industrial (LT) category for the control period FY 2011-12 to FY 2015-16 .....	107
Table 6.15: Energy sales approved for Industrial (LT) category for the control period FY 2011-12 to FY 2015-16 .....	108
Table 6.16: Energy sales projected for Public water works category for the control period FY 2011-12 to FY 2015-16 .....	108



**Madhya Gujarat Vij Company Limited**  
**Truing up for FY 2009-10, APR for FY 2010-11,**  
**ARR for FY 2011-12 to FY 2015-16 and Tariff for FY 2011-12**

Table 6.17: Energy sales approved for Public water works category for the control period FY 2011-12 to FY 2015-16 .....	109
Table 6.18: Energy sales projected for Agriculture (Irrigation Pumpsets) for the control period FY 2011-12 to FY 2015-16.....	109
Table 6.19: Projected number of new connections, connected load and consumption by Agriculture (Irrigation Pumpsets) for the control period FY 2011-12 to FY 2015-16 .....	110
Table 6.21 Approved consumption by Agriculture consumers .....	112
Table 6.22 Projected energy sales for Streetlights .....	112
Table 6.23: Energy sales approved for Streetlights.....	113
Table 6.24: Projected energy sales for Industrial (HT) .....	113
Table 6.25: Approved energy sales for Industrial (HT) .....	113
Table 6.26: Approved energy sales for Railway traction .....	114
Table 6.27: Energy sales approved for the Railway traction .....	114
Table 6.28: Energy sales projected by MGVCCL for the control period FY 2011-12 to FY 2015-16....	114
Table 6.29: Energy sales approved by the Commission for the control period FY 2011-12 to FY 2015-16 .....	115
Table 6.30: Projected distribution losses for the control period .....	115
Table 6.31: Distribution losses approved for the control period FY 2011-12 to FY 2015-16.....	116
Table 6.32: Total projected energy requirement during the control period .....	116
Table 6.33: Total approved energy requirement during the control period.....	117
Table 6.34: Summary of energy balance projected by MGVCCL .....	117
Table 6.35: Approved energy balance for the control period.....	118
Table 6.36: Existing capacity contracted by GUVNL as furnished by MGVCCL.....	120
Table 6.37: New capacity allocation and date of commissioning (COD) during the control period....	122
Table 6.38: Additional capacity envisaged for FY 2011-12 to FY 2015-16 .....	123
Table 6.39: Power purchase cost projected by GUVNL for FY 2011-12 as furnished by MGVCCL.....	125
Table 6.40: Power purchase cost projected by MGVCCL for FY 2012-13.....	127
Table 6.41: Power purchase cost projected by MGVCCL for FY 2013-14.....	129
Table 6.42: Power purchase cost projected by MGVCCL for FY 2014-15.....	131
Table 6.43: Power purchase cost projected by MGVCCL for FY 2015-16.....	133
Table 6.44: Transmission charges projected by MGVCCL for the control period FY 2011-12 to FY 2015-16 .....	135
Table 6.45: Trading of energy envisaged during the control period FY 2011-12 to FY 2015-16 as projected by MGVCCL .....	136
Table 6.46: Fixed cost for DISCOMs and trading of energy from FY 2011-12 to FY 2015-16 as projected by MGVCCL .....	136
Table 6.47: Variable cost for DISCOMs and trading of energy for FY 2011-12 to FY 2015-16 projected by MGVCCL .....	137
Table 6.48: GUVNL net power purchase cost for the control period FY 2011-12 to FY 2015-16 .....	137
Table 6.49: Existing capacity contracted source-wise by GUVNL for the control period FY 2011-12 to FY 2015-16 .....	140
Table 6.51: Power purchase cost for FY 2011-12 .....	141
Table 6.52: Power purchase cost for FY 2012-13 .....	143
Table 6.53: Power purchase cost for FY 2013-14 .....	145
Table 6.54: Power purchase cost for FY 2014-15 .....	147
Table 6.55: Power purchase cost for FY 2015-16 .....	149
Table 6.56: Transmission charges approved by the Commission for the control period FY 2011-12 to FY 2015-16 .....	152
Table 6.57: GUVNL costs approved by the Commission for the control period FY 2011-12 to FY 2015-16 .....	152
Table 6.58: SLDC charges approved by the Commission .....	153
Table 6.59: Fixed cost for DISCOMs and Trading units approved from FY 2011-12 to FY 2015-16. ....	154
Table 6.60: Variable cost for DISCOMs and trading energy approved for the control period for FY 2011-12 to FY 2015-16.....	154
Table 6.61: Net power purchase cost for the control period FY 2011-12 to FY 2015-16 .....	155
Table 6.62: Proposed O&M expenses projected for FY 2011-12 to 2015-16.....	155
Table 6.63: Average O&M expenses for FY 2008-09.....	156



**Madhya Gujarat Vij Company Limited**  
**Truing up for FY 2009-10, APR for FY 2010-11,**  
**ARR for FY 2011-12 to FY 2015-16 and Tariff for FY 2011-12**

Table 6.64: Approved O&M expenses for FY 2011-12 to 2015-16.....	157
Table 6.65: Capital expenditure projected for FY 2010-11 to FY 2015-16 .....	157
Table 6.66: Projected Funding of capital expenditure proposed for the control period FY 2011-12 to FY 2015-16.....	159
Table 6.67: Approved CAPEX, capitalization and funding for the control period FY 2011-12 to FY 2015-16.....	159
Table 6.68: Gross fixed assets approved for the control period FY 2011-12 to FY 2015-16 .....	160
Table 6.69: Depreciation projected for the control period.....	160
Table 6.70: Approved Depreciation for the control period FY 2011-12 to FY 2015-16 .....	161
Table 6.71: Interest and Finance charges projected for the control period .....	161
Table 6.72: Approved Interest and Finance charges for the control period FY 2011-12 to FY 2015-16 .....	162
Table 6.73: Projected Interest on working capital for the control period.....	163
Table 6.74: Interest on working capital approved for the control period .....	164
Table 6.75: Bad and doubtful debts projected for FY 2011-12 to 2015-16.....	164
Table 6.76: Approved bad and doubtful debts for FY 2011-12 to 2015-16 .....	165
Table 6.77: Return on equity projected for the control period FY 2011-12 to FY 2015-16.....	165
Table 6.78: Approved Return on equity for the control period FY 2011-12 to FY 2015-16 .....	165
Table 6.79: Taxes projected for the control period FY 2011-12 to FY 2015-16 .....	166
Table 6.80: Approved Income tax for the control period FY 2011-12 to FY 2015-16.....	166
Table 6.81: Non-Tariff income projected for the control period FY 2010-11 to FY 2015-16 .....	167
Table 6.82: Approved Non-tariff income for control period FY 2011-12 to FY 2015-16 .....	167
Table 6.83: Projected ARR for the control period excluding power purchase cost .....	168
Table 6.84: Approved ARR for MGVCCL for the control period excluding power purchase cost .....	168
Table 6.85: Revenue from existing tariff projected for FY 2011-12 .....	169
Table 6.86: Approved sales and Revenue for FY 2011-12.....	170
Table 6.87: Other consumer related income projected for FY 2011-12 .....	170
Table 6.88: Subsidy for FY 2011-12 .....	171
Table 6.89: Approved agricultural subsidy for FY 2011-12.....	171
Table 6.90: MGVCCL - Revenue from existing tariff for the control period .....	172
Table 6.91 : Aggregate Revenue available for power purchase from FY 2011-12 to FY 2015-16.....	173
Table 6.92 : Revenue Gap from FY 2011-12 to FY 2015-16.....	174
Table 6.93: Energy requirement and percentage of energy requirement.....	174
Table 6.94 : Allocation of Gap from FY 2011-12 to FY 2015-16.....	174
Table 6.95 : Bulk Supply Tariff .....	175
Table 6.96: ARR approved by the Commission for MGVCCL from FY 2011-12 to FY 2015-16 .....	176
Table 6.97: Estimated Revenue Gap for FY 2011-12 at Existing Tariff for MGVCCL.....	177
Table 8.1: Existing capacity allocation to GUVNL for FY 2011-12 .....	191
Table 9.1 Allocation matrix for segregation of wheeling and retail supply for MGVCCL for the FY 2011-12.....	198
Table 9.2: Allocation of ARR between wheeling and retail supply business for MGVCCL for FY 2011-12.....	199
Table 9.3: cross subsidy surcharge for FY 2011-12 .....	201

## ANNEXURES

<b>Annexure</b>	<b>Title</b>	<b>Page</b>
1.1	List of Organizations and individuals who filed objections/suggestions	7
9.1	Computation of Wheeling charges	203



## ABBREVIATIONS

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





## Before the Gujarat Electricity Regulatory Commission at Ahmedabad

Case No. 1099 of 2011

Date of the Order: 06.09.2011

### 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 Madhya Gujarat Vij Company Limited (hereinafter referred to as 'MGVCL' or 'Petitioner') has filed its petition on 12<sup>th</sup> May, 2011 under Section 62 of the Electricity Act, 2003, read with Gujarat Electricity Regulatory Commission (Terms & Conditions of Tariff) Regulations, 2005, Gujarat Electricity Regulatory Commission (Multi-Year Tariff Framework) Regulations, 2007 and Gujarat Electricity Regulatory Commission (Multi-Year Tariff) Regulations, 2011 (hereinafter referred to as 'MYT Regulations, 2011'), for truing up of FY 2009-10, Annual Performance Review (APR) for FY 2010-11, Aggregate Revenue Requirement (ARR) for the control period FY 2011-12 to FY 2015-16 and determination of Tariff FY 2011-12.

The Commission, on preliminary analysis, admitted the petition on 17<sup>th</sup> May, 2011.





## **1.2 Madhya Gujarat Vij Company Limited (MGVCL)**

The Government of Gujarat unbundled and restructured the Gujarat Electricity Board with effect from 1<sup>st</sup> 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:

<b>Generation</b>	Gujarat State Electricity Corporation Limited (GSECL)
<b>Transmission</b>	Gujarat Energy Transmission Corporation Limited (GETCO)

### **Distribution Companies:**

<b>Sl. No</b>	<b>Name of Company</b>
1	Dakshin Gujarat Vij Company Limited (DGVCL)
2	Madhya Gujarat Vij Company Limited (MGVCL)
3	Uttar Gujarat Vij Company Limited (UGVCL)
4	Paschim Gujarat Vij Company Limited (PGVCL)

Gujarat Urja Vikas Nigam Limited (GUVNL), a holding company, is responsible for purchase of electricity from various sources and supply to Distribution Companies and also other activities including trading of electricity.

The Government of Gujarat, vide notification dated 3<sup>rd</sup> October, 2006, notified the final opening balance sheets of the transferee companies as on 1<sup>st</sup> April, 2005. The value of assets and liabilities, which stand transferred from the erstwhile Gujarat Electricity Board to the transferee companies, including Madhya Gujarat Vij Company Limited (MGVCL). 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 Orders for the First Control Period**

The Madhya Gujarat Vij Company Limited filed its petition under the Multi-Year Tariff framework for the FYs 2008-09, 2009-10 and 2010-11 on 31<sup>st</sup> July, 2008 in accordance with the Gujarat Electricity Regulatory Commission (Multi-Year Tariff) Regulations, 2007 notified by GERC. The Commission, in exercise of the powers





vested under Sections 61, 62 and 64 of the Electricity Act, 2003 and all other powers enabling it in this regard and after taking into consideration the submissions made by MGVCL, the objections by various stakeholders, response of MGVCL, issues raised during the public hearing and all other relevant material, issued the Multi-Year Tariff order on 17<sup>th</sup> January, 2009 for the control period comprising the FYs 2008-09, 2009-10 and 2010-11.

The Commission also issued the orders on the following:

<b>Subject</b>	<b>Date of Issue</b>
Annual Performance Review for FY 2008-09 and Determination of tariff for FY 2009-10	14 <sup>th</sup> December, 2009
Annual Performance Review for FY 2009-10 and Determination of tariff for FY 2010-11	31 <sup>st</sup> March, 2010

#### **1.4 Admission of Current Petition and Public Hearing Process**

The MGVCL submitted the current petition for 'truing up' of FY 2009-10, Annual Performance Review (APR) for FY 2010-11 and the determination of Aggregate Revenue Requirement (ARR) for the distribution business for the period FY 2011-12 to FY 2015-16, the control period and determination of tariff for FY 2011-12. The Commission undertook the technical validation of the petition and admitted the petition (Case No.1099 of 2011) on 17<sup>th</sup> May, 2011.

In accordance with Section 64 of the Electricity Act, 2003, the Commission directed MGVCL to publish its application in the abridged form to ensure public participation. The Public Notice, inviting objections / suggestions from its stakeholders on the ARR petition filed by it, was published in the following newspapers on 19<sup>th</sup> May, 2011.

1. DNA (Daily News and Analysis) (English)
2. Divya Bhaskar (Gujarati)

The petitioner also placed the public notice and the petition on the website ([www.mgvcl.com](http://www.mgvcl.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 18<sup>th</sup> June, 2011.



The MGVL / Commission received the objections / suggestions from 15 consumers / consumer organisations. The Commission examined the objections / suggestions received and fixed the date for public hearing for MGVL to be held on 11<sup>th</sup> and 12<sup>th</sup> July, 2011. Subsequently, communication was sent to these objectors to take part in the public hearing process for presenting their views in person before the Commission. The public hearing was conducted at Commission's Office in Ahmedabad on scheduled dates.

The names of the consumers / consumer organisations that filed their objections and the objectors who participated in the public hearing for presenting their objections are given in Annexure 1.1.

A short note on the main issues raised by the objectors in the written submissions and also in the public hearing in respect of the petition, along with the response of UGVCL and the Commission's views on the response are briefly given in Chapter 3.

## **1.5 Approach of this Order**

The Multi-Year Tariff Regulations, 2007 provide for 'truing up' of 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 by the MYT order dated 17<sup>th</sup> January, 2009, the Annual Performance Review for FY 2008-09 by the tariff order dated 14<sup>th</sup> December, 2009 and Annual Performance Review for FY 2009-10 and the tariff order dated 31<sup>st</sup> March, 2010.

The MGVL has now approached the Commission with the present petition for 'truing up' of the FY 2009-10, the Annual Performance Review for the FY 2010-11 and determination of ARR for the period FY 2011-12 to FY 2015-16, the control period and determination of tariff for the FY 2011-12.

The Commission has undertaken truing up of the FY 2009-10 and Performance Review for FY 2010-11, based on the submission of the petitioner. However, the Commission has undertaken the computation of gains and losses for the FY 2009-10, based on the audited annual accounts made available to it. 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 the 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 for the FY 2009-10, the Commission has been primarily guided by the following principles:

1. Controllable parameters have been considered at the level approved under the Tariff Order for FY 2009-10, unless the Commission considers there are valid reasons for revising of the same.
2. Uncontrollable parameters have been revised, based on the actual performance observed.

The truing up of the FY 2009-10 and annual performance review for FY 2010-11 have been considered, based on the 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, which were notified on 22<sup>nd</sup> March, 2011.

**Regulation 1.4 (a) of these Regulations, 2011 reads as under:**

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

**1.6 Contents of this Order**

**This order is divided into ten chapters, as under:**

1. The **First Chapter** provides a background of the petitioner, the petition and details of the public hearing process and the approach adopted for this order.
2. The **Second Chapter** contains a summary of MGVL's MYT petition.
3. The **Third Chapter** provides a brief account of the public hearing process, including the objections raised by various stakeholders, MGVL's response and the Commission's views on the same.
4. The **Fourth Chapter** deals with the 'Truing up' for FY 2009-10.
5. The **Fifth Chapter** deals with Annual Performance Review (APR) for FY 2010-11



6. The **Sixth Chapter** deals with the Aggregate Revenue Requirement (ARR) for FY 2011-12 to 2015-16, the control period.
7. The **Seventh Chapter** deals with the compliance of directives and issue of fresh directives.
8. The **Eighth Chapter** deals with Power Purchase Cost Adjustment.
9. The **Ninth Chapter** deals with computation of Wheeling Charges
10. The **Tenth Chapter** deals with Tariff Philosophy and Tariff Proposals approved by the Commission.

## **1.7 Business Plan**

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



## **Annexure 1.1**

### **List of Organizations and individuals who filed objections/suggestions**

<b>Sl. No</b>	<b>Name</b>
1	Viom Networks
2	Rajkot Chamber of Commerce & Industry
3	Gujarat Krushi Vij Grahak Suraksha Sangh (GKVGSS)
4	Pradesh Kisan Vikas Sang
5	Laghu Udhog Bharti Gujarat
6	Tata Teleservices Limited
7	Indus Towers Limited
8	Utility Users' Welfare Association
9	Surat Citizen's Council Trust & The Southern Gujarat Chamber of Commerce & Industry
10	The Gujarat Chamber of Commerce & Industry (GCCI)
11	Consumer Education and Research Society (CERS)
12	Federation of Industries and Association (Gujarat) (FIA)
13	Western Railways
14	Centre for Apparent Energy Research (CAER)
15	Federation of Gujarat Industry

### **List of participants present in the public hearing**

<b>Sl. No</b>	<b>Name</b>
1	Viom Networks
2	Rajkot Chamber of Commerce & Industry
3	Gujarat Krushi Vij Grahak Suraksha Sangh (GKVGSS)
4	Pradesh Kisan Vikas Sang
5	Laghu Udhog Bharti Gujarat
6	Tata Teleservices Limited
7	Indus Towers Limited
8	Utility Users' Welfare Association
9	Surat Citizen's Council Trust & The Southern Gujarat Chamber of Commerce & Industry
10	The Gujarat Chamber of Commerce & Industry (GCCI)
11	Consumer Education and Research Society (CERS)
12	Federation of Industries and Association (Gujarat) (FIA)
13	Western Railways
14	Centre for Apparent Energy Research (CAER)
15	Federation of Gujarat Industry



## 2. Summary of ARR and Tariff Petition for FY 2011-12 to FY 2015-16

### 2.1 Aggregate Revenue Requirement (ARR) for the control period FY2011-12 to FY 2015-16

The Madhya Gujarat Vij Company Limited (MGVCL) submitted the petition on 5<sup>th</sup> May, 2011 seeking approval for Aggregate Revenue Requirement and determination of Retail supply tariff for the control period FY 2011-12 to FY 2015-16.

The MGVCL has projected the revenue requirement for the control period as under:

Year	Rs. crore
2011-12	3523
2012-13	4102
2013-14	4623
2014-15	5033
2015-16	5747

The details of expenses under various components of ARR are given in the Table below:

**Table 2.1: ARR proposed by MGVCL for the control period FY 2011-12 to FY 2015-16**  
(Rs. crore)

Sl. No.	Particulars	FY 2011-12	FY 2012-13	FY 2013-14	FY 2014-15	FY 2015-16
1	Cost of power purchase	3047	3594	4084	4468	5155
2	Operation and Maintenance expenses	269	284	301	318	336
2.1	Employee cost	222	234	248	262	277
2.2	Repairs and maintenance	40	42	45	47	50
2.3	Administration and general expenses	39	41	43	46	48
2.4	Other debts	7	8	8	9	9
2.5	Extraordinary items	0	0	0	0	0
2.6	Net prior period expenses / income	15	16	17	18	19
2.7	Other expenses capitalised	(54)	(57)	(61)	(64)	(68)
3	Depreciation	121	134	147	159	170
4	Interest and finance charges	51	44	35	24	10
5	Interest on working capital	40	47	53	57	65
6	Provision for bad debts	6	6	7	7	8
7	<b>Sub-total (1 to 6)</b>	<b>3533</b>	<b>4109</b>	<b>4626</b>	<b>5033</b>	<b>5745</b>
8	Return on equity	71	74	78	81	83
9	Provision for tax / tax paid	6	6	6	6	6
10	<b>Total expenditure (7 to 9)</b>	<b>3610</b>	<b>4189</b>	<b>4709</b>	<b>5120</b>	<b>5834</b>
11	Less: Non-tariff income	87	87	87	87	87
12	<b>Aggregate Revenue Requirement</b>	<b>3523</b>	<b>4102</b>	<b>4623</b>	<b>5033</b>	<b>5747</b>



## 2.2 Estimated Revenue Gap for FY 2011-12

Based on the ARR for FY 2011-12 given in Table 2.1 above, the estimated revenue gap for FY 2011-12 at existing tariff is shown in Table 2.2 below.

**Table 2.2: Estimated revenue gap for FY 2011-12 at existing tariff**

(Rs. crore)

Sl. No.	Particulars	FY 2011-12
1.	Aggregate Revenue Requirement	3523
2.	Revenue gap from truing up of FY 2009-10	75
3.	<b>Total Aggregate Revenue Requirement</b>	<b>3598</b>
4.	Revenue with existing tariff	2753
5.	PPPA charges @61 paise/kWh	441
6.	Other income (consumer related)	59
7.	Agriculture subsidy	80
8.	<b>Total revenue including subsidy (4 to 7)</b>	<b>3333</b>
9.	<b>Gap / (Surplus) 3-8)</b>	<b>266</b>

## 2.3 MGVCL's request to the Commission:

1. To condone the delay in filing this petition.
2. To admit this petition seeking Truing up of FY 2009-10, Annual Performance Review of FY 2010-11 and MYT petition for the second control period FY 2011-12 to 2015-16.
3. To approve the truing up for FY 2009-10 and allow sharing of gains/losses with the Consumers, as per sharing mechanism prescribed in the MYT Regulations, 2007.
4. To approve the Annual Performance Review for FY 2010-11 and allow sharing of gains/losses with the Consumers, as per sharing mechanism prescribed in the MYT Regulations, 2007.
5. To approve Aggregate Revenue Requirement of the second control period FY 2011-12 to 2015-16, as requested in this Petition on the basis of GERC (Multi- Year Tariff) Regulations, 2011.
6. To approve the methodology for recovery of Revenue Gap for FY 2011-12 as given in the Petition through proposed tariff hike of 25 paise/kWh for all categories of consumers, except agriculture and BPL (1-30 kWh).
7. To treat the un-recovered revenue gap as a regulatory asset, to be recovered in the future tariff.



8. To approve the actual capital expenditure for the FY 2009-10, revised capital expenditure plan for FY 2010-11 and projection of capital expenditure for the control period FY 2011-12 to 2015-16.
9. To approve the formula proposed for calculation of PPPA charges.
10. To consider approved parameters/ARR of GSECL, GETCO and SLDC, while finalising tariff of MGVL.
11. To grant any other relief as the Commission may consider appropriate. The petitioner craves leave of the Commission to allow further submissions, addition and alteration to this Petition as may be necessary from time to time and,
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.





### 3. Objections raised by various stakeholders, MGVCL's response and the Commission comments

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In response to the public notice inviting objections/suggestions of the stakeholders on the petition, a number of consumers/consumer organisations filed their submissions in writing. Some of these objectors also participated in the public hearing held on the 11<sup>th</sup> and 12<sup>th</sup> of July, 2011 jointly for DGVCL, MGVCL, UGVCL and PGVCL. The objections /suggestions, the responses and submissions of the petitioner on them and the views of the Commission are indicated below. Submissions and responses, pertaining to specific and detailed aspects of tariff, have been taken into account in the formulation of an equitable tariff, balancing the interests of various stakeholders, even if they may not find place in this chapter.

#### 1. Petition belated

**Objection:** Some of the stakeholders have pointed out that the filing of the petition is delayed by more than seven months. It was not submitted on 30<sup>th</sup> November, 2010, as per Regulation 9.2 of Tariff Regulations, 2007. Hence, it may be rejected.

**Response of the Petitioner:** The petitioner has submitted that, for the 2<sup>nd</sup> control period FY 2011-12 to FY 2015-16, the MYT filing due date was 30 November, 2010. This was extended by the Commission up to 31<sup>st</sup> December, 2010. In the month of December, 2010, the Commission issued the discussion paper on MYT Regulations, 2011. Comments were invited from the stakeholders. The MYT Regulations, 2011 were consequently issued on 22 March, 2011 and were made effective from 1<sup>st</sup> April 2011. The petitioner filed the petition based on the MYT Regulations, 2011. Also, the consultation with the State Government for subsidy support took some time. The Commission is empowered to condone justifiable delays under Clause 85 of the Conduct of Business Regulations, 2004.

**Commission's View:** *In view of the circumstances mentioned by the petitioner the delay is condoned. However, the petitioner is directed to file such petition, in future, within the time prescribed by the relevant Regulations.*



## **2. GUVNL role and conflict of interest**

**Objection:** Some of the stakeholders have raised issues about the role of GUVNL. The GUVNL cannot be a trader and a managing agent of the DISCOMs at the same time, without conflict of interest.

**Response of the Petitioner:** The petitioner has submitted that GUVNL derives its origin to the Transfer Scheme notification issued under the provisions of Section 28 of Gujarat Electricity Industry Reorganisation and Regulation Act, 2003 and Section 131 of the EA, 2003. The State Government issued the first transfer scheme through notification dt.24/10/2003 to form separate generation, transmission and distribution companies. Schedule G of the notification relates to bulk purchase of power from generating companies and supply /sale to DISCOMs (apart from other residual obligations, etc). GUVNL was incorporated under State Govt notification dated 10/12/2004 for the purpose of transferring the assets liabilities and proceedings, mentioned in Schedule G of the GEB (to GUVNL), including trading in electricity. Further, the State Government through notification dated 31/03/2005, finalised the transfer scheme w.e.f 01/04/2005.

**Commission's View:** *The objection and the detailed response are noted. GUVNL is a holding company and is also entrusted with bulk purchase of power and supply to DISCOMs. There is no conflict of interest. Any profit in trading is passed on to the DISCOMs.*

## **3. Filing should be by GUVNL, not by DISCOMs. The DISCOM's petitions should not be admitted.**

**Objection:** Some stakeholders have stated that, as the DISCOMs are subsidiaries of GUVNL, they are not GOG companies. So, GUVNL, which is a GOG company, is entitled to file the petition.

**Response of the Petitioner:** The petitioner has submitted that all the DISCOMs are distribution licensees. So, they are required to file the MYT petitions under the MYT Regulations.

**Commission's View:** *Only the licensee is entitled to file the tariff petition.*



#### **4. Tariff not to have retrospective application**

**Objection:** Some stakeholders have pointed out that the petition is filed late. The petitioner should be penalised for the delay. The tariff should not be retrospective.

**Response of the Petitioner:** The petitioner has submitted that the due date for filing was extended from 30<sup>th</sup> November, 2010 to 31<sup>st</sup> December, 2010. Meanwhile, the Discussion Paper on MYT Regulations, 2010 was issued in December, 2010. The MYT Regulations, 2011 were issued on 22 March, 2011, w.e.f. 1<sup>st</sup> April, 2011. The petition has been filed based on these Regulations. Further, consultation with Government of Gujarat on issues like agricultural subsidy also took time. The Commission is empowered to take a decision in the matter.

**Commission's View:** *The objection and the response are noted and the Commission has taken an appropriate decision.*

#### **5. Projections are unrealistic**

**Objection:** Some of the stakeholders have represented that the projections are unrealistic and inconsistent.

**Response of the Petitioner:** The petitioner has submitted that projections are made according to Tariff Regulations and are based on past data and the observed growth. Also, the projections are made prudently. The assumptions made are shown in the petition.

**Commission's View:** *The objection and the response are noted. The Commission has examined the projections from the point of view reasonableness and prudence.*

#### **6. T & D losses are high**

**Objection:** Some stakeholders have represented that the T & D losses be restricted to 11.5% only (10% distribution and 1.5% transmission) and consumers should not be burdened for losses exceeding these limits.

**Response of the Petitioner:** The petitioner has submitted that a number of steps have been taken to reduce the technical and commercial losses.



**Commission's View:** *The petitioner should intensify efforts in this regard and is directed to reduce distribution losses as per the target set by the Commission.*

#### **7. Reasonableness of losses needs assessment**

**Objection:** Some of the stakeholders have stated that the burden of distribution losses cannot be transferred to the consumers with the enactment of the Electricity Regulatory Commissions Act of 1998 Act and the EA, 2003. GERC should avail the services of experts to identify the quantum of losses that can be allowed for determination of the tariff.

**Response of the Petitioner:** The petitioner has submitted that several steps have been taken to bring the losses to a reasonable level.

**Commission's View:** *It is essential to reduce the losses to a reasonable level. The Commission has fixed the loss trajectory and the losses are allowed as per the targeted level.*

#### **8. Power purchases increase due to high losses**

**Objection:** Some of the stakeholders have pointed out that power purchase costs have increased due to high distribution losses.

**Response of the Petitioner:** The petitioner has submitted that the he has taken several steps and made improvement in practices to bring the losses to the permissible level. The high losses are due to factors like poor monsoon, and supplies to widely dispersed rural areas, etc.

**Commission's View:** *The objection and the response are noted. The utilities are directed to reduce the losses as per the trajectory given by the Commission.*

#### **9. Dynamic Allocation of PPAs**

**Objection:** Some of the stakeholders have stated that dynamic allocation of PPAs to DISCOMs is against the Tariff Policy and National Electricity Policy. If the allocations are changed to suit the utility conditions, the consumers should also be allowed to change contract demand every 2/4/6 months to ensure that they continue to be



viable. The reallocation of PPAs is not legal and cannot be done without permission of GERC. It should be a one-time exercise.

**Response of the Petitioner:** The petitioner has submitted that PPA allocation is reviewed and revised, as and when new capacity addition comes up, or based on the requirement of the DISCOMs. The paying capacity of the DISCOMs differs, on account of the different consumer mix and load. So permanent allocation of PPA may distort the requirement of ARR and the tariffs. Hence, in the tariff petitions, the power purchase cost is allocated by GUVNL out of the total pooled power purchase cost and is not any PPA specific.

**Commission's View:** *The GUVNL purchases power from various sources, on behalf of all the DISCOMs. Since the DISCOMs have different and varied consumer mix and load profile, for the time being, the GUVNL adopted the approach of dynamic allocation of capacities with a view to facilitating uniformity of retail tariff across the areas of all DISCOMs.*

#### **10. UI charges**

**Objection:** Some of the stakeholders have raised the issue of UI charges and pointed out that UI charges are not considered in power purchase cost.

**Response of the Petitioner:** The petitioner has submitted that UI charges are basically aimed to maintain grid discipline. Power purchase projections are generally based on scheduled energy as per MOD. However, for 2010-11, the power purchase cost for the second half is worked out, based on per unit cost during the 1<sup>st</sup> half of schedule energy which consists of:

- Power Purchase cost in line with PPA calculated on scheduled energy,
- UI charges, and
- Revenue from trading.

**Commission's View:** *The objection and response from the utility are noted.*

#### **11. Merit order despatch – Correlation with UI rates**

**Objection:** Some of the stakeholders have pointed out that the dispatch instructions issued ahead, for Merit order Dispatch, need to be revised in real time with regard to

the prevailing UI rates.

**Response of the Petitioner:** The petitioner has submitted that UI mechanism is intended to impose grid discipline so that demand and supply are matched with regard to the frequency. The DISCOM needs to schedule its power from various generating sources according to its requirement keeping in view the merit order.

**Commission's View:** *The objection and the response are noted.*

## **12. Power Purchase Price Adjustment (PPPA)**

**Objection:** Some of the stakeholders have requested that the levying of interim extra charges by way of PPPA in between the year should not be allowed.

**Response of the Petitioner:** The petitioner has submitted that the cost of the power purchase is approved by the appropriate regulatory authority, namely the GERC / CERC.

The incremental cost paid by the petitioner, compared to the base year's figures, is to be recovered through power purchase adjustment mechanism.

**Commission's View:** *The objection and the response are noted. The Petitioner is entitled to recover increase with reference to the base price approved by the Commission in the Tariff Order during the year from the consumers as per the FPPPA formula.*

## **13. Voltage Neutral FPPPA Charge**

**Objection:** Some of the stakeholders have stated that the FPPPA formula has a loss compensation factor of 33%, irrespective of the voltage level at which the consumer takes supply. This is grossly unfair for HV consumers (for example consumers taking 220 KV supply pay about 16 times more since their losses level is only 2% at 220 KV). Also, as losses have generally declined, compensation needs revision.

**Response of the Petitioner:** The petitioner has submitted that the plea to change FPPPA on voltage level basis is difficult to implement. There is no detailed study to assess voltage level wise losses. The voltage level cost of supply, based on Annual

accounts, is not backed by proper load flow studies and cannot form the basis for revision of FPPPA on voltage level.

Also, the tariffs, based on voltage level, will tend to create a feeling of discrimination among consumers in respect of sharing the fuel cost and this is violative of EA, 2003. A uniform FPPPA charge goes some way to reduce the cross subsidy among the consumer categories.

Any change in the FPPPA charges will need detailed discussion.

**Commission's View:** *The objection and the response are noted. The issues, such as category-wise level of losses and cross subsidisation, need a detailed study and the utility is directed to take up the matter.*

#### **14. Exorbitant penalty for excess demand**

**Objection:** Some of the stakeholders have objected that CPPs are charged exorbitantly at 3 times for excess demand registered by them on the plea that costly power has to be purchased to take care of such infringement. But if FPPPA permits total pass through, such a plea is not sustainable.

**Response of the Petitioner:** The petitioner has submitted that the FPPPA is intended to take care of the increase in fuel price and power purchase costs. The existing formula does not take into account the impact on the actual power purchase cost, due to variation in the quantum of power actually supplied by generating stations and that approved by the Commission.

**Commission's View:** *The objection and the response are noted. Commission directs the petitioner to recover penal charges for exceeding contract demand in accordance with relevant Regulations / Tariff Order. In case of any grievances the aggrieved party can approach the grievances redressal forum (CGRF) of the utility.*

#### **15. Technical losses and FPPPA**

**Objection:** Some stakeholders have pointed out that relative proportion of Technical and commercial losses remain indeterminate. The Commission needs to examine how much technical loss should be allowed in FPPPA formula.



**Response of the Petitioner:** The T&D losses are approved by the Commission for each DISCOM, based on which the FPPPA is determined.

**Commission's View:** *The objection and the response are noted. The Commission directs the petitioner to undertake a study to segregate technical and commercial losses and report to the Commission by December, 2011.*

#### **16. Revision of FPPPA at 61 Ps/unit**

**Objection:** Some stakeholders have pointed out that, in the ARR for the 2<sup>nd</sup> control period, strangely the petitioner has taken 61 ps/unit as confirmed FPPPA charges for revision of tariff. FPPPA is variable and cannot be linked to tariff in this manner.

**Response of the Petitioner:** **The petitioner has submitted that** actually, the average FPPPA for 2009-10 was 61 paisa. It is proposed to shift the base year for calculation of FPPPA to Financial Year 2009-10.

**Commission View:** *The FPPPA of 61 Ps/unit is not merged with tariff. As it is collected from consumers along with tariff, it is considered as a part of revenue.*

#### **17. Tariff for Telecom infrastructure services**

##### **Objections**

Some of the consumers in the telecom infrastructure enterprises have represented that:

- 1) Telecom services should be considered as a non-commercial or industrial category. The tariff applicable to commercial category should be reduced, or a new sub-category should be created for telecom towers within the commercial category. Some regulatory authorities have categorised these services under mixed load, meaning that lighting and appliances load cannot be separated,
- 2) They provide an essential public utility service on a 24/7 basis and do not deserve to be burdened with commercial tariff.

As the telecom tower installations are spread widely across the state, it is necessary to install AMR meters and issue consolidated billing for all installations belonging to a specific consumer. The Telecom infrastructure takes supply at 11KV at most of the places and provides a step-down transformer, though the



required load is only 15 - 20 KW, and saves the burden of extending LT supply to the telecom provider.

**Response of the Petitioner:**

**HT Supply:** The petitioner has submitted that, in HT category supply, there is only one applicable tariff category, i.e. HTP-I, for such consumers and this tariff is applied. Consumers supplied at higher voltages have a better quality of supply than consumer categories like agricultural. They need to pay more so that cross-subsidy can be paid to needy classes of consumers.

**LT Supply:** Telecom service is a service industry. No manufacturing is involved. As per the present tariff structure, in case of utilisation of non motive power load by non residential consumers, the applicable tariffs are: LFD-II and LFD-III.

The proposed tariffs for various categories are within a band of +/- 20% and are as per the average cost of supply.

**Consolidated billing and AMR:** The general conditions of tariff schedule lay down that each of the tariffs apply only within the compact area of the premises not intervened by any area / road belonging to any person or authority, other than the consumer. As the spread of the telecom towers is not in accordance with this condition, it is not possible to give a single consumer treatment to all such installations. Further, the various installations may fall under the jurisdiction of separate billing authorities and billing dates may also differ. It is difficult to prepare a consolidated billing. However, the consumer is allowed a consolidated payment of all his connections at one location, i.e., the corporate office of the petitioner. Alternatively, the consumer can opt for advance payment as per provisions of Security Deposit Regulations. As regards AMR facility, it is provided to H.T. consumers and High value L.T. consumers only.

**Commission's View:** *The issue of application of motive power tariffs or a separate tariff for telecom installations has to be viewed in the larger context of a comprehensive review of the tariff structure.*

*In the limited context of this tariff petition and Order, the Commission tried to fix the tariff equitably to all the categories as per the existing ground realities and provision of the Act.*



## **18. HP based Tariff**

**Objection:** Some of the stakeholders have suggested that the HP based tariff should be reduced from Rs 140/BHP/month to Rs 65/BHP/Month

**Response of the Petitioner:** The petitioner has submitted that the tariff to various categories of consumers is within the band of  $\pm 20\%$  over the average cost of supply, in accordance with the Tariff Policy.

**Commission's View:** *The objection and the response have been noted. The tariff for agriculture is subsidised by the State Government.*

## **19. Simpler Tariffs needed**

**Objection:** Some of the stakeholders have stated that, for formulating simpler tariffs, the existing laws bind the Commission to differentiate between consumers only according to:

- Consumer's load factor or power factor,
- Consumer's total consumption of energy during any specific period, and
- Time at which supply is required

Unjustifiably Complex tariffs will only lead to harassment of the consumers.

**Response of the Petitioner:** The petitioner has submitted that the Tariff Policy mentions the need to have a rationalisation of tariff to various consumer categories, such that tariffs are nearer to the cost of supply within a band of  $\pm 20\%$  over the average cost of supply, Even in effecting this, there are limitations.

While Industrial and Commercial consumers get good quality of supply all through the day including the peak hours, the agricultural category gets only a limited hours of supply and that too during off peak periods. Besides this, socio-economic considerations, relating to certain categories of consumers, cannot be ignored

**Commission's View:** *The objection and response are noted. The consumers are broadly categorised based on end use and tariffs are determined accordingly.*

## **20. Applicability of HTP-III Tariffs**



**Objection:** Some of the stakeholders have pointed out that the HTP III tariff is for supply of not less than 100 KVA for temporary periods. A consumer not taking supply on regular basis under a proper agreement should be deemed to be taking supply temporarily.

If a HT consumer is found to be using load not authorised, HTP III tariff is applied to the proportionate units and demand, even if the consumer belongs to HTPI or II categories. For example, a welding transformer is normally rated 20/25 KVA. It may not establish a demand even 5 KVA, but application of demand charges of HTP-III results in demand charges of Rs 92400, because the minimum billing demand is 100 KVA in HTP-III. The offending load is not treated as part of the agreement and utility goes beyond the agreement and invokes HTP-III. A clarification that the extraneous HTP-III rate is not applicable in such cases may be issued.

In case of consumers governed by contracted load tariff, even if contracted load does not exceed the contracted demand, the penalty is imposed. The operating guidelines are harsh and loaded against consumers.

**Response of the Petitioner:** The petitioner has submitted that the objection is not clear. Illustrative Annexure, stated to be enclosed, is not found. The provisions of “unauthorized use of energy” are applied only in cases where Section 126 of EA, 2003 is attracted.

**Commission’s View:** *The objector is advised to take up the issue with the petitioner and explain the grievance.*

## **21. Night concessional tariff**

**Objection:** Some stakeholders have raised the issue of night concessional tariff. The night concessional tariff should not have any demand charge. Night time demand is low. Infrastructure is not loaded much. The fixed cost relates to peak cost only. The licensee cannot gainsay that infrastructure cost is the same for night time consumers and other normal users. M/s Feed Back Ventures have made a costing for the POC assignment. It needs to be referred in this regard. The multiplier between peak and off Peak cost amounts to 7 to 8.

**Response of the Petitioner:** The petitioner has submitted that the fixed charges are levied on consumers to recover the company’s fixed costs, which the company incurs,



irrespective of consumption and time of consumption. The fixed charges cover components, like the cost of infrastructure, employee cost, R & M cost, A&G cost, etc. Any kind of discrimination among tariff categories would lead to passing on the burden to the other tariff categories. It is not appropriate to have different fixed charges for consumers of the same category.

**Commission's View:** *It is true that night time consumers facilitate the reduction of peak demand, by shifting their demand to off peak period. They allow the base load equipment to be loaded optimally. But the fixed charges loaded at present in the tariff are only a fraction of the fixed costs*

## **22. LFD-II (b) not justified**

**Objection:** Some stakeholders have resisted the move to divide LFD-II Category into (a) and (b). No reasons or justification has been provided by the petitioner for the proposal.

**Response of the Petitioner:** The petitioner has submitted that the purpose is for better DSM of commercial consumers. LFD II (b) is for big commercial consumers like super bazars, malls, hotels, etc. it is a demand-based tariff, aimed at promoting grid discipline.

**Commission's View:** *The objection and response are noted.*

## **23. LTP- I & III**

**Objection:** Some stakeholders have pointed out that there is a move for a separate category for LTP-III and LTP-I consumers. An industrialist, who installs a temporary machinery to execute a single contract, will be put to difficulty. In case of violation of LTP-III tariff, a chance should be given to him to explain the reason and then only action taken.

**Response of the Petitioner:** The petitioner has submitted that LTP-I is a connected load based tariff and LTP –III is a demand based tariff. It is proposed that an LTP – I consumer can switch over to LTP – III tariff, if he desires.

Often, motive power consumers contract larger demand under LTP –I and later switch over to LTP –III. The infrastructure created according to LTP- I category remains un-



utilized and non-remunerative

In case of violation on three occasions during the period of six months by LTP – III consumers, they have to switch over to HT supply.

**Commission's View:** *The objection and response of the utility are noted and appropriate decision is taken.*

#### **24. Time of Use (TOU) charges**

**Objection:** Some of the stakeholders have raised the point that the time of use charges on all HT consumers are unreasonable, especially extending it to below 500 KVA consumers. The power supply position is comfortable. Existing meters do not have a provision to meter the use with regard to time.

**Response of the Petitioner:** The petitioner has submitted that it is the intent of the petitioner to apply TOD rates on as many consumer categories as possible. Cost of power supply at peak hours is high. TOU takes care of this. There is another category of night supply with lesser energy charges. This is intended to ease the burden on the grid.

The night hours concession is given only if the night consumption is in excess of 1/3 of the total consumption in the month.

**Commission's View:** *The peak hour penalties and the night use concessions are the two faces of the same structure, the licensee should ensure that the meters are capable of registering the TOU. Appropriate decision taken on the applicability to all HT consumers.*

#### **25. Need for one single Maximum Demand (MD) based tariffs**

**Objection:** Some stakeholders have suggested that there should be only one single MD based tariff LTP-I for all LT industrial consumers. Below 150 HP, the tariff should encompass both lighting and motive load requirements. This will obviate the need for LTP-II meters, and reduce the scope for corruption. There could be a capping on the connected load, say, 3 to 4 kW for a 1 KWMD.

**Response of the petitioner:** The petitioner has submitted that the MD based tariff, with capping on connected load, may have overlapping effect on other tariff



categories.

**Commission's View:** *The objection and the response are noted.*

## **26. Single LFD-II tariff for all commercial consumers**

**Objection:** Some stakeholders have suggested that there should be only a single and uniform rate tariff LFD II for all commercial establishments. All LFD II meters should be 3 phase 4 wire and electronic.

**Response of the Petitioner:** The petitioner has submitted that LFD II is for single phase supply (total load up to 6 KW). The petitioner has proposed to create two categories: LFD II (a) and LFD II (b); LFD II (a) for loads up to 15 kw and LFD II (b) for loads of 15 kw and above. For better DSM, demand charges are proposed for demand of 15 kw and above.

**Commission's View:** *The objection and response are noted.*

## **27. Railway traction tariff**

**Objection:** The representative of railways has suggested that there is an imperative need for reasonable railway traction tariff.

**Response of the Petitioner:** The petitioner has submitted that the tariffs for traction have been stable for last eight years. Factors, like sharply increasing power purchase cost due to increase in coal and gas costs, cannot be passed on to the consumers in full to all consumers through FPPPA.

The depreciation and interest cost are also on increase due to increased asset base and high interest rates. The need of cross subsidisation of certain categories also necessitates a rise in tariff for some categories. The tariff for railway is within 20% of the average cost of supply, as per Tariff Policy.

**Commission's View:** *The objection and response are noted.*

## **28. Simultaneous Maximum Demand (MD) for Railways**

**Objection:** The representative of railways has pleaded that railways is a moving load and register MD at all substations. Temporarily, demand may shoot up in particular sub-station, due to abnormal conditions like bunching of trains.

The tariff should be a single part tariff. If not, demand charges should be based on simultaneous M.D.

**Response of the Petitioner:** The petitioner has submitted that, for motive power consumers, two-part tariff is the universal norm. Distribution investments are triggered by local demands. Hence, the present system of levying the demand charges at individual traffic substation is the most appropriate basis for recovery of demand charges.

**Commission's View:** *Objection and response are noted.*

### **29. Quality of supply to Agriculture**

**Objections:** Some of the stakeholders have submitted that the duration and quality of supply to Agriculture has worsened even while realisation per unit has been increasing.

**Response of the Petitioner:** The petitioner has submitted that a minimum of 8 hours of 3-phase supply is being given to agricultural sector. Depending on crop needs, more hours supply is also being given, even by purchasing power from various sources. In case of a shortfall in supply due to critical supply conditions, the same is compensated when conditions improve. The policy of Government of Gujarat is for uniform supply to agriculture across the DISCOMs. As agricultural connections are un-metered, the energy is assessed on the basis of 1700 units/HP/Annum

**Commission's View:** *The DISCOMs should ensure the stipulated hours of supply to the agricultural sector.*

### **30. Golden goals project**

**Objection:** Some of the stakeholders have suggested that, to assess the achievements under the golden goals project, a copy of the scheme and the achievements thereunder may be furnished.

**Response of the Petitioner:** The petitioner has submitted that achievements under the different schemes have been shown in the petition. As informed at the hearing of ARR FY 2008-09, the goals for release of agricultural connections, planned under the



golden goals, were later dropped. The targets for release are now based on the capital expenditure plan for the year.

**Commission's View:** - *The objection and the response are noted.*

### **31. Group Tariff for Agriculture**

**Objection:** It is suggested by some of the stakeholders to introduce a special sub-category and / or grant relief to the farmers, who accept metered tariff in a group catered by a particular feeder, at concession of 10 Ps./unit consumption, for a period of minimum 3 years.

**Response of the Petitioner:** No Response

**Commission's View:** *The distribution company is directed to examine whether such tariff can be implemented.*

### **32. Concessional Tariff for Micro-irrigation**

**Objection:** Some of the stakeholders have suggested that there is a need for a concessional tariff for individual farmers adopting Micro-Irrigation Systems.

**Response of the Petitioner:** The petitioner has submitted that applications for connections under such schemes have been accorded priority.

**Commission's View:** *The suggestion relates to a special tariff from a greater national perspective of optimising water use and is desirable. Such concessions can be extended, provided the government is willing to bear the cost of the subsidy.*

### **33. Tatkai Scheme**

**Objection:** Some of the stakeholders have suggested that the Tatkai scheme be abolished.

**Response of the Petitioner:** It is submitted that the Objector's Petition No. 1087/2011 in this regard and on Dark Zone was disposed of by the Commission.

**Commission's View:** *The objection and the response are noted. The Commission has issued an order on 30.05.2011 in respect of the Petition No.1087/2011.*

### **34. Water for Brick manufacturers**





**Objection:** Some of the stakeholders have objected to supplying of water to brick manufacturing units, under the head of agriculture category. Supply should only be for irrigation purpose.

**Response of the Petitioner:** The petitioner has submitted that the supply to Brick manufacturers by Agriculture consumers is an optional facility, and is not compulsory.

**Commission's View:** *The objection and the response are noted.*

### **35. Details of bad debts**

**Objection:** Some of the stakeholders have petitioned that no efforts are made by the petitioner to recover the bad debts and the details of bad debts requiring write off may be furnished.

**Response of the Petitioner:** The petitioner has submitted that every year, a certain amount due from some consumers, which seems to be non-recoverable, is waived off and is charged in the profit and loss account of the company for the year under the head of other debits. A statement regarding defaulting consumers with arrears over Rs. 1 Lakh is furnished.

**Commission view:** *The petitioner needs to ensure that the outstanding dues are collected quickly and do not accumulate. It is necessary to see that all possible steps are taken to minimise bad debts which need to be written off.*

### **36. Revenue gap affordable for FY 2011-12**

**Objection:** Some of the stakeholders have pointed out that the gap of Rs.1322 crores of all Discoms for 2011-12 can be eliminated by better performance.

**Response of the Petitioner:** The petitioner has submitted that the gap is significant and cannot be absorbed. Even after the increase, some gap remains. Expenses under various heads and the revenues are estimated, as per the ruling regulation and with prudence. Gap is normally due to increase in power purchase cost, employee cost and interest on working capital.

**Commission's View:** *The objection and response are noted. The Commission has examined the proposal for tariff increase and taken an appropriate decision in determining the tariffs.*



### **37. Receivable amount**

**Objection:** Some of the stakeholders have pointed out that electricity billing is done much later than it is supplied. All the expenses relating to the supply are incurred and accounted at the end of financial year, but some unbilled amount remains to be accounted. This amount is not covered in annual audit reports and is not reflected in the ARR. Such amount is far more than the ARR gap.

The amount of receivables is far more than the total gap. Provision for sundry debtors has been made in schedule of the Annual Audited Accounts, but the same is not shown in the ARRs.

**Response of the Petitioner:** The petitioner has submitted that he prepares the financial statements on historical basis, in accordance with the accounting standards and generally acceptable accounting principles. Revenue from sale of power is recognised on accrual basis of energy supplied to consumers. The revenue from sale of power, indicated in the petition, includes provision for unbilled revenue.

**Commission's View:** *The objection and the response are noted.*

### **38. Mismatch between Annual Accounts and ARR**

**Objection:** Some of the stakeholders have pointed out that the comparison of the audited annual accounts of 2009-10 and ARR shows a mismatch in respect of revenue from sale of power.

**Response of the Petitioner:** The petitioner has submitted that the income figures, shown in the P&L Accounts for FY 2009-10, include total income, i.e., revenue from sale of power, subsidy, grants, other income, etc. Table 6 of the petition shows revenue from sale of power from different categories of consumers. This can be verified from Schedule 14 attached to Annual Accounts for 2009-10.

**Commission's View:** *The objection and the response are noted.*

### **39. Consumer Contribution and Depreciation**

**Objection:** Some of the stakeholders have stated that the capital works of the petitioner are made up of the recovery of full line cost from consumers and grants

from the Government and other agencies, amounting to 50% of the cost of capital works. So, half the depreciation claimed must be shown as income.

**Response of the Petitioner:** The petitioner has submitted that in Table -13 of the petition, the total capitalisation to fixed assets and the consumers contribution have been shown.

The charging of depreciation on total assets is as per the accounting standards. Every year, the petitioner writes back certain part of consumers' contribution and grants on a consistent basis. Therefore, the appropriate effect to consumer's contribution is given weightage. Depreciation is charged on gross value of assets.

**Commission's View:** *The accounting of consumer's contribution and the depreciation has been treated as per the Regulations of the Commission.*

#### **40. Interest on Security Deposit (SD) and working capital**

**Objection:** Some of the stakeholders have submitted that the interest payable on security deposit is accounted at 6%. S.D forms a part of working capital. But full 10.25% interest is accounted in the balance sheet for the entire working capital requirements.

**Response of the Petitioner:** Interest on security deposit is as per provisions of the Security Deposit Regulations. The working capital requirement and interest thereon are calculated as per the terms and conditions of Tariff Regulations.

**Commission View:** *The interest on working capital and interest on Security Deposit are allowed as per relevant GERC Regulations.*

#### **41. Differential Bulk Supply Tariff (BST) not fair**

**Objection:** Some of the stakeholders have averred that BST is acting in contravention to the provisions of Electricity Act, 2003. The GUVNL is charging more from some DISCOMs to subsidise other DISCOMs. The PGVCL is supplying power at lower rate than UGVCL, whose agricultural consumption is higher than that of PGVCL. This implies that PGVCL is a sick utility. The rates for MGCVL and DGCVL are higher than those of UGVCL and PGVCL.



**Response of the Petitioner:** The petitioner has submitted that the four DISCOMs are configured on a Zonal basis. About 70 to 80% of a DISCOM's costs are for power purchase. Power purchase cost plays a major role in the ARR of a DISCOM. The consumer profiles and consumption profiles differ from DISCOM to DISCOM; so also their revenue earning capabilities. It is necessary to build a mechanism in the projections to bring them onto a level playing field. This is sought to be achieved through the differential bulk supply tariff mechanism. This is considered necessary to keep the retail tariff of the four DISCOMs uniform. The performance of the DISCOMs is monitored by the GERC.

**Commission's View:** *Differential BST may be necessary to keep the retail tariffs uniform across the state for some more time till the consumer mix in all the DISCOMs are at a comparative level.*

#### **42. Agricultural Subsidy not fully met by Government**

**Objection:** Some of the stakeholders have represented that the Agriculture Subsidy is not met in full by the Government. Consumers, other than agricultural, bear the brunt.

**Response of the Petitioner:** The petitioner has submitted that the tariff for all categories of consumers is well within +/-20% over the average cost of supply and is in line with the Tariff Policy. Industrial and Commercial categories of consumers are provided a better quality of supply. They are supplied power even during peak hours. So they are charged at a higher rate than the agriculture consumers, who are supplied only 8 hours of power a day and are not supplied power during peak hours.

Socio economic conditions of certain classes of consumers prevent radical rationalisation of tariffs.

**Commission's View:** *The objection and the response are noted. The State Government is paying substantial subsidy to the distribution companies towards agriculture.*

#### **43. Arrears of revenue**



**Objection:** Some stakeholders have suggested that the Commission may review the arrears of the various DISCOMs to reduce the extent of disparity of BST in the DISCOMs.

**Response of the Petitioner:** The petitioner has submitted that the amount of the arrears is not an ARR item, as arrears are not revenue. Revenue is recognised once assessment is made and bill is raised. If payment is not made by consumer, the amount is in arrears and cannot be adopted to revenue. It is a balance sheet item.

The cost implication of arrears is considered in the ARR calculation, i.e., delayed payment charges collected from defaulting consumers are accounted for in Non Tariff Income as Delayed Payment Charges. Interest on working capital, in respect of receivables and arrears, is also accounted. Hence, income and expenditure aspects of arrears have already been accounted for in the computation of the ARR. The petitioners are making all efforts to reduce the arrears.

**Commission's View:** *The objection and the response are noted.*

#### **44. Performance should determine the allowability of Expenses:-**

**Objection:** Some of the stakeholders have queried whether the accounts of the petitioner are sacrosanct. Factors, like performance of the company and also whether the consumers' interest was properly served in the expenditure incurred, have also to be considered in determining the propriety of the expenses qualifying for tariff determination. The accounts of the company are not ipso-facto binding on the Commission in this regard.

Similarly, the Commission needs to examine the question of applicability or admissibility of reasonable return as per the Regulations vis-à-vis the efficiency, economical use of the resources, good performance and the interest of the consumer .You earn only if you deliver, is the new paradigm..

**Response of the Petitioner:** The petitioner has submitted that audited annual accounts upto FY 2009-10 have already been submitted to the Commission.

**Commission's View:** *The Commission allows the expenses on prudence check. The performance is also taken into consideration, while determining the tariffs.*

#### 45. Sneering attitude towards consumers

**Objection:** Some of the stakeholders have stated that the attitude of the utilities is to dismiss the objections of the stakeholders with contempt sneering and a patronising attitude.

**Response of the Petitioner:** No comments made

**Commission View:** *The commission hopes that the licensee will take sincere steps to alter the perception of the objectors towards the licensee.*

#### 46. Poor Voltage Conditions

**Objection:** Some stakeholders have complained that, under prevalent conditions of low voltage, the motors have to be rated for a higher capacity to deliver the power required by the consumer. Agricultural consumers are penalised heavily for exceeding the load, based on the nameplate rating of the motor even though the motor delivers a far lesser quantity of water than what the nameplate shows. So, fixed charges should not be applied under low voltage conditions, or appropriate correction for low voltage should be applied.

At the tail end of feeders, there should be no inspection and penalisation on the capacity of the motor or some other such mechanism needs to be put in place to avoid hardship to consumer.

**Response of the Petitioner:** The petitioner has submitted that agricultural feeders have been separated from other rural feeders. Further, with increase in generation capacity, the voltage conditions have improved considerably. As the pump sets are of submersible type, name plate reading cannot be seen. Hence, for verifying connected load, actual technical parameters are measured with an accucheck meter. If measured capacity is more than contracted value, action is taken under Section 126 of EA, 2003.

**Commission's View:** *The objection and response are noted. The licensee needs to avoid low voltage at the tail end feeders through proper reactive power management, etc., so that consumer may not face the situation mentioned.*

#### 47. Penal charging on FPPPA amounts to over-compensation



**Objection:** Some stakeholders have contended that FPPPA is a pass through charge. It is not fair or legal to overcharge at double the same under Section 126 or 136 of EA, 2003.

**Response of the Petitioner:** The petitioner has submitted that FPPPA is an integral part of tariff and, therefore, while assessing bills under Sections 126 or 136 of EA, 2003, applicable FPPPA charges are applied.

**Commission's View:** *The Objection and the response are noted.*

#### **48. Power Factor (PF) Penalty to be levied on recorded demand**

**Objection:** Some of the stakeholders have suggested that the power factor penalty should be on recorded demand, and not on billing demand. Otherwise, it will impose undue burden on the CPP consumer.

**Response of the Petitioner:** The petitioner has submitted that power factor penalty/ rebate is levied on energy charges only.

**Commission's View:** *The objection and the response are noted.*

#### **49. Electronic meters are suspect**

**Objection:** Some of the stakeholders have complained that the electronic meters are suspect. The software can be doctored. The Commission may pick-up random samples and get them checked for conformance to specifications to ensure public trust in the metering process.

**Response of the Petitioner:** The petitioner has submitted that meters are supplied, as per specification / contract conditions, issued under the provisions of relevant Indian Standards. No oral specification is conveyed to any of the suppliers.

**Commission's View:** *The apprehension of the objector and the response of the petitioner are noted. If any specific instance of malfeasance comes to light, the meters could be got tested. Electronic meters are being used by all the utilities.*

#### **50. Assessment of 'proportional units'**

**Objection:** Some of the stakeholders have mentioned that the consumer is harassed by the expression "proportionate units" at para 10 (II) in Supply Amendment dated



25<sup>th</sup> September, 2006. This amount is driving SMEs to their doom. Pulse loads like a welding transformer are equated with production machinery which runs 24x7 and the proportionality expression is applied and lakhs of rupees are billed, which could be only a few hundreds normally.

**Response of the Petitioner:** The petitioner has submitted that under the connected load based tariff, “ Consumers can connect as many loads as contracted’. However, in case, where units consumed are duly metered, no additional units are worked out, either as per ABCD formula, or on proportionate basis.

Assessment on the basis of proportionate units is carried out only when the units consumed are duly metered and the connection is found to be utilised otherwise than for authorized purpose or at an unauthorized place.

**Commission’s View:** *The objection and the response of the petition are noted.*

#### **51. Security deposit is very high**

**Objection:** Some of the stakeholders have stated that the load factor assessed for levying security deposit is unwarranted, since high load factor materialises only after operations are stabilised. Thus, it increases starting up costs steeply. A 400 volts consumer has to pay up charges extending upto 11 KV facilities and also of GETCO, based on unconvincing interpretation of “works carried out on behalf of DISCOMS”

**Response of the Petitioner:** The petitioner has submitted that security deposit levy is as per the provisions of the S.D Regulations, notified by the Commission.

**Commission’s View:** *The objection and the response are noted. The security deposit has to be collected as per the applicable Regulation.*

#### **52. Industrial activity treated as commercial**

**Objection:** some stakeholders have raised the issue that a number of industrial activities like lasers and diamond cutting, etc., and even ACs in process industries, are being termed as commercial and charged accordingly on the plea that there is no motive power involved, though they use motive power. It is necessary that the term ‘motive power’ be substituted by the term ‘industrial power’ to avoid legal disputes.





Industrial consumers are forced to wire their premises for industrial and lighting circuits separately, leading to wastage of capital. There should be one rate for one premise. The rate could be a weighted average cost of lighting and motive power.

**Response of the Petitioner:** No comment made.

**Commission's View:** *This issue has been addressed by the Commission while rationalizing the tariff structure in this order.*

### **53. Unwarranted penal action**

**Objection:** Some stakeholders have stated that Supply Code may incorporate a provision that, if any penal action is contemplated for use of premises for a category of use other than originally authorized, such an action should arise only if such use is for a purpose for which higher tariff is applicable.

**Response of the Petitioner:** No response

**Commission's View:** *The petitioner may submit his views on the issue raised by the objector separately.*

### **54. New applications and feasibility**

**Objection:** Some stakeholders have stated that loads are not being released, on the plea of inadequate transformer capacity. The capacity of the transformer to cater to additional connections should be based on the demand registered on the transformer rather than the extent of connected load.

**Response of the Petitioner:** The petitioner has submitted that, under the connected load based tariff system, a consumer can connect as many loads as contracted and may put on the entire load at his choice. So connected load is taken into view to determine the feasibility of additional loading in the case of LT application. For HT, the actual maximum load recorded is taken into consideration. Diversity reduces as we go down the network.

**Commission's View:** *The petitioner should not deny any consumer for lack of capacity of distribution transformers. Transformer capacity has to be enhanced.*

### **55. GUVNL accounts need scrutiny**

**Objection:-** Some stakeholders have raised the issue that the burden of the administrative expenses or trading margin of GUVNL is passed on to the DISCOMs as administrative and management cost. They need regulatory scrutiny.

**Response of the Petitioner:** The petitioner has submitted that the servicing of the various liabilities allocated to GUVNL at the time of unbundling and administrative cost of managing power purchases and funds portfolio is charged to DISCOMs as margin in the power sale rate.

**Commission's View:** *The objection and responses are noted. The Commission scrutinizes the GUVNL costs.*

#### **56. Bank Guarantee as security deposit**

**Objection:** Some of the stakeholders have complained that utilities are refusing to accept bank guaranties as security deposit. They also delay the refund of the Security Deposits (SD). While consumers are dealt with a heavy hand for any default, the defaults of the utility go unpunished. Consumers are kept in the dark about the provisions regarding deposits. The estimates are hazy. Refunds are not made in cash, but adjusted in future bills and the issue drags on for more than six months. The interest on S.D should be checked for accuracy to avoid undue enhancement in tariff.

As per GERC notification 5 of 2010 and GERC Security Deposit Regulations notification No. 8 of 2005, security deposit is acceptable as B.G from consumers having contract demand of one MVA and above.

**Response of the Petitioner:** Annual review is made and if the security deposit is found in excess, it is adjusted in future bills.

In the case of Open Access or CPP consumers, any excess S.D is adjusted in future bills upto six months and if any further residual S.D is there, it is refunded. Existing security deposit is shown in the energy bill.

**Commission's View:** *Bank guarantee should be accepted for demand of one MVA and above.*

#### **57. Deposit works and final bills**

**Objection:** Some stakeholders have complained that there are inordinate delays in



completion of deposit works and in settling the final bills, causing loss to the consumers. A deterrent penal interest needs to be imposed on licensees to curb such delays, or interest income notional or income on delayed deposits should be accounted in ARR.

**Response of the petitioner:** The petitioner has submitted that, generally, there is some delay in collecting the information on actual material used and labour deployed in finalisation of such bills. The matter was discussed in the 10<sup>th</sup> Electricity Supply Code Review Panel (ESCRP) and it was decided that such bills should be finalised within 120 days from the date of release of the connection.

**Commission's View:** *The licensee should see that accounts are settled promptly on completion of works and any amount due is refunded without delay. Any delay will have to be viewed seriously.*

#### **58. Adhesion agreement illegal**

**Objection:** Some of the stakeholders have stated that GERC order No.6 of 2010, on Open Access is being nullified by the utilities by getting an adhesion undertaking signed by the consumers. This bipartite undertaking lacks the Commission's approval/scrutiny and is a breach of law.

**Response of the Petitioner:** The petitioner has submitted that Commercial settlement of Open Access users, who are also consumers of the DISCOM, is made under the Intrastate ABT order No.3 of 2006. Any excess drawal is taken as supplied by the DISCOM and billed as per applicable tariff.

The Intra-State ABT Order No. 10 and Open Access Regulations, 2011 do not provide applicability of UI rates to Open Access consumers who are also Consumers of the DISCOM for excess/under drawal. There is no mechanism under the State ABT for any intra DISCOM. UI pool account to enable payment/receipt of UI charges to/from the consumers.

As regards the undertaking sought by DISCOMs from consumers availing power through short-term Open Access, it is necessary for the DISCOMs to take care of situations wherein such consumers take supply from DISCOM during the day and then for night supply they go outside, where they can get cheaper power.



**Commission's View:** *The objection and the response are noted. The licensees and the Open Access consumers should be fair towards each other.*

#### **59. Selective application of judgements**

**Objection:** Some of the stakeholders have submitted that the judgements of APTEL are applied in a limited way, even when there is a general scope for application for benefit to the larger number of consumers who may not have chosen to go to the Tribunal.

**Response of the Petitioner:-** The petitioner has submitted that orders of any judicial Fora are either accepted or challenged, based on merit. If the accepted judgement is general in nature, it is implemented.

**Commission's View:** *The objection and response are noted.*

#### **60. Category-wise, voltage-wise cost-to-serve**

**Objection:** Some stakeholders have pointed out that Section 61 of EA, 2003 is not recognized. Category-wise and voltage level-wise cost- to- serve and the progress in respect of reducing cross subsiditation are not reported. It is not enough to consider pooled or average cost of supply. Irrespective of adoption of tariff, the Commission is requested to call for this information.

**Response of the Petitioner:** The petitioner has submitted that cost-to-serve report for 2009 -10 is under preparation and will be submitted very soon.

The National Tariff Policy mentions the need for rationalisation of category-wise tariffs, such that it does not cross +/- 20% over the average cost of supply. But even in this, there are practical and socio-economic difficulties. However the proposed tariff for all categories is within the limit of NTP. The deficiencies in quality of supply justify category -wise differentials in tariffs.

**Commission's View:** *The petitioner should expedite the COS study. There needs to be a progressive shift in reduction in cross subsidy.*

#### **61. Connectivity to open access customers**

**Objection:** Some stakeholders have pointed out that the connectivity conditions from EPP / SPV / MPP and co-generation plants are hazy, leading to delays and



inconvenience Tariffs for such consumers should not be exorbitant, but based on COS.

**Response of the Petitioner:** Regulation of Intra-State Open Access Notification No. 3 of 2011 govern the connectivity to open access customers.

**Commission's View:** *The objection and response are noted.*

#### **62. HTP-IV tariff is inconsistent and irrational**

**Objection:** Some of the stakeholders have submitted that HTP IV tariff needs to be actively promoted. The percentage increase for HTP IV proposed is much higher than that proposed for all other categories. The permissible daytime drawals for maintenance should be raised to 25% of contract demand and 20% of consumption. Tariff should not be fixed on the basis of full fixed cost recovery for night time use in HTP IV & LTP IV tariffs. The penalty for default should be on the basis of the higher cost of power purchases during the relevant slot of the whole day for temporary tariffs.

**Response of the Petitioner:** the petitioner has submitted that since the energy charge for HTP-IV is low compared to others, some additional increase is proposed. The permissible daytime demand cannot be increased further. Fixed charges need to be recovered in full, as otherwise, it will amount to discrimination against other consumers within the same class.

**Commission's View:** *The objector's view is noted. The Commission has taken various relevant points into consideration and determined an equitable and balanced tariff.*

#### **63. Tariff hike only for non-agricultural and other than BPL categories is not fair**

**Objection:** Some of the stakeholders have pointed out that BPL and agricultural consumers are not considered for tariff hike. This is not proper unless the Government pays upfront subsidy. This is not fair to other consumers. The level of cross subsidisation is increasing.

**Response of the Petitioner:** The petitioner has submitted that agricultural subsidy is fixed at Rs.1100 crore by the State Government and is distributed among DISCOMs, in proportion to the unmetered category consumers.



**Commission's View:** *The objection and the response are noted. Apart from cost-to-serve there are many factors that need to be kept in view in Tariff determination, to the extent feasible. Cross-subsidy, to support certain class of people, is a common practice.*

#### **64. Over-spending by DISCOMs**

**Objection:** Some of the stakeholders have stated that the truing up shows over-spending by DISCOMs during 2009-10. Despite recovery of FPPPA, the gap of all the DISCOMs amounts to Rs. 309 crore and should not be allowed.

**Response of the Petitioner:** The petitioner has submitted that the revenue gap is arrived at, following the process of sharing mechanism, allowing recovery in FY 2011-12. Revenue shown in truing up is inclusive of FPPPA charges.

The FPPPA formula does not cover power purchase from other sources.

**Commission's View:** *The objection and the response are noted. The Commission has considered the increase in costs after prudence check of the expenses.*

#### **65. Revision of FPPPA at 61 Ps/unit**

**Objection:** Some stakeholders have pointed out that, in the ARR for the 2<sup>nd</sup> control period, strangely the petitioners have taken 61ps/unit as confirmed FPPPA charges for revision of tariff. FPPPA is variable and cannot be linked to tariff in this manner.

**Response of the Petitioner:** The petitioner has submitted that actually, the average FPPPA for 2009-10 was 61 paisa. It is proposed to shift the base year for calculation of FPPPA to Financial Year 2009-10.

**Commission's View:** *The FPPPA of 61 Ps/unit is what is being collected and is considered as a part of present revenue.*

#### **66. Release of agricultural connections**

**Objection:** Some stakeholders have stated that there is no data of the extent of unmetered agricultural connections. 2.80 lakh farmers are waiting since 1994 for connection. Illegal connections are provided by DISCOM staff under the pretext of



farm houses. There should be a time bound programme over 5 years to release all pending connections.

**Response of the Petitioner:** The petitioner has submitted that it is difficult to get data of the proportion of unmetered connections, because there are connections that have meters but are charged under un-metered category. All new connections are metered, 4000 new connections are being released every year since 2007-08, and are all under metered tariff.

The Company has planned to release 4000-6000 agricultural connections per year in the ensuing control period.

**Commission's View:** *The utilities are directed to clear all pending applications at the earliest.*

#### **67. Tariff hike across the board unfair to smaller consumers**

**Objection:** A number of stakeholders have objected to the tariff increase. It is stated that increase in tariff by 25 Ps/unit in all categories, except agriculture and BPL, is irrational and is a heavy burden on consumers with consumption of less than 100 units/month and is against the NTP and beyond the paying capacity of consumers.

**Response of the Petitioner:** The petitioner has submitted that for the past several years, the tariff increases allowed are minimal. The intention in uniform hike of 25 Ps/unit is to reduce the cross-subsidy within the same category and maintain overall cross-subsidy level intact.

**Commission's View:** *The Commission has endeavored to allow a reasonable and balanced tariff in this order keeping in view practical and operational aspects and constraints.*

#### **68. Consumer forums**

**Objection:** Some of the stakeholders have mentioned that the performance of Consumer Forums and the Ombudsman is biased towards the licensees. The petitioners have not taken action to appoint a Chairman.

**Response of the Petitioner:** The petitioner has submitted that the Consumer Grievance Redressal Forum gives due hearing to the grievances and they are



redressed fairly. The Forum is being reconstituted by seeking applications through a public notice for the appointment of the chairperson.

**Commission's View:** *The utilities are directed to appoint members and chairman on priority, as per guidelines issued by Ministry of Power, Government of India.*

#### **69. L&T meters**

**Objection:** some of the stakeholders have complained that the appearance of code number in L&T meters for industrial consumers is treated under Section 135 of EA, 2003 and huge amounts are extorted from the consumers.

**Response of the Petitioner:** It is sub-judice; hence, no comment.

**Commission's View:** *The Commission has noted the objection and the response.*

#### **70. Meter rent**

**Objection:** Some of the stakeholders have complained that the meter charges are collected when the old meters are replaced with new ones. If the cost is recovered so, meter rent cannot be charged.

**Response of the Petitioner:** The petitioner has submitted that the meter rent is recoverable under the provisions of Licensees Power to Recover Expenditure incurred in Providing Supply and Other Miscellaneous Charges Regulations, 2005. No charges are recovered for replacement of old meters.

**Commission's View:** *The objection and the response are noted.*

#### **71. Reduction of cross subsidy**

**Objection:** Some of the stakeholders have raised the issue of cross-subsidy. It is stated that the tariff increase is not based on cost-to-serve and the need is to reduce cross-subsidy. Other classes of consumers are forced to bear the burden of BPL/ agricultural consumers. The agricultural subsidy is capped at Rs.1100/- crores ever since Oct. 2000 and all increases are passed on to other consumers. Details of payment of the subsidy and how much is pending is not known.



**Response of the Petitioner:** The petitioner has submitted that Cost-to-Serve Report for the Financial Year 2009-10 is under preparation. The tariffs are within the limit of +/- 20% of average cost as per NTP.

**Commission's View:** *The Commission has noted the objection and the response.*

## **72. PF penalty to be based on reactive energy**

**Objection:** Some of the stakeholders have suggested that PF penalty/reactive energy charges be computed, based on reactive energy, instead of PF.

Referring to case No. 862/2006 order dated 06/05/2006, page 39 it is observed that charges of reactive energy, levied by GETCO/ SLDC, as well as PGVCL, are based on PF penalty provisions, as per the Tariff Order, without referring to the referred provisions. It is suggested that, for consumers with CPP in parallel, bills and accounting should be done by GETCO/SLDC.

**Response of the Petitioner:** The petitioner has submitted that CPPs are also consumers of DISCOMs. They export power and also draw reactive energy from the grid. They are billed on average monthly P.F basis, as per HTP tariff. The reactive energy drawn during export is for their plant requirement and, therefore, is governed by the applicable tariff. As regard billing for reactive energy by SLDC, the objector may represent it to the committee formed under the ABT orders.

As regards the suggestion for billing based on reactive energy, instead of P.F, the Regulations stipulate a P.F of 0.9 or more. RKVAH billing will be more complex than this. RKVAH billing may induce consumers to over-compensate. The same rate of RKVAH unit for all RKVAH consumers may not be fair for consumers drawing marginal RKVAH units.

**Commission's View:** *The issue raised by the objector (s) and response from the utility are noted.*

## **73. Consumer contribution**

**Objection:** Some stakeholders have stated that all expenses under Normal Development work is 100% recovered from the consumer. There should be no question of any capital amount being booked under this scheme.



**Response of the Petitioner:** The petitioner has submitted that Table 13, depicting the capital expenditure in the petition, clearly shows the extent of consumer contribution under CAPEX. Against CAPEX of Rs. 654 crore for FY 2009-10, the consumer contribution is Rs. 123 crore (18%).

**Commission's View:** *The objection and the response are noted.*

#### **74. Sales have reduced, revenue has increased**

**Objections:** Some of the consumers have pointed out that it can be seen from the figures for 2010-11, that the sales of almost all categories have reduced in terms of units, but the revenue has increased.

**Response of the Petitioner:** It is submitted by the petitioner that the increase in revenue is mainly due to FPPPA. The Commission has approved much less i.e., only 10 Ps/kWh by way of FPPPA, instead of the actual of Rs 67 Ps/kWh.

**Commission's View:** *The objection and response are noted.*

#### **75. Distribution losses and employee costs are controllable**

**Objection:** Some stakeholders have pointed out that the revenue gap for FY 2009-10 has been created mainly due to increase in distribution losses and employee cost, which are described as uncontrollable. This is unacceptable.

**Response of the Petitioner:** The petitioner has submitted that distribution losses are considered as controllable costs only. So, deviation in power purchase cost, consequent to increase in distribution losses, is absorbed. It is net gap after treatment of gain/loss due to all factors.

**Commission's view:** *The distribution losses are controllable. Employee cost, in some cases, where payment of wage increases due to pay revision, etc., is considered uncontrollable.*

#### **76. Load factor and diversity factor need revision**

**Objection:** Some of the stakeholders have suggested that the load factor and diversity Factor in supply code should be revised in the light of energy efficient equipment now available.



**Response of the Petitioner:** The petitioner has submitted that this issue can be reviewed in the supply code review panel.

**Commission's View:** *The load factor and diversity factor enable assessment of consumption realistically with regard to the type of industry. There is a need to reassess them. The licensee should come up with a proposal soon.*

#### **77. More than one meter in single premises**

**Objection:** Some stakeholders have suggested that if more than one meter is installed in single premises, the sum of the connected load should be taken as contracted load.

**Response of the Petitioner:** The petitioner has submitted that the connections are released with specific connected load. If this suggestion is implemented, the consequent variation in load in use by the consumer may affect the revenue of the licensee.

**Commission's View:** *This requires further examination. This will be considered and appropriate decision taken.*

#### **78. Average cost of supply for HT consumers is not fair**

**Objection:** Some of the stakeholders have pointed out that the methodology adopted in determination of average cost of supply is unfair to a consumer like railways, operating at a very low T & D loss level.

**Response of the Petitioner:** The petitioner has submitted that the average cost of supply during the year is computed by dividing the ARR of the licensee for recovery through the retail tariff by the total energy sales forecast for the year.

**Commission's View:** *The objection and response are noted.*

#### **79. PF incentive**

**Objection:** Some of the stakeholders have requested that power factor incentive rate should be restored to 1 %.

**Response of the Petitioner:** The petitioner has submitted that the rate of 0.5 % was fixed by Commission in Review Petitions 1,2,3 of 2007, filed by Western Railways.



**Commission's View:** *The objection and response are noted.*

#### **80. Interest cost on capital works for agricultural connection**

**Objection:** Some stakeholders have suggested that the Commission should direct the state Government to bear the burden of increased interest cost on account of creating assets for the agricultural sector. This will facilitate reduction of tariffs to other sectors.

**Response of the Petitioner:** The petitioner has submitted that the Commission may take note of this.

**Commission's View:** *The Commission directs the petitioner to submit the details of source of funding for agricultural infrastructure.*

#### **81. FCA formula nontransparent**

**Objection:** Some stakeholders have mentioned that the fuel adjustment formula is not transparent and seems dysfunctional. There is a continuous increase in tariff. The abbreviation L.A in the formula is the weighted average of the approved level of T& D losses for the four DISCOMs for a particular quarter.

**Response of the Petitioner:** The petitioner has submitted that the FCA charges are recovered as per the formula approved by the Commission. The FPPPA is calculated every quarter and the same is posted on the company's website.

**Commission's View:** *The FPPPA formula has been approved after due process and after detailed deliberation. Any changes can be made after a similar exercise and review. This will be examined.*

#### **82. Fuel cost and tariffs**

**Objection:** Some stakeholders have complained that the tariffs are not reduced in line with the fall in the fuel cost from 134 dollars to 34 dollars. The company has unduly profited from this.

**Response of the Petitioner:** The petitioner has submitted that the power tariff regime in Gujarat has been fairly stable for several years as increases in costs were absorbed by the petitioners. It is not possible to absorb all the increases in costs. All



the basic fuels have witnessed increases all over the world. So, tariff hike, by way of FPPPA, is inevitable.

**Commission's View:** *The objection and response are noted.*

### **83. Legal help for consumers**

**Objection:** Some of the stakeholders have requested that there are numerous court cases for or against licensee, due to factors like extractive attitude of the concerned staff and ambiguity of rules or actions of licensee, devoid of legality. There is undue enhancement in cases like:

- (1) Reconnection charges levied without disconnection,
- (2) Payment to GETCO,
- (3) Development charges, and
- (4) Recovery of parallel operation charges etc.

The utilities fight court cases with public money, which cannot be matched by the poor consumers. Legal expenses of licensee need to be checked. GERC should see that consumer guidance legal cells be formed for presenting consumer cases (as in the case of Karnataka ERC's Consumer Advocacy Cell)

**Response of the Petitioner:** The petitioner has submitted that reconnection charges are not recovered without disconnection. Parallel Operation Charges (POC) are charged at the rates determined recently by GERC. No 'Development Charges' are levied by petitioner. The issue of payment to GETCO' needs clarification from the objector.

**Commission's View:** *The suggestion of the objector regarding consumer advocacy cell is noted. It needs detailed consideration. The petitioner needs to be more responsive to consumer difficulties and less litigious.*

### **84. Agricultural consumption pushing up power purchases**

**Objection:** Some of the stakeholders have suggested that 4995 new agriculture connections are proposed with load of 38.49 MW. Increased supply to agriculture will require more power purchases.

**Response of the Petitioner:** The increase in tariff is not entirely due to increase in supply to the agriculture sector. Application of cost-to-serve to particular sections (like



the objectors) cannot be done selectively. The proposed tariffs are within limits stipulated in the NTP.

**Commission's View:** *The Objection and the response are noted.*

#### **85. KVAH tariff needs promotion**

**Objection:** Some of the stakeholders of MGCVL have suggested that KVAH tariff is desirable instead of kWh tariff. KVAH tariff should be approved as an optional tariff with greater discount particularly for streetlights and residential segment.

MGCVL should be penalised for delaying pilot projects and should cooperate with the objector, CAER, by accepting 500 single phase KVA H meters for pilot project and submit the report to GERC, CEA and CPRI within 4 months. KVAH studies of MGCVL ignore effect of distortion on PF.

**Response of the Petitioner:** The petitioner has submitted that, in the Tariff Order dated 31/03/2010, GERC already made a provision for optional KVAH tariff as pilot project at Rs 2.50 per KVAH rate.

Anand Nagarpalika requested to bill three streetlight installations on the KVAH tariff. Three phase electronic meters, with KVAH recording capabilities, were installed, since single phase KVAH meters were not readily available. There is no delay in installation of meters by MGCVL. In the absence of any directive to the contrary, the purchase of meters or any equipment has to be done through tendering only. CAER cannot be preferred in this. The adoption of KVAH for domestic consumers is not feasible at present.

**Commission's View:** *The report on the practical experience gained in the installation of KVAH meters in Anand may be furnished to the Commission soon. The MGCVL needs to act more proactively in this matter. The Commission would examine the implementation of KVAH metering and take an appropriate decision.*

#### **86. MGCVL gap due to inefficiency**

**Objection:** Some of the stakeholders have opined that the proposed increase in tariff and request for regulatory asset by MGCVL are to cover its inefficiency and thereby burden consumers through a tariff hike.



**Response of the Petitioner:** The petitioner has submitted that a part of the gap remains even after the proposed tariffs increase. The petitioner has requested the Commission to treat this gap as regulatory asset - to be recovered through tariff in future.

**Commission's View:** *The objection and the response are noted. These issues have been taken into consideration while determining the tariff.*

#### **87. Common tariff determined to MGVCL consumers**

**Objection:** Some of the stakeholders have suggested that it is against the Electricity Act, 2003. Separate tariff is determined for Torrent Energy Limited, the private licensee while common tariff is imposed on the four DISCOMs, differing widely in their parameters like T&D losses, consumer mix, employee cost, etc. For example, T&D losses in MGVCL are 13%. (to modify)

**Response of the Petitioner:** The petitioner has submitted that the loss level of 13% of MGVCL is despite its diverse mix of consumers. 70% are in rural areas. The lines are long and dispersed.

**Commission's View:** *The common tariff to DISCOMs is as per the policy of the State Government.*

#### **88. Non-Implementation of Directives**

**Objection:** Some of the stakeholders have pointed out that several directives are not yet complied with.

**Response of the Petitioner:** The petitioner has submitted that the status of compliance of the directives is given in the petition.

**Commission's View:** *This is discussed in the Chapter on "Compliance of Directives". The Commission would ensure that all directives are complied with.*



## 4. Truing up for FY 2009-10

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The petitioner, in its petition for truing up for FY 2009-10, has furnished the actual energy sales, expenditure and revenue for FY 2009-10, based on the audited annual accounts for FY 2009-10. It is submitted that the truing up for FY 2009-10 is based on the comparison of the actual performance of the FY 2009-10 with the approved revised estimate for FY 2009-10 in the Tariff order dated 31<sup>st</sup> March, 2010 to arrive at the gains / losses.

The Commission has analyzed the components of the actual energy sales, expenses, revenue and gains / losses in the truing up for FY 2009-10.

The Commission has, however, compared the actuals of FY 2009-10 with the approved ARR for FY 2009-10 in the order dated 14<sup>th</sup> December, 2009.

### 4.1 Energy sales

#### Petitioner's submission

The petitioner has submitted the category-wise actual energy sales for FY 2009-10 as given in the table below:

**Table 4.1: Category-wise actual energy sales for FY 2009-10**

Sl. No.	Particulars	Sales (MU)	
		FY 2009-10 (Approved)	FY 2009-10 (Actual)
<b>A</b>	<b>LT Consumers</b>		
1.	Residential	1458	1428
2.	Commercial	590	508
3.	Industrial LT	526	472
4.	Public Water Works	144	145
5.	Agriculture	852	909
6.	Public Lighting	59	59
	<b>LT Total (A)</b>	<b>3629</b>	<b>3521</b>
<b>B</b>	<b>HT Consumers</b>		
7.	Industrial HT	1894	1877
8.	Railway Traction	374	358
	<b>HT Total (B)</b>	<b>2268</b>	<b>2235</b>
	<b>Grand Total (A + B)</b>	<b>5897</b>	<b>5756</b>

Subsequently, MGVCL has submitted the break-up of actual consumption by metered and un-metered agricultural pump sets accounting to 909 MU.





### Commission's Analysis

The Commission, in the Tariff order dated 14<sup>th</sup> December, 2009, had approved the energy sales of 5860 MU for FY 2009-10. While reviewing the Annual Performance for FY 2009-10, the Commission had considered the revised sales at 5897 MU for FY 2009-10 in the Tariff order dated 31<sup>st</sup> March, 2010. As against the above, MGVCL has submitted the actual sales as 5756 MU. The actual energy sales are lower by 104 MU when compared to the sales approved in the Tariff order dated 14<sup>th</sup> December, 2009.

**The Commission approves the energy sales of 5756 MU for FY 2009-10 as detailed in the table below:**

**Table 4.2: Energy sales approved in the truing up for FY 2009-10**

(MU)					
Sl. No.	Particulars	Approved in the Tariff order dated 14 <sup>th</sup> December, 2009	APR for FY 2009-10	FY 2009-10 (Actual)	Approved for truing up
<b>A</b>	<b>LT Consumers</b>				
1.	Residential	1435	1458	1428	1428
2.	Commercial	520	590	508	508
3.	Industrial LT	484	526	472	472
4.	Public Water Works	146	144	145	145
5.	Agriculture	375	852	909	909
6.	Public Lighting	61	59	59	59
7.	Temporary supply	0	0	0	0
	<b>LT Total (A)</b>	<b>3497</b>	<b>3629</b>	<b>3521</b>	<b>3521</b>
<b>B</b>	<b>HT Consumers</b>				
8.	Industrial HT	2016	1894	1877	1877
9.	Railway Traction	346	374	358	358
	<b>HT Total (B)</b>	<b>2363</b>	<b>2268</b>	<b>2235</b>	<b>2235</b>
	<b>Grand Total (A + B)</b>	<b>5860</b>	<b>5897</b>	<b>5756</b>	<b>5756</b>

## 4.2 Distribution losses

### Petitioner's submission

The petitioner has submitted that the actual distribution losses for FY 2009-10 are 14.51%, as against the approved level of 14.00% in the revised estimate for FY 2009-10. No reasons have been mentioned for the increase in the distribution losses. It is submitted by the petitioner that as per MYT Regulations, the distribution losses need to be treated as controllable and any gain or loss has to be dealt with accordingly as per provisions of MYT Regulations.



### Commission's Analysis

The MGVCL has submitted that the actual distribution losses are 14.51% for FY 2009-10, against 14.00% considered in APR for FY 2009-10 in the order dated 31<sup>st</sup> March, 2010 and 14.00% approved in ARR order dated 14<sup>th</sup> December 2009.

**The Commission approves the distribution losses at 14.00% for FY 2009-10 for truing up of FY 2009-10, as given in the table below:**

**Table 4.3 Distribution Losses approved for truing up for FY 2009-10**

(%)				
Particulars	Approved in ARR order for FY 2009-10	APR for FY 2009-10	FY 2009-10 (Actual)	Approved for truing up
Distribution Losses	14.00	14.00	14.51	14.00

### 4.3 Energy requirement

#### Petitioner's submission

Based on the energy sales for FY 2009-10 and the actual distribution losses for FY 2009-10, the petitioner has submitted the energy requirement for FY 2009-10, as given in the table below:

**Table 4.4: Energy requirement as submitted by MGVCL for FY 2009-10**

Sl. No.	Particulars	Unit	FY 2009-10 (Approved in APR)	FY 2009-10 (Actual)
1.	Energy sales	MU	5897	5756
2.	Distribution losses	MU	960	977
		%	14.00	14.51
3.	Energy requirement	MU	6857	6733
4.	Transmission losses	MU	304	339
		%	4.25	4.79
5.	Total energy to be input to transmission system	MU	7161	7072
6.	Pooled losses in PGCIL system	MU	156	154
7.	<b>Total energy requirement</b>	<b>MU</b>	<b>7317</b>	<b>7226</b>

### Commission's Analysis

The MGVCL has computed the energy requirement based on the actual distribution losses of 14.51%, actual energy sales of 5756 MU and transmission loss of 4.79%.



The Commission had approved the distribution losses of 14.00% in the order dated 14<sup>th</sup> December 2009 and also in the truing up for FY 2009-10 and the transmission loss of 4.30% in the truing up for FY 2009-10 to GETCO.

The Commission has computed the energy requirement with the distribution loss of 14.00% and transmission loss of 4.79% as arrived by SLDC for FY 2009-10 and as given in the table below:

**Table 4.5: Energy requirement approved for truing up for FY 2009-10**

Sl. No.	Particulars	Unit	Approved in Tariff order dated 14 <sup>th</sup> December 2009	Actuals submitted by MGVL FY 2009-10	Approved for FY 2009-10 for truing up
1.	Energy sales	MU	5860	5756	5756
2.	Distribution losses	MU	954	977	937
		%	14.00	14.51	14.00
3.	Energy requirement	MU	6814	6733	6693
4.	Transmission losses	MU	302	339	337
		%	4.25	4.79	4.79
5.	Total energy to be input to transmission system	MU	7116	7072	7030
6.	Pooled losses in PGCIL system	MU	172	154	154
7.	<b>Total energy requirement</b>	<b>MU</b>	<b>7288</b>	<b>7226</b>	<b>7184</b>

**The Commission approves the energy requirement of 7184 MU for truing up for FY 2009-10, as given in the table above.**

## **4.4 Power purchase cost**

### **Petitioner's submission**

The petitioner has submitted that the company has been allotted share of generation capacities as per the scheme worked out by GUVNL.

During the year, based on the requirement of power, the generation capacities have been allocated to MGVL. Based on the allocation, if there is surplus power, the distribution company sells the power to other distribution companies. On the other hand, if there is deficit of power, the same is purchased from other distribution companies.



The MGVL has submitted the actual power purchase cost during FY 2009-10, along with revised power purchase cost considered in APR for FY 2009-10, as shown below:

**Table 4.6: Power purchase cost claimed by MGVL for FY 2009-10**

Particulars	(Rs. crore)	
	FY 2009-10 (Approved in APR)	FY 2009-10 (Actual)
Total power purchase cost	2386	2287

The power purchase cost as per the audited annual accounts for FY 2009-10 is Rs. 2287.12 crore.

It is submitted by MGVL that the variation in the approved cost in APR and the actual power purchase expenses is on account of various reasons. These include:, change in cost of power, change in quantum of power purchased, consequent changes in the transmission charges payable and GUVNL cost allocation.

In addition to the above, there is an incidence of higher power purchase cost on account of the higher distribution losses, as compared to the losses approved by the Commission.

It is further submitted that variation in power purchase expenses is due to variation in the cost and quantum and is an uncontrollable factor. Accordingly, any gain or loss, on this account is to be entirely passed on to the consumers. However, the increase or reduction in quantum of power purchase and power purchase expenses due to variation in distribution loss is a controllable factor; which would result in gain or loss under MYT Regulations and is dealt with accordingly.

### **Commission's Analysis**

The Commission has examined the actual quantum of power purchased and the power purchase cost during the year FY 2009-10, based on the actual energy sales and the distribution losses submitted by MGVL. The sales and the quantum of power purchase and the power purchase cost are as per the audited annual accounts for the FY 2009-10.

**The Commission approves the power purchase cost of Rs. 2287.12 crore, as per actuals for FY 2009-10 for truing up purpose, as against Rs. 1901.35 crore as per ARR order for FY 2009-10.**

**Table 4.7: Power purchase cost approved by the Commission for truing up for FY 2009-10**

Particulars	Approved in ARR order dated 14 <sup>th</sup> December 2009	Actuals as submitted by MGVCL	Approved for truing up for FY 2009-10
Total power purchase cost (Rs. crore)	1901.35	2287.15	2287.12

#### **4.4.1 Gain/Loss due to distribution losses**

The Commission has approved the distribution loss at 14.00% for FY 2009-10 against the actual loss of 14.51%.

The total gain/(loss) on account of higher distribution loss are computed as given in the table below:

**Table 4.8: Gain/(loss) on account of distribution losses for FY 2009-10**

Sl. No	Particulars	Unit	Actuals submitted by MGVCL FY 2009-10	Actuals approved FY 2009-10
1	Energy sales	MU	5756	5756
2	Distribution Losses	MU	977	937
		%	14.51	14.00
4	Energy requirement	MU	6733	6693
5	Transmission losses	MU	339	337
		%	4.79	4.79
7	Total energy to be input to transmission system	MU	7072	7030
8	Pooled losses in PGCIL system	MU	154	154
9	Total energy requirement	MU	7226	7184
10	Gain/ (loss) due to distribution losses	MU	(42)	(40)
11	Average cost of power purchases	Rs./kWh	3.17	3.165
12	Gain/ (loss) due to distribution losses	Rs. crore	(13)	(12.66)

As can be seen from the above, the total loss on account of higher distribution losses is Rs. 12.66 crore. The loss is categorized as on account of controllable factors.

Based on the above, the gain/ (loss) on account of power purchase expenses, is shown as given below:



**Table 4.9 Approved gain/ (loss) – power purchases expenses for truing up for FY 2009-10**  
(Rs. crore)

Sl. No	Particulars	FY 2009-10 approved in ARR dated 14 <sup>th</sup> December 2009	FY 2009-10 (Actuals)	Gain/ (loss) due to controllable factor	Gain / (loss) due to uncontrollable factor
1	Total power purchase cost	1901.35	2287.12	(12.66)	(373.11)

## 4.5 Fixed charges

### 4.5.1 Operation and Maintenance (O&M) expenses for FY 2009-10

The MGVCCL has claimed Rs. 275.10 crore towards actual O&M expenses in the truing up for FY 2009-10 against Rs. 250.00 crore considered in the APR for FY 2009-10 as detailed in the table below:

**Table 4.10: O&M expenses claimed in the truing up for FY 2009-10**  
(Rs. crore)

Sl. No.	Particulars	FY 2009-10 APR	FY 2009-10 (Actual)	Deviation
1.	Employee cost	215.00	237.00	(22.00)
2.	Repairs & Maintenance expenses	42.00	36.00	6.00
3.	Administration & General charges	36.00	36.00	(0.00)
4.	Other debits	1.00	9.00	(8.00)
5.	Extraordinary items	0.00	-	0.00
6.	Net prior period expenses (Income)	-	7.00	(7.00)
7.	Other expenses capitalized	(45.00)	(50.00)	5.00
8.	<b>Total O&amp;M expenses</b>	<b>250.00</b>	<b>275.00</b>	<b>(26.00)</b>

### Petitioner's submission

The MGVCCL has submitted that the O&M expenses consist of the following elements:

- Employee expenses
- Repairs and Maintenance expenses
- Administration and General expenses

The petitioner has also submitted that the following items are included in the O&M expenses as per the directive issued by the Commission. These items are:

- Other debits
- Extraordinary items
- Net prior period expense / (income)
- Other expenses capitalized



The MGVL has compared the O&M expenses actually incurred during FY 2009-10 with the expenses approved by the Commission in the Annual Performance Review (APR) for FY 2009-10 and arrived at a loss of Rs. 26.00 crore as detailed in the table below:

**Table 4.11: O&M expenses and gains / losses claimed in the truing up for FY 2009-10**  
(Rs. crore)

Sl. No.	Particulars	FY 2009-10 (APR)	FY 2009-10 (Actual)	Gain (loss) due to controllable factor	Gain (loss) due to uncontrollable factor
1.	Employee cost	215.00	237.00	-	(22.00)
2.	Repairs & Maintenance expenses	42.00	36.00	6.00	-
3.	Administration & General charges	36.00	36.00	(0.00)	-
4.	Other debits	1.00	9.00	-	(8.00)
5.	Extraordinary items	0.00	-	-	0.00
6.	Net prior period expenses (Income)	-	7.00	-	(7.00)
7.	Other expenses capitalized	(45.00)	(50.00)	-	5.00
8.	<b>Total O&amp;M expenses</b>	<b>250.00</b>	<b>275.00</b>	<b>6.00</b>	<b>(32.00)</b>

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

#### 4.5.2 Employee cost

The MGVL has claimed Rs. 237.00 crore towards actual employee cost in the truing up for FY 2009-10. The employee cost approved for FY 2009-10 in the Tariff order of 14<sup>th</sup> December 2009, considered in APR for FY 2009-10 and claimed by MGVL in the truing up are as given in the table below:

**Table 4.12: Employee cost claimed by MGVL in the truing up for FY 2009-10**  
(Rs. crore)

Particulars	FY 2009-10		
	Tariff order dated 14 <sup>th</sup> December 2009	APR order	Claimed in truing up
Employee cost	215.00	215.00	237.00

#### Petitioner's submission

The MGVL has submitted that the employee cost was incurred on the basis of the guidelines issued by the competent authorities like the State Government and



therefore the entire expenditure estimated is a legitimate expenditure and any variation is purely beyond its control. It is further submitted that the 6% hike approved in the previous MYT order does not compensate the increases due to salary related aspects including hikes, DA increase / mergers etc. MGVCL has requested to consider the variation in employee cost as uncontrollable and accordingly give appropriate treatment for the same. MGVCL has estimated a loss of Rs. 22.00 crore on account of uncontrollable factor.

### **Commission's Analysis**

The MGVCL has compared the actual employee cost of Rs. 237.00 crore incurred during FY 2009-10 with Rs. 214.75 crore considered in the APR for FY 2009-10. The employee cost approved in the MYT order and ARR order for FY 2009-10 is the same as considered in the APR order for FY 2009-10. The actual employee cost as per the audited annual accounts for FY 2009-10 is Rs. 236.66 crore. The increase is mainly on account of the impact of 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 the fact that the additional expenses on account of implementation of Sixth Pay Commission recommendations the Commission allows it to be treated as an uncontrollable expense.

**The Commission, accordingly, approves the employee cost at Rs. 236.66 crore in the truing up for FY 2009-10.**

### **4.5.3 Repairs & Maintenance (R&M) expenses**

The MGVCL has claimed Rs. 36.00 crore towards R&M expenses in the truing up for FY 2009-10. The R&M expenses approved for FY 2009-10 in the Tariff order dated 14<sup>th</sup> December 2009, considered in APR for FY 2009-10 and claimed by MGVCL in the truing up for FY 2009-10 are as given in the table below:

**Table 4.13: R&M expenses claimed by MGVCL for the truing up for FY 2009-10**

(Rs. crore)

Particulars	FY 2009-10		
	Tariff order dated 14 <sup>th</sup> December 2009	APR order	Claimed in truing up
R&M expenses	42.40	42.40	36.00





### **Petitioner's submission**

The MGVCL has submitted that the assets of MGVCL are old and require regular maintenance to ensure uninterrupted operations. It is further submitted that MGVCL has been trying its best to ensure uninterrupted operations of the system by undertaking R&M activities which are uncontrollable in nature.

The MGVCL has estimated a gain of Rs. 6.00 crore due to controllable factor.

### **Commission's Analysis**

The actual R&M expenses incurred during FY 2009-10 are Rs. 36.06 crore as per the audited annual accounts. The Commission has observed that though the DISCOM has stated that the assets are old and require regular maintenance, it could not utilize the amount approved by the Commission under the head. The R&M expense is controllable item of expenditure under the MYT Regulations, 2007.

**The Commission, accordingly, approves the R&M expenses at Rs. 36.06 crore in the truing up for FY 2009-10.**

#### **4.5.4 Administration and General (A&G) expenses**

The MGVCL has claimed Rs. 36.00 crore towards A&G expenses in the truing up for FY 2009-10. The A&G expenses approved for FY 2009-10 in the Tariff order dated 14<sup>th</sup> December, 2009, considered in the APR for FY 2009-10 and claimed by MGVCL in the truing up are as given in the table below:

**Table 4.14: A&G expenses claimed by MGVCL in the truing up for FY 2009-10**

(Rs. crore)

Particulars	FY 2009-10		
	Tariff order	APR order	Claimed in truing up
A & G expenses	36.00	36.00	(0.00)

### **Petitioner's submission**

The MGVCL has submitted that the A&G expenses are categorized as controllable expenses in the MYT Regulations and the actual A&G expenses when compared with the approved value, resulted in a gain / loss of (0.00) crore for FY 2009-10.



### **Commission's Analysis**

The actual A&G expenses as per the audited annual accounts for FY 2009-10 are Rs. 36.49 crore and are higher than what was approved in the Tariff order and considered in the APR for FY 2009-10 by Rs. 0.24 crore.

**The Commission, accordingly, approves the A&G expenses at Rs. 36.49 crore in the truing up for FY 2009-10.**

The parameters impacting A&G expenses are controllable in nature as specified in the MYT Regulations, 2007. The Commission, accordingly, considers the loss under A&G expenses on account of controllable factor.

### **4.5.5 Other Debits**

#### **Petitioners' submission**

The MGVL has claimed the actual other debits at Rs. 9.00 crore in the truing up against Rs. 1.18 crore approved in the Tariff order dated 14<sup>th</sup> December 2009 for FY 2009-10.

### **Commission's Analysis**

The actual other debits as per audited annual accounts for FY 2009-10 are Rs. 9.07 crore.

**The Commission approves the other debits at Rs. 9.07 crore in the truing up for FY 2009-10 as these are recognized as part of O&M expenses.**

### **4.5.6 Extraordinary items**

The MGVL has not claimed anything under extraordinary items in the truing up for FY 2009-10 against provision of Rs. 0.04 crore approved in the Tariff order and APR order for FY 2009-10.

### **Commission's Analysis**

The actual extraordinary items are nil as per the audited annual accounts for FY 2009-10.



#### **4.5.7 Net prior period expenses / (income)**

The MGVCCL has claimed Rs. 7.00 crore towards net prior period expenses in the truing up for FY 2009-10.

#### **Commission's Analysis**

The MGVCCL did not estimate prior period expenses / income in the petitions for ARR as well as APR for FY 2009-10. These net prior period expenses / income are recognized through a directive in the Tariff order dated 31<sup>st</sup> March, 2010. The actual net prior period expenses accounted for in the audited annual accounts are Rs. 7.22 crore.

**The Commission, accordingly, approves the net prior period expenses of Rs. 7.22 crore in the truing up for FY 2009-10.**

#### **4.5.8 Other expenses capitalized**

The MGVCCL has claimed the actual expenses capitalized at Rs. 50.00 crore in the truing up for FY 2009-10 against Rs. 44.72 crore approved in the Tariff order for the year FY 2009-10 and considered in the APR order for FY 2009-10.

#### **Commission's Analysis**

The Commission has observed that the other expenses capitalized represent the capitalization of employee cost, A&G expenses and interest charges etc as seen from the schedule 22 of the annual accounts for FY 2009-10. The actual other expenses capitalized are Rs. 50.07 crore as per the audited annual accounts for FY 2009-10. These other expenses capitalized include Rs. 2.98 crore towards capitalization of interest charges. The interest charges capitalized are excluded from this since the interest charges are allowed on normative basis against the actual capitalization of CAPEX.

**The Commission, accordingly, approves the other expenses capitalized at Rs. 47.09 crore excluding the interest charges capitalized in the truing up for FY 2009-10.**

The total O&M expenses approved in the truing up for FY 2009-10 and the gains / (losses) considered due to controllable and uncontrollable factors are detailed in the table below:

**Table 4.15: Approved O&M expenses and gains / loss in the truing up for FY 2009-10**

(Rs. crore)						
Sl. No.	Particulars	As per Tariff order FY 2009-10	Approved in truing up	Deviation	Gain / (loss) due to controllable factor	Gain / (loss) due to uncontrollable factor
1.	Employee cost	214.75	236.66	(21.91)	-	(21.91)
2.	Repairs and Maintenance expenses	42.40	36.06	6.34	6.34	-
3.	Administration and General charges	36.25	36.49	(0.24)	(0.24)	-
4.	Other debits	1.18	9.07	(7.89)	-	(7.89)
5.	Extraordinary items	-	-	-	-	-
6.	Net prior period expenses	-	7.22	(7.22)	-	(7.22)
7.	Other expenses capitalized	(44.72)	(47.09)	2.37	-	2.37
8.	<b>Total O&amp;M expenses</b>	<b>249.86</b>	<b>278.41</b>	<b>(28.55)</b>	<b>6.10</b>	<b>(34.65)</b>

#### 4.5.9 Capital expenditure, Capitalization and Funding of CAPEX

The MGVCCL has furnished the capital expenditure at Rs. 251.00 crore in the truing up for FY 2009-10 against Rs. 314.00 crore considered in the APR for FY 2009-10 (APR). The details are as given in the table below:

**Table 4.16: Capital expenditure claimed by MGVCCL for FY 2009-10**

(Rs. crore)			
Sl. No.	Particulars	APR order FY 2009-10	Claimed in truing up FY 2009-10
1.	Distribution schemes	78.00	50.00
2.	Rural Electrification schemes	92.00	117.00
3.	Others	5.00	5.00
4.	Non-plan schemes	51.00	18.00
5.	New Innovating schemes	85.00	59.00
6.	Other schemes	4.00	2.00
	<b>Total</b>	<b>314.00</b>	<b>251.00</b>

#### Petitioner's submission

The MGVCCL has submitted that the actual capital expenditure incurred during FY 2009-10 was Rs. 251.00 crore which is lower than what was approved for FY 2009-10 by Rs. 63.00 crore.

#### Commission's Analysis

The capital expenditure considered in the APR for FY 2009-10 in the Tariff order dated 31<sup>st</sup> March, 2010 was Rs. 314.45 crore. The actual capital expenditure incurred is given as Rs. 251.18 crore and this is lower by Rs. 36.73 crore than the CAPEX



considered in the APR for FY2009-10. The actual capital expenditure during FY 2009-10 was Rs. 251.18 crore and the actual capitalization was Rs. 234.79 crore as per the audited annual accounts for FY 2009-10.

The Commission has observed that there is wide variation in the capital expenditure projected and actual capitalisation. The licensee shall be more realistic in projecting the capital expenditure.

**The Commission, accordingly, approves the capital expenditure at Rs. 251.18 crore and the capitalization at Rs. 234.79 crore in the truing up for FY 2009-10.**

The CAPEX, capitalization and funding claimed by the MGVCL and approved by the Commission are as given in the table below:

**Table 4.17: Approved Capitalization and sources of funding in the truing up for FY 2009-10**  
(Rs. crore)

Particulars	Claimed in truing up for FY 2009-10	Approved in truing up for FY 2009-10
Capital expenditure	251.00	251.18
Capitalization	235.00	234.79
Less:		
Consumer contribution	48.00	30.63
Grants	127.00	91.21
Balance capitalization	60.00	112.95
Debt @ 70%	42.00	79.07
Equity @ 30%	18.00	33.88

\* Note: The MGVCL has considered the consumer contribution and grants to the extent of Rs. 175.00 crore while the actuals are Rs. 121.84 crore as per the audited accounts for FY 2009-10.

#### **4.5.10 Depreciation**

The MGVCL has claimed Rs. 94.00 crore towards depreciation in the truing up for FY 2009-10. The depreciation charges approved in the Tariff order for the year FY 2009-10, considered in the APR order for FY 2009-10 and claimed by MGVCL in the truing up for FY 2009-10 are as given in the table below:

**Table 4.18: Depreciation claimed by MGVCL in the truing up for FY 2009-10**  
(Rs. crore)

Particulars	FY 2009-10		
	Tariff order	APR order	Claimed in truing up
Depreciation	96.64	96.26	94.00



### Petitioner's submission

The MGVL has submitted that the amount of depreciation as per actuals is lower than the approved depreciation. MGVL has applied the rate of depreciation as specified by CERC assuming the asset mix to remain unchanged.

The MGVL has considered that the depreciation rate as per the CERC Regulations, 2009 and computed the depreciation as detailed in the table below:

**Table 4.19: Fixed assets and depreciation computed by MGVL for FY 2009-10**

(Rs. crore)

Sl. No.	Particulars	FY 2009-10 (Approved)	FY 2009-10 (Actual)	Deviation
1.	Gross block in beginning of the year	1674.00	1674.00	-
2.	Additions during the year (Net)	314.00	235.00	-
3.	Depreciation for the year	96.00	94.00	2.00
4.	Average rate of depreciation	5.26%	5.26%	-

The MGVL has further submitted that actual depreciation for FY 2009-10 as against the value approved (APR) resulted in a net uncontrollable gain of Rs. 2.00 crore as detailed in the table below:

**Table 4.20: Gain / loss due to deprecation claimed in the truing up for FY 2009-10**

(Rs. crore)

Particulars	FY 2009-10 (Approved)	FY 2009-10 (Actual)	Gain / loss due to controllable factor	Gain / (loss) due to uncontrollable factor
Depreciation	96.00	94.00	-	2.00

### Commission's Analysis

The opening balance of GFA, the net addition during the year FY 2009-10 and the closing balance of GFA are verified with the audited annual accounts for FY 2009-10. The MGVL has adopted the opening balance of GFA at Rs. 1674 crore against Rs. 1679.13 crore as per the audited accounts for FY 2009-10. The depreciation rate of 5.26% adopted is in line with the depreciation rates specified in CERC Tariff Regulations, 2009.

**The Commission has computed the depreciation at Rs. 94.49 crore in the truing up for FY 2009-10 as detailed in the table below:**



**Table 4.21: Approved depreciation in the truing up for FY 2009-10**

Sl. No.	Particulars	(Rs. crore)	
		Claimed in truing up for FY 2009-10	Approved in truing up for FY 2009-10
1.	Gross block in beginning of the year	1674.00	1679.13
2.	Additions during the year (Net)	235.00	234.79
3.	Depreciation for the year	94.00	94.49
4.	Average rate of depreciation	5.26%	5.26%

The amount of depreciation is dependent on the quantum of capitalization, rate of depreciation etc. The Commission has therefore considered the parameters impacting depreciation as uncontrollable.

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

**Table 4.22: Gain / loss due to depreciation approved in the truing up for FY 2009-10**

(Rs. crore)				
Particulars	As per Tariff order FY 2009-10	Approved in truing up for FY 2009-10	Deviation	Gain / loss due to Uncontrollable factor
Depreciation	96.64	94.49	2.15	2.15

#### 4.5.11 Interest and Finance charges

The MGVCL has claimed Rs. 49.00 crore towards interest and finance charges in the truing up for FY 2009-10 against Rs. 42.30 crore approved in the Tariff order and Rs. 50.67 crore considered in the APR for FY 2009-10 as detailed in the table below:

**Table 4.23: Interest and Finance charges claimed by MGVCL in the truing up for FY 2009-10**

Particulars	FY 2009-10		
	Tariff order	APR order	Claimed in truing up
Interest and Finance charges	42.30	50.67	49.00

#### Petitioners' submission

The MGVCL has submitted that it has considered opening balance of loan as approved in its APR order for FY 2009-10 considered in the Tariff order dated 31<sup>st</sup> March, 2010. The loan addition is computed at Rs. 42.00 crore towards loan for funding the CAPEX for FY 2009-10. MGVCL has considered the weighted average rate of interest of 10.84% against 10.74% considered in APR for FY 2009-10. In addition to the above, MGVCL has considered the guarantee charges payable on



legacy loan from erstwhile GEB and interest on security deposits. The details of interest and finance charges claimed by MGVCCL are as given in the table below:

**Table 4.24: Interest and Finance charges claimed in the truing up for FY 2009-10**

(Rs. crore)

Sl. No.	Particulars	FY 2009-10 (Approved)	FY 2009-10 (Actual)	Deviation
1.	Opening loans	263.00	263.00	
2.	New loan during the year	103.00	42.00	
3.	Repayment during the year	103.00	49.00	
4.	Closing loans	263.00	256.00	
5.	Average loans	263.00	259.00	
6.	Interest on loans	28.00	28.00	0.00
7.	Interest on security deposit	21.00	20.00	1.00
8.	Guarantee charges	1.00	1.00	0.00
9.	Total interest & finance charges	51.00	49.00	1.00
10.	<b>Weighted average rate of interest</b>	<b>10.74%</b>	<b>10.84%</b>	

The MGVCCL has further submitted that interest and finance charges are categorized as uncontrollable as per the MYT Regulations and accordingly worked out deviation in the actual vis-à-vis the approved expenses under uncontrollable factors and they are as given in the table below:

**Table 4.25: Gains / (Loss) claimed due to interest & finance charges for FY 2009-10**

(Rs. crore)

Particulars	FY 2009-10 (Approved)	FY 2009-10 (Actual)	Gain / loss due to controllable factor	Gain / loss due to Uncontrollable factor
Interest and Finance charges	51.00	49.00	-	1.00

### Commission's Analysis

The Commission analyzed the loan for capital expenditure and approved the opening loan towards capital expenditure at Rs. 262.63 crore in the APR for FY 2009-10 in the Tariff order dated 31<sup>st</sup> March, 2010. This is taken as opening balance of loan in the truing up for FY 2009-10. The capitalization and funding of CAPEX have been approved for FY 2009-10 based on the audited accounts. The interest on security deposits is claimed at Rs. 20.00 crore. The actual interest on security deposits as per audited accounts is Rs. 20.15 crore for FY 2009-10. The repayment of loan is claimed at Rs. 49.00 crore in the truing up for FY 2009-10. In the MYT order for FY 2009-10 the tenure of new loan is considered as 10 years for repayment and the repayment is considered 1/10<sup>th</sup> of the loan outstanding at the beginning of the year. The guarantee charges as per audited accounts for FY 2009-10 are Rs. 1.10 crore.





Taking all these factors into consideration the interest and finance charges are computed @ 10.84% as detailed in the table below:

**Table 4.26: Interest and Finance charges approved by the Commission in the truing up for FY 2009-10**

(Rs. crore)

Sl. No.	Particulars	Claimed in truing up for FY 2009-10	Approved in truing up for FY 2009-10
1.	Opening loans	263.00	262.63
2.	New loan during the year	42.00	79.07
3.	Repayment during the year	49.00	26.26
4.	Closing loan	256.00	315.44
5.	Average loan	259.00	289.04
6.	Interest on loan	28.00	31.33
7.	Interest on security deposit	20.00	20.15
8.	Guarantee charges	1.00	1.10
9.	<b>Total interest &amp; finance charges</b>	<b>49.00</b>	<b>52.58</b>
10.	<b>Rate of interest</b>	<b>10.84%</b>	<b>10.84%</b>

**The Commission, accordingly, approves the interest and finance charges at Rs. 52.58 crore in the truing up for FY 2009-10.**

In regard to the computation of gains / losses, Regulation 9.6.2 (a) considers the interest and finance charges as a controllable expense. The Commission has observed that the interest and finance charges are dependent on the amount of capital expenditure, capitalization and the extent of borrowing considered during the financial year. The Commission, therefore, considers the deviation as on account of uncontrollable factors.

**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 4.27: Gain / loss approved in the truing up for FY 2009-10**

(Rs. crore)

Particulars	As per Tariff order FY 2009-10	Approved in truing up for FY 2009-10	Deviation	Gain / loss due to Uncontrollable factor
Interest and finance charges	42.30	52.58	(10.28)	(10.28)

#### **4.5.12 Interest on working capital**

The MGVCL has claimed Rs. 51.00 crore towards interest on working capital in the truing up for FY 2009-10 against Rs. 22.73 crore approved in the Tariff order and Rs. 25.47 crore considered in the APR order for FY 2009-10 which are as detailed in the table below:



**Table 4.28: Interest on working capital claimed by MGVCCL in the truing up for FY 2009-10**  
(Rs. crore)

Particulars	FY 2009-10		
	Tariff order	APR order	Claimed in truing up
Interest on working capital	22.73	25.47	51.00

#### **Petitioner's submission**

The petitioner has submitted that the interest on working capital has been calculated based on the normative principles outlined in the Terms and Conditions of Tariff Regulations at an interest rate of 10.25%, being the Short-term Prime Lending Rate of SBI as on 01/04/2004 as approved in the APR order for FY 2009-10.

The detailed computation of interest on working capital is as given in the table below:

**Table 4.29: Interest on working capital claimed by MGVCCL in the truing up for FY 2009-10**  
(Rs. crore)

	Particulars	FY 2009-10 (Approved)	FY 2009-10 (Actual)	Deviation
1.	O&M expenses	24.00	23.00	
2.	Maintenance spares	18.00	17.00	
3.	Receivables	206.00	459.00	
4.	<b>Total working capital</b>	<b>248.00</b>	<b>499.00</b>	
5.	Rate of interest on working capital	10.25%	10.25%	
6.	<b>Interest on working capital</b>	<b>25.00</b>	<b>51.00</b>	<b>(26.00)</b>

The MGVCCL has further submitted that the actual amount of interest on working capital against the amount approved in APR for FY 2009-10 results in a net uncontrollable loss of Rs. 26.00 crore as is given in the table below:

**Table 4.30: Gains / (Loss) claimed due to interest on working capital for FY 2009-10**  
(Rs. crore)

Particulars	FY 2009-10 (Approved)	FY 2009-10 (Actual)	Gain / (loss) due to controllable factor	Gain / (loss) due to uncontrollable factor
Interest on working capital	25.00	51.00		(26.00)

#### **Commission's Analysis**

The Commission examined the computation of interest on working capital submitted by MGVCCL and observed that receivables equivalent to two months sales have been claimed by MGVCCL in the truing up for FY 2009-10 against one month sales approved in the Tariff order for FY 2009-10. The Commission had considered receivables equivalent to one-month sales as proposed by the petitioner in the ARR



petition as well as in the APR petition for FY 2009-10. The working capital and interest on working capital are recomputed taking into consideration the receivables equivalent to one month sales and the O&M expenses approved in the truing up which are as detailed in the table below:

**Table 4.31: Interest on working capital approved in the truing up for FY 2009-10**

(Rs. crore)

Sl. No.	Particulars	Claimed in truing up for FY 2009-10	Approved in truing up for FY 2009-10
1.	O&M expenses for one month	23.00	23.20
2.	Maintenance spares 1% of GFA	17.00	16.79
3.	Receivables one month's sales	459.00	216.45
4.	<b>Total working capital</b>	<b>499.00</b>	<b>256.44</b>
5.	Rate of interest on working capital	10.25%	10.25%
6.	<b>Interest on working capital</b>	<b>51.00</b>	<b>26.29</b>

**The Commission, accordingly, approves the interest on working capital at Rs. 26.29 crore in the truing up for FY 2009-10.**

The deviation in the interest on working capital is considered as on account of uncontrollable factors as the components contributing to 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 below:**

**Table 4.32: Gain / loss approved in the truing up for FY 2009-10**

(Rs. crore)

Particulars	As per Tariff order FY 2009-10	Approved in truing up for FY 2009-10	Deviation	Gain / loss due to uncontrollable factor
Interest on working capital	22.73	26.29	(3.56)	(3.56)

#### **4.5.13 Provision for bad debts**

The MGVCCL has claimed Rs. 12.89 crore towards actual bad debts in the truing up for FY 2009-10 against Rs. 2.23 crore approved in the Tariff order for FY 2009-10. The details are as given in the table below:



**Table 4.33: Provision for bad debts claimed by MGVCCL in the truing up for FY 2009-10**  
(Rs. crore)

Particulars	FY 2009-10 (Approved)	FY 2009-10 (Actual)	Gain /( loss) due to controllable factor	Gain / (loss) due to uncontrollable factor
Provision for bad debts	2.00	13.00	(10.00)	-

#### **Petitioner's submission**

The MGVCCL has submitted that the actual value of bad debts when compared with the approved value resulted in a gain of Rs. 10.00 crore on account of controllable factors which are as shown in the table below:

**Table 4.34: Provision for bad debts for FY 2009-10**  
(Rs. crore)

Particulars	FY 2009-10 (Approved)	FY 2009-10 (Actual)	Gain /( loss) due to uncontrollable factor	Gain / (loss) due to uncontrollable factor
Provision for bad debts	2.00	13.00	(10.00)	-

#### **Commission's Analysis**

The Commission examined the submission made by the petitioner. It is noted, on verification from the audited annual accounts that an amount of Rs. 12.89 crore is included towards bad and doubtful debts provided for / written off in the (schedule 23 of the annual accounts).

The Regulation 66 of GERC (Terms and Conditions of Tariff) Regulations, 2005 specified that the bad debts actually written off subject to commission's clearance are to be considered. The amount of Rs. 12.89 crore claimed by MGVCCL includes a provision of Rs. 9.22 crore (vide schedule 11 of annual accounts) and this cannot be considered as written off without adequate justification being provided by MGVCCL.

**The Commission, therefore, approves the bad debts at Rs. 3.67 (12.89-9.22) crore in the truing up for FY 2009-10.**

The deviation on account of bad debts written off is 1.44 crore and the Commission considers the loss of Rs. 1.44 crore due to controllable factors as detailed in the table below:



**Table 4.35: Gain / loss due to bad debts approved in the truing up for FY 2009-10**

(Rs. crore)

Particulars	Approved in the Tariff order for FY 2009-10	Approved in truing up for FY2009-10	Deviation	Gain / (loss) due to controllable factor
Provision for bad debts	2.23	3.67	(1.44)	(1.44)

#### 4.5.14 Return on equity

The MGVCCL has claimed Rs. 63.00 crore towards return on equity in the truing up for FY 2009-10 against Rs. 65.97 crore approved in the Tariff order for FY 2009-10 and Rs. 64.92 crore considered in the APR which are as given in the table below:

**Table 4.36: Return on equity claimed by MGVCCL in the truing up for FY 2009-10**

(Rs. crore)

Particulars	FY 2009-10		
	Tariff order	APR order	Claimed in truing up
Return on equity	65.97	64.92	63.00

#### Petitioner's submission

The petitioner has submitted that MGVCCL has computed the return on equity considering a rate of 14% on the average of opening and closing equity taking into account the additions during the year FY 2009-10.

The details of computation of return on equity are as given in the table below:

**Table 4.37: Return on equity claimed by MGVCCL in the truing up for FY 2009-10**

(Rs. crore)

Sl. No.	Particulars	FY 2009-10 (Approved)	FY 2009-10 (Actual)	Deviation
1.	Opening equity	442.00	442.00	-
2.	Additional equity during the year	44.00	18.00	26.00
3.	Closing equity	486.00	460.00	26.00
4.	Average equity	464.00	451.00	13.00
5.	Rate of return on equity	14%	14%	
6.	<b>Return on Equity</b>	<b>65.00</b>	<b>63.00</b>	<b>2.00</b>

#### Commission's Analysis

The MGVCCL has furnished the opening equity capital at Rs. 442.00 crore for FY 2009-10 and it has claimed an equity addition of Rs. 18.00 crore during the FY 2009-10. The actual opening equity as on 01/04/2009 was Rs. 441.70 crore being the closing balance of equity approved for FY 2008-09 (APR). The Commission has approved the normative equity addition at Rs. 33.88 crore in table 4.17.



The Commission has computed the return on equity in the truing up for FY 2009-10 as detailed in the table below:

**Table 4.38: Return on equity approved for FY 2009-10**

(Rs. crore)			
Sl. No.	Particulars	Claimed in truing up for FY 2009-10	Approved in truing up for FY 2009-10
1.	Opening equity	442.00	441.70
2.	Additional equity during the year	18.00	33.88
3.	Closing equity	460.00	475.58
4.	Average equity	451.00	458.64
5.	Rate of return on equity@ 14%	63.00	64.21

**The Commission approves the return on equity at Rs. 64.21 crore in the truing up for FY 2009-10.**

It is considered that the deviation is due to uncontrollable factors as 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 the capitalization achieved during the year.

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

**Table 4.39: Approved gains / losses due to return on equity in the truing up for FY 2009-10**

(Rs. crore)				
Particulars	As per Tariff order FY 2009-10	Approved in truing up for FY 2009-10	Deviation	Gain / (loss) due to uncontrollable factor
Return on equity	65.97	64.21	1.76	1.76

#### **4.5.15 Taxes**

The MGVL has claimed Rs. 6.00 crore towards income tax in the truing up for FY 2009-10 against Rs. 1.07 crore approved in the Tariff order for FY 2009-10 as well as in the APR order for FY 2009-10 as given in the table below:

**Table 4.40: Taxes claimed by MGVL in the truing up for FY 2009-10**

(Rs. crore)			
Particulars	FY 2009-10		
	Tariff order	APR order	Claimed in truing up
Provision for tax / paid	1.07	1.07	6.00



### **Petitioner's submission**

The petitioner has submitted that the actual tax is worked out to be Rs. 6.00 crore as against Rs. 1.07 crore approved in the APR order for FY 2009-10. MGVL has further mentioned that tax is a statutory expense and this should be allowed without any deduction. MGVL has claimed loss of Rs. 5.00 crore on account of tax as given in the table below:

**Table 4.41: Gains / (Loss) claimed due to provision for taxes for FY 2009-10**

(Rs. crore)

Particulars	FY 2009-10 (Approved)	FY 2009-10 (Actual)	Gain / (loss) due to controllable factor	Gain / (loss) due to uncontrollable factor
Provision for tax / tax paid	1.00	6.00	-	(5.00)

### **Commission's Analysis**

The Commission verified and found that the provision for tax is Rs. 5.84 crore as per the audited annual accounts.

**The Commission, accordingly, approves the provision for tax at Rs. 5.84 crore in the truing up for FY 2009-10.**

In regard to the computation of gains / losses, the 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 which are as detailed in the table below:

**Table 4.42: Approved gains / losses due to tax in the truing up for FY 2009-10**

(Rs. crore)

Particulars	As per Tariff order FY 2009-10	Approved in truing up for FY 2009-10	Deviation	Gain / (loss) due to Un controllable factor
Tax on income	1.07	5.84	(4.77)	(4.77)

### **4.5.16 Non-tariff income**

The MGVL has furnished the actual non-tariff income at Rs. 87.00 crore in the truing up for FY 2009-10 against Rs. 33.02 crore approved in the Tariff order for FY 2009-10 and Rs. 73.31 crore considered in the APR for FY 2009-10 which are as detailed in the table below:



**Table 4.43: Non-tariff income claimed by MGVCCL in the truing up for FY 2009-10**  
(Rs. crore)

Particulars	FY 2009-10		
	Tariff order	APR order	Claimed in truing up
Non-tariff income	33.02	73.31	87.00

#### **Petitioner's submission**

The petitioner has submitted that the actual value of non-tariff income is Rs. 87.00 crore as against Rs. 73.00 crore considered in the APR and this resulted in a net controllable loss of Rs. 13.00 crore which is as detailed in the table below:

**Table 4.44: Gains / (Loss) claimed due to non-tariff income for FY 2009-10**  
(Rs. crore)

Particulars	FY 2009-10 (Approved)	FY 2009-10 (Actual)	Gain / (loss) due to controllable factor	Gain / (loss) due to Un controllable factor
Non-tariff income	73.00	87.00	(13.00)	

#### **Commission's Analysis**

The Commission has verified and found that the actual 'other income' is Rs. 86.75 crore as per the audited annual accounts for FY 2009-10.

**The Commission, accordingly, approves the non-tariff income at Rs. 86.75 crore in the truing up for FY 2009-10.**

The deviation in non-tariff income is considered as uncontrollable. The Commission, accordingly, approves the gains / losses on account of non-tariff income in the truing up for FY 2009-10 which is as detailed in the table below:

**Table 4.45: Approved gains / losses due to non-tariff income in the truing up for FY 2009-10**  
(Rs. crore)

Particulars	As per Tariff order FY 2009-10	Approved in truing up for FY 2009-10	Deviation	Gain / (loss) due to Un controllable factor
Non-tariff income	33.02	86.75	53.73	53.73

## **4.6 Revenue from sale of power**

The MGVCCL has furnished the total revenue at Rs. 2675.00 crore in the truing up for FY 2009-10 as against Rs. 2424.17 crore approved in the Tariff order for FY 2009-10 and Rs. 2601.00 crore considered in the APR for FY 2009-10 as detailed in the table below:





**Table 4.46: Revenue claimed in the truing up for FY 2009-10**

(Rs. crore)

Sl. No.	Particulars	Tariff order	APR order	Claimed in truing up
1.	Revenue from sale of power	2228.54	2473.00	2539.00
2.	Other income (Consumer related)	73.92	49.00	59.00
3.	Total revenue excluding subsidy (1+2)	2302.46	2523.00	2597.00
4.	Agricultural subsidy	79.71	79.00	78.00
5.	Other subsidy	42.00	-	-
6.	<b>Total revenue including subsidy (3+4+5)</b>	2424.17	<b>2601.00</b>	<b>2675.00</b>

The category-wise sales revenue for FY 2009-10 is given in the table below:

**Table 4.47 : Category-wise sales and revenue for FY 2009-10**

(Rs. crore)

Revenue from sale of power	Year ended March, 31 <sup>st</sup> 2010
Domestic or Residential	543.15
Commercial	286.18
Industrial low & medium voltage	258.29
Industrial high voltage	1025.72
Public lightening	24.18
Traction Railways	206.52
Irrigation agricultural	144.88
Public water works and sew pumps	49.80
<b>Total revenue from sale</b>	<b>2538.72</b>

### Commission's Analysis

The Commission has verified the total revenue for FY 2009-10 from the audited annual accounts. The actual revenue is Rs. 2675.40 crore including other income and revenue subsidy.

**The Commission, accordingly, approves the total revenue in the truing up for FY 2009-10 as detailed in the table below:**

**Table 4.48: Revenue approved in the truing up for FY 2009-10**

(Rs. crore)

Sl. No.	Particulars	Claimed in truing up for FY 2009-10	Approved in truing up for FY 2009-10
1.	Revenue from sale of power	2539.00	2538.72
2.	Other income (Consumer related)	59.00	58.65
3.	Total revenue excluding subsidy (1+2)	2597.00	2597.37
4.	Agricultural subsidy	78.00	78.03
5.	<b>Total revenue including subsidy (3+4)</b>	2675.00	<b>2675.40</b>



#### 4.7 ARR approved in the truing up

The Commission reviewed the performance of MGVCCL under Regulation 9.2 of MYT Regulations, 2007 with reference to the audited annual accounts for FY 2009-10. The Commission computed the gains / losses for FY 2009-10 based on the truing up for each of the components discussed in the above paragraphs.

The Aggregate Revenue Requirement (ARR) approved in the Tariff order dated 14<sup>th</sup> December, 2009, actual claimed in truing up and approved for truing up and gains / losses computed in accordance with MYT Regulations are as given in the table below:

**Table 4.49: ARR approved in truing up for FY 2009-10**

(Rs. crore)								
Sl. No	Particulars	ARR Order	APR Order	Actual Claimed	Approved in Truing up	Deviation (3-6) +/-	Gain / (Loss) due to controllable factors	Gain / (Loss) due to Uncontrollable factors
1	2	3	4	5	6	7	8	9
1	Cost of Power Purchase	1901.35	2385.68	2287.00	2287.12	(385.77)	(12.66)	(373.11)
<b>2</b>	<b>Operation &amp; Maintenance Expenses</b>	<b>293.40</b>	<b>293.40</b>	<b>309.00</b>	<b>309.21</b>			0.00
2.1	Employee Cost	214.75	214.75	237.00	236.66	(21.91)		(21.91)
2.2	Repair & Maintenance	42.40	42.40	36.00	36.06	6.34	6.34	
2.3	Administration & General Charges	36.25	36.25	36.00	36.49	(0.24)	(0.24)	
3	Depreciation	96.64	96.26	94.00	94.49	2.15	2.15	
4	Interest & Finance Charges	42.30	50.67	49.00	52.58	(10.28)		(10.28)
5	Interest on Working Capital	22.73	25.47	51.00	26.29	(3.56)		(3.56)
6	Other Debits	1.18	1.18	9.00	9.07	(7.89)		(7.89)
7	Extraordinary Items	0.04	0.04	0.00		0.04		0.04
8	Provision for Bad Debts	2.23	2.47	13.00	3.67	(1.44)	(1.44)	
9	Net Prior Period Expenses / (Income)	0.00	0.00	7.00	7.22	(7.22)		(7.22)
10	Other Expenses Capitalised	(44.72)	(44.72)	(50.00)	(47.09)	2.37		2.37
<b>11</b>	<b>Sub-Total (1+2+(3to 10))</b>	<b>2315.15</b>	<b>2810.45</b>	<b>2769.00</b>	<b>2742.56</b>	<b>(427.41)</b>	<b>(5.85)</b>	<b>(421.56)</b>
12	Return on Equity	65.97	64.92	63.00	64.21	1.76		1.76
13	Provision for Tax / Tax Paid	1.07	1.07	6.00	5.84	(4.77)		(4.77)



**Madhya Gujarat Vij Company Limited**  
**Truing up for FY 2009-10, APR for FY 2010-11,**  
**ARR for FY 2011-12 to FY 2015-16 and Tariff for FY 2011-12**

<b>14</b>	<b>Total Expenditure (11 to 13)</b>	<b>2382.19</b>	<b>2876.44</b>	<b>2838.00</b>	<b>2812.61</b>	<b>(430.42)</b>	<b>-5.85</b>	<b>(424.57)</b>
15	Less: Non-Tariff Income	33.02	73.31	87.00	86.75	53.73		53.73
<b>16</b>	<b>Aggregated Revenue Requirement (14-15)</b>	<b>2349.17</b>	<b>2803.13</b>	<b>2751.00</b>	<b>2725.86</b>	<b>(376.69)</b>	<b>(5.85)</b>	<b>(370.84)</b>

The comparison of actual performance of MGVCCL in FY 2009-10 with the approved ARR in the Tariff order dated 14<sup>th</sup> December, 2009 resulted in a deviation of Rs. 376.69 crore (loss) comprising of controllable loss of Rs.5.85 crore and uncontrollable loss of Rs. 370.84 crore during FY 2009-10.

#### **4.8 Sharing of Gains / Losses for FY 2009-10**

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

The relevant Regulations are extracted below:

*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 11.1 “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 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 11.2 "The approved aggregate loss 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 loss maybe 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."*

#### **4.9 Revenue gap / surplus for FY 2009-10**

The MGVCCL has claimed a revenue gap of Rs. 191.00 crore in the truing up after treatment of gains / (loss) due to controllable / uncontrollable factor comparing the performance with the APR for FY 2009-10 instead of Tariff order for FY 2009-10 as detailed in the table below:

**Table 4.50: Projected Revenue gap / (surplus) FY 2009-10**

(Rs. crore)		
<b>Sl. No</b>	<b>Particulars</b>	<b>Approved for FY 2009-10</b>
1	Aggregate Revenue Requirement originally approved for FY 2009-10	2803.00
2	Gain / (Loss) on account of Uncontrollable factor to be passed on to Consumer	53.00
3	Gain / (Loss) on account of Controllable factor to be passed on to Consumer (1/3rd of Total Gain / Loss)	(1.00)
<b>4</b>	<b>Revised ARR for FY 2009-10 (1-2-3)</b>	<b>2751.00</b>
5	Revenue from Sale of power	2539.00
6	Other Income (Consumer related)	59.00
7	Total Revenue excluding Subsidy (5+6)	2597.00
8	Agriculture Subsidy	78.00
<b>9</b>	<b>Total Revenue including Subsidy (7+8)</b>	<b>2675.00</b>
<b>10</b>	<b>Revised Gap after treating gains/(losses) due to Controllable/Uncontrollable factors (4-9)</b>	<b>75.00</b>

The Commission compared the actual performance of MGVCCL with the values approved in the Tariff order dated 14<sup>th</sup> December, 2009.

The Commission arrived at the revised ARR and revenue gap based on the expenses and the gains / (loss) approved in the truing up for FY 2009-10. The revenue gap / surplus approved by the Commission is summarized in the table below:



**Table 4.51: Revenue gap / (surplus) approved in the truing up for FY 2009-10**

		(Rs. crore)
<b>Sl. No.</b>	<b>Particulars</b>	<b>Approved for FY 2009-10</b>
1	Aggregate Revenue Requirement originally approved for FY 2009-10	2349.17
2	Add: Loss on account of Uncontrollable factor to be passed on to Consumer	370.84
3	Add: Loss on account of Controllable factor to be passed on to Consumer 1/3rd of Total Gain	1.95
<b>4</b>	<b>Revised ARR for FY 2009-10 (1-2-3)</b>	<b>2721.96</b>
5	Revenue from Sale of power	2538.72
6	Other Income (Consumer related)	58.65
7	Total Revenue excluding Subsidy	2597.37
8	Agriculture Subsidy	78.03
<b>9</b>	<b>Total Revenue including Subsidy (7+8)</b>	<b>2675.40</b>
<b>10</b>	<b>Revised Gap after treating gains/(losses) due to Controllable/Uncontrollable factors (4-9)</b>	<b>46.56</b>

As discussed above, there is a gap of Rs.46.56 crore for FY 2009-10, the Commission has not considered this gap while determining the tariff for FY 2011-12, as the truing up for FY 2010-11 is required to be taken up next year. After completing the truing up for FY 2010-11 and looking to the net entitlement for the first MYT control period i.e. FY 2008-09 to FY 2010-11, the Commission would take appropriate decision on this at that time.



## 5. Annual Performance Review for FY 2010-11

The petitioner, in its petition for Annual Performance Review (APR) for FY 2010-11, has estimated the energy sales, expenditure and revenue for FY 2010-11, based on actual energy sales, expenditure and revenue for the first half (H1) of FY 2010-11 and estimated performance of the remaining part of the year and provided the revised estimate of energy sales, expenditure and revenue for FY 2010-11, based on the actuals of H1 against each head.

The performance of FY 2010-11 (revised estimate) is compared with the ARR approved for FY 2010-11, in the Order dated 31<sup>st</sup> March, 2010.

The Commission has analyzed the energy sales and components of expenditure and revenue in the performance review for FY 2010-11 in this chapter.

### 5.1 Energy sales

#### Petitioner's submission

The MGVCL, in its petition, has estimated the energy sales for FY 2010-11, based on the actuals for the first half of FY 2010-11 and estimated sales for the rest of the year.

The MGVCL has submitted the category-wise energy sales approved in the Tariff order dated 31<sup>st</sup> March, 2010 and the revised estimate for FY 2010-11, as given in the table below:

**Table 5.1: Category-wise sales for FY 2010-11**

(MU)			
Sl. No.	Particulars	FY 2010-11 (Approved)	FY 2010-11 (RE)
<b>A</b>	<b>LT Consumers</b>		
1.	Residential	1615	1670
2.	Commercial	661	586
3.	Industrial LT	547	512
4.	Public Water Works	161	159
5.	Agriculture	762	864*
6.	Public Lighting	61	60
	<b>LT Total (A)</b>	<b>3806</b>	<b>3851</b>
<b>B</b>	<b>HT Consumers</b>		
7.	Industrial HT	2061	2322
8.	Railway Traction	399	361
	<b>HT Total (B)</b>	<b>2460</b>	<b>2683</b>
	<b>Grand Total (A + B)</b>	<b>6266</b>	<b>6534</b>



\*The agriculture consumption, which was estimated as 968 MU in the petition, was revised to 864 MU, vide letter dated 10<sup>th</sup> June 2011 of the petitioner. Consequently, the total sales (RE) given in the petition as 6638 MU, stand revised to 6534 MU, as given in Table 5.1.

There is an increase in the sales by about 268 MU, mainly in the agricultural category.

The total sales of 6534 MU is considered by the Commission for the purpose of APR.

## **5.2 Distribution losses**

### **Petitioner's submission**

The MGVCCL has projected the distribution losses at 13.00% for FY 2010-11 against 14.00% approved in the Tariff Order dated 31<sup>st</sup> March, 2010.

A reduction of 1.0% is estimated by MGVCCL in the revised estimate for FY 2010-11.

Distribution losses of 13.00% are considered for FY 2010-11 as shown below for the purpose of APR.

**Table 5.2: Distribution losses for FY 2010-11**

(%)		
<b>Particulars</b>	<b>Approved in order dated 31/03/2010</b>	<b>Considered for FY 2010-11</b>
Distribution loss (%)	14.00	13.00

## **5.3 Energy requirement and Energy balance**

### **Petitioner's submission**

Based on the revised energy sales and distribution losses projected above in the paragraphs 5.1 and 5.2 and the transmission loss as per GETCO order, MGVCCL has computed the total energy requirement as given in the table below:

**Table 5.3: Energy requirement and Energy balance as submitted by MGVCCL for FY 2010-11**

<b>Sl. No.</b>	<b>Particulars</b>	<b>Unit</b>	<b>FY 2010-11 (Approved)</b>	<b>FY 2010-11 (RE)</b>
1.	Energy sales	MU	6266	6638
2.	Distribution losses	MU	1020	992
		%	14.00	13.00
3.	Energy requirement	MU	7286	7630
4.	Transmission losses	MU	319	360
		%	4.20	4.50



Sl. No.	Particulars	Unit	FY 2010-11 (Approved)	FY 2010-11 (RE)
5.	Total energy to be input to transmission system	MU	7605	7990
6.	Pooled losses in PGCIL system	MU	151	151
7.	<b>Total energy requirement</b>	<b>MU</b>	<b>7756</b>	<b>8141</b>

### Commission's Analysis

The MGVL has computed the energy requirement with distribution loss of 13.00% considered in the revised estimate for FY 2010-11 and transmission loss of 4.50%. But the transmission loss arrived by SLDC for FY 2010-11 is 4.12%. The energy requirement is accordingly, computed by the Commission as shown in the table below:

**Table 5.4: Energy requirement considered for FY 2010-11**

Sl. No.	Particulars	Unit	Estimated by MGVL for FY 2010-11 (RE)	Considered by the Commission FY 2010-11 (RE)
1.	Energy sales	MU	6638	6534
2.	Distribution losses	MU	992	976
		%	13.00	13.00
3.	Energy requirement	MU	7630	7510
4.	Transmission losses	MU	360	323
		%	4.50	4.12
5.	Total energy to be input to transmission system	MU	7990	7833
6.	Pooled Losses in PGCIL system	MU	151	151
7.	Total energy requirement	MU	8141	7984

**The Commission considers the total energy requirement of 7984 MU in APR for FY 2010-11.**

## 5.4 Power purchase cost

### Petitioner's submission

It is submitted by MGVL that the company has been currently allocated its share from the generating capacities as per the scheme worked out by GUVNL. Based on the allocation, if there is surplus of power, the distribution company sells the power to other distribution companies and if there is a deficit, the power is purchased from other distribution companies. It is further submitted by MGVL that the power purchase cost includes the cost of power, transmission charges payable to GETCO and PGCIL and DISCOM's share of GUVNL cost. The power purchase cost for H1 of





FY 2010-11 is considered on actual basis and the power purchase cost for the H2 of the year is worked out, based on per unit cost during the H1 of FY 2010-11 of scheduled energy.

Based on the above, MGVCCL has compared the approved cost and revised estimate of power purchase cost for FY 2010-11, as shown below:

**Table 5.5: Power purchase cost as submitted by MGVCCL for FY 2010-11**

Particulars	(Rs. crore)		
	FY 2010-11 (Approved)	FY 2009-10 (H1 Actual)	FY 2009-10 (Revised estimate)
Total power purchase cost	2610	1278	2686

Total energy requirement (RE) = 8141 MU  
 Total power purchase cost (RE) = Rs.2686 crore  
 Per unit power purchase cost =  $2686/8141 \times 10 = 3.299$   
 Or say Rs.3.30 per kWh.

### Commission's Analysis

The total energy requirement is revised by the Commission in paragraph 5.3 above by taking into consideration the transmission loss at 4.12% by the Commission against 4.5% considered by MGVCCL. The revised energy requirement of 7984 MU is considered by the Commission for FY 2010-11. The revised power purchase cost based on revised energy requirement is given below:

**Table 5.6: Quantum of power purchase and power purchase cost considered for APR for FY 2010-11**

Sl. No	Particulars	Actuals submitted by MGVCCL	Power purchase cost considered for APR for FY 2010-11
1	Total energy requirement (MU)	8141	7984
2	Unit cost of power (Rs./kWh)	3.30	3.30
3	Total power purchase cost (Rs. crore)	2686	2634.72

**The Commission considers the power purchase cost of Rs. 2634.72 crore in the APR for FY 2010-11.**



## 5.5 Fixed charges

### 5.5.1 Operation and Maintenance (O&M) expenses

The MGVL has claimed Rs. 261.00 crore in the review for FY 2010-11. The O&M expenses approved in the Tariff order for FY 2010-11 and claimed by MGVL in the revised estimate are as detailed in the table below:

**Table 5.7: Estimated O&M expenses in the APR for FY 2010-11**

(Rs. crore)

Sl. No	Particulars	FY 2010-11 (Approved)	FY 2010-11 (H1)	FY 2010-11 (RE)	Gain/(Loss) due to Controllable Factor	Gain/(Loss) due to Uncontrollable Factor
1.	Employee Expenses	200.00	106.00	223.00	-	(22.00)
2.	Repair & Maintenance Cost	45.00	20.00	40.00	5.00	-
3.	Administration & General Charges	38.00	20.00	39.00	(1.00)	-
4.	Other Debits	1.00	4.00	9.00	-	(8.00)
5.	Extraordinary Items	0.00	-	-	-	(0.00)
6.	Net Prior Period Expenses/(Income)	-	-	-	-	-
7.	Other Expenses Capitalized	(47.00)	(25.00)	(50.00)	-	3.00
8.	<b>Total O&amp;M Expenses</b>	<b>238.00</b>	<b>125.00</b>	<b>261.00</b>	<b>4.00</b>	<b>(27.00)</b>

The O&M expenses comprise Employee cost, R&M expenses and Administration and General expenses. In addition, MGVL has also included the other debits, extraordinary items, net prior period expenses / (income) and other expenses capitalized. The O&M expenses are discussed component wise in the following paragraphs.

### 5.5.2 Employee cost

The MGVL has submitted that the employee expenditure estimated by the company is on the basis of actual employee cost incurred during FY 2009-10 and 10% escalation thereon. MGVL has explained that additional provision of gratuity of Rs. 34.31 crore made during FY 2009-10 is not considered while escalating the employee cost of FY 2009-10. The employee cost incurred is purely on the basis of the guidelines issued by competent authorities like the State Government and therefore the entire expenditure estimated is a legitimate expenditure and any variation is purely beyond its control. MGVL has further mentioned that the hike



approved in the previous tariff order does not compensate the company on account of increases due to salary related aspects including hikes, DA increase / mergers etc and requested to approve the employee cost as estimated by the company. MGVCL has also computed the gains and losses for each component of expenses in the APR.

### **Commission's Analysis**

The Commission has noted the increase in employee cost is mainly due to the Sixth Pay Commission recommendations. The actual employee cost approved in the truing up for FY 2009-10 based on audited annual accounts is Rs. 236.66 crore. As per the submission of MGVCL this includes Rs. 34.31 crore towards additional provision of gratuity. Excluding the additional provision the normalized employee cost for FY 2009-10 is Rs. 202.35 crore. In the MYT order for FY 2010-11 the Commission permitted 6% escalation over FY 2009-10 employee cost and the same provision has been retained in the Tariff order for FY 2010-11, the employee cost being controllable expense. Considering 6% escalation over the normalized employee cost of Rs. 202.35 crore during FY 2009-10, the employee cost works out to Rs. 214.49 crore.

**The Commission, accordingly, considers Rs. 214.49 crore towards employee cost in the review for FY 2010-11 as detailed in the table below:**

**Table 5.8: Employee cost considered in the APR for FY 2010-11**

(Rs. crore)

Particulars	FY 2010-11		
	Tariff order	Claimed in RE	Considered for APR
Employee cost	200.46	223.00	214.49

### **5.5.3 Repairs & Maintenance (R&M) expenses**

The MGVCL has claimed Rs. 40.00 crore towards R&M expenses in APR for FY 2010-11 against Rs. 44.52 crore approved in the MYT order as well as Tariff order for FY 2010-11.

### **Petitioner's submission**

The petitioner has submitted that the revised estimate for R&M is calculated on the basis of actual R&M cost for FY 2009-10 with 10% escalation.

### **Commission's Analysis**



The Commission has observed that the R&M expense estimated at Rs. 40.00 crore in the APR is lower than what was approved in the MYT order as well as Tariff order for FY 2010-11.

**The Commission, accordingly, considers Rs. 40.00 crore in the review for FY 2010-11 as projected by MGVCCL as detailed in the table below:**

**Table 5.9: R&M expenses considered in the APR for FY 2010-11**

(Rs. crore)

Particulars	FY 2010-11		
	Tariff order	Claimed in RE	Considered for APR
R&M expenses	44.52	40.00	40.00

#### **5.5.4 Administration & General (A&G) expenses**

The MGVCCL has claimed Rs. 39.00 crore towards A & G expenses in the APR for FY 2010-11 against Rs. 38.42 crore approved in the MYT order as well as Tariff order for FY 2010-11.

##### **Petitioner's submission**

The MGVCCL has submitted that the revised estimate of A&G expenses is worked out on the basis of actual A&G expenses for FY 2009-10 with 8% escalation.

##### **Commission's Analysis**

The A&G expenses are controllable expenses and the Commission retains the projection for these expenses at Rs. 38.42 crore as approved in the Tariff order for FY 2010-11 as detailed in the table below:

**Table 5.10: A&G expenses considered in the APR for FY 2010-11**

(Rs. crore)

Particulars	FY 2009-10		
	Tariff order	Claimed in RE	Considered for APR
A & G expenses	38.42	39.00	38.42

#### **5.5.5 Other Debits**

##### **Petitioners' submission**

The MGVCCL has claimed Rs. 9.00 crore towards other debits in the APR for FY 2010-11 against Rs. 1.24 crore approved in the MYT order as well as Tariff order for FY 2010-11.



### **Commission's Analysis**

The MGVCL has not substantiated as to why the other debits require a revision in the APR. The Commission finds no justification for revising the provision for other debits.

**The Commission, accordingly, considers the provision for other debits at Rs. 1.24 crore in the APR as approved in the Tariff order for FY 2010-11.**

#### **5.5.6 Extra ordinary items**

The MGVCL has not claimed any extraordinary items in the revised estimate for FY 2010-11 against Rs. 0.04 crore approved in the MYT order as well as Tariff order for FY 2010-11.

#### **5.5.7 Net prior period expenses / (income)**

The MGVCL has not projected any expenses under this head in the APR for FY 2010-11.

#### **5.5.8 Other expenses capitalized**

The MGVCL has estimated Rs. 50.00 crore under the head 'other expenses capitalized' in the APR for FY 2010-11 against Rs. 46.95 crore approved in the MYT order as well as Tariff order for FY 2010-11.

### **Commission's Analysis**

The actual other expenses capitalized during FY 2009-10 has been approved at Rs. 47.09 crore as per audited accounts. The provision of Rs. 50.00 crore estimated in the APR for FY 2010-11 is in line with the actuals.

**The Commission, accordingly, considers the 'other expenses capitalized' at Rs. 50.00 crore as approved in the Tariff order for FY 2010-11.**

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

**Table 5.11: O&M expenses considered in the APR for FY 2010-11**

Sl. No.	Particulars	FY 2010-11 (Rs. crore)		
		Tariff Order	Claimed in RE	Considered for APR
1.	Employee cost	200.46	223.00	214.49
2.	Repairs & Maintenance expenses	44.52	40.00	40.00



**Madhya Gujarat Vij Company Limited**  
**Truing up for FY 2009-10, APR for FY 2010-11,**  
**ARR for FY 2011-12 to FY 2015-16 and Tariff for FY 2011-12**

Sl. No.	Particulars	FY 2010-11		
		Tariff Order	Claimed in RE	Considered for APR
3.	Administration & General charges	38.42	39.00	38.42
4.	Other debits	1.24	9.00	1.24
5.	Extraordinary items	-	-	-
6.	Net prior period expenses	-	-	-
7.	Other expenses capitalized	(46.95)	(50.00)	(50.00)
8.	<b>Total O&amp;M expenses</b>	<b>237.69</b>	<b>261.00</b>	<b>244.15</b>

#### 5.5.9 Capital expenditure

The MGVCCL has estimated the capital expenditure at Rs. 269.00 crore in the APR for FY 2010-11 against Rs. 309.85 crore approved in the Tariff order for FY 2010-11 as detailed in the table below:

**Table 5.12: Capital expenditure projected in the RE for FY 2010-11**

(Rs. crore)

Sl. No.	Schemes	FY 2010-11 (Approved)	FY 2010-11 (H1)	FY 2010-11 (RE)	Deviation
<b>A.</b>	<b>Distribution Schemes</b>				
	Normal Development Scheme	40.00	13.00	34.00	6.00
	System Improvement Scheme	10.00	3.00	7.00	2.00
	Electrification of hutments	11.00	9.00	25.00	(14.00)
	Kutir Jyoti Scheme	6.00	1.00	2.00	4.00
	Tribal villages	-	1.00	9.00	(9.00)
	<b>Total</b>	<b>67.00</b>	<b>27.00</b>	<b>77.00</b>	<b>(10.00)</b>
<b>B.</b>	<b>Rural Electrification Schemes</b>				
	TASP(Wells & Petapara)	60.00	21.00	56.00	4.00
	Special Component plan	0.00	1.00	2.00	(2.00)
	RE Normal Wells	7.00	5.00	17.00	(10.00)
	<b>Total</b>	<b>67.00</b>	<b>27.00</b>	<b>75.00</b>	<b>(7.00)</b>
<b>C.</b>	<b>Others</b>				
	Energy Conservation	3.00	1.00	3.00	(0.00)
	Sagar Khedu	2.00	1.00	2.00	0.00
	<b>Total</b>	<b>5.00</b>	<b>2.00</b>	<b>5.00</b>	<b>(0.00)</b>
<b>D.</b>	<b>Non Plan Schemes</b>				
	SCADA	-	-	-	-
	RAPDRP (Part A)	62.00	3.00	57.00	5.00
	RAPDRP (Part B)	50.00	-	-	50.00
	RGGVY	15.00	6.00	14.00	1.00
	DRUM	5.00	1.00	10.00	(5.00)
	<b>Total</b>	<b>132.00</b>	<b>11.00</b>	<b>81.00</b>	<b>51.00</b>
<b>E.</b>	<b>New Innovative Schemes</b>				
	Line capacitors	1.00	-	-	1.00
	Aerial Bunch Conductors	9.00	1.00	2.00	6.00
	HVDS in selected sub-division	4.00	1.00	4.00	(0.00)
	Automatic meter reading	1.00	0.00	1.00	0.00
	GIS in cities	-	-	-	-
	Automation and computerisation	0.00	0.00	0.00	0.00
	Customer care centre	-	-	-	-
	Under ground cables	2.00	1.00	4.00	(2.00)
	Replacement of conductors/TC	2.00	0.00	1.00	1.00



**Madhya Gujarat Vij Company Limited**  
**Truing up for FY 2009-10, APR for FY 2010-11,**  
**ARR for FY 2011-12 to FY 2015-16 and Tariff for FY 2011-12**

Sl. No.	Schemes	FY 2010-11 (Approved)	FY 2010-11 (H1)	FY 2010-11 (RE)	Deviation
	Mis. Civil + Electrical works	14.00	1.00	8.00	6.00
	Other new schemes	3.00	5.00	11.00	(8.00)
	<b>Total</b>	<b>35.00</b>	<b>9.00</b>	<b>31.00</b>	<b>4.00</b>
<b>F</b>	<b>Other schemes</b>				
	Urban development	4.00	-	-	4.00
	Govt. school electrification (General)	0.00	-	-	0.00
	<b>Total</b>	<b>4.00</b>	<b>-</b>	<b>-</b>	<b>4.00</b>
	<b>Capital Expenditure Total</b>	<b>310</b>	<b>75</b>	<b>269</b>	<b>41.00</b>

#### Petitioner's submission

The MGVCCL has submitted that it has revised the capital expenditure to Rs. 269 crore during FY 2010-11 and this is lower than that approved by the Commission.

The MGVCCL has estimated the funding of capital expenditure as detailed in the table below:

**Table 5.13: Funding of capital expenditure projected in the APR for FY 2010-11**  
(Rs. crore)

Sl. No.	Particulars	FY 2010-11 (Approved)	FY 2010-11 (H1)	FY 2010-11 (RE)	Deviation
1.	Capitalization	247.00	75.00	269.00	(22.00)
2.	Less:				
	Consumer Contribution	62.00	12.00	31.00	31.00
3.	Grants	103.00	40.00	134.00	(31.00)
<b>4.</b>	<b>Balance CAPEX</b>	<b>82.00</b>	<b>23.00</b>	<b>104.00</b>	<b>(22.00)</b>
5.	Debt @ 70%	57.00	16.00	73.00	(16.00)
6.	Equity @ 30%	25.00	7.00	31.00	(7.00)

#### Commission's Analysis

The Commission has examined the submission made by MGVCCL in respect of the proposed increase in the CAPEX in the APR for FY 2010-11. The actual capital expenditure incurred during FY 2009-10 is Rs. 251.18 crore and the capitalization is Rs. 234.79 crore. The capitalization reported in the first half year is Rs.75.00 crore only. With reference to a query from the Commission MGVCCL has indicated the provisional CAPEX for FY 2010-11 at Rs. 230.03 crore and capitalization at Rs. 207.10 crore vide MGVCCL letter dated 10<sup>th</sup> June, 2011.

The Commission, accordingly, considers the CAPEX at Rs. 230.03 crore and capitalisation at Rs. 207.10 crore in the APR for FY 2010-11.

The CAPEX, capitalization and funding claimed by MGVCCL and considered by the Commission are as given in the table below:



**Table 5.14: Capitalization and sources of funding considered in the APR for FY 2010-11**  
(Rs. crore)

Sl. No.	Particulars	Claimed in APR for FY 2010-11	Considered for APR for FY 2010-11
1.	Capitalization	269.00	207.10
2.	Less:		
	Consumer contribution	31.00	62.00
	Grants	134.00	103.00
3.	Balance CAPEX	104.00	42.10
4.	Debt @ 70%	73.00	29.47
5.	Equity @ 30%	31.00	12.63

#### 5.5.10 Depreciation

The MGVCCL has estimated the depreciation at Rs. 107.00 crore in the APR for FY 2010-11 against Rs. 111.02 crore approved in the Tariff order for FY 2010-11 as detailed in the table below:

**Table 5.15: Fixed Assets and Depreciation projected in the APR for FY 2010-11**  
(Rs. crore)

Sl. No	Particulars	FY 2010-11 (Approved)	FY 2010-11 (H1)	FY 2010-11 (RE)	Deviation
1.	Gross Block in Beginning of the year	1989.00	1909.00	1909.00	
2.	Additions during the year	247.00	-	269.00	
3.	Depreciation for the Year	111.00	50.00	107.00	4.00
4.	Average Rate of Depreciation	5.26%	5.26%	5.26%	

#### Petitioner's submission

The MGVCCL has submitted that the depreciation has been revised in the APR based on the revised capital expenditure. MGVCCL has further submitted that the revised estimate of depreciation for FY 2010-11 as against the value approved by the Commission resulted in a net uncontrollable gain / (loss) of Rs. 4.00 crore as detailed in the below:

**Table 5.16: Gains / (Loss) due to depreciation claimed in the APR for FY 2010-11**  
(Rs. crore)

Sl. No	Particulars	FY 2010-11 (Approved)	FY 2010-11 (H1)	FY 2010-11 (RE)	Gain/(Loss) due to Controllable Factor	Gain/(Loss) due to Uncontrollable Factor
1.	Depreciation	111.00	50.00	107.00	-	4.00





### Commission's Analysis

The Commission has observed that the petitioner has computed the depreciation for FY 2009-10 using CERC depreciation rates, asset classification wise. The opening balance of GFA as on 01/04/2010 is Rs. 1913.92 crore. The Commission has computed the depreciation based on the opening balance of GFA and addition considered for FY 2010-11 as detailed in the table below:

**Table 5.17: Depreciation considered in the APR for FY 2010-11**

(Rs. crore)

Particulars	Claimed in RE	Considered for APR
Gross block in the beginning of the year	1909.00	1913.92
Additions during the year	269.00	207.10
Average rate of depreciation	5.26%	5.26%
Depreciation for the year	107.00	106.12

**The Commission, accordingly, considers the depreciation at Rs. 106.12 crore in the APR for FY 2010-11.**

### 5.5.11 Interest and Finance charges

The MGVCL has estimated the interest and finance charges at Rs.51.00 crore in the APR for FY 2010-11 against Rs. 54.63 crore approved in the Tariff order for FY 2010-11 as detailed in the table below:

**Table 5.18: Interest & Finance charges claimed in the APR for FY 2010-11**

(Rs. crore)

Sl. No.	Particulars	FY 2010-11 (Approved)	FY 2010-11 (H1)	FY 2010-11 (RE)	Deviation
1.	Opening Loans	263.00	256.00	256.00	7.00
2.	Loan Addition during the Year	101.00	14.00	73.00	
3.	Repayment during the year	26.00	17.00	26.00	
4.	Closing Loans	338.00	252.00	303.00	
5.	Average Loans	300.00	254.00	279.00	
6.	Interest on Loan	32.00	14.00	30.00	2.00
7.	Interest in Security Deposit	21.00	10.00	20.00	1.00
8.	Guarantee Charges	1.00	1.00	1.00	0.00
9.	<b>Total Interest &amp; Financial Charges</b>	<b>55.00</b>	<b>25.00</b>	<b>51.00</b>	<b>3.00</b>
10.	Weighted Average Rate of Interest	10.71%	11.04%	10.79%	

### Petitioners' submission

The MGVCL has submitted that it has considered closing balance of loans of FY 2009-10 as basis for estimation of interest on loans and mentioned that the loan addition in FY 2010-11 is computed at Rs. 73.00 crore for funding the capital



expenditure. The repayment has been considered as 10% of the opening balance of loan and the weighted average rate of interest worked out to 10.79%. The interest on security deposit and guarantee charges have been considered based on the actual for FY 2009-10.

The MGVCL has further submitted that the revised estimate of interest and finance charges of FY 2010-11 as against the value approved by the Commission resulted in a gain of Rs. 3.00 crore on account of uncontrollable factor as detailed in the table below:

**Table 5.19: Gain / (Loss) due to interest & financial charges claimed in the APR for FY 2010-11**

(Rs. crore)					
Particulars	FY 2010-11 (Approved)	FY 2010-11 (H1)	FY 2010-11 (RE)	Gain/ (Loss) due to Controllable Factor	Gain/(Loss) due to Uncontrollable Factor
Interest and Finance Charges	55.00	25.00	51.00	-	3.00

#### **Commission's Analysis**

The Commission has observed that the opening balance of loans for FY 2010-11 is adopted by MGVCL as per the closing balance of loans claimed in the truing up for FY 2009-10. However, the addition of loan is considered by MGVCL at Rs. 73.00 crore while the debt considered based on capitalization approved in the table 5.14 is Rs. 29.47 crore for FY 2010-11. The Commission has taken this Rs. 29.47 crore as loan addition for FY 2010-11. MGVCL has estimated interest on security deposit at Rs. 20.00 crore in the APR for FY 2010-11. The Commission considers Rs. 20.00 crore towards interest on security deposit. The guarantee charges claimed are Rs.1.00 crore. This is as approved in the truing up for FY 2009-10. Taking all these into consideration the Commission has computed the interest and finance charges in the APR for FY 2010-11 as detailed in the table below:

**Table 5.20: Interest and Finance charges considered in the APR for FY 2010-11**

(Rs. crore)			
Sl. No.	Particulars	Claimed in RE	Considered for APR
1.	Opening loans	256.00	315.44
2.	Loan additions during the year	73.00	29.47
3.	Repayment during the year	26.00	31.54
4.	Closing loans	303.00	313.37
5.	Average loans	279.00	314.41



**Madhya Gujarat Vij Company Limited**  
**Truing up for FY 2009-10, APR for FY 2010-11,**  
**ARR for FY 2011-12 to FY 2015-16 and Tariff for FY 2011-12**

6.	Rate of interest	10.79%	10.79%
7.	Interest on loans	30.00	33.92
8.	Interest on security deposit	20.00	20.00
9.	Guarantee charges	1.00	1.00
10.	<b>Total interest and finance charges</b>	<b>51.00</b>	<b>54.92</b>

**The Commission, accordingly, considers the interest and finance charges at Rs. 54.92 crore in the APR for FY 2010-11.**

#### **5.5.12 Interest on working capital**

The MGVCCL has estimated the interest on working capital at Rs. 58.00 crore in the APR for FY 2010-11 against Rs. 25.65 crore approved in the Tariff order for FY 2010-11 as detailed in the table below:

**Table 5.21: Interest on Working Capital claimed in the APR for FY 2010-11**

(Rs. crore)

Sl. No.	Particulars	FY 2010-11 (Approved)	FY 2010-11 (H1)	FY 2010-11 (RE)	Deviation
1.	O & M Expenses	24.00	10.00	22.00	
2.	Maintenance Spares	22.00	9.00	21.00	
3.	Receivables	205.00	252.00	527.00	
4.	<b>Total Working Capital</b>	<b>250.00</b>	<b>271.00</b>	<b>570.00</b>	
5.	Rate of Interest on Working Capital	10.25%	10.25%	10.25%	
6.	<b>Interest on Working Capital</b>	<b>26.00</b>	<b>14.00</b>	<b>58.00</b>	<b>(33.00)</b>

#### **Petitioner's submission**

The petitioner has submitted that the interest on working capital has been calculated on normative principles as per the Terms and Conditions of Tariff Regulations at an interest rate of 10.25% the Short-term Prime Lending Rate of SBI as on 01/04/2004.

The MGVCCL has further submitted that the normative amount of interest on working capital for FY 2010-11 as against the amount approved in Tariff order for FY 2010-11 resulted in a net uncontrollable loss of Rs. 33.00 crore as detailed in the table below:

**Table 5.22: Treatment of Interest on Working Capital**

(Rs. crore)

Particulars	FY 2010-11 (Approved)	FY 2010-11 (H1)	FY 2010-11 (RE)	Gain/(Loss) due to Controllable Factor	Gain/(Loss) due to Uncontrollable Factor
Interest on working capital	26.00	14.00	58.00	-	(33.00)



### Commission's Analysis

The Commission has examined the computation of interest on working capital submitted by MGVL and observed that receivables equivalent to two months sales have been claimed by MGVL in the ARR for FY 2010-11 against one month sales approved in the Tariff order for FY 2010-11. The Commission had considered receivables equivalent to one-month sales as proposed by the petitioner in the ARR petition for FY 2010-11. The working capital and interest on working capital are recomputed taking into consideration the receivables equivalent to one month sales as detailed in the table below:

**Table 5.23: Interest on working considered in the APR for FY 2010-11**

(Rs. crore)

Sl. No.	Particulars	Claimed in RE FY 2010-11	Considered for APR for FY 2010-11
1.	O&M expenses for one month	22.00	20.35
2.	Maintenance spares 1% of GFA	21.00	19.14
3.	Receivables one month's sales	527.00	243.75
4.	Total working capital	570.00	283.24
5.	Rate of interest on working capital	10.25%	10.25%
6.	<b>Interest on working capital</b>	<b>58.00</b>	<b>29.03</b>

**The Commission, accordingly, considers the interest on working capital at Rs. 29.03 crore in the APR for FY 2010-11.**

### 5.5.13 Provision for bad debts

The MGVL has claimed Rs. 6.00 crore towards bad debts in the APR for FY 2010-11 against Rs. 2.45 crore approved in the Tariff order for FY 2010-11 and claimed loss of Rs. 3.00 crore on account of controllable factor as detailed in the table below:

**Table 5.24: Treatment of Provision for bad debts**

(Rs. crore)

Particulars	FY 2010-11 (Approved)	FY 2010-11 (H1)	FY 2010-11 (RE)	Gain/(Loss) due to Controllable Factor	Gain/(Loss) due to Uncontrollable Factor
Provision for bad debts	2.00	3.00	6.00	(3.00)	-

### Petitioner's submission

The MGVL has submitted that the provision for bad debts has been calculated at 0.2% of revenue from existing tariff considering substantial addition to the BPL consumer category.



### Commission's Analysis

The Commission had approved the bad debts @ 0.10% of the revenue in the Tariff order of FY 2010-11. MGVL has estimated the revenue from sale of power at Rs. 2925.00 crore in the APR for FY 2010-11. The bad debts at 0.1% of the revenue works out to Rs. 2.93 crore.

**The Commission, accordingly, considers the provision for bad debts at Rs. 2.93 crore as detailed in the table below:**

**Table 5.25: Provision for bad debts considered in the APR for FY 2010-11**

(Rs. crore)

Particulars	FY 2010-11		
	ARR order	Claimed in RE	Considered for APR
Provision for bad debts	2.45	6.00	2.93

### 5.5.14 Return on equity

The MGVL has estimated the return on equity at Rs. 67.00 crore in the APR for FY 2010-11 against Rs. 69.72 crore approved in the Tariff order for FY 2010-11 as detailed in the table below:

**Table 5.26: Return on Equity claimed in the APR for FY 2010-11**

(Rs. crore)

Sl. No.	Particulars	FY 2010-11 (Approved)	FY 2010-11 (H1)	FY 2010-11 (RE)	Deviation
1.	Opening Equity Capital	486.00	460.00	460.00	26.00
2.	Equity additions during the Year	25.00	7.00	31.00	(7.00)
3.	Closing Equity	510.00	467.00	491.00	19.00
4.	Average Equity	498.00	463.00	475.00	23.00
5.	Rate of Return on Equity	14%	14%	14%	-
6.	<b>Return on Equity</b>	<b>70.00</b>	<b>32.00</b>	<b>67.00</b>	<b>3.00</b>

### Petitioner's submission

The petitioner has submitted that return on equity has been computed @ 14% on the average equity based on the opening balance of equity and additions during the year. The comparison of the normative return on equity for FY 2010-11 as against the amount approved in the tariff order resulted in a controllable loss of Rs. 2.00 crore as detailed in the table below:



**Table 5.27: Treatment of return on equity**

(Rs. crore)

Particulars	FY 2010-11 (Approved)	FY 2010-11 (H1)	FY 2010-11 (RE)	Gain/ (Loss) due to Controllable Factor	Gain/(Loss) due to Uncontrollable Factor
Return on equity	70.00	32.00	67.00	3.00	-

### Commission's Analysis

The Commission has computed the return on equity @ 14% on the average equity for FY 2010-11 taking into consideration the closing balance of equity of Rs. 475.59 crore for FY 2009-10 as the opening balance for FY 2010-11 and addition of equity of Rs. 12.63 crore during the year as detailed in the table below:

**Table 5.28: Return on equity considered in the APR for 2010-11**

(Rs. crore)

Sl. No.	Particulars	FY 2010-11	
		Claimed in RE	Considered in APR
1.	Opening Equity Capital	460.00	475.58
2.	Equity additions during the Year	31.00	12.63
3.	Closing Equity	491.00	488.21
4.	Average Equity	475.00	481.90
5.	<b>Return on Equity @14%</b>	<b>67.00</b>	<b>67.47</b>

**The Commission, accordingly, considers the return on equity at Rs. 67.47 crore in the APR for FY 2010-11.**

### 5.5.15 Taxes

The MGVL has estimated the income tax at Rs. 15.00 crore in the APR for FY 2010-11 against Rs. 1.00 crore approved in the Tariff order for FY 2010-11 and computed the gains / losses as detailed in the table below:

**Table 5.29: Provision for taxes claimed in the APR for FY 2010-11**

(Rs. crore)

Particulars	FY 2010-11 (Approved)	FY 2010-11 (H1)	FY 2010-11 (RE)	Gain/ (Loss) due to Controllable Factor	Gain/(Loss) due to Uncontrollable Factor
Provision for Tax/Tax Paid	1.00	15.00	15.00	-	(14.00)

### Petitioner's submission

The petitioner has submitted that it has estimated the tax at Rs. 15.00 crore at MAT rate of 19.93% and stated that income tax is a statutory expense and should be allowed without any deduction.



### Commission's Analysis

The Commission considers the income tax at Rs.15 crore @ MAT rate of 19.93% as claimed by MGVCL in the APR for FY 2010-11 as detailed in the Table below:

**Table 5.30: Provision for taxes considered in the APR for FY 2010-11**

(Rs. crore)

Particulars	FY 2010-11		
	ARR order	Claimed in RE	Considered for APR
Income tax	1.00	15.00	15.00

**The Commission, accordingly, considers the tax on income at Rs. 15.00 crore in the APR for FY 2010-11.**

### 5.5.16 Non-tariff income

The MGVCL has estimated the non-tariff at Rs. 87.00 crore in the APR for FY 2010-11 against Rs. 77.71 crore approved in the Tariff order for FY 2010-11 and claimed loss of Rs. 9.00 crore as detailed in the table below:

**Table 5.31: Non-tariff income claimed in the APR for FY 2010-11**

(Rs. crore)

Particulars	FY 2010-11 (Approved)	FY 2010-11 (H1)	FY 2010-11 (RE)	Gain/ (Loss) due to Controllable Factor	Gain/(Loss) due to Uncontrollable Factor
Non-tariff income	78.00	47.00	87.00	(9.00)	-

### Commission's Analysis

The Commission has observed that MGVCL has estimated the non-tariff income at the level of actual during FY 2009-10.

**Table 5.32: Non-tariff income considered in the APR for FY 2010-11**

(Rs. crore)

Particulars	FY 2010-11		
	ARR order	Claimed in RE	Considered for APR
Non-tariff income	77.71	87.00	87.00

**The Commission considers the non-tariff income at Rs. 87.00 crore in the APR for FY 2010-11.**



## 5.6 Revenue from sale of power

The MGVCCL has estimated the revenue at Rs. 2925.00 crore (excluding agriculture subsidy) in the APR for FY 2010-11, as against Rs.2541.00 crore approved in the Tariff order for FY 2010-11 as detailed in the table below:

**Table 5.33: Revenue claimed in the APR for FY 2010-11**

(Rs. crore)				
Sl. No.	Particulars	FY 2010-11 (Approved)	FY 2010-11 (H1)	FY 2010-11 (RE)
1.	Revenue with Existing Tariff	2488*	1451	2866
2.	Other Income (Consumer related)	54	31	59
3.	<b>Total Revenue excluding Subsidy (1+2)</b>	<b>2541</b>	<b>1482</b>	<b>2925</b>
4.	Agriculture Subsidy	81	-	78
5.	<b>Total Revenue including subsidy</b>	<b>2623.00</b>	<b>1482</b>	<b>3003</b>

\* **Note** the revenue with existing tariff is wrongly shown as Rs. 2488 crore instead of Rs. 2453.54 in the petition.

The MGVCCL has submitted that it has revised its estimate of revenue to Rs. 3003.00 crore as against Rs.2623.00 crore approved in the Tariff order for FY 2010-11. MGVCCL has recovered revenue of Rs. 1482.00 crore in the H1 of FY 2010-11 based on which the revenue is projected for H2 of FY 2010-11 considering the same per unit realisation.

### Commission's Analysis

**The Commission takes into consideration the revenue at Rs. 3003.00 crore including subsidy as estimated by MGVCCL in the APR for FY 2010-11.**

## 5.7 ARR considered in the APR

The Commission has reviewed the performance of MGVCCL under Regulation 9.3 of MYT Regulations, 2007 with reference to the performance of the company during the first half year of FY 2010-11.

The Aggregate Revenue Requirement (ARR) approved in the Tariff order dated 31<sup>st</sup> March, 2010, claimed by the Commission in the performance review for FY 2010-11 are as given in the table below:





**Madhya Gujarat Vij Company Limited**  
**Truing up for FY 2009-10, APR for FY 2010-11,**  
**ARR for FY 2011-12 to FY 2015-16 and Tariff for FY 2011-12**

**Table 5.34: ARR considered in the APR for FY 2010-11**

(Rs. crore)

Sl. No	Particulars	Tariff Order dated 31/03/2010	Claimed in RE FY 2010-11	Considered in APR FY 2010-11	Deviation (3-5)
<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>
1	Cost of Power Purchase	2610.10	2686.00	2634.72	(24.62)
<b>2</b>	<b>Operation &amp; Maintenance Expenses</b>	283.40	302.00	292.91	(9.51)
2.1	Employee Cost	200.46	223.00	214.49	(14.03)
2.2	Repair & Maintenance	44.52	40.00	40.00	4.52
2.3	Administration & General Charges	38.42	39.00	38.42	0.00
3	Depreciation	111.02	107.00	106.12	4.90
4	Interest & Finance Charges	54.63	51.00	54.92	(0.29)
5	Interest on Working Capital	25.65	58.00	29.03	(3.38)
6	Other Debits	1.24	9.00	1.24	0.00
7	Extraordinary Items	0.04	0.00	0.00	0.04
8	Provision for Bad Debts	2.45	6.00	2.93	(0.48)
9	Net Prior Period Expenses/(Income)	0.00		0.00	0.00
10	Other Expenses Capitalised	(46.95)	(50.00)	(50.00)	3.05
<b>11</b>	<b>Sub-Total (1+2+(3to 10))</b>	<b>3041.58</b>	<b>3169.00</b>	<b>3071.88</b>	<b>(30.30)</b>
12	Return on Equity	69.72	67.00	67.47	2.25
13	Provision for Tax / Tax Paid	1.00	15.00	15.00	(14.00)
<b>14</b>	<b>Total Expenditure (11 to 13)</b>	<b>3112.30</b>	<b>3251.00</b>	<b>3154.34</b>	<b>(42.04)</b>
15	Less: Non-Tariff Income	77.71	87.00	87.00	(9.29)
<b>16</b>	<b>Aggregate Revenue Requirement (14-15)</b>	<b>3034.59</b>	<b>3164.00</b>	<b>3067.34</b>	<b>(32.75)</b>

The comparison of revised estimate of MGVCCL in FY 2010-11 with the approved ARR in the Tariff order dated 31<sup>st</sup> March, 2010 resulted in a deviation of Rs. 32.75 crore.

**The actual performance for FY 2010-11 will be reviewed with reference to the audited annual accounts for FY 2010-11 and sharing of gains / losses as per GERC Regulations will be considered at the time of truing up for FY 2010-11.**



## 6. Aggregate Revenue Requirement (ARR) for the control period FY 2011-12 to FY 2015-16 and determination of tariff for FY 2011-12

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### 6.1 Energy Sales

Proper estimation of category-wise energy sales for the control period is essential to arrive at the quantum of power to be purchased and the likely revenue by sale of energy.

This section examines in detail the consumer category-wise energy sales projected by MGVCL in its MYT petition for the control period FY 2011-12 to FY 2015-16 for approval of ARR.

### 6.2 Consumer Categories

The MGVCL serves over 24 lakh consumers within its license area and the consumers are broadly categorized as under:

#### LT category

- Residential
- Commercial
- Industrial-LT
- Agricultural
- Public water works
- Public lighting/street lighting

#### HT category

- Industrial-HT
- Railway traction

The DISCOM serves the consumers at different voltages at which the consumers avail supply.



All the consumers' connections other than agricultural are metered. Even the agriculture consumers who are connected since October, 2010 are metered. However, majority of agriculture consumers' connections (which were connected prior to 2010) are un-metered and their consumption is assessed based on the normative consumption approved by the Commission.

### **6.2.1 Overall approach to sales projections**

The MGVL has projected the energy sales for the control period, taking the actual sales for the year FY 2009-10 as a base. It is stated that methodology based on past trend has proved to be a reasonably accurate and well-accepted method for estimating the energy consumption, number of consumers and connected load. MGVL has, therefore, estimated the energy sales, the number of consumers and connected load, based on compound annual growth rate (CAGR) during the past years. Wherever the average has seemed unreasonable or unsustainable, the growth factors have been adjusted by the DISCOM to arrive at more realistic projections.

Where the past data is fairly accurate and the patterns are well established, the methodology based on past data is a well established method for energy forecast.

**As such, the methodology** adopted by MGVL is accepted by the Commission.

### **6.2.2 Category-wise projected energy sales for the control period FY 2011-12 to FY 2015-16**

The MGVL has furnished the category-wise sales over the last 5 years (FY 2005-06 to FY 2009-10) based on the actuals and projected the sales for the control period, FY 2011-12 to FY 2015-16 and also the underlying CAGR (5 year and 3 year) thereof. The category-wise sales over the last 5 years as furnished by MGVL are shown in the table below:

**Table 6.1: Historical data on category-wise energy sales**

Particulars	FY 2005-06	FY 2006-07	FY 2007-08	FY 2008-09	FY 2009-10
<b>Low tension consumers</b>					
Residential	973	1078	1185	1316	1428
Commercial	310	348	407	463	508
Industrial LT	357	388	432	446	472
Public water works	102	107	119	133	145
Agriculture	743	723	746	817	909
Street light	46	50	53	57	59

(MU)



**Madhya Gujarat Vij Company Limited**  
**Truing up for FY 2009-10, APR for FY 2010-11,**  
**ARR for FY 2011-12 to FY 2015-16 and Tariff for FY 2011-12**

Particulars	FY 2005-06	FY 2006-07	FY 2007-08	FY 2008-09	FY 2009-10
<b>LT Total</b>	<b>2531</b>	<b>2694</b>	<b>2942</b>	<b>3232</b>	<b>3521</b>
<b>High tension consumers</b>					
Industrial HT	1327	1553	1618	1839	1877
Railway traction	266	280	305	329	358
<b>HT Total</b>	<b>1593</b>	<b>1833</b>	<b>1923</b>	<b>2168</b>	<b>2235</b>
<b>Total</b>	<b>4124</b>	<b>4527</b>	<b>4865</b>	<b>5400</b>	<b>5756</b>

**Table 6.2: Category-wise growth rates of energy sales**

(%)

Particulars	5 Years CAGR FY 2010 over 2006	3 Years CAGR FY 2010 over 2008	FY 2010 over FY 2009
<b>Low tension consumers</b>			
Residential	10.07	9.78	8.50
Commercial	13.14	11.72	9.70
Industrial LT	7.23	4.53	5.80
Public water works	9.19	10.39	9.00
Agriculture	5.17	10.38	11.30
Street light	6.42	5.51	3.50
<b>LT Total</b>	<b>8.60</b>	<b>9.40</b>	<b>8.90</b>
<b>High tension consumers</b>			
Industrial HT	9.06	7.71	2.10
Railway traction	7.71	8.34	8.80
<b>HT Total</b>	<b>8.83</b>	<b>7.81</b>	<b>3.10</b>
<b>Total</b>	<b>8.69</b>	<b>8.77</b>	<b>6.60</b>

### 6.2.3 Consumers profile and connected load

The MGVCCL has also furnished the category-wise number of consumers and the connected load for the past years and CAGR growth rates for different periods (5 year, 3 year and YoY) as given below:

#### (1) Consumer profile

**Table 6.3: Category-wise number of consumers**

Particulars	FY 2005-06	FY 2006-07	FY 2007-08	FY 2008-09	FY 2009-10
<b>Low tension consumers</b>					
Residential	1576731	1636477	1746777	1946349	2064337
Commercial	205384	211997	219495	228619	232418
Industrial LT	21979	22859	23811	24712	25714
Public water works	6345	6703	7085	7358	8112
Agriculture	57327	57987	59684	62290	66965
Street light	4486	4603	4796	5018	6049
<b>LT Total</b>	<b>1872252</b>	<b>1940626</b>	<b>2061648</b>	<b>2274346</b>	<b>2403595</b>
<b>High tension consumers</b>					
Industrial HT	875	928	994	1111	1186
Railway traction	6	6	6	6	6
<b>HT Total</b>	<b>881</b>	<b>934</b>	<b>1000</b>	<b>1117</b>	<b>1192</b>
<b>Total</b>	<b>1873133</b>	<b>1941560</b>	<b>2062648</b>	<b>2275463</b>	<b>2404787</b>

**Table 6.4: Growth rate of number of consumers**

(%)

Particulars	5 Years CAGR FY 2010 over 2006	3 Years CAGR FY 2010 over 2008	FY 2010 over FY 2009
<b>Low tension consumers</b>			
Residential	6.97	4.26	6.10
Commercial	3.14	1.44	1.70
Industrial LT	4.00	1.94	4.10



**Madhya Gujarat Vij Company Limited**  
**Truing up for FY 2009-10, APR for FY 2010-11,**  
**ARR for FY 2011-12 to FY 2015-16 and Tariff for FY 2011-12**

Particulars	5 Years CAGR FY 2010 over 2006	3 Years CAGR FY 2010 over 2008	FY 2010 over FY 2009
Public water works	6.33	3.44	10.20
Agriculture	3.96	2.92	7.50
Street light	7.76	5.97	20.50
<b>LT Total</b>	<b>6.44</b>	<b>3.91</b>	<b>5.70</b>
<b>High tension consumers</b>			
Industrial HT	7.90	4.51	6.80
Railway traction	0.00	0.00	0.00
<b>HT Total</b>	<b>7.85</b>	<b>4.49</b>	<b>6.70</b>
<b>Total</b>	<b>6.45</b>	<b>3.91</b>	<b>5.70</b>

**(2) Connected load profile**

**Table 6.5: Category-wise connected load**

(MW)

Particulars	FY 2005-06	FY 2006-07	FY 2007-08	FY 2008-09	FY 2009-10
<b>Low tension consumers</b>					
Residential	1192	1357	1520	1550	1666
Commercial	258	290	390	481	527
Industrial LT	367	391	450	423	473
Public water works	66	83	76	69	74
Agriculture	460	499	510	511	508
Street light	16	20	25	29	27
<b>LT Total</b>	<b>2358</b>	<b>2639</b>	<b>2972</b>	<b>3063</b>	<b>3274</b>
<b>High tension consumers</b>					
Industrial HT	539	538	606	651	779
Railway traction	77	76	78	78	90
<b>HT Total</b>	<b>616</b>	<b>614</b>	<b>684</b>	<b>730</b>	<b>869</b>
<b>Total</b>	<b>2974</b>	<b>3253</b>	<b>3656</b>	<b>3793</b>	<b>4142</b>

**Table 6.6: Growth rate for connected load**

(%)

Particulars	5 Years CAGR FY 2010 over 2006	3 Years CAGR FY 2010 over 2008	FY 2010 over FY 2009
<b>Low tension consumers</b>			
Residential	8.73	2.31	7.40
Commercial	19.54	7.78	9.40
Industrial LT	6.56	1.23	11.90
Public water works	2.79	-0.81	7.10
Agriculture	2.51	-0.11	-0.70
Street light	13.94	2.05	-5.40
<b>LT Total</b>	<b>8.55</b>	<b>2.45</b>	<b>6.90</b>
<b>High tension consumers</b>			
Industrial HT	9.65	6.47	19.60
Railway traction	3.83	3.44	14.10
<b>HT Total</b>	<b>8.97</b>	<b>6.14</b>	<b>19.00</b>
<b>Total</b>	<b>8.63</b>	<b>3.17</b>	<b>9.20</b>

**6.2.4 Category-wise projected energy sales**

Based on the growth rates of energy sales given in the table 6.2 above, MGVCCL has projected category-wise energy sales for the control period FY 2011-12 to FY 2015-



16 as given in the table below. It is stated in the petition that the sales are projected for the control period with the figures of FY 2009-10. Later, it was clarified that the figures of FY 2010-11 (Revised Estimate), as furnished in the present petition are taken as the base for projection of sales for the control period.

**Table 6.7: Projected energy sales for the control period FY 2011-12 to FY 2015-16**

Particulars	FY 2011-12	FY 2012-13	FY 2013-14	FY 2014-15	FY 2015-16
<b>LT Consumers</b>					
Residential	1838	2024	2227	2451	2698
Commercial	663	750	848	960	1086
Industrial LT	549	589	632	677	726
Public water works	174	190	207	227	247
Agriculture	1026	1085	1143	1202	1260
Public lighting	64	68	72	77	82
<b>LT Total (A)</b>	<b>4314</b>	<b>4705</b>	<b>5130</b>	<b>5593</b>	<b>6099</b>
<b>HT consumers</b>					
Industrial HT	2533	2762	3012	3285	3582
Railway traction	388	418	451	485	523
<b>HT Total (B)</b>	<b>2921</b>	<b>3180</b>	<b>3463</b>	<b>3770</b>	<b>4105</b>
<b>Grand Total</b>	<b>7235</b>	<b>7885</b>	<b>8592</b>	<b>9363</b>	<b>10204</b>

#### 6.2.5 Projection of consumers and connected load

The MGVCL has also projected the category-wise number of consumers and connected load for the control period as shown below:

**Table 6.8: Projection of number of consumers for the control period FY 2011-12 to FY 2015-16**

Particulars	FY 2011-12	FY 2012-13	FY 2013-14	FY 2014-15	FY 2015-16
<b>LT Consumers</b>					
Residential	2362066	2526666	2702736	2891075	3092538
Commercial	247241	255004	263010	271268	279785
Industrial LT	27813	28926	30084	31288	32540
Public water works	9172	9753	10371	11028	11727
Agriculture	76855	81800	86745	91690	96635
Public lighting	7024	7569	8157	8789	9472
<b>LT Total (A)</b>	<b>2730172</b>	<b>2909719</b>	<b>3101103</b>	<b>3305138</b>	<b>3522696</b>
<b>HT consumers</b>					
Industrial HT	1381	1490	1608	1735	1872
Railway traction	6	6	6	6	6
<b>HT Total (B)</b>	<b>1387</b>	<b>1496</b>	<b>1614</b>	<b>1741</b>	<b>1878</b>
<b>Grand Total</b>	<b>2731559</b>	<b>2911215</b>	<b>3102716</b>	<b>3306879</b>	<b>3524574</b>

**Table 6.9: Projection of connected load for the control period FY 2011-12 to FY 2015-16**

Particulars	FY 2011-12	FY 2012-13	FY 2013-14	FY 2014-15	FY 2015-16
<b>LT Consumers</b>					
Residential	1969	2141	2328	2531	2753
Commercial	631	690	755	827	905
Industrial LT	537	572	610	650	692
Public water works	78	80	82	85	87
Agriculture	581	617	653	690	726



Particulars	FY 2011-12	FY 2012-13	FY 2013-14	FY 2014-15	FY 2015-16
Public lighting	31	33	35	38	40
<b>LT Total (A)</b>	<b>3826</b>	<b>4134</b>	<b>4464</b>	<b>4820</b>	<b>5203</b>
<b>HT consumers</b>					
Industrial HT	937	1027	1126	1235	1354
Railway traction	96	100	104	108	112
<b>HT Total (B)</b>	<b>1033</b>	<b>1127</b>	<b>1230</b>	<b>1343</b>	<b>1466</b>
<b>Grand Total</b>	<b>4859</b>	<b>5261</b>	<b>5694</b>	<b>6162</b>	<b>6669</b>

### 6.3 Detailed Analysis of energy sales projected

The category-wise energy sales given in the table 6.1 for FY 2005-06 to FY 2009-10 are the actuals, the energy sales for the control period FY 2011-12 to FY 2015-16 projected are based on the 5 year / 3 year CAGR between the period FY 2005-06 to FY 2009-10 and year on year for the period between the years 2009 and 2010..

The MGVCL has projected the sales for the control period mostly based on the past trends considering 5 year CAGR with the base numbers of FY 2010-11 (Revised Estimate) submitted to the Commission in the present petition under APR for FY 2010-11.

The percentage contribution of sales by each category on the total sales during the year FY 2010-11 are shown below:

Sl. No.	Category	Sales	Percentage
1	Residential	1670	25.6
2	Commercial	586	9.0
3	Industrial LT	512	7.8
4	Public water works	159	2.4
5	Agriculture	864	13.2
6	Public lighting	60	0.9
7	Industrial HT	2322	35.6
8	Railway traction	361	5.5
	<b>Total</b>	<b>6534</b>	<b>100.0</b>

Since the revised estimates submitted to the Commission in APR FY 2010-11, are the latest sales figures available, it is considered appropriate to project the sales for the control period based on FY 2010-11 (Revised Estimate) figures.

#### 6.4.1 Residential

The sales to this category constitute about 25.6% of total energy sales of the company. MGVCL has projected the energy sales to residential category for the control period, as given below:



**Table 6.10: Energy sales projected for the residential category during the control period FY 2011-12 to FY 2015-16**

Particulars	FY 2011-12	FY 2012-13	FY 2013-14	FY 2014-15	FY 2015-16
Residential Category (MU)	1838	2024	2227	2451	2698

#### **Petitioner's submission**

It is submitted by MGVCL that the company has witnessed a near to double digit growth in the units sold in the last 5 years to this category. The CAGR growth rate between FY 2005-06 and FY 2009-10 was 10.07%. The company expects this trend to continue in the control period 2011-16 and accordingly projected the sales.

#### **Commission's Analysis**

The growth during the last 5 years was 10.07% and MGVCL expects the trend to continue during the control period 2011-16. Since a number of households are still to be electrified, it is possible that the growth of 10.07% may continue during the control period also.

**The Commission approves the energy sales to the residential category during the control period as shown below:**

**Table 6.11 : Energy sales approved for the residential category during the control period**

Particulars	FY 2011-12	FY 2012-13	FY 2013-14	FY 2014-15	FY 2015-16
Residential category (MU)	1838	2024	2227	2451	2698

#### **6.4.2 Commercial**

The sales to this category constitute about 9% of total energy sales of the company.

The MGVCL has projected the energy sales to this category during the control period 2011-16 as shown below:

**Table 6.12 : Energy sales projected for the Commercial category during the control period FY 2011-12 to FY 2015-16**

Particulars	FY 2011-12	FY 2012-13	FY 2013-14	FY 2014-15	FY 2015-16
Commercial category (MU)	663	750	848	960	1086





### **Petitioner's submission**

The MGVCL has submitted that the sales growth rate between FY 2005-06 and FY 2009-10 was 13.14%. The company expects this trend to continue for the control period.

### **Commission's Analysis**

The CAGR over the 5-year period 2005-06 to 2009-10 was 13.14% and the growth over the 3-year period, 2009-10 over FY 2007-08 was 11.72%. Hence, the growth of 13.14% assumed by MGVCL is considered reasonable, as the Commercial category is likely to maintain the same growth with the growth of the economy.

**The Commission approves the energy sales for the commercial category for the control period as given in the table below:**

**Table 6.13: Energy sales approved for Commercial category for the control period FY 2011-12 to FY 2015-16**

<b>Particulars</b>	<b>FY 2011-12</b>	<b>FY 2012-13</b>	<b>FY 2013-14</b>	<b>FY 2014-15</b>	<b>FY 2015-16</b>
Commercial category (MU)	663	750	848	960	1086

### **6.4.3 Industrial (LT)**

The consumption of this category accounts for about 7.8% of the total sales of the company. MGVCL has projected the sales of this category during the control period as given below:

**Table 6.14: Energy sales projected for Industrial (LT) category for the control period FY 2011-12 to FY 2015-16**

<b>Particulars</b>	<b>FY 2011-12</b>	<b>FY 2012-13</b>	<b>FY 2013-14</b>	<b>FY 2014-15</b>	<b>FY 2015-16</b>
Industrial (LT) category (MU)	549	589	632	677	726

### **Petitioner's submission**

The MGVCL has submitted that sales growth between FY 2005-06 and FY 2009-10 was 7.23% and the company expects this trend to continue during the control period.



### **Commission's Analysis**

The CAGR of this category was 7.23% over a 5 year period FY 2005-06 to FY 2009-10 and 4.53% over a 3 year period FY 2008 to FY 2010 and the DISCOM expects the growth of 7.23% to continue for the control period. The industry is picking up and it would be possible to achieve the growth of 7.23% recorded during the last 5 years in the control period also.

**The Commission approves the energy sales to the Industrial (LT) category during the control period FY 2011-12 to FY 2015-16, as given in the table below:**

**Table 6.15: Energy sales approved for Industrial (LT) category for the control period FY 2011-12 to FY 2015-16**

<b>Particulars</b>	<b>FY 2011-12</b>	<b>FY 2012-13</b>	<b>FY 2013-14</b>	<b>FY 2014-15</b>	<b>FY 2015-16</b>
Industrial (LT) category (MU)	549	589	632	677	726

### **6.4.4 Public water works**

The sales to this category amount to about 2.40% of total energy sales of the company. MGVL has projected the sales of this category during the control period, as given in the table below:

**Table 6.16: Energy sales projected for Public water works category for the control period FY 2011-12 to FY 2015-16**

<b>Particulars</b>	<b>FY 2011-12</b>	<b>FY 2012-13</b>	<b>FY 2013-14</b>	<b>FY 2014-15</b>	<b>FY 2015-16</b>
Public water works category (MU)	174	190	207	227	247

### **Petitioner's submission**

The MGVL has submitted that the sales growth rate between FY 2005-06 and FY 2009-10 was 9.19% and the company is expecting this trend to continue during the control period.

### **Commission's Analysis**

The 5 year CAGR (2006-2010) of the category was 9.19% and 3 year CAGR (2008-2010) was 10.39% and the YoY growth for FY 2010 over FY 2009 is 9.0%. The petitioner has proposed a growth of 9.19% over the control period. The growth of



9.19% for this category during the control period appears feasible and may sustain during the control period, and hence approved.

**The Commission approves the sales to public water works during the control period, as given in the table below:**

**Table 6.17: Energy sales approved for Public water works category for the control period FY 2011-12 to FY 2015-16**

Particulars	FY 2011-12	FY 2012-13	FY 2013-14	FY 2014-15	FY 2015-16
Public water works category (MU)	174	190	207	227	247

#### **6.4.5 Agriculture (Irrigation pumpsets)**

The consumption by agriculture (irrigation pumpsets) accounts for about 13.2% of total energy sales of the company. The consumption by irrigation pumpsets connected during the recent years only is metered and those related to earlier years are not metered. MGVCL has projected the energy sales during the control period, as given in the table below:

**Table 6.18: Energy sales projected for Agriculture (Irrigation Pumpsets) for the control period FY 2011-12 to FY 2015-16**

Particulars	FY 2011-12	FY 2012-13	FY 2013-14	FY 2014-15	FY 2015-16
Agriculture category (MU)	1026	1085	1143	1202	1260

#### **Petitioner's submission**

The MGVCL has submitted that for calculation of sales for un-metered consumers and metered consumers, sales at around 700 kWh/HP/annum are considered for metered consumer connections and 1700 kWh/HP/annum for un-metered consumer connections. For projection of sales for additional connections, 1200 kWh/HP/annum is taken. It is further submitted that the company has stopped connecting un-metered connections (A1 slab). Hence, a 0% growth rate has been assumed for the A1 slab.

The number of connections, unit sales, the load estimated and the projected sales to the category during the control period are given in the table below:



**Table 6.19: Projected number of new connections, connected load and consumption by Agriculture (Irrigation Pumpsets) for the control period FY 2011-12 to FY 2015-16**

Particulars	No. of connections	Average HP of DISCOM	HP Increase	MW Increase	Per HP Consumption	Additional sale (MU)
<b>FY 2010-11</b>	4945	9.85	48695	36	1200	58
<b>FY 2011-12</b>	4945	9.85	48695	36	1200	58
<b>FY 2012-13</b>	4945	9.85	48695	36	1200	58
<b>FY 2013-14</b>	4945	9.85	48695	36	1200	58
<b>FY 2014-15</b>	4945	9.85	48695	36	1200	58
<b>FY 2015-16</b>	4945	9.85	48695	36	1200	58

### Commission's Analysis

As mentioned earlier, there is a mix of un-metered and metered consumers in this category. The consumption of un-metered category is arrived at on normative basis of 1700 kWh/HP/annum as fixed by the Commission. For metered consumption, MGVCCL is taking the consumption of about 700 kWh/HP/annum. It is submitted by MGVCCL that sales for additional connections (metered) would be projected at 1200 kWh/HP/annum. This is not acceptable to the Commission as all additional connections are metered.

While furnishing additional information called for by the Commission, MGVCCL has stated that the consumption of metered category does not reflect the true consumption due to several factors including unauthorized use of energy.

In the additional information, the petitioner has also furnished the number of agricultural consumer connections, connected load in HP and the consumption for FY 2009-10 and FY 2010-11 (actuals) as below:

<b>FY 2009-10</b>	<b>Metered</b>	<b>Un-metered</b>
Number of consumers	40816	26149
Connected load (HP)	401961	278620
Consumption (MU)	436	473
<b>FY 2010-11</b>		
Number of consumers	43766	26109
Connected load (HP)	416321	278971
Consumption (MU)	391	474

Based on the information available the Commission has assessed the consumption of un-metered and metered connections for the control period as below:

- The total number of metered and un-metered consumer connections as on 31<sup>st</sup> March, 2011, are 43766 and 26109 respectively and the connected load



is 416321 HP and 278971 HP for metered and un-metered category respectively.

- Since MGVCCL has stated that it is not releasing any un-metered connections during the control period, the number of connections projected to be released during each year of the control period are added to the number of metered consumers as on 31<sup>st</sup> March, 2011. The un-metered connections will remain constant, as no new un-metered connection will be released during the control period.
- The consumption for the un-metered is adopted at 1700 kWh/HP/annum, as per the norm fixed by the Commission.
- The weighted average consumption of metered consumers during FY 2009-10 and FY 2010-11 is considered for assessing the consumption during the control period for the existing and new metered consumer connections being added during the control period. The weighted average consumption works out to 1011 kWh/HP/annum for MGVCCL.

Based on the above, the energy consumption for Agriculture consumers is computed during the control period as shown in the table below:

**Table 6.20 Approved consumption by Agricultural consumers during the control period  
FY 2011-12 to FY 2015-16**

Metered/ Unmetered	Number of consumers	Connected Load (HP)	Energy Consumption (MU)
<b>FY 2011-12</b>			
Unmetered	26109	278971	474
Metered	48711	465016	470
<b>Total</b>			<b>944</b>
<b>FY 2012-13</b>			
Unmetered	26109	278971	474
Metered	53656	513711	519
<b>Total</b>			<b>993</b>
<b>FY 2013-14</b>			
Unmetered	26109	278971	474
Metered	58601	562406	569
<b>Total</b>			<b>1043</b>
<b>FY 2014-15</b>			
Unmetered	26109	278971	474
Metered	63546	611101	618
<b>Total</b>			<b>1092</b>
<b>FY 2015-16</b>			



Metered/ Unmetered	Number of consumers	Connected Load (HP)	Energy Consumption (MU)
Unmetered	26109	278971	474
Metered	68491	659796	667
<b>Total</b>			<b>1141</b>

**The Commission approves the energy sales for the Agricultural consumers for the control period, as given in the table below:**

**Table 6.21 Approved consumption by Agriculture consumers**

Particulars	FY 2011-12	FY 2012-13	FY 2013-14	FY 2014-15	FY 2015-16
Sales (MU)	944	993	1043	1092	1141

### 6.2.6 Streetlights

The consumption to streetlights accounts for about 0.90% of total sales of the company. MGVCL has projected the energy sales of this category for the control period, as given in the table below:

**Table 6.22 Projected energy sales for Streetlights**

Particulars	FY 2011-12	FY 2012-13	FY 2013-14	FY 2014-15	FY 2015-16
Streetlights (MU)	64	68	72	77	82

### Petitioner's submission

The MGVCL has submitted that the sales growth rate of this category was 6.42% during the 5-year period FY 2005-06 to FY 2009-10. The company expects this trend to continue for the control period.

### Commission's Analysis

The 5-year CAGR and 3 year CAGR growth rates were 6.42% and 5.51% respectively. MGVCL has projected the sales based on 5 year CAGR of 6.42%. In view of the potential for growth, the growth of 6.42% assumed by the company is approved.

**The Commission approves the sales to Streetlights for the control period, as given in the table below:**



**Table 6.23: Energy sales approved for Streetlights**

Particulars	FY 2011-12	FY 2012-13	FY 2013-14	FY 2014-15	FY 2015-16
Streetlights (MU)	64	68	72	77	82

### 6.2.7 Industrial (HT)

The sales to this category account to about 35.6% of the total sales of the company. MGVCCL has projected the sales to this category during the control period as below:

**Table 6.24: Projected energy sales for Industrial (HT)**

Particulars	FY 2011-12	FY 2012-13	FY 2013-14	FY 2014-15	FY 2015-16
Industrial (HT) (MU)	2533	2762	3012	3285	3582

### Petitioner's submission

The MGVCCL has submitted that the sales growth rate between FY 2005-06 and FY 2009-10 was 9.06% and it expects this trend to continue in the control period.

### Commission's Analysis

The growth rates of this category were 9.06%, 7.71% and 2.1% over 5 year, 3 year and YoY 2009/2010 between the period FY 2005-06 and FY 2009-10. MGVCCL has adopted a growth rate of 9.06%, 5 year CAGR. Since the industry (HT) has high potential for growth, particularly in Gujarat, the growth projected by MGVCCL might be realistic, compared to past growth. Hence, the growth assumed is approved.

**The Commission approves the energy sales to Industry (HT) during the control period, as given in the table below:**

**Table 6.25: Approved energy sales for Industrial (HT)**

Particulars	FY 2011-12	FY 2012-13	FY 2013-14	FY 2014-15	FY 2015-16
Industrial (HT) (MU)	2533	2762	3012	3285	3582

### 6.2.8 Railway Traction

The Railway traction load accounts to about 5.5% of the total sales of the company. MGVCCL has projected the sales to this category during the control period, as shown below:



**Table 6.26: Approved energy sales for Railway traction**

Particulars	FY 2011-12	FY 2012-13	FY 2013-14	FY 2014-15	FY 2015-16
Railway Traction (MU)	388	418	451	485	523

#### **Petitioner's submission**

It is submitted by MGVCL that the sales growth rate of this category was 7.71% over a 5-year period between FY 2005-06 and FY 2009-10. It is stated that the company expects this trend to continue during the control period.

#### **Commission's Analysis**

The growth rates of 5 year, 3 year CAGR and YoY periods were 7.71%, 8.34% and 8.80% respectively. It is single consumer and the load is almost constant over the years. The projection at a growth rate of 7.71% assumed by MGVCL is considered reasonable for the control period.

**The Commission approves the sales to the railway traction load, as given in the table below:**

**Table 6.27: Energy sales approved for the Railway traction**

Particulars	FY 2011-12	FY 2012-13	FY 2013-14	FY 2014-15	FY 2015-16
Railway Traction (MU)	388	418	451	485	523

#### **6.2.9 Total Energy Sales**

Total energy sales, as projected by MGVCL and as approved by the Commission for the control period, are given in the table below:

**Table 6.28: Energy sales projected by MGVCL for the control period FY 2011-12 to FY 2015-16**

Particulars	FY 2011-12	FY 2012-13	FY 2013-14	FY 2014-15	FY 2015-16
<b>LT Consumers</b>					
Residential	1838	2024	2227	2451	2698
Commercial	663	750	848	960	1086
Industrial LT	549	589	632	677	726
Public water works	174	190	207	227	247
Agriculture	1026	1085	1143	1202	1260
Public lighting	64	68	72	77	82
<b>LT Total (A)</b>	<b>4314</b>	<b>4705</b>	<b>5130</b>	<b>5593</b>	<b>6099</b>
<b>HT consumers</b>					
Industrial HT	2533	2762	3012	3285	3582





Particulars	FY 2011-12	FY 2012-13	FY 2013-14	FY 2014-15	FY 2015-16
Railway traction	388	418	451	485	523
<b>HT Total (B)</b>	<b>2921</b>	<b>3180</b>	<b>3463</b>	<b>3770</b>	<b>4105</b>
<b>Grand Total</b>	<b>7235</b>	<b>7885</b>	<b>8592</b>	<b>9363</b>	<b>10204</b>

**Table 6.29: Energy sales approved by the Commission for the control period FY 2011-12 to FY 2015-16**

Particulars	FY 2011-12	FY 2012-13	FY 2013-14	FY 2014-15	FY 2015-16
<b>LT Consumers</b>					
Residential	1838	2024	2227	2451	2698
Commercial	663	750	848	960	1086
Industrial LT	549	589	632	677	726
Public water works	174	190	207	227	247
Agriculture	944	993	1043	1092	1141
Public lighting	64	68	72	77	82
<b>LT Total (A)</b>	<b>4232</b>	<b>4614</b>	<b>5029</b>	<b>5484</b>	<b>5980</b>
<b>HT consumers</b>					
Industrial HT	2533	2762	3012	3285	3582
Railway traction	388	418	451	485	523
<b>HT Total (B)</b>	<b>2921</b>	<b>3180</b>	<b>3463</b>	<b>3770</b>	<b>4105</b>
<b>Grand Total</b>	<b>7153</b>	<b>7794</b>	<b>8492</b>	<b>9254</b>	<b>10085</b>

### 6.3 Distribution losses

The MGVCL has projected the distribution losses for the control period, as given below:

**Table 6.30: Projected distribution losses for the control period**

Particulars	FY 2011-12	FY 2012-13	FY 2013-14	FY 2014-15	FY 2015-16
Distribution Losses (%)	12.75	12.50	12.25	12.00	12.00

#### Petitioner's submission

The MGVCL has submitted that it has achieved significant reduction in distribution losses during recent years. The efforts will continue and will be enhanced.

It is further submitted that the loss reduction is a slow process and becomes increasingly difficult as the loss levels come down. It is stated that the distribution loss in FY 2011-12 to FY 2015-16 will be reduced but at a lesser percentage



### Commission's Analysis

The Commission, in its tariff order dated 31<sup>st</sup> March, 2010 for FY 2010-11, considered the distribution loss of 14.00% against 13.00% in MYT order for FY 2010-11. But MGVCCL has achieved a loss level of 13.0%, as furnished in APR for FY 2010-11 for reasons stated above.

The petitioner has however, projected a loss level of 12.75% for FY 2011-12 with loss reduction trajectory, as given in table 6.30 above.

The Commission considers that the loss level of 12.75% for FY 2011-12 against 13.00% approved in ARR order for FY 2010-11 and also the loss reduction trajectory to the control period are reasonable.

The approved distribution losses for the control period are as given below:

**Table 6.31: Distribution losses approved for the control period FY 2011-12 to FY 2015-16**

Particulars	FY 2011-12	FY 2012-13	FY 2013-14	FY 2014-15	FY 2015-16
Distribution losses of MGVCCL (%)	12.75	12.50	12.25	12.00	12.00

## 6.4 Energy requirement

The total energy requirement of a distribution company to meet the total demand of its consumers would be the sum of estimated energy sales and the system losses (Distribution losses), as approved by the Commission. The estimated energy sales, the distribution losses and estimated energy requirement for the control period FY 2011-12 to FY 2015-16 as projected by MGVCCL are given in the table below:

**Table 6.32: Total projected energy requirement during the control period**

Sl. No.	Particulars	Units	FY 2011-12	FY 2012-13	FY 2013-14	FY 2014-15	FY 2015-16
1.	Estimated energy sales	MU	7235	7885	8592	9363	10204
2.	Distribution losses	MU	1057	1126	1200	1277	1391
		%	12.75	12.50	12.25	12.00	12.00
3.	Energy input required at the distribution periphery	MU	8292	9011	9792	10640	11595



### Commission's Analysis

Based on the energy sales and distribution losses approved by the Commission in paragraphs 6.2.9 and 6.3, the energy requirement is arrived at as given in the table below:

**Table 6.33: Total approved energy requirement during the control period**

Sl. No.	Particulars	Units	FY 2011-12	FY 2012-13	FY 2013-14	FY 2014-15	FY 2015-16
1.	Estimated energy sales	MU	7153	7794	8492	9254	10085
2.	Distribution losses	MU	1045	1113	1185	1262	1375
		%	12.75	12.50	12.25	12.00	12.00
3.	Energy input required at the distribution periphery	MU	8198	8907	9677	10516	11460

### 6.5 Energy balance

The summary of energy balance projected by MGVCL is as given below:

**Table 6.34: Summary of energy balance projected by MGVCL**

Sl. No.	Particulars	Units	FY 2011-12	FY 2012-13	FY 2013-14	FY 2014-15	FY 2015-16
1.	Estimated energy sales	MU	7235	7885	8592	9363	10204
2.	Distribution losses	MU	1057	1126	1200	1277	1391
		%	12.75%	12.50%	12.25%	12.00%	12.00%
3.	Energy input required at the distribution periphery	MU	8292	9011	9792	10640	11595
4.	Transmission losses	MU	386	415	445	478	521
		%	4.45%	4.40%	4.35%	4.30%	4.30%
5.	Total energy to be input to transmission system	MU	8678	9426	10237	11118	12116
6.	Pooled losses in PGCIL system	MU	109	157	211	245	267
7.	Total energy requirement	MU	8787	9583	10448	11363	12383

### Commission's Analysis

The MGVCL has considered the transmission loss of 4.45% to 4.30% for the control period. The Commission has considered transmission loss of 4.12% as arrived by SLDC for FY 2010-11 and the total energy requirement is computed with



transmission loss of 4.12% for the entire control period. The Commission approves the pool losses, which are determined by the RLDC as projected by MGVCL, subject to review in the truing up. Based on the approved energy sales, distribution losses and transmission losses, the approved energy balance is as given in the table below:

**Table 6.35: Approved energy balance for the control period**

Sl. No.	Particulars	Units	FY 2011-12	FY 2012-13	FY 2013-14	FY 2014-15	FY 2015-16
1.	Energy sales	MU	7153	7794	8492	9254	10086
2.	Distribution losses	MU	1045	1113	1186	1262	1375
		%	12.75	12.50	12.25	12.00	12.00
3.	Energy input required at the distribution periphery	MU	8198	8907	9677	10516	11460
4.	Transmission losses	MU	352	383	416	452	492
		%	4.12	4.12	4.12	4.12	4.12
5.	Total energy to be input to transmission system	MU	8550	9290	10093	10968	11952
6.	Pooled losses in PGCIL system	MU	109	157	211	245	267
8.	Total energy requirement	MU	8659	9447	10304	11213	12219

## 6.7 Revenue Requirement for the control period FY 2011-12 to FY 2015-16

The components for calculation of revenue requirement (total expenses) for the control period FY 2011-12 to FY 2015-16 are as follows:

- Power purchase cost
- Operation and maintenance expenses
- Depreciation
- Interest on loans and finance charges
- Interest on working capital
- Provision for bad debts
- Return on equity
- Provision for tax

The projected expenses by MGVCL under each head and the analysis and decisions of the Commission are discussed below:



## **6.8 Power purchase cost**

### **6.8.1 Bulk supply tariff**

#### **Petitioner's submission**

The MGVL has submitted that when the erstwhile Gujarat Electricity Board (GEB) was unbundled into seven entities, it was decided by the State Government that Gujarat Urja Vikas Nigam Limited (GUVNL) shall purchase the entire power requirement from GSECL, central generating stations, traders, MPPs, IPPs and any other source to meet the demand of DISCOMs and shall perform the activity of bulk supplier of power to all the four Distribution companies at bulk supply tariff. In accordance with the arrangement related to power procurement the distribution licensees have entered into bulk supply arrangement / agreement with GUVNL to meet the supply obligation.

It is also submitted by MGVL that the State Government has envisaged uniform retail supply tariff in the four DISCOMs (of the unbundled GEB), so that the consumers in the similar category in the State could have a similar tariff.

It is further submitted that since 70% - 80% of the total cost incurred by DISCOMs is for power purchase, the same plays a major role in determining the ARR as well as gap / (surplus) for the DISCOM for a particular year. Since the consumer profile and consumption pattern are different in the four distribution companies, the revenue earning capabilities of each of the DISCOMs differs resulting in different Annual Revenue Requirement. Therefore, it is necessary to build a mechanism in the projection to give them a level-playing field. This is proposed to be achieved by differential bulk supply tariff (BST) to each of the DISCOMs to ensure uniform retail consumers tariffs in the four DISCOMs.

### **6.8.2 Power purchase sources**

#### **Petitioner's submission**

The various sources of power purchase by GUVNL consist, of State generating plants (GSECL), central sector – NTPC and NPC, renewable sources of power – hydro, solar and wind, IPPs, other sources, etc. The power purchase sources have been differentiated into existing and additional capacity envisaged during the control period.



**(i) Existing capacity with GUVNL**

The existing capacity contracted by GUVNL, consists GSECL plants, IPPs, central sector plants and renewable sources, RLNG gas based plants where the plants are commissioned before 31<sup>st</sup> March, 2010. The names of the existing power plants, their operational parameters, capacity allocated to GUVNL, their fixed cost as per capacity contracted along with the variable cost of generation per unit are given below:

**Table 6.36: Existing capacity contracted by GUVNL as furnished by MGVL**

Sl. No	Particulars	Rated Capacity Allocated to GUVNL	Auxiliary Consumption (%)	Plant Load Factor (%)	Fixed Cost (Rs. crore)	Variable Cost (Rs. /Kwh)
<b>GSECL Plants:</b>						
1	Ukai TPS	850	9.00	75%	247	1.71
2	Ukai Hydro	305	0.70	13%	24	0.00
3	Gandhinagar I to IV	660	10.00	79%	266	2.38
4	Gandhinagar V	210	9.00	85%	97	2.13
5	Wanakbori I to VI	1,260	9.00	85%	366	2.11
6	Wanakbori VII	210	9.00	85%	95	2.02
7	Sikka TPS	240	11.00	68%	122	2.77
8	Kutch Lignite I to III	215	12.00	66%	222	1.18
9	Kutch Lignite IV	75	12.00	75%	129	1.11
10	Dhuvaran oi I	-	-	0%	-	-
11	Kadana Hydro	242	1.19	6%	61	0.00
12	Utran Gas Based	75	4.00	80%	29	2.37
13	Dhuvaran Gas Based - Stage-I	91	3.00	80%	48	2.41
14	Dhuvaran Gas Based - Stage-II	94	3.00	80%	57	2.39
15	Utran Extension	295	3.00	80%	279	2.07
	<b>Sub-total</b>	<b>4822</b>			<b>2042</b>	
<b>IPPs:</b>						
1	ESSAR	242	3.00	70%	202	2.95
2	GPEC	391	2.90	70%	307	2.40
3	GIPCL II (160)	82	2.90	80%	27	1.95
4	GIPCL-SLPP	250	10.00	75%	158	1.14
5	GSEG	126	2.90	80%	101	1.77
6	GIPCL - I (145)	21	2.90	80%	11	2.15
7	GMDC - Akrimota	250	10.00	75%	203	0.74
8	GIPCL, Expansion	250	10.00	80%	158	1.14
	<b>Sub-Total</b>	<b>1612</b>			<b>1167</b>	
<b>Central Sector:</b>						
1	NPC - Tarapur- 1&2	160	10.00	80%	-	0.95
2	NPC - Kakrapar	125	12.50	80%	-	2.19
3	NPC - Tarapur- 3&4	274	10.00	80%	-	2.32
4	NTPC - KORBA	360	7.93	85%	74	0.76
5	NTPC - VINDHYACHAL-I	230	9.00	85%	58	1.27
6	NTPC - VINDHYACHAL-II	239	7.50	85%	98	1.23



**Madhya Gujarat Vij Company Limited**  
**Truing up for FY 2009-10, APR for FY 2010-11,**  
**ARR for FY 2011-12 to FY 2015-16 and Tariff for FY 2011-12**

Sl. No	Particulars	Rated Capacity Allocated to GUVNL	Auxiliary Consumption (%)	Plant Load Factor (%)	Fixed Cost (Rs. crore)	Variable Cost (Rs. /Kwh)
7	NTPC - VINDHYACHAL-III	266	7.50	85%	165	1.21
8	NTPC - KAWAS	143	3.00	85%	58	2.32
9	NTPC - JHANOR	181	3.00	85%	101	2.14
11	SSNNL - Hydro	232	0.50	14%	-	2.05
12	NTPC - Kahalgaon (New)	141	7.50	85%	172	1.78
13	NTPC - Kahalgaon (New)	273	6.50	85%	192	0.88
14	NTPC - KORBA II	96	6.50	85%	102	0.72
	<b>Sub-Total</b>	<b>2720</b>			<b>1020</b>	
<b>Renewables:</b>						
1	Wind Farms (1.75)	22	-	23%	-	1.75
2	Wind Farms (3.37)	782	-	23%	-	3.37
3	Wind Farms (3.56)	229	-	23%	-	3.56
4	Biomass	30	-	80%	-	4.40
5	Hydro	9	-	70%	-	3.52
	<b>Sub-Total</b>	<b>1072</b>				
<b>RLNG Capacity @15%:</b>						
1	ESSAR - 300	58	3.00	70%	49	5.21
2	GPEC - 655	264	2.90	70%	208	5.77
3	Utran Gas Based - 135	60	4.00	80%	23	4.96
4	Utran Extension - 375	80	3.00	80%	62	5.26
5	Dhuvran Gas Based - Stage 1 - 107	16	3.00	80%	8	5.26
6	Dhuvran Gas Based - Stage 2 - 112	18	3.00	80%	11	5.49
7	GIPCL-II (160) 165	83	2.90	80%	27	5.21
8	GSEG-156	30	2.90	80%	24	5.49
9	GIPCL-I (145)-42	21	2.90	80%	12	5.59
10	NTPC-Kawas	44	3.00	85%	18	5.59
11	NTPC-Jhanor-237	56	3.00	85%	31	-
	<b>Sub-Total</b>	<b>730</b>			<b>473</b>	
<b>Others:</b>						
1	Captive Power Plant (MU)	8	-	80%	-	3.64
	<b>Grand Total</b>	<b>10964</b>			<b>4702</b>	

The existing contracted capacity tied up by MGVCCL as on 31<sup>st</sup> March, 2010 is 10,964 MW.

**(ii) Capacity additions for FY 2011-12 to FY 2015-16**

The capacity addition available for the State which includes GSECL capacity additions, central stations, IPPs and others and competitive bidding capacity is given in the Table below with details of capacity allocated to Gujarat and unit-wise tentative commissioning schedule. PPAs are already entered for various stations and are expected to get commissioned during the control period FY 2011-12 to FY 2015-16. GUVNL will purchase power from these stations.



**Table 6.37: New capacity allocation and date of commissioning (COD) during the control period**

Sl. No.	Particulars	Unit Size (MW)	COD Month-wise)
<b>GSECL Plants:</b>			
1	Ukai Expansion 6	500	Apr-12
2	Sikka 3 & 4	500	Mar-13
3	Dhuvaran CCPP Ext - 3	180	Mar-14
4	Wanakbori Expansion	800	Mar-16
5	Dhuvaran CCPP Ext - 3	180	Sep-14
	<b>Sub-Total</b>	<b>2160</b>	
<b>IPPs:</b>			
1	BECL	500	Mar-14
2	GIPCL Addition	500	Mar-15
	<b>Sub-Total</b>	<b>1000</b>	
<b>Central Sector:</b>			
1	NTPC - Sipat Stage - I	180	Mar-11
2	NTPC - Sipat Stage - I	180	Sep-11
3	NTPC - Sipat Stage - I	180	Mar-12
4	NTPC - Mauda STPS-I	120	Mar-12
5	NTPC - Mauda STPS-I	120	Sep-12
6	NTPC - Barh STPS-I	87	Sep-13
7	NTPC - Barh STPS-I	87	Mar-14
8	NTPC - Barh STPS-I	86	Sep-14
9	NTPC - Vindhyachal STPS-IV	240	Mar-13
10	NTPC - Barh STPS-II	87	Mar-13
11	NTPC - Barh STPS-II	87	Sep-13
12	NTPC - Mauda STPS-II	240	Mar-16
13	Mundra UMPP	361	Sep-11
14	Mundra UMPP	361	Mar-14
15	Mundra UMPP	542	Sep-14
16	Mundra UMPP	542	Mar-15
17	Ti laiya UMPP	60	Mar-14
18	Ti laiya UMPP	120	Sep-14
19	Ti laiya UMPP	120	Apr-15
20	NPC kakrapar addition	476	Mar-16
21	NTPC - Lara	140	Mar-16
	<b>Sub-Total</b>	<b>4416</b>	
<b>Renewables:</b>			
1	Solar Photovoltaic	372	Jan-12
2	Solar Thermal	25	Jan-12
	<b>Sub-Total</b>	<b>397</b>	
<b>Competitive Bidding:</b>			
1	APPL	1,500	Mar-11
2	APPL	500	Oct-11
3	APPL	-	Jan-00
4	Aryan	200	Mar-12
5	Essar – 1000 MW	500	Dec-11
6	Essar – 1000 MW	500	Jun-12
7	Wardha Power - KSK Mahanadi Power Co	1,010	May-15
8	Essar - 800 MW	800	May-15
9	Shapoorji Pal lonj i	800	May-15
	<b>Sub-Total</b>	<b>5810</b>	
<b>RLNG Capacity@15%:</b>			





**Madhya Gujarat Vij Company Limited**  
**Truing up for FY 2009-10, APR for FY 2010-11,**  
**ARR for FY 2011-12 to FY 2015-16 and Tariff for FY 2011-12**

Sl. No.	Particulars	Unit Size (MW)	COD Month-wise)
1	GSEG Expansion	351	Mar-12
2	GSPC-Pipavav	350	Mar-12
3	GSPC-Pipavav	350	Sep-12
	<b>Sub-Total</b>	<b>1051</b>	
	<b>Grand Total</b>	<b>14834</b>	

The total additional capacity envisaged to get commissioned and allocated to GUVNL is arrived at 14,834 MW. The additional capacity envisaged during the control period along with operational parameters, fixed cost and variable cost per unit are given below:

**Table 6.38: Additional capacity envisaged for FY 2011-12 to FY 2015-16**

Sl. No.	Particulars	Rated capacity allocated to GUVNL (MW)	Auxiliary consumption (%)	Plant load factor (%)					Fixed cost (Rs. crores)	Variable cost (Rs./ kWh)
				FY 2011-12	FY 2012-13	FY 2013-14	FY 2014-15	FY 2015-16		
	<b>GSECL plants</b>									
1.	Wanakbori expansion	800	9.00	0	0	0	0	85	673	1.60
2.	Ukai expansion 6	500	8.50	0	80	80	80	80	401	1.54
3.	Sikka 3 & 4	500	8.50	0	7	80	80	80	401	1.99
4.	Dhuvaran CCPP Ext.-3	360	3.00	0	0	3	63	80	329	3.39
	<b>IPPs:</b>									
1	GIPCL addition	500	10.00	0	0	0	7	80	315	1.14
2	BECL	500	11.00	0	0	7	80	80	390	1.20
	<b>Central Sector</b>									
1	NPC Kakrapar addition	476	12.50	0	0	0	0	7	-	2.89
2	NTPC-Lara	140	8.50	0	0	0	0	7	170	1.31
3	NTPC-Sipat stage I	540	7.50	47	85	85	85	85	421	0.88
4	NTPC-Mauda STPS-I	240	6.50	4	67	85	85	85	242	0.89
5	NTPC-Barh STPS 1	260	6.50	0	0	19	73	85	169	0.81
6	NTPC-Vindychal STPS-IV	240	6.50	0	7	85	85	85	287	0.87
7	NTPC-Barh STPS II	174	6.50	0	4	67	85	85	102	0.89
8	NTPC-Mauda STPS-II	240	6.50	0	0	0	0	7	470	1.05
9	Mundra UMPP	1805	-	0	16	17	48	80	1448	0.91
10	Tilaiya UMPP	300	-	0	0	1	35	80	143	0.95
	<b>Renewables</b>									
1	Solar Photovoltaic	944	-	2	11	20	20	20	-	15.00
2	Solar Thermal	25	-	5	20	20	20	20	-	11.00
	<b>Competitive Bidding</b>									
1	APPL	2000	-	70	80	80	80	80	1634	1.43
2	Aryan	200	-	7	80	80	80	80	226	0.55
3	Essar 1000 MW	1000	-	13	73	80	80	80	82	1.27
4	Wardha power – KSK Mahanadi Power Co.	1010	-	0	0	0	0	73	1023	0.62
5	Essar 800 mW	800	-	0	0	0	0	73	798	1.38
6	Shapoorji Pallonji	800	-	0	0	0	0	73	798	1.38



**Madhya Gujarat Vij Company Limited**  
**Truing up for FY 2009-10, APR for FY 2010-11,**  
**ARR for FY 2011-12 to FY 2015-16 and Tariff for FY 2011-12**

Sl. No.	Particulars	Rated capacity allocated to GUVNL (MW)	Auxiliary consumption (%)	Plant load factor (%)					Fixed cost (Rs. crores)	Variable cost (Rs./ kWh)
				FY 2011-12	FY 2012-13	FY 2013-14	FY 2014-15	FY 2015-16		
	<b>RLNG Capacity @15%</b>									
1	GSEG Expansion	351	3.50	7	80	80	80	80	238	5.00
2	GSPC Pipavav	700	3.50	3	63	80	80	80	473	5.00

### 6.8.3 Power purchase cost

The MGVL has submitted that in order to minimize the power purchase cost, GUVNL has worked out a comprehensive merit order despatch (MOD) as below:

- The dispatch from individual generating stations is worked out based on the merit order for the variable cost of each generating unit.
- The NPC power plants, renewable, captive power plants and hydro plants have been considered as must run power plants and so they have been excluded from merit order calculations.
- The RLNG spot gas based power plants PLF is considered at 30% for FY 2011-12 and 5% from FY 2012-13 onwards due to the high variable cost. The power purchase availability from these plants has been capped in order to minimize the impact of the high variable cost of generation from these plants.
- During merit order despatch, at least 50% availability of each plant has been considered to take care of the peak loads and peak season.
- The balance power based on the 80% availability, or the actual availability whichever is low, is considered to meet any additional demand which is not met after inclusion of must run power plant and 50% capacity of the other plant.
- Fixed and variable costs for GSECL have been taken as approved by the Commission for the control period of FY 2011-12 to FY 2015-16 in its order dated 11<sup>th</sup> April, 2011 and the same has been taken in future years, as well. Transmission tariff for GETCO has been taken as approved by the Commission for the control period FY 2012-16 in MYT order dated 31<sup>st</sup> March, 2011.



For IPP and central sector, fixed cost and variable costs are taken as per actual for FY 2009-10. The availability has been projected based on the operation of a plant in a particular year and the past trend of energy availability from the plants.

Based on the above factors, the plant-wise dispatchable energy and cost of purchase by GUVNL from various plants of GSECL, central generating stations, IPPs and other sources, the generation fixed cost due to the capacity contracted, and variable cost of generation per unit are given in table below. The dispatchable energy (MU) based on the allocated capacity and merit order stacking consists both for supplying power to DISCOMs as well as for trading purpose.

**Table 6.39: Power purchase cost projected by GUVNL for FY 2011-12 as furnished by MGVC**

Sl. No	Particulars	FY 2011-12					
		Available MU	Dispatch MU	Fixed Cost (Rs.crore)	Variable Cost (Rs./Unit)	Variable Cost (Rs.crore)	Total Cost (Rs. crore)
	<b>GSECL Plant</b>						
1	Ukai TPS	5,082	5,082	247	1.71	869	1,116
2	Ukai Hydro	345	345	24	0.00	0	24
3	Gandhinagar I to IV	4,111	2,602	266	2.38	618	884
4	Gandhinagar V	1,339	837	97	2.13	178	276
5	Wanakbori I to VI	8,035	5,022	366	2.11	1,059	1,424
6	Wanakbori VII	1,339	1,339	95	2.02	271	365
8	Sikka TPS	1,272	936	110	2.77	259	369
9	Kutch Lignite I to III	1,094	1,094	195	1.18	129	324
10	Kutch Lignite IV	434	434	129	1.11	48	177
11	Dhuvaran oi I	-	-	-	-	-	-
12	Kadana Hydro	126	126	61	0.00	0	61
13	Utran Gas Based	505	315	29	2.37	75	103
14	Dhuvaran Gas Based - Stage-I	616	385	48	2.41	93	141
15	Dhuvaran Gas Based - Stage-II	642	401	57	2.39	96	152
16	Utran Extension	2,005	1,878	229	2.07	389	618
	<b>IPPs</b>						
20	ESSAR	1,439	1,028	202	2.95	303	505
21	GPEC	2,328	1,663	307	2.40	399	707
22	GIPCL II (160)	559	559	27	1.95	109	135
23	GIPCL-SLPP	1,478	1,478	158	1.14	169	327
24	GSEG	858	858	101	1.77	152	253
25	GIPCL - I (145)	140	87	11	2.15	19	30
27	GMDC - Akrimota	1,478	1,478	203	0.74	109	312
28	GSEG Expansion	201	201	20	5.00	101	121
29	GIPCL, Expansion	1,577	1,577	158	1.14	180	338
30	GSPC-Pipavav	200	200	20	5.00	100	120
	<b>Central sector</b>						
32	NPC - Tarapur- 1&2	1,009	1,009	-	0.95	96	96



**Madhya Gujarat Vij Company Limited**  
**Truing up for FY 2009-10, APR for FY 2010-11,**  
**ARR for FY 2011-12 to FY 2015-16 and Tariff for FY 2011-12**

Sl. No	Particulars	FY 2011-12					
		Available MU	Dispatch MU	Fixed Cost (Rs.crore)	Variable Cost (Rs /Unit)	Variable Cost (Rs.crore)	Total Cost (Rs. crore)
33	NPC - Kakrapar	767	767	-	2.19	168	1 68
35	NPC - Tarapur- 3&4	1,728	1,728	-	2.32	402	4 02
37	NTPC - KORBA	2,323	2,323	74	0.76	175	2 49
38	NTPC - VINDHYACHAL - I	1,467	1,467	58	1.27	186	2 43
39	NTPC - VINDHYACHAL - II	1,549	1,549	98	1.23	191	2 89
40	NTPC-VINDHYACHAL - III	1,724	1,724	1 65	1.21	209	3 75
41	NTPC - KAWAS	971	607	58	2.32	141	1 98
42	NTPC - JHANOR	1,231	769	1 01	2.14	164	2 66
43	NTPC-Sipat Stage- I	2,066	2,066	2 34	0.88	181	4 15
44	SSNNL - Hydro	283	283	-	2.05	58	58
45	NTPC-Kahalgaoon New)	914	914	1 72	1.78	162	3 35
46	NTPC - Sipat Stage-II	1,789	1,789	1 92	0.88	157	3 50
47	NTPC-Mauda STPS-I	7 1	71	10	0.89	6	17
52	NTPC - KORBA II	629	629	1 02	0.72	45	1 48
53	Mundra UMPP	1,472	1,472	1 69	0.91	133	3 02
55	<b>Captive Power Plant (MU)</b>	5 6	56	-	3.64	20	20
	<b>Renewables</b>						
56	Wind Farms (1.75)	4 4	44	-	1.75	8	8
57	Wind Farms (3.37)	1,575	1,575	-	3.37	531	5 31
58	Wind Farms (3.56)	462	462	-	3.56	164	1 64
59	Solar Photovoltaic	162	162	-	15.00	243	2 43
60	Solar Thermal	1 1	11	-	11.00	12	12
61	Biomass	210	210	-	4.40	93	93
62	Hydro	5 3	53	-	3.52	19	19
	<b>Competitive Bidding</b>						
63	APPL	1 2,264	12,264	1,430	1.43	1,759	3,188
64	Aryan	119	119	19	0.55	7	26
	<b>RLNG</b>						
65	Essar - 1000 MW	1,168	1,168	1 37	1.27	148	2 85
69	ESSAR - 300	148	148	49	5.34	79	1 27
70	GPEC - 655	674	674	2 08	5.21	351	5 59
71	Utran Gas Based - 135	151	151	23	5.77	87	1 10
72	Utran Extension - 375	204	204	62	4.96	101	1 63
73	Dhuvran Gas Based - Stage 1 - 107	4 1	41	8	5.26	21	30
74	Dhuvran Gas Based - Stage 2 - 112	4 6	46	11	5.26	24	35
75	GIPCL II (160) - 165	212	212	27	5.49	116	1 43
76	GSEG - 156	7 7	77	24	5.21	40	64
77	GIPCL - I (145) - 42	5 4	54	12	5.49	30	41
78	NTPC-KAWAS- 87	112	112	18	5.59	63	81
79	NTPC-JHANOR-237	142	142	31	5.59	80	1 11
	<b>Total</b>	<b>75,181</b>	<b>67,077</b>	<b>6,652</b>		<b>12,195</b>	<b>18,847</b>



**Madhya Gujarat Vij Company Limited**  
**Truing up for FY 2009-10, APR for FY 2010-11,**  
**ARR for FY 2011-12 to FY 2015-16 and Tariff for FY 2011-12**

**Table 6.40: Power purchase cost projected by MGVCL for FY 2012-13**

Sl. No	Particulars	FY 2012-13					
		Available MU	Dispatch MU	Fixed Cost (Rs.crore)	Variable Cost (Rs./Unit)	Variable Cost (Rs.crore)	Total Cost (Rs. crore)
	<b>GSECL Plant</b>						
1	Ukai TPS	5,082	3,388	247	1.71	579	826
2	Ukai Hydro	345	345	24	0.00	0	24
3	Gandhinagar I to IV	4,111	2,602	266	2.38	618	884
4	Gandhinagar V	1,339	837	97	2.13	178	276
5	Wanakbori I to VI	8,035	5,022	366	2.11	1,059	1,424
6	Wanakbori VII	1,339	837	95	2.02	169	264
8	Sikka TPS	1,272	936	110	2.77	259	369
9	Kutch Lignite I to III	1,243	1,243	222	1.18	147	368
10	Kutch Lignite IV	434	434	129	1.11	48	177
11	Dhuvaran oi I	-	-	-	-	-	-
12	Kadana Hydro	126	126	61	0.00	0	61
13	Utran Gas Based	505	315	29	2.37	75	103
14	Dhuvaran Gas Based - Stage-I	616	385	48	2.41	93	141
15	Dhuvaran Gas Based - Stage-II	642	401	57	2.39	96	152
16	Utran Extension	2,005	1,253	229	2.07	260	488
17	Ukai Expansion 6	3,206	2,004	401	1.54	309	709
18	Sikka 3 & 4	272	272	34	1.99	54	88
	<b>IPPs</b>						
20	ESSAR	1,439	1,028	202	2.95	303	505
21	GPEC	2,328	1,663	307	2.40	399	707
22	GIPCL II (160)	559	349	27	1.95	68	95
23	GIPCL-SLPP	1,478	1,478	158	1.14	169	327
24	GSEG	858	536	101	1.77	95	196
25	GIPCL - I (145)	140	87	11	2.15	19	30
27	GMDC - Akrimota	1,478	1,478	203	0.74	109	312
28	GSEG Expansion	149	149	238	5.00	74	312
29	GIPCL, Expansion	1,577	1,577	158	1.14	180	338
30	GSPC-Pipavav	296	296	374	5.00	148	522
	<b>Central sector</b>						
32	NPC - Tarapur- 1&2	1,009	1,009	-	0.95	96	96
33	NPC - Kakrapar	767	767	-	2.19	168	168
35	NPC - Tarapur- 3&4	1,728	1,728	-	2.32	402	402
37	NTPC - KORBA	2,323	2,323	74	0.76	175	249
38	NTPC - VINDHYACHAL - I	1,467	1,467	58	1.27	186	243
39	NTPC - VINDHYACHAL - II	1,549	1,549	98	1.23	191	289
40	NTPC - VINDHYACHAL - III	1,724	1,724	165	1.21	209	375
41	NTPC - KAWAS	971	607	58	2.32	141	198
42	NTPC - JHANOR	1,231	769	101	2.14	164	266
43	NTPC-Sipat Stage-I	3,500	3,500	421	0.88	307	728
44	SSNNL - Hydro	283	283	-	2.05	58	58
45	NTPC - Kahalgaon (New)	914	571	172	1.78	102	274
46	NTPC - Sipat Stage-II	1,789	1,789	192	0.88	157	350



**Madhya Gujarat Vij Company Limited**  
**Truing up for FY 2009-10, APR for FY 2010-11,**  
**ARR for FY 2011-12 to FY 2015-16 and Tariff for FY 2011-12**

Sl. No	Particulars	FY 2012-13					
		Available MU	Dispatch MU	Fixed Cost (Rs.crore)	Variable Cost (Rs./Unit)	Variable Cost (Rs.crore)	Total Cost (Rs. crore)
47	NTPC - Mauda STPS-I	1,321	1,321	191	0.89	118	3 09
49	NTPC - Vindhyachal STPS-IV	142	142	24	0.87	12	37
50	NTPC - Barh STPS-II	51	51	4	0.89	5	9
52	NTPC - KORBA II	629	629	102	0.72	45	1 48
53	Mundra UMPP	2,530	2,530	290	0.91	229	5 19
55	<b>Captive Power Plant (MU)</b>	56	56	-	3.64	20	20
	<b>Renewables</b>						
56	Wind Farms (1.75)	4 4	44	-	1.75	8	8
57	Wind Farms (3.37)	1,575	1,575	-	3.37	531	5 31
58	Wind Farms (3.56)	462	462	-	3.56	164	1 64
59	Solar Photovoltaic	898	898	-	15.00	1,347	1,347
60	Solar Thermal	44	44	-	11.00	48	48
61	Biomass	210	210	-	4.40	93	93
62	Hydro	53	53	-	3.52	19	19
	<b>Competitive Bidding</b>						
63	APPL	14,016	8,760	1,634	1.43	1,256	2,890
64	Aryan	1,402	1,402	226	0.55	77	3 03
	<b>RLNG</b>						
65	Essar - 1000 MW	6,422	6,145	751	1.27	780	1,532
69	ESSAR - 300	25	25	49	5.34	13	62
70	GPEC - 655	112	112	208	5.21	58	2 66
71	Utran Gas Based-135	25	25	23	5.77	15	38
72	Utran Extension - 375	34	34	62	4.96	17	79
73	Dhuvran Gas Based - Stage 1 - 107	7	7	8	5.26	4	12
74	Dhuvran Gas Based - Stage 2 - 112	8	8	11	5.26	4	15
75	GIPCL II (160) - 165	35	35	27	5.49	19	46
76	GSEG - 156	13	13	24	5.21	7	31
77	GIPCL - I (145) - 42	9	9	12	5.49	5	17
78	NTPC - KAWAS - 187	19	19	18	5.59	10	28
79	NTPC - JHANOR - 237	24	24	31	5.59	13	44
	<b>Total</b>	<b>90,295</b>	<b>71,759</b>	<b>9,229</b>		<b>12,781</b>	<b>22,010</b>



**Table 6.41: Power purchase cost projected by MGVL for FY 2013-14**

Sl. No	Particulars	FY 2013-14					
		Available MU	Dispatch MU	Fixed Cost (Rs.crore)	Variable Cost (Rs /Unit)	Variable Cost (Rs.crore)	Total Cost (Rs. crore)
	<b>GSECL Plants</b>						
1	Ukai TPS	5,082	3,388	247	1.71	579	826
2	Ukai Hydro	345	345	24	0.00	0	24
3	Gandhinagar I to IV	4,111	2,602	266	2.38	618	8 84
4	Gandhinagar V	1,339	837	97	2.13	178	2 76
5	Wanakbori I to VI	8,035	5,022	366	2.11	1,059	1,424
6	Wanakbori VII	1,339	837	95	2.02	169	2 64
8	Sikka TPS	1,329	936	115	2.77	259	3 74
9	Kutch Lignite I to III	1,243	1,243	222	1.18	147	3 68
10	Kutch Lignite IV	434	434	129	1.11	48	1 77
11	Dhuvaran oi I	-	-	-	-	-	-
12	Kadana Hydro	126	126	61	0.00	0	61
13	Utran Gas Based	505	315	29	2.37	75	1 03
14	Dhuvaran Gas Based - Stage-I	616	385	48	2.41	93	1 41
15	Dhuvaran Gas Based - Stage-II	618	401	54	2.39	96	1 50
16	Utran Extension	2,005	1,253	229	2.07	260	4 88
17	Ukai Expansion 6	3,206	2,004	401	1.54	309	7 09
18	Sikka 3 & 4	3,206	2,004	401	1.99	398	7 99
19	Dhuvaran CCPP Ext - 3	104	104	14	3.39	35	49
	<b>IPPs</b>						
20	ESSAR	1,439	1,028	202	2.95	303	5 05
21	GPEC	2,328	1,663	307	2.40	399	7 07
22	GIPCL II (160)	559	349	27	1.95	68	95
23	GIPCL-SLPP	1,478	1,478	158	1.14	169	3 27
24	GSEG	858	536	101	1.77	95	1 96
25	GIPCL - I (145)	140	87	11	2.15	19	30
27	GMDC - Akrimota	1,478	1,478	203	0.74	109	3 12
28	GSEG Expansion	149	149	238	5.00	74	3 12
29	GIPCL, Expansion	1,577	1,577	158	1.14	180	3 38
30	GSPC-Pipavav	296	296	473	5.00	148	6 21
31	BECL	265	265	33	1.20	32	65
	<b>Central sector</b>						
32	NPC - Tarapur- 1&2	1,009	1,009	-	0.95	96	96
33	NPC - Kakrapar	767	767	-	2.19	168	1 68
35	NPC - Tarapur- 3&4	1,728	1,728	-	2.32	402	4 02
37	NTPC - KORBA	2,323	2,323	74	0.76	175	2 49
38	NTPC - VINDHYACHAL - I	1,467	1,467	58	1.27	186	2 43
39	NTPC - VINDHYACHAL - II	1,549	1,549	98	1.23	191	2 89
40	NTPC - VINDHYACHAL - III	1,724	1,724	165	1.21	209	3 75
41	NTPC - KAWAS	971	607	58	2.32	141	1 98
42	NTPC - JHANOR	1,231	769	101	2.14	164	2 66
43	NTPC - Sipat Stage - I	3,500	3,500	421	0.88	307	7 28
44	SSNNL - Hydro	283	283	-	2.05	58	58



**Madhya Gujarat Vij Company Limited**  
**Truing up for FY 2009-10, APR for FY 2010-11,**  
**ARR for FY 2011-12 to FY 2015-16 and Tariff for FY 2011-12**

Sl. No	Particulars	FY 2013-14					
		Available MU	Dispatch MU	Fixed Cost (Rs.crore)	Variable Cost (Rs /Unit)	Variable Cost (Rs.crore)	Total Cost (Rs. crore)
45	NTPC - Kahalgaon (New)	914	571	172	1.78	102	2 74
46	NTPC - Sipat Stage-II	1,789	1 ,789	192	0.88	157	3 50
47	NTPC-Mauda STPS-I	1,573	1 ,573	242	0.89	140	3 82
48	NTPC-Barh STPS-I	403	403	38	0.81	33	70
49	NTPC - Vindhyachal STPS-IV	1,573	1 ,573	287	0.87	137	4 24
50	NTPC - Barh STPS-II	957	957	80	0.89	85	1 66
52	NTPC - KORBA II	629	629	102	0.72	45	1 48
53	Mundra UMPP	2,745	2 ,745	314	0.91	248	5 63
54	Ti laiya UMPP	36	36	2	0.95	3	6
55	<b>Captive Power Plant (MU)</b>	56	56	-	3.64	20	20
	<b>Renewables</b>						
56	Wind Farms (1.75)	4 4	44	-	1.75	8	8
57	Wind Farms (3.37)	1,575	1 ,575	-	3.37	531	5 31
58	Wind Farms (3.56)	462	462	-	3.56	164	1 64
59	Solar Photovoltaic	1,653	1 ,653	-	15.00	2 ,480	2,480
60	Solar Thermal	44	44	-	11.00	48	48
61	Biomass	210	210	-	4.40	93	93
62	Hydro	53	53	-	3.52	19	19
	<b>Competitive Bidding</b>						
63	APPL	14,016	8 ,760	1,634	1.43	1 ,256	2,890
64	Aryan	1,402	1 ,402	226	0.55	77	3 03
	<b>RLNG</b>						
65	Essar - 1000 MW	7,008	5 ,031	820	1.27	639	1,459
69	ESSAR - 300	25	25	49	5.34	13	62
70	GPEC - 655	112	112	208	5.21	58	2 66
71	Utran Gas Based - 135	25	25	23	5.77	15	38
72	Utran Extension - 375	34	34	62	4.96	17	79
73	Dhuvran Gas Based - Stage 1 - 107	7	7	8	5.26	4	12
74	Dhuvran Gas Based - Stage 2 - 112	8	8	10	5.26	4	14
75	GIPCL II (160) - 165	35	35	27	5.49	19	46
76	GSEG - 156	13	13	24	5.21	7	31
77	GIPCL - I (145) - 42	9	9	12	5.49	5	17
78	NTPC - KAWAS - 187	19	19	18	5.59	10	28
79	NTPC - JHANOR - 237	24	24	31	5.59	13	44
	<b>Total</b>	<b>98,213</b>	<b>76,743</b>	<b>10,268</b>		<b>14,466</b>	<b>24,733</b>





**Table 6.42: Power purchase cost projected by MGVCL for FY 2014-15**

Sl. No	Particulars	FY 2014-15					
		Available MU	Dispatch MU	Fixed Cost (Rs.crore)	Variable Cost (Rs /Unit)	Variable Cost (Rs. crore)	Total Cost (Rs. crore)
	<b>GSECL Plants</b>						
1	Ukai TPS	5,082	3,388	247	1.71	579	826
2	Ukai Hydro	345	345	24	0.00	0	24
3	Gandhinagar I to IV	4,111	2,602	266	2.38	618	884
4	Gandhinagar V	1,339	837	97	2.13	178	276
5	Wanakbori I to VI	8,035	5,022	366	2.11	1,059	1,424
6	Wanakbori VII	1,339	837	95	2.02	169	264
8	Sikka TPS	1,329	936	115	2.77	259	374
9	Kutch Lignite I to III	1,243	829	222	1.18	98	319
10	Kutch Lignite IV	434	289	129	1.11	32	161
11	Dhuvaran oi I	-	-	-	-	-	-
12	Kadana Hydro	126	126	61	0.00	0	61
13	Utran Gas Based	505	315	29	2.37	75	103
14	Dhuvaran Gas Based - Stage-I	616	385	48	2.41	93	141
15	Dhuvaran Gas Based - Stage-II	642	401	57	2.39	96	152
16	Utran Extension	2,005	1,253	229	2.07	260	488
17	Ukai Expansion 6	3,206	2,004	401	1.54	309	709
18	Sikka 3 & 4	3,206	2,004	401	1.99	398	799
19	Dhuvaran CCPP Ext - 3	1,934	1,529	260	3.39	518	779
	<b>IPPs</b>						
20	ESSAR	1,439	1,028	202	2.95	303	505
21	GPEC	2,328	1,663	307	2.40	399	707
22	GIPCL II (160)	559	349	27	1.95	68	95
23	GIPCL-SLPP	1,478	986	158	1.14	112	271
24	GSEG	858	536	101	1.77	95	196
25	GIPCL - I (145)	140	87	11	2.15	19	30
26	GIPCL Addition	268	268	31	1.14	31	61
27	GMDC - Akrimota	1,478	1,478	203	0.74	109	312
28	GSEG Expansion	149	149	238	5.00	74	312
29	GIPCL, Expansion	1,577	986	158	1.14	112	270
30	GSPC-Pipavav	296	296	473	5.00	148	621
31	BECL	3,119	1,949	390	1.20	234	624
	<b>Central sector</b>						
32	NPC - Tarapur- 1&2	1,009	1,009	-	0.95	96	96
33	NPC - Kakrapar	767	767	-	2.19	168	168
35	NPC - Tarapur- 3&4	1,728	1,728	-	2.32	402	402
37	NTPC - KORBA	2,323	2,323	74	0.76	175	249
38	NTPC - VINDHYACHAL - I	1,467	917	58	1.27	116	174
39	NTPC - VINDHYACHAL - II	1,549	968	98	1.23	119	218
40	NTPC - VINDHYACHAL - III	1,724	1,078	165	1.21	131	296
41	NTPC - KAWAS	971	607	58	2.32	141	198
42	NTPC - JHANOR	1,231	769	101	2.14	164	266
43	NTPC-Sipat Stage-I	3,500	3,500	421	0.88	307	728



**Madhya Gujarat Vij Company Limited**  
**Truing up for FY 2009-10, APR for FY 2010-11,**  
**ARR for FY 2011-12 to FY 2015-16 and Tariff for FY 2011-12**

Sl. No	Particulars	FY 2014-15					
		Available MU	Dispatch MU	Fixed Cost (Rs.crore)	Variable Cost (Rs /Unit)	Variable Cost (Rs. crore)	Total Cost (Rs. crore)
44	SSNNL - Hydro	283	283	-	2.05	58	58
45	NTPC - Kahalgaon (New)	914	571	172	1.78	102	2 74
46	NTPC-Sipat Stage-II	1,789	1 ,754	192	0.88	154	3 47
47	NTPC - Mauda STPS-I	1,573	983	242	0.89	87	3 30
48	NTPC - Barh STPS-I	1,559	1 ,559	146	0.81	126	2 72
49	NTPC - Vindhyachal STPS-IV	1,573	1 ,573	287	0.87	137	4 24
50	NTPC-Barh STPS-II	1,140	713	102	0.89	63	1 65
52	NTPC - KORBA II	629	629	102	0.72	45	1 48
53	Mundra UMPP	7,586	7 ,586	869	0.91	687	1,555
54	Ti laiya UMPP	909	909	62	0.95	86	1 48
55	<b>Captive Power Plant (MU)</b>	56	56	-	3.64	20	20
	<b>Renewables</b>						
56	Wind Farms (1.75)	4 4	44	-	1.75	8	8
57	Wind Farms (3.37)	1,575	1 ,575	-	3.37	531	5 31
58	Wind Farms (3.56)	462	462	-	3.56	164	1 64
59	Solar Photovoltaic	1,653	1 ,653	-	15.00	2 ,480	2,480
60	Solar Thermal	44	44	-	11.00	48	48
61	Biomass	210	210	-	4.40	93	93
62	Hydro	53	53	-	3.52	19	19
	<b>Competitive Bidding</b>						
63	APPL	14,016	8 ,760	1,634	1.43	1 ,256	2,890
64	Aryan	1,402	1 ,402	226	0.55	77	3 03
	<b>RLNG</b>						
65	Essar - 1000 MW	7,008	4 ,380	820	1.27	556	1,376
69	ESSAR - 300	25	25	49	5.34	13	62
70	GPEC - 655	112	112	208	5.21	58	2 66
71	Utran Gas Based - 135	25	25	23	5.77	15	38
72	Utran Extension - 375	34	34	62	4.96	17	79
73	Dhuvran Gas Based - Stage 1 - 107	7	7	8	5.26	4	12
74	Dhuvran Gas Based - Stage 2 - 112	8	8	11	5.26	4	15
75	GIPCL II (160) - 165	35	35	27	5.49	19	46
76	GSEG - 156	13	13	24	5.21	7	31
77	GIPCL - I (145) - 42	9	9	12	5.49	5	17
78	NTPC - KAWAS - 187	19	19	18	5.59	10	28
79	NTPC - JHANOR - 237	24	24	31	5.59	13	44
	<b>Total</b>	<b>110,242</b>	<b>82,050</b>	<b>11,646</b>		<b>15,228</b>	<b>26,874</b>



**Madhya Gujarat Vij Company Limited**  
**Truing up for FY 2009-10, APR for FY 2010-11,**  
**ARR for FY 2011-12 to FY 2015-16 and Tariff for FY 2011-12**

**Table 6.43: Power purchase cost projected by MGCVCL for FY 2015-16**

Sl. No.	Particulars	FY 2015-16					
		Available MU	Dispatch MU	Fixed Cost (Rs. crore)	Variable Cost (Rs /Unit)	Variable Cost (Rs .crore)	Total Cost (Rs. crore)
	<b>GSECL plants</b>						
1	Ukai TPS	5,082	3388	247	1.71	579	826
2	Ukai Hydro	345	345	24	0.00	0	24
3	Gandhinagar I to IV	4,111	1972	266	2.38	468	735
4	Gandhinagar V	1,339	837	97	2.13	178	276
5	Wanakbori I to VI	8,035	5022	366	2.11	1,059	1,424
6	Wanakbori VII	1,339	837	95	2.02	169	264
7	Wanakbori Expansion	5,102	3189	673	1.60	510	1,183
8	Sikka TPS	1,329	-	115	2.77	-	115
9	Kutch Lignite I to III	1,243	829	222	1.18	98	319
10	Kutch Lignite IV	434	289	129	1.11	32	161
11	Dhuvaran oi I	-	-	-	-	-	-
12	Kadana Hydro	126	126	61	0.00	0	61
13	Utran Gas Based	505	315	29	2.37	75	103
14	Dhuvaran Gas Based - Stage-I	616	-	48	2.41	-	48
15	Dhuvaran Gas Based - Stage-II	642	-	57	2.39	-	57
16	Utran Extension	2,005	1253	229	2.07	260	488
17	Ukai Expansion 6	3,206	2004	401	1.54	309	709
18	Sikka 3 & 4	3,206	2004	401	1.99	398	799
19	Dhuvaran CCPP Ext - 3	2,447	-	329	3.39	-	329
	<b>IPPs</b>						
20	ESSAR	1,439	-	202	2.95	-	202
21	GPEC	2,328	-	307	2.40	-	307
22	GIPCL II (160)	559	349	27	1.95	68	95
23	GIPCL-SLPP	1,478	986	158	1.14	112	271
24	GSEG	858	536	101	1.77	95	196
25	GIPCL - I (145)	140	87	11	2.15	19	30
26	GIPCL Addition	3,154	1971	315	1.14	225	540
27	GMDC - Akrimota	1,478	986	203	0.74	73	275
28	GSEG Expansion	149	149	238	5.00	74	312
29	GIPCL, Expansion	1,577	986	158	1.14	112	270
30	GSPC-Pipavav	296	296	473	5.00	148	621
31	BECL	3,119	1949	390	1.20	234	624
32	NPC - Tarapur- 1&2	1,009	1009	-	0.95	96	96
33	NPC - Kakrapar	767	767	-	2.19	168	168
34	NPC kakrapar addition	247	247	-	2.89	71	71
	<b>Central sector</b>						
35	NPC - Tarapur- 3&4	1,728	1728	-	2.32	402	402
36	NTPC - Lara	81	81	14	1.31	11	25
37	NTPC - KORBA	2,323	1452	74	0.76	110	183
38	NTPC - VINDHYACHAL - I	1,467	917	58	1.27	116	174
39	NTPC - VINDHYACHAL - II	1,549	968	98	1.23	119	218
40	NTPC - VINDHYACHAL - III	1,724	1078	165	1.21	131	296



**Madhya Gujarat Vij Company Limited**  
**Truing up for FY 2009-10, APR for FY 2010-11,**  
**ARR for FY 2011-12 to FY 2015-16 and Tariff for FY 2011-12**

Sl. No.	Particulars	FY 2015-16					Total Cost (Rs. crore)
		Available MU	Dispatch MU	Fixed Cost (Rs. crore)	Variable Cost (Rs /Unit)	Variable Cost (Rs .crore)	
41	NTPC - KAWAS	971	607	58	2.32	141	198
42	NTPC - JHANOR	1,231	769	101	2.14	164	266
43	NTPC-Sipat Stage-I	3,500	2188	421	0.88	192	613
44	SSNNL - Hydro	283	283	-	2.05	58	58
45	NTPC - Kahalgaon (New)	914	571	172	1.78	102	274
46	NTPC - Sipat Stage-II	1,789	1118	192	0.88	98	291
47	NTPC - Mauda STPS-I	1,573	983	242	0.89	87	330
48	NTPC-Barh STPS-I	1,704	1065	169	0.81	86	255
49	NTPC - Vindhyachal STPS-IV	1,573	983	287	0.87	86	373
50	NTPC-Barh STPS-II	1,140	713	102	0.89	63	165
51	NTPC - Mauda STPS-II	142	142	40	1.05	15	55
52	NTPC - KORBA II	629	393	102	0.72	28	131
53	Mundra UMPP	12,649	7906	1,448	0.91	715	2,164
54	Ti laiya UMPP	2,102	1314	143	0.95	125	268
55	<b>Captive Power Plant (MU)</b>	56	56	-	3.64	20	20
	<b>Renewables</b>						
56	Wind Farms (1.75)	44	44	-	1.75	8	8
57	Wind Farms (3.37)	1,575	1575	-	3.37	531	531
58	Wind Farms (3.56)	462	462	-	3.56	164	164
59	Solar Photovoltaic	1,653	1653	-	15.00	2,480	2,480
60	Solar Thermal	44	44	-	11.00	48	48
61	Biomass	210	210	-	4.40	93	93
62	Hydro	53	53	-	3.52	19	19
	<b>Competitive Bidding</b>						
63	APPL	14,016	8760	1,634	1.43	1,256	2,890
64	Aryan	1,402	876	226	0.55	48	275
65	Essar - 1000 MW	7,008	4380	820	1.27	556	1,376
66	Wardha Power - KSK Mahanadi Power Co	6,498	4424	939	0.62	274	1,213
67	Essar - 800 MW	5,147	3504	732	1.38	484	1,216
68	Shapoorji Pallonji	5,147	3504	732	1.38	484	1,216
	<b>RLNG</b>						
69	ESSAR - 300	25	25	49	5.34	13	62
70	GPEC - 655	112	112	208	5.21	58	266
71	Utran Gas Based-135	25	25	23	5.77	15	38
72	Utran Extension-375	34	34	62	4.96	17	79
73	Dhuvran Gas Based - Stage 1 - 107	7	7	8	5.26	4	12
74	Dhuvran Gas Based - Stage 2 - 112	8	8	11	5.26	4	15
75	GIPCL II (160) - 165	35	35	27	5.49	19	46
76	GSEG - 156	13	13	24	5.21	7	31
77	GIPCL - I (145) - 42	9	9	12	5.49	5	17
78	NTPC-KAWAS-187	19	19	18	5.59	10	28
79	NTPC-JHANOR- 237	24	24	31	5.59	13	44



**Madhya Gujarat Vij Company Limited**  
**Truing up for FY 2009-10, APR for FY 2010-11,**  
**ARR for FY 2011-12 to FY 2015-16 and Tariff for FY 2011-12**

Sl. No.	Particulars	FY 2015-16					
		Available MU	Dispatch MU	Fixed Cost (Rs. crore)	Variable Cost (Rs /Unit)	Variable Cost (Rs .crore)	Total Cost (Rs. crore)
	<b>Total</b>	<b>142405</b>	<b>87838</b>	<b>15815</b>		<b>15111</b>	<b>30926</b>

It is submitted by MGVL that the total power purchase cost for the company for the control period FY 2011-12 to FY 2015-16 consists of transmission charges, GUVNL charges and SLDC fees & charges.

#### 6.8.4 Transmission charges

Transmission charges to GETCO are calculated as per the approved charges to GETCO in the MYT order for the control period FY 2011-12 to FY 2015-16. PGCIL charges are worked out based on actual of FY 2009-10 with escalation of 5% every year.

Based on the transmission charges for PGCIL and GETCO, the transmission costs included in the calculation of bulk supply tariff of all DISCOMs is given below:

**Table 6.44: Transmission charges projected by MGVL for the control period FY 2011-12 to FY 2015-16**

Particulars	FY 2009-10 (Approved)	FY 2009-10 (Actual)	FY 2010-11	FY 2011-12	FY 2012-13	FY 2013-14	FY 2014-15	FY 2015-16
Escalation for PGCIL charges (%)	0	0	5	5	5	5	5	5
PGCIL charges (Rs.crore)	-	254	267	280	294	309	324	340
GETCO charges (Rs./MW/day)	-	-	2829	2775	2954	3245	3029	2727
GETCO charges (Rs./crore/MW/ annum)	-	-	0.10	0.10	0.11	0.12	0.11	0.10
SLDC fees (Rs./MW/half year)	-	-	375	321	371	407	363	313
SLDC charges (Rs/MW/month)	-	-	519	397	365	348	295	251

#### 6.8.5 GUVNL cost

The MGVL has submitted that GUVNL is entrusted with the function of supplying power to DISCOMs and the overall coordination between the subsidiary companies. It also undertakes the function of raising and managing overall loan portfolio of GUVNL and its subsidies.



GUVNL is charging Rs.0.04 for every transaction of the unit.

#### **6.8.6 SLDC Fees and charges**

It is submitted by MGVCCL that SLDC fees and charges have been taken as approved by the Commission in the SLDC MYT order dated 31<sup>st</sup> March, 2011.

#### **6.8.7 Trading**

The MGVCCL has stated that GUVNL has projected trading of surplus power based on its capacity to sell GUVNL has considered 6000 MU for FY 20911-12, 7000 MU for FY 2012-13 each year increasing the trading units by 1000 MU, thus reaching a level of 10,000 MU for the FY 2015-16. Trading cost is calculated based on variable and fixed costs of respective power plants.

The trading MU envisaged from FY 2011-12 to FY 2015-16 are given below:

**Table 6.45: Trading of energy envisaged during the control period FY 2011-12 to FY 2015-16 as projected by MGVCCL**

<b>Particulars</b>	<b>FY 2011-12</b>	<b>FY 2012-13</b>	<b>FY 2013-14</b>	<b>FY 2014-15</b>	<b>FY 2015-16</b>
Trading units (MU)	6000	7000	8000	9000	10000

#### **6.8.8 Total power purchase cost**

The MGVCCL has furnished the total power purchase cost consisting of the cost of power purchase from various generating stations, transmission charges of PGCIL and GETCO, SLDC charges, GUVNL costs and trading units. The total fixed costs due to the capacity contracted is passed on to the DISCOMs. For trading on the basis of the number of units dispatched, the cost is allocated to the trading given in the table below:

**Table 6.46: Fixed cost for DISCOMs and trading of energy from FY 2011-12 to FY 2015-16 as projected by MGVCCL**

(Rs. crore)							
<b>Year</b>	<b>Fixed Cost</b>	<b>GETCO cost</b>	<b>PGCIL charges</b>	<b>SLDC charges</b>	<b>Total Fixed cost</b>	<b>DISCOM Fixed cost</b>	<b>Trading Fixed cost</b>
FY 2011-12	6652	1185	280	8	8125	8125	798
FY 2012-13	9229	1594	294	9	11126	11126	1203
FY 2013-14	10268	1887	309	9	12473	12473	1451
FY 2014-15	11646	1923	324	9	13902	13902	1713
FY 2015-16	15815	2192	340	9	18356	18356	2358



The total variable cost units of the energy cost due to generating energy to supply power to DISCOMs as well as for trading purpose and includes additional 4 paise/unit payable to GUVNL for the supply of such power. The basic purpose is to have an average variable cost to DISCOMs as well as trading of power. The total variable cost is given in the table below:

**Table 6.47: Variable cost for DISCOMs and trading of energy for FY 2011-12 to FY 2015-16 projected by MGVCCL**

Year	Variable cost (Rs. crore)	GUVNL cost (Rs. crore)	Total variable cost (Rs. crore)	Total MU dispatched	Variable cost (Rs./unit)	DISCOM		Trading	
						MU	Variable cost (Rs. crore)	MU	Variable cost (Rs. crore)
FY 2011-12	12195	268	12463	67077	1.86	61077	11348	6000	1115
FY 2012-13	12781	287	13068	71759	1.82	64759	11793	7000	1275
FY 2013-14	14466	307	14773	76743	1.92	68743	13233	8000	1540
FY 2014-15	15228	328	15556	82050	1.90	73050	13850	9000	1706
FY 2015-16	15111	351	15463	87838	1.76	77838	13702	10000	1760

### 6.8.9 Net power purchase cost

It is submitted by MGVCCL that trading revenue for GUVNL is calculated based on per unit total cost of power plus Rs.1.00 per unit, which also includes the profit margin and GUVNL trading margin.

Hence, the revenue earned from sale of power to trade is subtracted from the total power purchase cost for DISCOMs to obtain the net power purchase cost. The net power purchase cost is shown below:

**Table 6.48: GUVNL net power purchase cost for the control period FY 2011-12 to FY 2015-16**

(Rs. crore)

Year	DISCOM fixed cost	DISCOM variable cost	Total power purchase cost	Trading fixed cost	Trading variable cost	Profit & trading margin	Total trading revenue	Net cost
FY 2011-12	8125	11348	19473	798	1115	600	2513	18075
FY 2012-13	11126	11793	22919	1203	1275	700	3177	21016
FY 2013-14	12473	13233	25705	1451	1540	800	3791	23454
FY 2014-15	13092	13850	27752	1713	1706	900	4319	25139
FY 2015-16	18356	13702	32059	2358	1760	1000	5119	28700

## Commission's Analysis

### 6.8.10 Bulk supply arrangement

GUVNL is a holding company of the restructured successor companies and is also entrusted with the purchase and sale (trading) function of electricity. GUVNL



purchases power from various sources and supplies this to the four distribution companies and also in bulk to the distribution licensees in Gujarat. The GUVNL has entered into contracts to purchase the entire power requirement from GSECL, central generating companies, IPPs, traders and others to meet the demand of the DISCOMs. Thus, it performs the activity of bulk supplier of power to all the four distribution companies at Bulk Supply Tariff. In accordance with this arrangement, the distribution licensees have entered into bulk supply arrangement / agreement with GUVNL to meet their supply obligations.

When the erstwhile Gujarat Electricity Board (GEB) was restructured on a functional basis, the four distribution companies were incorporated on the basis of Zonal configuration existing in the Electricity Board.

Each of the zones, now the distribution companies, have different consumer profile and consumption profile and hence the revenue earning capabilities of each DISCOM differs as well as the Annual Revenue Requirement.

The State Government envisaged an uniform structure of retail supply tariff in the four DISCOMs so that consumers in similar categories in the State could have similar tariff as in the erstwhile GEB and there may not be any discrimination among the consumers on account of the restructuring.

Since the revenue earning capabilities and the ARR of the four DISCOMs are different, it is necessary to build a mechanism to bring them under uniform retail tariffs.

Since the power purchase cost contributes 70 to 80% of the total cost incurred by DISCOMs, this factor plays a major role in achieving the level playing field among the DISCOMs for maintaining uniform tariffs in the DISCOMs. In this context the Tariff Policy has provided as under:

***Para 8.4.2 of Tariff Policy states –***

*The National Electricity Policy states that existing PPAs with the generating companies would need to be suitably assigned to the successor distribution companies. The State Governments may make such assignments taking care of different load profiles of the distribution companies so that retail tariffs are uniform in the State for*





*different categories of consumers. Thereafter the retail tariffs would reflect the relative efficiency of distribution companies in procuring power at competitive costs, controlling theft and reducing other distribution losses.*

The Government had earlier assigned the PPAs to different DISCOMs based on the load profile of each DISCOM, but the assignment of PPAs has become a dynamic situation in view of additional capacity that is being added every year, the generation cost of such additional capacity being different. In this situation, uniform tariff by the assignment of PPAs has become difficult.

Even though the distribution companies are improving their performance by reducing the distribution losses etc., the consumer profile and consumption profile is a historical legacy. It would take considerable time for the distribution companies to develop industries and commercial activities for a more favourable consumer mix. Until such time the uniform tariffs have to be maintained in all DISCOMs. In order to maintain uniform tariffs in all DISCOMs the equitable allocation of PPA is suggested in the Tariff Policy. As stated earlier the allocation has its own limitation. The other alternative of Bulk Supply arrangement is considered more appropriate. Hence the differential Bulk Supply Tariff proposed by the DISCOM / GUVNL, which provides for uniform tariff is approved by the Commission.

#### **6.8.11 Power purchase sources and merit order despatch**

##### **Power purchase sources**

As mentioned in paragraph 6.8.1, GUVNL has entered into contract for the existing capacity with GSECL, central generating companies, IPPs, renewable energy sources and RLNG gas based plants which were commissioned before 31<sup>st</sup> March, 2010. The details of the existing plants, etc., are given in the table 6.36.

GUVNL has also entered into contract for new capacity that is likely to be commissioned during the control period.

The details of the new plants likely to be commissioned during the control period are given in the table 6.37.

The quantum contracted from the new capacity source-wise is included in table below 6.49 below:

**Table 6.49: Existing capacity contracted source-wise by GUVNL for the control period  
FY 2011-12 to FY 2015-16**

Sl. No.	Particulars	Rated capacity allocated to GUVNL (MW) as on 31 <sup>st</sup> March 2011	FY 2011-12	FY 2012-13	FY 2013-14	FY 2014-15	FY 2015-16
1	GSECL	4822	4822	5822	6002	6182	6982
2	IPPs	1612	2313	2663	3163	3663	3663
3	Central Generating stations	2900	3741	4188	4870	6160	7136
4	Renewable sources	1072	1469	2041	2041	2041	2041
5	Competitive bidding	1500	2700	3200	3200	3200	5810
6	CPP	8	8	8	8	8	8
	<b>Total</b>	<b>11914</b>	<b>15053</b>	<b>17922</b>	<b>19284</b>	<b>21254</b>	<b>25640</b>

The details of capacity contracted by GUVNL from the existing plant and the additional plants envisaged during the control period along with the operational, fixed and variable cost are given in the table 6.36 and 6.37.

#### **6.8.12 Purchase in merit order**

As discussed earlier in paragraph 6.3.2 GUVNL, in order to optimize the power purchase costs, has worked out a comprehensive merit order dispatch (MOD) as below:

- The despatch from individual generating station is worked out based on merit order of variable cost of each generating unit.
- NPC power plants, renewable sources, captive power plants and hydro power plants have been considered as must run power plants and so they have been excluded from merit order calculations.
- R-LNG spot gas based power plants PLF is considered at 30% for FY 2011-12 and @5% for the FY 2012-13 onwards due to high variable costs. The



power purchase from these plants has been capped by GUVNL in order to minimize the impact of higher variable cost of generation from these plant.

- During merit order dispatch, at least 50% availability of each plant has been considered to take care of the peak loads and peak seasons.
- Fixed cost and variable cost for GSECL plants have been taken as approved by the Commission for the control period in the order dated 31<sup>st</sup> March, 2011.
- For IPPs and central sector stations, fixed cost and variable costs are taken as per actuals of FY 2009-10.

**The quantum of power and the cost as provided by MGVL/GUVNL are considered on due examination as given in the tables 6.51 to 6.55 and approved by the Commission.**

#### **6.8.13 Power purchase during the control period FY 2011-12 to FY 2015-16**

The power purchase for the control period FY 2011-12 to FY 2015-16 is based on the energy requirement of MGVL / four DISCOMs approved by the Commission. As stated in the previous paragraphs the fixed and variable costs of GSECL stations are as approved by the Commission in the Tariff Order dated 31<sup>st</sup> March, 2011. For purchase from central generating stations, IPPs and others the fixed and variable costs are taken based on actuals for FY 2009-10. The power purchase costs for each year of the control period are given in tables 6.38 to 6.42, which include the energy available from each station as estimated by the Commission and energy dispatchable based on merit order as given in the above tables.

The source-wise power purchase cost by GUVNL for the control period FY 2011-12 to FY 2015-16 is summarized and given in the tables below:

**Table 6.51: Power purchase cost for FY 2011-12**

Sl. No.	Particulars	FY 2011-12					
		Available MU	Dispatch MU	Fixed Cost (Rs.Cr)	Variable Cost (Rs /Unit)	Variable Cost (Rs Cr)	Total Cost (Rs Cr)
	<b>GSECL Plants</b>						
1	Ukai TPS	5082	5082	246.64	1.710	869	1115.64
2	Ukai Hydro	345	345	24.42	0.000	0	24.42
3	Gandhinagar I to IV	4111	2602	266.37	2.375	618	884.37
4	Gandhinagar V	1339	837	97.24	2.130	178	275.24
5	Wanakbori I to VI	8035	5022	365.77	2.108	1059	1424.77
6	Wanakbori VII	1339	1339	94.58	2.022	271	365.58
7	Sikka TPS	1272	936	121.68	2.769	259	380.68
8	Kutch Lignite I to I II	1094	1094	221.5	1.181	129	350.5



**Madhya Gujarat Vij Company Limited**  
**Truing up for FY 2009-10, APR for FY 2010-11,**  
**ARR for FY 2011-12 to FY 2015-16 and Tariff for FY 2011-12**

Sl. No.	Particulars	FY 2011-12					
		Available MU	Dispatch MU	Fixed Cost (Rs.Cr)	Variable Cost (Rs /Unit)	Variable Cost (Rs Cr)	Total Cost (Rs Cr)
9	Kutch Lignite IV	434	434	129.34	1 .109	48	177.34
10	Dhuvaran oi I	-	-	-	-	-	-
11	Kadana Hydro	126	126	61.45	0 .00	0	61.45
12	Utran Gas Based	505	315	28.82	2 .367	75	103.82
13	Dhuvaran Gas Based - Stage-I	616	385	47.77	2 .411	93	140.77
14	Dhuvaran Gas Based - Stage-II	642	401	56.33	2 .388	96	152.33
15	Utran Extension	2005	1878	228.9	2 .071	389	617.9
	<b>Sub Total</b>	26945	20796	1990.81		4084	6074.81
	<b>IPPs</b>						
16	ESSAR	1439	1028	202	2 .95	303	505
17	GPEC	2328	1663	307	2 .40	399	707
18	GIPCL II (160)	559	559	27	1 .95	109	135
19	GIPCL-SLPP	1478	1478	158	1 .14	169	327
20	GSEG	858	858	101	1 .77	152	253
21	GIPCL - I (145)	140	87	11	2 .15	19	30
22	GMDC - Akrimota	1478	1478	203	0 .74	109	312
23	GSEG Expansion	201	201	20	5 .00	101	121
24	GIPCL Expansion	1577	1577	158	1 .14	180	338
25	GSPC-Pipavav	200	200	20	5 .00	100	120
	<b>Sub Total</b>	10258	9129	1207		1641	2848
	<b>Central Sector</b>						
26	NPC - Tarapur- 1&2	1009	1009	-	0 .95	96	96
27	NPC - Kakrapar	767	767	-	2 .19	168	168
28	NPC - Tarapur- 3&4	1728	1728	-	2 .32	402	402
29	NTPC - KORBA	2323	2323	74	0 .76	175	249
30	NTPC - VINDHYACHAL - I	1467	1467	58	1 .27	186	243
31	NTPC - VINDHYACHAL - II	1549	1549	98	1 .23	191	289
32	NTPC - VINDHYACHAL - III	1724	1724	165	1 .21	209	375
33	NTPC - KAWAS	971	607	58	2 .32	141	198
34	NTPC - JHANOR	1231	769	101	2 .14	164	266
35	NTPC - Sipat Stage - I	2066	2066	234	0 .88	181	415
36	SSNNL - Hydro	283	283	-	2 .05	58	58
37	NTPC - Kahaigaon (New)	914	914	172	1 .78	162	335
38	NTPC - Sipat Stage-II	1789	1789	192	0 .88	157	350
39	NTPC - Mauda STPS-I	71	71	10	0 .89	6	17
40	NTPC - KORBA II	629	629	102	0 .72	45	148
41	Mundra UMPP	1472	1472	169	0 .91	133	302
	<b>Sub Total</b>	19993	19167	1433		2474	3911
	<b>Others</b>						
42	Captive Power Plant (MU)	56	56	-	3 .64	20	20
	<b>Sub Total</b>	56	56	-		20	20
	<b>Renewables</b>						
43	Wind Farms (1.75)	44	44	-	1 .75	8	8
44	Wind Farms (3.37)	1575	1575	-	3 .37	531	531
45	Wind Farms (3.56)	462	462	-	3 .56	164	164
46	Solar Photovoltaic	162	162	-	15	243	243
47	Solar Thermal	11	11	-	11	12	12
48	Biomass	210	210	-	4 .40	93	93



**Madhya Gujarat Vij Company Limited**  
**Truing up for FY 2009-10, APR for FY 2010-11,**  
**ARR for FY 2011-12 to FY 2015-16 and Tariff for FY 2011-12**

Sl. No.	Particulars	FY 2011-12					
		Available MU	Dispatch MU	Fixed Cost (Rs.Cr)	Variable Cost (Rs /Unit)	Variable Cost (Rs Cr)	Total Cost (Rs Cr)
49	Hydro	53	53	-	3.52	19	19
	<b>Sub Total</b>	2517	2517			1070	1070
	<b>Competitive Bidding</b>						
50	APPL	12264	12264	1430	1.43	1759	3188
51	Aryan	119	119	19	0.55	7	26
52	Essar - 1000 MW	1168	1168	137	1.27	148	285
53	ESSAR - 300	148	148	49	5.34	79	127
	<b>Sub Total</b>	13699	13699	1635		1993	3626
	<b>RLNG</b>						
54	GPEC - 655	674	674	208	5.21	351	559
55	Utran Gas Based - 135	151	151	23	5.77	87	110
56	Utran Extension - 375	204	204	62	4.96	101	163
57	Dhuvran Gas Based-Stage 1-107	41	41	8	5.26	21	30
58	Dhuvran Gas Based - Stage 2-112	46	46	11	5.26	24	35
59	GIPCL II (160) - 165	212	212	27	5.49	116	143
60	GSEG - 156	77	77	24	5.21	40	64
61	GIPCL - I (145) - 42	54	54	12	5.49	30	41
62	NTPC - KAWAS - 187	112	112	18	5.59	63	81
63	NTPC - JHANOR - 237	142	142	31	5.59	80	111
	<b>Sub Total</b>	1713	1713	424		913	1337
	<b>Total</b>	<b>75181</b>	<b>67077</b>	<b>6689.81</b>		<b>12195</b>	<b>18886.81</b>

**Table 6.52: Power purchase cost for FY 2012-13**

Sl. No	Particulars	FY 2012-13					
		Available MU	Dispatch MU	Fixed Cost (Rs.Cr)	Variable Cost (Rs /Unit)	Variable Cost (Rs Cr)	Total Cost (Rs Cr)
	<b>GSECL Plants</b>						
1	Ukai TPS	5082	3388	246.64	1.710	579	825.64
2	Ukai Hydro	345	345	24.42	0.000	0	24.42
3	Gandhinagar I to IV	4111	2602	266.37	2.375	618	884.37
4	Gandhinagar V	1339	837	97.24	2.130	178	275.24
5	Wanakbori I to VI	8035	5022	365.77	2.108	1059	1424.77
6	Wanakbori VII	1339	837	94.58	2.022	169	263.58
7	Sikka TPS	1272	936	121.68	2.769	259	380.68
8	Kutch Lignite I to III	1243	1243	221.5	1.181	147	368.5
9	Kutch Lignite IV	434	434	129.34	1.109	48	177.34
10	Dhuvaran oi I	-	-	-	-	-	-
11	Kadana Hydro	126	126	61.45	0.00	0	61.45
12	Utran Gas Based	505	315	28.82	2.367	75	103.82
13	Dhuvaran Gas Based - Stage-I	616	385	47.77	2.411	93	140.77
14	Dhuvaran Gas Based - Stage-II	642	401	56.33	2.388	96	152.33
15	Utran Extension	2005	1253	228.9	2.071	260	488.9
16	Ukai Expansion 6	3206	2004	401	1.54	309	710



**Madhya Gujarat Vij Company Limited**  
**Truing up for FY 2009-10, APR for FY 2010-11,**  
**ARR for FY 2011-12 to FY 2015-16 and Tariff for FY 2011-12**

Sl. No	Particulars	FY 2012-13					
		Available MU	Dispatch MU	Fixed Cost (Rs.Cr)	Variable Cost (Rs /Unit)	Variable Cost (Rs Cr)	Total Cost (Rs Cr)
17	Sikka 3 & 4	272	272	34	1.99	54	88
	<b>Sub Total</b>	30572	20400	2425.81		3944	6369.81
	<b>IPPs</b>						
18	ESSAR	1439	1028	202	2.95	303	505
19	GPEC	2328	1663	307	2.4	399	707
20	GIPCL II (160)	559	349	27	1.95	68	95
21	GIPCL-SLPP	1478	1478	158	1.14	169	327
22	GSEG	858	536	101	1.77	95	196
23	GIPCL - I (145)	140	87	11	2.15	19	30
24	GMDC - Akrimota	1478	1478	203	0.74	109	312
25	GSEG Expansion	149	149	238	5	74	312
26	GIPCL Expansion	1577	1577	158	1.14	180	338
27	GSPC-Pipavav	296	296	374	5	148	522
	<b>Sub Total</b>	10302	8641	1779		1564	3344
	<b>Central Sector</b>						
28	NPC - Tarapur- 1&2	1009	1009	-	0.95	96	96
29	NPC - Kakrapar	767	767	-	2.19	168	168
30	NPC - Tarapur- 3&4	1728	1728	-	2.32	402	402
31	NTPC - KORBA	2323	2323	74	0.76	175	249
32	NTPC - VINDHYACHAL - I	1467	1467	58	1.27	186	243
33	NTPC - VINDHYACHAL - II	1549	1549	98	1.23	191	289
34	NTPC - VINDHYACHAL - III	1724	1724	165	1.21	209	375
35	NTPC - KAWAS	971	607	58	2.32	141	198
36	NTPC - JHANOR	1231	769	101	2.14	164	266
37	NTPC - Sipat Stage - I	3500	3500	421	0.88	307	728
38	SSNNL - Hydro	283	283	-	2.05	58	58
39	NTPC - Kahalgaon (New)	914	571	172	1.78	102	274
40	NTPC - Sipat Stage-II	1789	1789	192	0.88	157	350
41	NTPC - Mauda STPS-I	1321	1321	191	0.89	118	309
42	NTPC - Vindhyachal STPS-IV	142	142	24	0.87	12	37
43	NTPC - Barh STPS-II	51	51	4	0.89	5	9
44	NTPC - KORBA II	629	629	102	0.72	45	148
45	Mundra UMPP	2530	2530	290	0.91	229	519
	<b>Sub Total</b>	23928	22759	1950		2765	4718
	<b>Others</b>						
46	Captive Power Plant (MU)	56	56	-	3.64	20	20
	<b>Sub Total</b>	56	56			20	20
	<b>Renewables</b>						
47	Wind Farms (1.75)	44	44	-	1.75	8	8
48	Wind Farms (3.37)	1575	1575	-	3.37	531	531
49	Wind Farms (3.56)	462	462	-	3.56	164	164
50	Solar Photovoltaic	898	898	-	15	1347	1347
51	Solar Thermal	44	44	-	11	48	48
52	Biomass	210	210	-	4.4	93	93
53	Hydro	53	53	-	3.52	19	19
	<b>Sub Total</b>	3286	3286			2210	2210
	<b>Competitive Bidding</b>						
54	APPL	14016	8760	1634	1.43	1256	2890



**Madhya Gujarat Vij Company Limited**  
**Truing up for FY 2009-10, APR for FY 2010-11,**  
**ARR for FY 2011-12 to FY 2015-16 and Tariff for FY 2011-12**

Sl. No	Particulars	FY 2012-13					
		Available MU	Dispatch MU	Fixed Cost (Rs.Cr)	Variable Cost (Rs /Unit)	Variable Cost (Rs Cr)	Total Cost (Rs Cr)
55	Aryan	1402	1402	226	0.55	77	303
56	Essar - 1000 MW	6422	6145	751	1.27	780	1532
57	ESSAR - 300	25	25	49	5.34	13	62
	<b>Sub Total</b>	21865	16332	2660		2126	4787
	<b>RLNG</b>						
58	GPEC - 655	112	112	208	5.21	58	266
59	Utran Gas Based - 135	25	25	23	5.77	15	38
60	Utran Extension - 375	34	34	62	4.96	17	79
61	Dhuvran Gas Based - Stage 1 - 107	7	7	8	5.26	4	12
62	Dhuvran Gas Based - Stage 2 - 112	8	8	11	5.26	4	15
63	GIPCL II (160) - 165	35	35	27	5.49	19	46
64	GSEG - 156	13	13	24	5.21	7	31
65	GIPCL - I (145) - 42	9	9	12	5.49	5	17
66	NTPC - KAWAS - 187	19	19	18	5.59	10	28
67	NTPC - JHANOR - 237	24	24	31	5.59	13	44
	<b>Sub Total</b>	286	286	424		152	576
	<b>Total</b>	<b>90295</b>	<b>71760</b>	<b>9238.81</b>		<b>12781</b>	<b>22024.81</b>

**Table 6.53: Power purchase cost for FY 2013-14**

Sl. No	Particulars	FY 2013-14					
		Available MU	Dispatch MU	Fixed Cost (Rs.Cr)	Variable Cost (Rs /Unit)	Variable Cost (Rs Cr)	Total Cost (Rs Cr)
	<b>GSECL Plants</b>						
1	Ukai TPS	5082	3388	246.64	1.710	579	825.64
2	Ukai Hydro	345	345	24.42	0.000	0	24.42
3	Gandhinagar I to IV	4111	2602	266.37	2.375	618	884.37
4	Gandhinagar V	1339	837	97.24	2.130	178	275.24
5	Wanakbori I to VI	8035	5022	365.77	2.108	1059	1424.77
6	Wanakbori VII	1339	837	94.58	2.022	169	263.58
7	Sikka TPS	1329	936	121.68	2.769	259	380.68
8	Kutch Lignite I to III	1243	1243	221.5	1.181	147	368.5
9	Kutch Lignite IV	434	434	129.34	1.109	48	177.34
10	Dhuvaran oi I	-	-	-	-	-	-
11	Kadana Hydro	126	126	61.45	0.00	0	61.45
12	Utran Gas Based	505	315	28.82	2.367	75	103.82
13	Dhuvaran Gas Based - Stage-I	616	385	47.77	2.411	93	140.77
14	Dhuvaran Gas Based - Stage-II	618	401	56.33	2.388	96	152.33
15	Utran Extension	2005	1253	228.9	2.071	260	488.9
16	Ukai Expansion 6	3206	2004	401	1.54	309	710
17	Sikka 3 & 4	3206	2004	401	1.99	398	799
18	Dhuvaran CCPP Ext - 3	104	104	14	3.39	35	49
	<b>Sub Total</b>	33643	22236	2806.81		4323	7129.81
	<b>IPPs</b>						
19	ESSAR	1439	1028	202	2.95	303	505
20	GPEC	2328	1663	307	2.4	399	707
21	GIPCL II (160)	559	349	27	1.95	68	95



**Madhya Gujarat Vij Company Limited**  
**Truing up for FY 2009-10, APR for FY 2010-11,**  
**ARR for FY 2011-12 to FY 2015-16 and Tariff for FY 2011-12**

Sl. No	Particulars	FY 2013-14					
		Available MU	Dispatch MU	Fixed Cost (Rs.Cr)	Variable Cost (Rs /Unit)	Variable Cost (Rs Cr)	Total Cost (Rs Cr)
22	GIPCL-SLPP	1478	1478	158	1.14	169	327
23	GSEG	858	536	101	1.77	95	196
24	GIPCL - I (145)	140	87	11	2.15	19	30
25	GMDC - Akrimota	1478	1478	203	0.74	109	312
26	GSEG Expansion	149	149	238	5	74	312
27	GIPCL Expansion	1577	1577	158	1.14	180	338
28	GSPC-Pipavav	296	296	473	5	148	621
29	BECL	265	265	33	1.2	32	65
	<b>Sub Total</b>	10567	8906	1911		1596	3508
	<b>Central Sector</b>						
30	NPC - Tarapur- 1&2	1009	1009	-	0.95	96	96
31	NPC - Kakrapar	767	767	-	2.19	168	168
32	NPC - Tarapur- 3&4	1728	1728	-	2.32	402	402
33	NTPC - KORBA	2323	2323	74	0.76	175	249
34	NTPC - VINDHYACHAL - I	1467	1467	58	1.27	186	243
35	NTPC - VINDHYACHAL - II	1549	1549	98	1.23	191	289
36	NTPC - VINDHYACHAL - III	1724	1724	165	1.21	209	375
37	NTPC - KAWAS	971	607	58	2.32	141	198
38	NTPC - JHANOR	1231	769	101	2.14	164	266
39	NTPC - Sipat Stage - I	3500	3500	421	0.88	307	728
40	SSNNL - Hydro	283	283	-	2.05	58	58
41	NTPC - Kahalgaon (New)	914	571	172	1.78	102	274
42	NTPC - Sipat Stage-II	1789	1789	192	0.88	157	350
43	NTPC - Mauda STPS-I	1573	1573	242	0.89	140	382
44	NTPC - Barh STPS-I	403	403	38	0.81	33	70
45	NTPC - Vindhyachal STPS-IV	1573	1573	287	0.87	137	424
46	NTPC - Barh STPS-II	957	957	80	0.89	85	166
47	NTPC - KORBA II	629	629	102	0.72	45	148
48	Mundra UMPP	2745	2745	314	0.91	248	563
49	Ti laiya UMPP	36	36	2	0.95	3	6
	<b>Sub Total</b>	27171	26002	2404		3047	5455
	<b>Others</b>						
50	Captive Power Plant (MU)	56	56	-	3.64	20	20
	<b>Sub Total</b>	56	56			20	20
	<b>Renewables</b>						
51	Wind Farms (1.75)	44	44	-	1.75	8	8
52	Wind Farms (3.37)	1575	1575	-	3.37	531	531
53	Wind Farms (3.56)	462	462	-	3.56	164	164
54	Solar Photovoltaic	1653	1653	-	15	2480	2480
55	Solar Thermal	44	44	-	11	48	48
56	Biomass	210	210	-	4.4	93	93
57	Hydro	53	53	-	3.52	19	19
	<b>Sub Total</b>	4041	4041			3343	3343
	<b>Competitive Bidding</b>						
58	APPL	14016	8760	1634	1.43	1256	2890





**Madhya Gujarat Vij Company Limited**  
**Truing up for FY 2009-10, APR for FY 2010-11,**  
**ARR for FY 2011-12 to FY 2015-16 and Tariff for FY 2011-12**

Sl. No	Particulars	FY 2013-14					
		Available MU	Dispatch MU	Fixed Cost (Rs.Cr)	Variable Cost (Rs /Unit)	Variable Cost (Rs Cr)	Total Cost (Rs Cr)
59	Aryan	1402	1402	226	0.55	77	303
60	Essar - 1000 MW	7008	5031	820	1.27	639	1459
61	ESSAR - 300	25	25	49	5.34	13	62
	<b>Sub Total</b>	22451	15218	2729		1985	4714
	<b>RLNG</b>						
62	GPEC - 655	112	112	208	5.21	58	266
63	Utran Gas Based - 135	25	25	23	5.77	15	38
64	Utran Extension - 375	34	34	62	4.96	17	79
65	Dhuvran Gas Based - Stage 1 - 107	7	7	8	5.26	4	12
66	Dhuvran Gas Based - Stage 2 - 112	8	8	10	5.26	4	14
67	GIPCL II (160) - 165	35	35	27	5.49	19	46
68	GSEG - 156	13	13	24	5.21	7	31
69	GIPCL - I (145) - 42	9	9	12	5.49	5	17
70	NTPC - KAWAS - 187	19	19	18	5.59	10	28
71	NTPC - JHANOR - 237	24	24	31	5.59	13	44
	<b>Sub Total</b>	286	286	423		152	575
	<b>Total</b>	<b>98215</b>	<b>76745</b>	<b>10273.81</b>		<b>14466</b>	<b>24744.81</b>

**Table 6.54: Power purchase cost for FY 2014-15**

Sl. No	Particulars	FY 2014-15					
		Available MU	Dispatch MU	Fixed Cost (Rs.Cr)	Variable Cost (Rs /Unit)	Variable Cost (Rs Cr)	Total Cost (Rs Cr)
	<b>GSECL Plants</b>						
1	Ukai TPS	5082	3388	246.64	1.710	579	825.64
2	Ukai Hydro	345	345	24.42	0.000	0	24.42
3	Gandhinagar I to IV	4111	2602	266.37	2.375	618	884.37
4	Gandhinagar V	1339	837	97.24	2.130	178	275.24
5	Wanakbori I to VI	8035	5022	365.77	2.108	1059	1424.77
6	Wanakbori VII	1339	837	94.58	2.022	169	263.58
7	Sikka TPS	1329	936	121.68	2.769	259	380.68
8	Kutch Lignite I to III	1243	829	221.5	1.181	98	319.5
9	Kutch Lignite IV	434	289	129.34	1.109	32	161.34
10	Dhuvaran oi I	-	-	-	-	-	-
11	Kadana Hydro	126	126	61.45	0.00	0	61.45
12	Utran Gas Based	505	315	28.82	2.367	75	103.82
13	Dhuvaran Gas Based - Stage-I	616	385	47.77	2.411	93	140.77
14	Dhuvaran Gas Based - Stage-II	642	401	56.33	2.388	96	152.33
15	Utran Extension	2005	1253	228.9	2.071	260	488.9
16	Ukai Expansion 6	3206	2004	401	1.54	309	710
17	Sikka 3 & 4	3206	2004	401	1.99	398	799
18	Dhuvaran CCPP Ext - 3	1934	1529	260	3.39	518	778
	<b>Sub Total</b>	35497	23102	3052.81		4741	7793.81



**Madhya Gujarat Vij Company Limited**  
**Truing up for FY 2009-10, APR for FY 2010-11,**  
**ARR for FY 2011-12 to FY 2015-16 and Tariff for FY 2011-12**

Sl. No	Particulars	FY 2014-15					
		Available MU	Dispatch MU	Fixed Cost (Rs.Cr)	Variable Cost (Rs /Unit)	Variable Cost (Rs Cr)	Total Cost (Rs Cr)
	<b>IPPs</b>						
19	ESSAR	1439	1028	202	2.95	303	505
20	GPEC	2328	1663	307	2.4	399	707
21	GIPCL II (160)	559	349	27	1.95	68	95
22	GIPCL-SLPP	1478	986	158	1.14	112	271
23	GSEG	858	536	101	1.77	95	196
24	GIPCL - I (145)	140	87	11	2.15	19	30
25	GIPCL Addition	268	268	31	1.14	31	61
26	GMDC - Akrimota	1478	1478	203	0.74	109	312
27	GSEG Expansion	149	149	238	5	74	312
28	GIPCL Expansion	1577	986	158	1.14	112	270
29	GSPC-Pipavav	296	296	473	5	148	621
30	BECL	3119	1949	390	1.2	234	624
	<b>Sub Total</b>	13689	9775	2299		1704	4004
	<b>Central Sector</b>						
31	NPC - Tarapur- 1&2	1009	1009	-	0.95	96	96
32	NPC - Kakrapar	767	767	-	2.19	168	168
33	NPC - Tarapur- 3&4	1728	1728	-	2.32	402	402
34	NTPC - KORBA	2323	2323	74	0.76	175	249
35	NTPC - VINDHYACHAL - I	1467	917	58	1.27	116	174
36	NTPC - VINDHYACHAL - II	1549	968	98	1.23	119	218
37	NTPC - VINDHYACHAL - III	1724	1078	165	1.21	131	296
38	NTPC - KAWAS	971	607	58	2.32	141	198
39	NTPC - JHANOR	1231	769	101	2.14	164	266
40	NTPC - Sipat Stage - I	3500	3500	421	0.88	307	728
41	SSNNL - Hydro	283	283	-	2.05	58	58
42	NTPC - Kahalgaon (New)	914	571	172	1.78	102	274
43	NTPC - Sipat Stage-II	1789	1754	192	0.88	154	347
44	NTPC - Mauda STPS-I	1573	983	242	0.89	87	330
45	NTPC - Barh STPS-I	1559	1559	146	0.81	126	272
46	NTPC - Vindhyachal STPS-IV	1573	1573	287	0.87	137	424
47	NTPC - Barh STPS-II	1140	713	102	0.89	63	165
48	NTPC - KORBA II	629	629	102	0.72	45	148
49	Mundra UMPP	7586	7586	869	0.91	687	1555
50	Ti laiya UMPP	909	909	62	0.95	86	148
	<b>Sub Total</b>	34224	30226	3149	26.02	3364	6516
	<b>Others</b>						
51	Captive Power Plant (MU)	56	56	-	3.64	20	20
	<b>Sub Total</b>	56	56	-	3.64	20	20
	<b>Renewables</b>						
52	Wind Farms (1.75)	44	44	-	1.75	8	8
53	Wind Farms (3.37)	1575	1575	-	3.37	531	531
54	Wind Farms (3.56)	462	462	-	3.56	164	164
55	Solar Photovoltaic	1653	1653	-	15	2480	2480
56	Solar Thermal	44	44	-	11	48	48



**Madhya Gujarat Vij Company Limited**  
**Truing up for FY 2009-10, APR for FY 2010-11,**  
**ARR for FY 2011-12 to FY 2015-16 and Tariff for FY 2011-12**

Sl. No	Particulars	FY 2014-15					
		Available MU	Dispatch MU	Fixed Cost (Rs.Cr)	Variable Cost (Rs /Unit)	Variable Cost (Rs Cr)	Total Cost (Rs Cr)
57	Biomass	210	210	-	4.4	93	93
58	Hydro	53	53	-	3.52	19	19
	<b>Sub Total</b>	4041	4041			3343	3343
	<b>Competitive Bidding</b>						
59	APPL	14016	8760	1634	1.43	1256	2890
60	Aryan	1402	1402	226	0.55	77	303
61	Essar - 1000 MW	7008	4380	820	1.27	556	1376
62	ESSAR - 300	25	25	49	5.34	13	62
	<b>Sub Total</b>	22451	14567	2729		1902	4631
	<b>RLNG</b>						
63	GPEC - 655	112	112	208	5.21	58	266
64	Utran Gas Based - 135	25	25	23	5.77	15	38
65	Utran Extension - 375	34	34	62	4.96	17	79
66	Dhuvran Gas Based - Stage 1 - 107	7	7	8	5.26	4	12
67	Dhuvran Gas Based - Stage 2 - 112	8	8	11	5.26	4	15
68	GIPCL II (160) - 165	35	35	27	5.49	19	46
69	GSEG - 156	13	13	24	5.21	7	31
70	GIPCL - I (145) - 42	9	9	12	5.49	5	17
71	NTPC - KAWAS - 187	19	19	18	5.59	10	28
72	NTPC - JHANOR - 237	24	24	31	5.59	13	44
	<b>Sub Total</b>	286	286	424		152	576
	<b>Total</b>	<b>110244</b>	<b>82053</b>	<b>11653.81</b>		<b>15226</b>	<b>26883.81</b>

**Table 6.55: Power purchase cost for FY 2015-16**

Sl. No	Particulars	FY 2015-16					
		Available MU	Dispatch MU	Fixed Cost (Rs.Cr)	Variable Cost (Rs /Unit)	Variable Cost (Rs Cr)	Total Cost (Rs Cr)
	<b>GSECL Plants</b>						
1	Ukai TPS	5082	3388	246.64	1.710	579	825.64
2	Ukai Hydro	345	345	24.42	0.000	0	24.42
3	Gandhinagar I to IV	4111	1972	266.37	2.375	468	734.37
4	Gandhinagar V	1339	837	97.24	2.130	178	275.24
5	Wanakbori I to VI	8035	5022	365.77	2.108	1059	1424.77
6	Wanakbori VII	1339	837	94.58	2.022	169	263.58
7	Wanakbori Expansion	5102	3189	673.00	1.600	510	1183
8	Sikka TPS	1329	-	121.68	2.769		121.68
9	Kutch Lignite I to III	1243	829	221.5	1.181	98	319.5
10	Kutch Lignite IV	434	289	129.34	1.109	32	161.34
11	Dhuvaran oi I						
12	Kadana Hydro	126	126	61.45	0.00	0	61.45
13	Utran Gas Based	505	315	28.82	2.367	75	103.82
14	Dhuvaran Gas Based - Stage-I	616		47.77	2.411		47.77
15	Dhuvaran Gas Based - Stage-II	642		56.33	2.388		56.33



**Madhya Gujarat Vij Company Limited**  
**Truing up for FY 2009-10, APR for FY 2010-11,**  
**ARR for FY 2011-12 to FY 2015-16 and Tariff for FY 2011-12**

Sl. No	Particulars	FY 2015-16					
		Available MU	Dispatch MU	Fixed Cost (Rs.Cr)	Variable Cost (Rs /Unit)	Variable Cost (Rs Cr)	Total Cost (Rs Cr)
16	Utran Extension	2005	1253	228.9	2.071	260	488.9
17	Ukai Expansion 6	3206	2004	401	1.54	309	710
18	Sikka 3 & 4	3206	2004	401	1.99	398	799
19	Dhuvaran CCPP Ext - 3	2447		329	3.39		329
	<b>Sub Total</b>	<b>41112</b>	<b>22410</b>	<b>3794.81</b>		<b>4135</b>	<b>7929.81</b>
	<b>IPPs</b>						
20	ESSAR	1439		202	2.95		202
21	GPEC	2328		307	2.4		307
22	GIPCL II (160)	559	349	27	1.95	68	95
23	GIPCL-SLPP	1478	986	158	1.14	112	271
24	GSEG	858	536	101	1.77	95	196
25	GIPCL - I (145)	140	87	11	2.15	19	30
26	GIPCL Addition	3154	1971	315	1.14	225	540
27	GMDC - Akrimota	1478	986	203	0.74	73	275
28	GSEG Expansion	149	149	238	5	74	312
29	GIPCL Expansion	1577	986	158	1.14	112	270
30	GSPC-Pipavav	296	296	473	5	148	621
31	BECL	3119	1949	390	1.2	234	624
	<b>Sub Total</b>	<b>16575</b>	<b>8295</b>	<b>2583</b>		<b>1160</b>	<b>3743</b>
	<b>Central Sector</b>						
32	NPC - Tarapur- 1&2	1009	1009	-	0.95	96	96
33	NPC - Kakrapar	767	767	-	2.19	168	168
34	NPC kakrapar addition	247	247	-	2.89	71	71
35	NPC - Tarapur- 3&4	1728	1728	-	2.32	402	402
36	NTPC - Lara	81	81	14	1.31	11	25
37	NTPC - KORBA	2323	1452	74	0.76	110	183
38	NTPC - VINDHYACHAL - I	1467	917	58	1.27	116	174
39	NTPC - VINDHYACHAL - II	1549	968	98	1.23	119	218
40	NTPC - VINDHYACHAL - III	1724	1078	165	1.21	131	296
41	NTPC - KAWAS	971	607	58	2.32	141	198
42	NTPC - JHANOR	1231	769	101	2.14	164	266
43	NTPC - Sipat Stage - I	3500	2188	421	0.88	192	613
44	SSNNL - Hydro	283	283	-	2.05	58	58
45	NTPC - Kahalgaon (New)	914	571	172	1.78	102	274
46	NTPC - Sipat Stage-II	1789	1118	192	0.88	98	291
47	NTPC - Mauda STPS-I	1573	983	242	0.89	87	330
48	NTPC - Barh STPS-I	1704	1065	169	0.81	86	255
49	NTPC - Vindhyachal STPS-IV	1573	983	287	0.87	86	373
50	NTPC - Barh STPS-II	1140	713	102	0.89	63	165
51	NTPC - Mauda STPS-II	142	142	40	1.05	15	55
52	NTPC - KORBA II	629	393	102	0.72	28	131
53	Mundra UMPP	12649	7906	1448	0.91	715	2164
54	Ti laiya UMPP	2102	1314	143	0.95	125	268
	<b>Sub Total</b>	<b>41095</b>	<b>27282</b>	<b>3886</b>		<b>3184</b>	<b>7074</b>
	<b>Others</b>						
55	Captive Power Plant (MU)	56	56	-	3.64	20	20



**Madhya Gujarat Vij Company Limited**  
**Truing up for FY 2009-10, APR for FY 2010-11,**  
**ARR for FY 2011-12 to FY 2015-16 and Tariff for FY 2011-12**

Sl. No	Particulars	FY 2015-16					
		Available MU	Dispatch MU	Fixed Cost (Rs.Cr)	Variable Cost (Rs /Unit)	Variable Cost (Rs Cr)	Total Cost (Rs Cr)
	<b>Sub Total</b>	<b>56</b>	<b>56</b>	<b>-</b>		<b>20</b>	<b>20</b>
	<b>Renewables</b>						
56	Wind Farms (1.75)	44	44	-	1.75	8	8
57	Wind Farms (3.37)	1575	1575	-	3.37	531	531
58	Wind Farms (3.56)	462	462	-	3.56	164	164
59	Solar Photovoltaic	1653	1653	-	15	2480	2480
60	Solar Thermal	44	44	-	11	48	48
61	Biomass	210	210	-	4.4	93	93
62	Hydro	53	53	-	3.52	19	19
	<b>Sub Total</b>	<b>4041</b>	<b>4041</b>			<b>3343</b>	<b>3343</b>
	<b>Competitive Bidding</b>						
63	APPL	14016	8760	1634	1.43	1256	2890
64	Aryan	1402	876	226	0.55	48	275
65	Essar - 1000 MW	7008	4380	820	1.27	556	1376
66	Wardha Power - KSK Mahanadi Power Co	6498	4424	939	0.62	274	1213
67	Essar - 800 MW	5147	3504	732	1.38	484	1216
68	Shapoorji & Palaniyandhi	5147	3504	732	1.38	484	1216
69	ESSAR - 300	25	25	49	5.34	13	62
	<b>Sub Total</b>	<b>39243</b>	<b>25473</b>	<b>5132</b>		<b>3115</b>	<b>8248</b>
	<b>RLNG</b>						
70	GPEC - 655	112	112	208	5.21	58	266
71	Utran Gas Based - 135	25	25	23	5.77	15	38
72	Utran Extension - 375	34	34	62	4.96	17	79
73	Dhuvran Gas Based - Stage 1 - 107	7	7	8	5.26	4	12
74	Dhuvran Gas Based - Stage 2 - 112	8	8	11	5.26	4	15
75	GIPCL II (160) - 165	35	35	27	5.49	19	46
76	GSEG - 156	13	13	24	5.21	7	31
77	GIPCL - I (145) - 42	9	9	12	5.49	5	17
78	NTPC - KAWAS - 187	19	19	18	5.59	10	28
79	NTPC - JHANOR - 237	24	24	31	5.59	13	44
	<b>Sub Total</b>	<b>286</b>	<b>286</b>	<b>424</b>		<b>152</b>	<b>576</b>
	<b>Total</b>	<b>142408</b>	<b>87787</b>	<b>15819.81</b>		<b>15109</b>	<b>30933.81</b>

#### 6.8.14 Transmission costs

The transmission costs include the cost to be paid to PGCIL for regional transmission and cost of GETCO for intra-state transmission.

The transmission charges of PGCIL are approved by CERC and to be paid by GUVNL on the basis of calculations in the Regional Energy Account of Western Region by WRLDC. Hence, the Commission accepts the projection of MGVL / GUVNL for PGCIL charges. The transmission charges of GETCO are approved by



the Commission in the MYT order of GETCO. The transmission charges payable to PGCIL and GETCO are as given in the table below:

**Table 6.56: Transmission charges approved by the Commission for the control period FY 2011-12 to FY 2015-16**

Sl. No.	Particulars	FY 2011-12	FY 2012-13	FY 2013-14	FY 2014-15	FY 2015-16
1	Transmission charges of PGCIL (Rs. crore)	280	294	309	324	340
2	Transmission charges of GETCO (Rs./MW/day)	2775.06	2953.99	3244.85	3029.08	2727.17
3	Total transmission charges (Rs. crore)	1185	1594	1887	1923	2192
	<b>Total (Rs. crore)</b>	<b>4265</b>	<b>1888</b>	<b>2196</b>	<b>2247</b>	<b>2532</b>

**The CERC has since revised the transmission charges for PGCIL transmission system. The impact of this revision shall be reported to the Commission every quarter.**

#### **GUVNL Costs**

The MGVL has submitted in paragraph 6.3.2 above that GUVNL is charging Rs.0.04 for every transaction of one unit of energy for providing the services of procuring the power from various sources and supplying to DISCOMs and the overall coordination between the subsidiary companies and also undertaking the function of raising and managing the overall loan portfolio of GUVNL and its subsidiaries.

The Commission considers the charges at Rs.0.04/unit to handle power procurement supply etc., reasonable based on the cost approved for FY 2010-11 and approves the GUVNL costs as given below based on the energy handled during the control period.

**Table 6.57: GUVNL costs approved by the Commission for the control period FY 2011-12 to FY 2015-16**

Sl. No.	Particulars	FY 2011-12	FY 2012-13	FY 2013-14	FY 2014-15	FY 2015-16
1	Energy handled (MU)	67077	71759	76743	82050	87838
2	GUVNL cost (Rs. crore)	268	287	307	328	351



### **SLDC fees and charges**

The MGVCCL / GUVNL has submitted that the SLDC fees and charges have been taken as approved by the Commission in the SLDC MYT order dated 31<sup>st</sup> March, 2011.

The Commission approves the SLDC charges as given in the table below:

**Table 6.58: SLDC charges approved by the Commission**

<b>Particulars</b>	<b>FY 2011-12</b>	<b>FY 2012-13</b>	<b>FY 2013-14</b>	<b>FY 2014-15</b>	<b>FY 2015-16</b>
SLDC charges (Rs. crore)	8	9	9	9	9

### **6.8.15 Trading**

As discussed earlier in paragraph 6.3.3 GUVNL has projected trading of surplus power based on its capacity to sell. GUVNL has estimated 6000 MU for FY 2011-12, 7000 MU for FY 2012-13, and increasing the energy sales by 1000 MU every year and thus reaching a level of 10,000 MU for the FY 2015-16. Based on the total energy available on merit order and the requirement of DISCOMs, the energy available for trading during FY 2011-12 to FY 2015-16 is 46906 MU.

Trading cost is based on variable and fixed cost of respective power plants.

The Commission considers the estimated revenue by trading at a margin of Rs.1.0 per unit as projected by GUVNL, to arrive at the net power purchase cost to all the DISCOMs as shown in Table 6.61.

### **6.8.16 Fixed costs**

The total power purchase cost consisting of the cost of power procured from various sources, transmission costs of PGCIL and GETCO, SLDC charges and trading costs approved by the Commission is aggregated to arrive at the total power purchase cost for all DISCOMs / trading unit. The fixed cost due to the capacity contracted by GUVNL is passed on to DISCOMs. For trading on the basis of energy dispatched, the fixed cost allocated to trading, is given in the table below:



**Table 6.59: Fixed cost for DISCOMs and Trading units approved from FY 2011-12 to FY 2015-16**

Year	Fixed Cost (Rs. crore)	GETCO cost (Rs. crore)	PGCIL charges (Rs.crore)	SLDC charges (Rs.crore )	Total Fixed cost (Rs. crore)	DISCOM Fixed cost (Rs. crore)	Trading Fixed cost (Rs. crore)
FY 2011-12	6690	1185	280	8	8163	8163	947.79
FY 2012-13	9239	1594	294	9	11136	11136	1444.20
FY 2013-14	10274	1887	309	9	12479	12479	1759.58
FY 2014-15	11654	1923	324	9	13910	13910	2080.99
FY 2015-16	15820	2192	340	9	18361	18361	2853.23

#### 6.8.17 Variable costs

The total variable cost consists of the energy costs supplied to DISCOMs as well as for trading. The total variable cost and variable cost per unit are given in the table below:

**Table 6.60: Variable cost for DISCOMs and trading energy approved for the control period for FY 2011-12 to FY 2015-16**

Year	Variable cost (Rs. crore)	GUVNL cost (Rs. crore)	Total variable cost (Rs. crore)	Total MU despatched	Variable cost (Rs./ unit)	DISCOM		Trading	
						MU	Variable cost (Rs. crore)	MU	Variable cost (Rs. crore)
FY 2011-12	12191	268	12459	67077	1.857	60099	11162.89	6978	1296.11
FY 2012-13	12779	287	13066	71760	1.821	63522	11566.03	8238	1499.97
FY 2013-14	14466	307	14773	76745	1.925	67261	12947.38	9484	1825.62
FY 2014-15	15231	328	15559	82053	1.896	71375	13534.22	10678	2024.78
FY 2015-16	15112	351	15463	87787	1.761	75980	13383.29	11807	2079.71

#### 6.8.18 Net power purchase cost

The revenue from trading of energy by GUVNL is calculated based on the fixed and variable cost of generation plus Rs.1.00 per unit, which will also include the profit margin and GUVNL trading margin.

The revenue earned from sale of power to traders and others is subtracted from the total power purchase cost to arrive at net power purchase cost to DISCOMs. The net power purchase cost to DISCOMs as approved by the Commission is given in the table below:





**Table 6.61: Net power purchase cost for the control period FY 2011-12 to FY 2015-16**

Year	DISCOM fixed cost (Rs. crore)	DISCOM variable cost (Rs. crore)	Total power purchase cost (Rs. crore)	Trading fixed cost (crore)	Trading variable cost (Rs. crore)	Margin of GUVNL due to trading etc. (Rs. crore)	Total trading revenue (Rs. crore)	Net* cost (Rs. crore)
FY 2011-12	8163	11162.89	19325.89	947.79	1296.11	697.80	2942	17680.30
FY 2012-13	11136	11566.03	22702.03	1444.20	1499.97	823.80	3768	20434.03
FY 2013-14	12479	12947.38	25426.38	1759.58	1825.62	948.40	4534	22718.40
FY 2014-15	13910	13534.22	27444.22	2080.99	2024.78	1067.80	5174	24295.43
FY 2015-16	18361	13383.29	31744.29	2853.23	2079.71	1180.70	6114	27710.36

\* Total power purchase cost – (trading fixed costs + profit and trading margin)

## 6.9 Fixed charges

### 6.9.1 Operation and Maintenance (O&M) expenses

The MGVL has claimed Rs. 1508.00 crore towards O&M expenses for the control period FY 2011-12 to FY 2015-16 as given in the table below:

**Table 6.62: Proposed O&M expenses projected for FY 2011-12 to 2015-16**

(Rs. crore)

Sl. No.	Particulars	FY 2011-12	FY 2012-13	FY 2013-14	FY 2014-15	FY 2015-16
1.	Employee cost	222.00	234.00	248.00	262.00	277.00
2.	Repairs & Maintenance	40.00	42.00	45.00	47.00	50.00
3.	Administration & General charges	39.00	41.00	43.00	46.00	48.00
4.	Other Debits	7.00	8.00	8.00	9.00	9.00
5.	Extraordinary items	-	-	-	-	-
6.	Net prior period expenses / (income)	15.00	16.00	17.00	18.00	19.00
7.	Other expenses capitalized	(54.00)	(57.00)	(61.00)	(64.00)	(68.00)
8.	<b>Total O&amp;M expenses</b>	<b>269.00</b>	<b>284.00</b>	<b>301.00</b>	<b>318.00</b>	<b>336.00</b>

### Petitioner's submission

The MGVL has submitted that the O&M expenses consist of Employee cost, A&G expenses, R&M expenses, other debits, extraordinary items and net prior period expenses. MGVL has mentioned that the norms as specified in the GERC MYT Regulations, 2011 have been considered in the petition as detailed below.

The O&M expenses have been derived on the basis of average of the actual O&M expenses for the three (3) years ending March 31, 2010.



The average of such O&M expenses are considered as O&M expenses for FY 2008-09 and are escalated at the escalation factor of 4% per annum to arrive at O&M expenses for FY 2011-12.

The O&M expenses for subsequent years of MYT have been determined by escalating the base expenses determined for FY 2011-12, at the escalation factor of 5.72% per annum.

The average O&M expenses for FY 2008-09 are as given in the table below:

**Table 6.63: Average O&M expenses for FY 2008-09**

(Rs. crore)

Sl. No.	Particulars	FY 2007-08 (Actuals)	FY 2008-09 (Actuals)	FY 2009-10 (Actuals)	FY 2008-09 (Average)
1.	Employee cost	167.07	187.55	236.66	197.09
2.	Repairs & Maintenance	38.12	32.98	36.06	35.72
3.	Administration & General charges	32.20	34.11	36.49	34.27
4.	Other Debits	1.27	9.36	9.07	6.57
5.	Extraordinary items	0.00	-	-	-
6.	Net prior period expenses / (income)	33.27	0.62	7.22	13.71
7.	Other expenses capitalized	(40.56)	(54.33)	(50.07)	(48.32)
8.	<b>Total O&amp;M expenses</b>	<b>231.37</b>	<b>210.29</b>	<b>275.44</b>	<b>239.04</b>

### Commission's Analysis

The Employee expenses, R&M expenses and A&G expenses are commonly considered as O&M expenses. MGVCL has also included the following in the O&M expenses as per the directive issued by the Commission.

- Other debits
- Extraordinary item
- Net prior period expenses and
- Other expenses capitalized

The O&M expenses are arrived at by MGVCL in accordance with Regulation 98.6 of GERC (MYT) Regulations, 2011. The actual O&M expenses for the years FY 2007-08, FY 2008-09 and FY 2009-10 furnished by MGVCL are verified with the audited annual accounts for the respective years and found to be correct. The O&M expenses proper viz., the Employee cost, R&M expenses and A&G expenses are accepted as projected by MGVCL as they are in accordance with the (MYT) Regulations, 2011. In the case of other items of expenses viz., 'other debits' and



extraordinary items they can at best be recognized at the level of actual for the year for which audited annual accounts are provided. The net prior period expenses / income depend on the excess / short provision made in the Books of Accounts in the past. This cannot be accepted for projection. It is relevant to mention that MGVCCL has not projected any prior period income under non-tariff income for the control period.

Regarding capitalization of other expenses the projection is considered as this relates to capitalization of Employee cost, A&G expenses etc.

The O&M expenses considered for the control period FY 2011-12 to FY 2012-13 are summarized in the table below:

**Table 6.64: Approved O&M expenses for FY 2011-12 to 2015-16**

(Rs. crore)

Sl. No.	Particulars	FY 2011-12	FY 2012-13	FY 2013-14	FY 2014-15	FY 2015-16
1.	Employee cost	221.70	234.38	247.79	261.96	276.94
2.	Repairs & Maintenance	40.18	42.48	44.91	47.48	50.19
3.	Administration & General charges	38.55	40.75	43.08	45.55	48.16
4.	Other Debits	9.07	9.07	9.07	9.07	9.07
5.	Extraordinary items	-	-	-	-	-
6.	Net prior period expenses / (income)	0.00	0.00	0.00	0.00	0.00
7.	Other expenses capitalized	(54.00)	(57.00)	(61.00)	(64.00)	(68.00)
8.	<b>Total O&amp;M expenses</b>	<b>255.50</b>	<b>269.68</b>	<b>283.85</b>	<b>300.06</b>	<b>316.36</b>

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

### 6.9.2 Capital expenditure

The MGVCCL has projected the capital expenditure at Rs. 1157.00 crore for the control period FY 2011-12 to FY 2015-16 as given the table below:

**Table 6.65: Capital expenditure projected for FY 2010-11 to FY 2015-16**

(Rs. crore)

Sl. No.	Schemes	FY 2011-12	FY 2012-13	FY 2013-14	FY 2014-15	FY 2015-16
<b>A.</b>	<b>Distribution Schemes</b>					
	Normal Development Scheme	41.00	41.00	42.00	42.00	42.00
	System Improvement Scheme	8.00	8.00	8.00	8.00	8.00
	Electrification of hutments	20.00	20.00	20.00	20.00	20.00
	Kutir Jyoti Scheme	2.00	2.00	2.00	2.00	2.00
	Tribal villages	-	-	-	-	-
	<b>Total</b>	<b>71.00</b>	<b>71.00</b>	<b>72.00</b>	<b>72.00</b>	<b>72.00</b>



**Madhya Gujarat Vij Company Limited**  
**Truing up for FY 2009-10, APR for FY 2010-11,**  
**ARR for FY 2011-12 to FY 2015-16 and Tariff for FY 2011-12**

Sl. No.	Schemes	FY 2011-12	FY 2012-13	FY 2013-14	FY 2014-15	FY 2015-16
<b>B.</b>	<b>Rural Electrification Schemes</b>					
	TASP(Wells & Petapara)	61.00	61.00	61.00	61.00	61.00
	Special Component plan	1.00	1.00	1.00	1.00	1.00
	RE Normal wells	19.00	19.00	19.00	19.00	19.00
	<b>Total</b>	<b>80.00</b>	<b>80.00</b>	<b>80.00</b>	<b>80.00</b>	<b>80.00</b>
<b>C.</b>	<b>Others</b>					
	Energy Conservation	3.00	3.00	3.00	3.00	3.00
	Sagar Khedu	2.00	2.00	2.00	2.00	2.00
	<b>Total</b>	<b>5.00</b>	<b>5.00</b>	<b>5.00</b>	<b>5.00</b>	<b>5.00</b>
<b>D.</b>	<b>Non Plan Schemes</b>					
	SCADA	-	-	-	-	-
	RAPDRP (Part A)	55.00	58.00	65.00	13.00	9.00
	RAPDRP (Part B)	-	-	-	-	-
	RGGVY	6.00	-	-	-	-
	DRUM	-	-	-	-	-
	<b>Total</b>	<b>61.00</b>	<b>58.00</b>	<b>65.00</b>	<b>13.00</b>	<b>9.00</b>
<b>E.</b>	<b>New Innovative Schemes</b>					
	Line capacitors	-	-	-	-	-
	Ariel bunch conductors	3.00	3.00	3.00	3.00	3.00
	HVDS in selected sub-division	7.00	7.00	7.00	7.00	7.00
	Automatic meter reading	1.00	1.00	1.00	1.00	1.00
	GIS in cities	-	-	-	-	-
	Automation and computerisation	0.00	0.00	0.00	0.00	0.00
	Customer care centre	-	-	-	-	-
	Underground cables	5.00	5.00	5.00	5.00	5.00
	Replacement conductors / TC	1.00	1.00	1.00	1.00	1.00
	Misc. civil + Electrical works	4.00	3.00	3.00	3.00	3.00
	Others new schemes (General Schemes)	9.00	10.00	10.00	11.00	11.00
	Urban development	3.00	4.00	4.00	4.00	4.00
	Govt. school electrification (General)	-	-	-	-	-
	<b>Total</b>	<b>33</b>	<b>34</b>	<b>34</b>	<b>35</b>	<b>35</b>
	<b>Capital Expenditure Total</b>	<b>250.00</b>	<b>248.00</b>	<b>255.00</b>	<b>204.00</b>	<b>200.00</b>

**Petitioner's submission**

The MGVCL has submitted that the capital expenditure required for providing earth-terminals as per petition No. 909/2006 is not considered in the CAPEX projected for the control period and requested the Commission to consider the capital expenditure of the same as per actual as and when incurred.

The MGVCL has further submitted that the funding of the projected capital expenditure is envisaged through various sources categorized under four headings viz., consumer contribution, grants, equity and debt and the grants have been considered based on the figures available with the company while the remaining



expenditure is proposed to be funded though debt and equity in the ratio of 70:30.

The details of funding the CAPEX are as detailed in the table below:

**Table 6.66: Projected Funding of capital expenditure proposed for the control period FY 2011-12 to FY 2015-16**

(Rs. crore)

Sl. No.	Particulars	FY 2011-12	FY 2012-13	FY 2013-14	FY 2014-15	FY 2015-16
1.	Capital expenditure	250.00	248.00	255.00	204.00	200.00
2.	Less: Consumer contribution	36.00	37.00	37.00	37.00	37.00
3.	Grants	125.00	126.00	129.00	112.00	110.00
4.	Balance CAPEX	88.00	85.00	89.00	55.00	53.00
5.	Debt @ 70%	61.00	59.00	63.00	39.00	37.00
6.	Equity @ 30%	26.00	25.00	27.00	17.00	16.00

### Commission's Analysis

The Commission has examined the capital expenditure plan projected for the control period. MGVCL has envisaged capital expenditure under normal development scheme, RE Normal, non-plan scheme viz., RAPDRP and small new schemes like HVDS for the control period. It is noted that the actual capital expenditure incurred during FY 2009-10 was Rs. 251.18 crore and the proposed capital expenditure for each year of the control period is about Rs. 230.00 crore on an average. The capital investment is required to be made by the Distribution Company for various purposes like the creation of new infrastructure to meet the load growth, to meet statutory requirements, to strengthen the existing system and increase its operational efficiency, replace old and obsolete assets.

Having considered various works programmed for augmenting the transmission and distribution network to meet the growing load growth to meet the operation efficiency etc, the Commission approves the capital expenditure as proposed by MGVCL for the control period.

The MGVCL has proposed to capitalize the proposed capital expenditure in the same year of investment. As the expenditure projected is mostly for the network expansion and installation of additional equipment besides replacement of equipments the Commission approves the capitalization as proposed by MGVCL. The funding of the capital expenditure is computed as given in the table below:

**Table 6.67: Approved CAPEX, capitalization and funding for the control period FY 2011-12 to FY 2015-16**



**Madhya Gujarat Vij Company Limited**  
**Truing up for FY 2009-10, APR for FY 2010-11,**  
**ARR for FY 2011-12 to FY 2015-16 and Tariff for FY 2011-12**

	(Rs. crore)				
<b>Particulars</b>	<b>FY 2011-12</b>	<b>FY 2012-13</b>	<b>FY 2013-14</b>	<b>FY 2014-15</b>	<b>FY 2015-16</b>
Capital expenditure	250.00	248.00	255.00	204.00	200.00
Capitalization	250.00	248.00	255.00	204.00	200.00
Less: Consumer contribution	36.00	37.00	37.00	37.00	37.00
Grants	125.00	126.00	129.00	112.00	110.00
Balance CAPEX	89.00	85.00	89.00	55.00	53.00
Debt @ 70%	62.30	59.50	62.30	38.50	37.10
Equity @ 30%	26.70	25.50	26.70	16.50	15.90

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

**Table 6.68: Gross fixed assets approved for the control period FY 2011-12 to FY 2015-16**

	(Rs. crore)		
<b>Particulars</b>	<b>Opening balance</b>	<b>Additions during the year</b>	<b>Closing balance</b>
FY 2011-12	2121.02	250.00	2371.02
FY 2012-13	2371.02	248.00	2619.02
FY 2013-14	2619.02	255.00	2874.02
FY 2014-15	2874.02	204.00	3078.02
FY 2015-16	3078.02	200.00	3278.02

**The gross fixed assets as mentioned in the above table are taken into consideration for computation of depreciation charges.**

### **6.9.3 Depreciation**

The MGVCCL has projected the depreciation at Rs. 2251.00 crore for the control period FY 2011-12 to FY 2015-16 as detailed in the table below:

**Table 6.69: Depreciation projected for the control period**

	(Rs. crore)				
<b>Particulars</b>	<b>FY 2011-12</b>	<b>FY 2012-13</b>	<b>FY 2013-14</b>	<b>FY 2014-15</b>	<b>FY 2015-16</b>
Gross block in beginning of the year	2178.00	2428.00	2676.00	2932.00	3136.00
Additions during the year (Net)	250.00	248.00	255.00	204.00	200.00
<b>Depreciation for the year</b>	<b>121.00</b>	<b>134.00</b>	<b>147.00</b>	<b>159.00</b>	<b>170.00</b>
Average rate of depreciation	5.25%	5.25%	5.25%	5.25%	5.25%

### **Petitioner's submission**

The MGVCCL has submitted that it has considered the closing gross block of fixed assets of FY 2010-11 as opening balance for FY 2011-12. The addition of assets during the control period is considered as per the projected capital expenditure and



the proposed capitalization. The average rate of depreciation adopted by MGVCCL is 5.25%.

### Commission's Analysis

The Commission noted that the petitioner has computed the depreciation for the control period FY 2011-12 to 2015-16 using the CERC rates of depreciation. The Commission has approved the capitalization and gross fixed assets in paragraph 6.9.2 and table 6.67 above. The Commission has considered the average rate of depreciation at 5.25% in accordance with the GERC (MYT) Regulations, 2011. The Commission has computed the depreciation based on the opening balance of GFA and addition of assets approved in table 6.69 above which are as given in the table below:

**Table 6.70: Approved Depreciation for the control period FY 2011-12 to FY 2015-16**

(Rs. crore)

Particulars	FY 2011-12	FY 2012-13	FY 2013-14	FY 2014-15	FY 2015-16
Gross block in beginning of the year	2121.02	2371.02	2619.02	2874.02	3078.02
Additions during the year	250.00	248.00	255.00	204.00	200.00
Average rate of depreciation	5.25%	5.25%	5.25%	5.25%	5.25%
<b>Depreciation for the year</b>	<b>117.92</b>	<b>130.99</b>	<b>144.19</b>	<b>156.24</b>	<b>166.85</b>

**The Commission, accordingly, approves the depreciation for the control period as detailed in the above table.**

### 6.9.4 Interest and Finance charges

The MGVCCL has projected the interest and finance charges at Rs. 164.00 crore including interest on security deposit from consumers and guarantee charges for the control period FY 2011-12 to FY 2015-16 as detailed in the table below:

**Table 6.71: Interest and Finance charges projected for the control period**

(Rs. crore)

Sl. No.	Particulars	FY 2011-12	FY 2012-13	FY 2013-14	FY 2014-15	FY 2015-16
1.	Opening loan	303.00	243.00	169.00	84.00	(36.00)
2.	Loan additions during the year	61.00	59.00	63.00	39.00	37.00
3.	Repayment during the year	121.00	134.00	147.00	159.00	170.00
4.	Closing loan	243.00	169.00	84.00	(36.00)	(170.00)
5.	<b>Average loan</b>	<b>273.00</b>	<b>206.00</b>	<b>126.00</b>	<b>24.00</b>	<b>(103.00)</b>
6.	Interest on loan	30.00	22.00	14.00	3.00	(11.00)
7.	Interest on security deposit	20.00	20.00	20.00	20.00	20.00



**Madhya Gujarat Vij Company Limited**  
**Truing up for FY 2009-10, APR for FY 2010-11,**  
**ARR for FY 2011-12 to FY 2015-16 and Tariff for FY 2011-12**

8.	Guarantee charges	1.00	1.00	1.00	1.00	1.00
9.	<b>Total interest and finance charges</b>	<b>51.00</b>	<b>44.00</b>	<b>35.00</b>	<b>24.00</b>	<b>10.00</b>

**Petitioner's submission**

The MGVCL has submitted that the opening loan for FY 2011-12 is taken as per the closing balance of loan for FY 2010-11 and the normative loan addition for the control period is computed as per the CAPEX funding plan and the repayment is considered equal to the depreciation calculated for the year. The interest on the opening loans has been computed considering the weighted average rate of interest for the last year and @ 10.50% on the new loans proposed to be drawn during the year.

The MGVCL has further submitted that the company has allocated some Government of Gujarat guarantees and the company has to pay the guarantee charges, which are considered at the same level as estimated in the RE for FY 2010-11. The interest on security deposit is also considered at the same level as in the RE for FY 2010-11.

**Commission's Analysis**

The opening balance of loans for FY 2011-12 is as per the closing balance of loans for FY 2010-11. The repayment of loans considered by MGVCL is in accordance with the Regulation 39 of GERC (MYT) Regulations, 2011 for the control period. The MGVCL has assumed the loan addition based on the entire capitalization of CAPEX during the year of investment. The Commission has approved the capitalization in paragraph above and the loan additions are computed accordingly in the table. The Commission has observed that as per the projection made by MGVCL the average interest works out to 11.00%. The Commission has however adopted this weighted average rate of 11.00% considered for the control period. MGVCL has not projected increase in the interest on security deposit during the control period. Considering all the above the Commission has computed the interest and finance charges for the control period which are as given in the table below:

**Table 6.72: Approved Interest and Finance charges for the control period FY 2011-12 to FY 2015-16**

(Rs. crore)						
Sl. No	Particulars	FY 2011-12	FY 2012-13	FY 2013-14	FY 2014-15	FY 2015-16
1.	Opening loan	313.37	257.75	186.27	104.37	0.00
2.	Loan additions during	62.30	59.50	62.30	38.50	37.10





**Madhya Gujarat Vij Company Limited**  
**Truing up for FY 2009-10, APR for FY 2010-11,**  
**ARR for FY 2011-12 to FY 2015-16 and Tariff for FY 2011-12**

Sl. No	Particulars	FY 2011-12	FY 2012-13	FY 2013-14	FY 2014-15	FY 2015-16
	the year					
3.	Repayment during the year	117.92	130.99	144.19	142.87	37.10
4.	Closing loan	257.75	186.27	104.37	0.00	0.00
5.	<b>Average loan</b>	285.56	222.01	145.32	52.19	0.00
6.	Average rate of interest	11.00%	11.00%	11.00%	11.00%	11.00%
7.	Interest on loan	<b>31.41</b>	<b>24.42</b>	<b>15.99</b>	<b>5.74</b>	<b>0.00</b>
8.	Interest on security deposit	20	20	20	20	20
9.	Guarantee charges	1	1	1	1	1
10.	<b>Total interest and finance charges</b>	<b>52.41</b>	<b>45.42</b>	<b>36.99</b>	<b>26.74</b>	<b>21.00</b>

The Commission, accordingly, approves the interest and finance charges as detailed in the above table.

#### 6.9.5 Interest on working capital

The MGVCL has projected the interest on working capital at Rs. 262.00 crore for the control period FY 2011-12 to FY 2015-16 as detailed in the table below:

**Table 6.73: Projected Interest on working capital for the control period**

(Rs. crore)					
Particulars	FY 2011-12	FY 2012-13	FY 2013-14	FY 2014-15	FY 2015-16
O&M expenses	24.00	27.00	30.00	33.00	37.00
Maintenance spares	25.00	29.00	33.00	37.00	41.00
Receivables	294.00	342.00	385.00	419.00	479.00
<b>Total working capital</b>	<b>342.00</b>	<b>397.00</b>	<b>448.00</b>	<b>489.00</b>	<b>556.00</b>
Rate of interest on working capital	11.75%	11.75%	11.75%	11.75%	11.75%
<b>Interest on Working Capital</b>	<b>40.00</b>	<b>47.00</b>	<b>53.00</b>	<b>57.00</b>	<b>65.00</b>

#### Petitioner's submission

The MGVCL has submitted that the interest on working capital has been calculated on normative parameters in accordance with the GERC (MYT) Regulations, 2011. The rate of interest considered is 11.75% being the State Bank Advance Rate (SBAR) as on 1<sup>st</sup> April 2010 under Regulation 41 (3) (b) of the GERC (MYT) Regulations, 2011.

#### Commission's Analysis

The Commission has examined the computation of interest on working capital submitted by MGVCL. The O&M expenses for one month and maintenance spares at 1% GFA are considered by the company as per its projection. The Commission has



analyzed and approved the O&M expenses and GFA in tables 6.64 and 6.68. Based on the approved O&M expenses and GFA the Commission has computed the working capital and interest on working capital which are as detailed in the table below

**Table 6.74: Interest on working capital approved for the control period**

(Rs. crore)					
<b>Particulars</b>	<b>FY 2011-12</b>	<b>FY 2012-13</b>	<b>FY 2013-14</b>	<b>FY 2014-15</b>	<b>FY 2015-16</b>
O&M expenses for 1month	21.29	22.47	23.66	25.01	26.36
1 % of GFA for maintenance spares	21.21	23.71	26.19	28.74	30.78
Receivables for 1 month sales revenue at the prevailing tariffs	270.00	294.66	321.63	351.19	383.60
Less: Amount held as security deposit from consumers	397.55	397.55	397.55	397.55	397.55
Total Working Capital Requirement	-85.05	-56.70	-26.08	7.39	43.20
Interest Rate	11.75%	11.75%	11.75%	11.75%	11.75%
<b>Interest on Working Capital</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>0.87</b>	<b>5.08</b>

**The Commission, accordingly, approves the interest on working capital as detailed in the above Table for the control period for FY 2010-11 to FY 2015-16.**

#### **6.9.6 Provision for bad and doubtful debts**

The MGVCL has estimated the bad debts at Rs. 34.00 crore for the control period FY 2011-15 to FY 2015-16 which are as given in the table below:

**Table 6.75: Bad and doubtful debts projected for FY 2011-12 to 2015-16**

(Rs. crore)					
<b>Particulars</b>	<b>FY 2011-12</b>	<b>FY 2012-13</b>	<b>FY 2013-14</b>	<b>FY 2014-15</b>	<b>FY 2015-16</b>
Provision for bad debts	6.00	6.00	7.00	7.00	8.00

#### **Petitioner's submission**

The MGVCL has submitted that the company has considered the bad and doubtful debts at 0.20% of the revenue from sale of power and that it is a legitimate expenditure associated with the business risk and is consumer related expense.

#### **Commission's Analysis**

The Regulation 98.8 of the GERC (MYT) Regulations, 2011 specifies that the Commission may allow bad debts written off as a pass through, in the ARR. The latest audited accounts available in respect of MGVCL are for FY 2009-10. The Commission has approved the bad debts written off at Rs.3.67 crore for the truing up of FY 2009-10 as given in the table below:



**Table 6.76: Approved bad and doubtful debts for FY 2011-12 to 2015-16**

(Rs. crore)

Particulars	FY 2011-12	FY 2012-13	FY 2013-14	FY 2014-15	FY 2015-16
Provision for bad debts	3.67	3.67	3.67	3.67	3.67

The Commission, accordingly, approves the provision for bad debts at Rs.3.67 crore for year year of the control period FY 2011-12 to FY 2015-16.

#### 6.9.7 Return on equity

The MGVCCL has projected the return on equity at Rs. 387.00 crore for the control period FY 2011-12 to FY 2015-16 as detailed in the table below :

**Table 6.77: Return on equity projected for the control period FY 2011-12 to FY 2015-16**

(Rs. crore)

Particulars	FY 2011-12	FY 2012-13	FY 2013-14	FY 2014-15	FY 2015-16
Opening equity	491.00	517.00	543.00	570.00	586.00
Equity addition	26.00	25.00	27.00	17.00	16.00
Closing equity	517.00	543.00	570.00	586.00	602.00
Average equity	504.00	530.00	556.00	578.00	594.00
Rate of return on equity	14%	14%	14%	14%	14%
<b>Return on equity</b>	<b>71.00</b>	<b>74.00</b>	<b>78.00</b>	<b>81.00</b>	<b>83.00</b>

#### Petitioner's submission

The MGVCCL has submitted that the return on equity has been computed @ 14% on average equity based on the opening balance of equity and normative additions during the year, which has been arrived at by considering 30% of the capital expenditure net of consumer contribution and grants.

#### Commission's Analysis

The Commission has computed the return on equity @ 14% on the average equity of the opening and closing balance and addition of equity during each year of the control period as approved in the table below:

**Table 6.78: Approved Return on equity for the control period FY 2011-12 to FY 2015-16**

(Rs. crore)

Particulars	FY 2011-12	FY 2012-13	FY 2013-14	FY 2014-15	FY 2015-16
Opening equity	488.21	514.91	540.41	567.11	583.61
Equity addition	26.70	25.50	26.70	16.50	15.90
Closing equity	514.91	540.41	567.11	583.61	599.51
Average equity	501.56	527.66	553.76	575.36	591.56
Rate of return on equity	14%	14%	14%	14%	14%
<b>Return on equity</b>	<b>70.22</b>	<b>73.87</b>	<b>77.53</b>	<b>80.55</b>	<b>82.82</b>



**The Commission, accordingly, approves the return on equity as detailed in the above table for the control period FY 2011-12 to FY 2015-16.**

#### **6.9.8 Provision for Tax**

The MGVCL has projected the income tax at Rs. 30.00 crore for the control period FY 2011-12 to FY 2015-16 as detailed in the table below:

**Table 6.79: Taxes projected for the control period FY 2011-12 to FY 2015-16**

(Rs. crore)					
<b>Particulars</b>	<b>FY 2011-12</b>	<b>2012-13</b>	<b>FY 2013-14</b>	<b>FY 2014-15</b>	<b>FY 2015-16</b>
Normative ROE	71.00	74.00	78.00	81.00	83.00
Provision for tax / tax expenses	6.00	6.00	6.00	6.00	6.00

#### **Petitioner's submission**

The MGVCL has submitted that the income tax for each year of the control period has been taken as per the actual income tax paid as per the latest audited accounts i.e FY 2009-10 and requested the Commission to pass on the impact of revised tax rates as per the budget by the Central Government.

#### **Commission's Analysis**

The Regulation 42.1 of GERC (MYT) Regulations, 2011 specifies that the Commission in its MYT order shall provisionally approve income tax payable for each year of the control period, if any, based on the actual income tax paid as per the latest audited accounts available for the applicant, subject to prudence check. The latest audited accounts available for MGVCL are for FY 2009-10 and the income tax admitted in the truing up for FY 2009-10 is Rs. 5.84 crore.

**The Commission, accordingly, approves the provision for income tax for the control period for FY 2011-12 to FY 2015-16 as detailed in the table below:**

**Table 6.80: Approved Income tax for the control period FY 2011-12 to FY 2015-16**

(Rs. crore)					
<b>Particulars</b>	<b>FY 2011-12</b>	<b>FY 2012-13</b>	<b>FY 2013-14</b>	<b>FY 2014-15</b>	<b>FY 2015-16</b>
Income Tax	5.84	5.84	5.84	5.84	5.84

Any variation in income tax actually paid and approved shall be considered based on the documentary evidence at the time of truing up for each year of the control period in accordance with the Regulation 42.2 of the GERC (MYT) Regulations, 2011.



#### **6.9.9 Non-Tariff income**

The MGVL has projected the non-tariff income at Rs. 435.00 crore for the control period FY 2011-12 to FY 2015-16 as detailed in the table below:

**Table 6.81: Non-Tariff income projected for the control period FY 2010-11 to FY 2015-16**  
(Rs. crore)

Particulars	FY 2011-12	FY 2012-13	FY 2013-14	FY 2014-15	FY 2015-16
Non-Tariff income	87.00	87.00	87.00	87.00	87.00

#### **Petitioner's submission**

The MGVL has submitted that the income under this category comprises of interest on loans and advances to employees / contractors, income from investment with banks, delayed payment surcharges from the consumers and the non-tariff income considered at the level of actual in FY 2009-10 for the control period FY 2011-12 to FY 2015-16.

#### **Commission's Analysis**

The Commission has noted that the actual non-tariff income in FY 2009-10 was Rs. 86.75 crore and the projection for the control period is in accordance with the actual for FY 2009-10.

The Commission, accordingly, approves the non-tariff income for the control period FY 2011-12 to FY 2015-16 as detailed in the table below:

**Table 6.82: Approved Non-tariff income for control period FY 2011-12 to FY 2015-16**  
(Rs. crore)

Particulars	FY 2011-12	FY 2012-13	FY 2013-14	FY 2014-15	FY 2015-16
Non-tariff income	86.75	86.75	86.75	86.75	86.75

#### **6.10 Annual Revenue Requirement (ARR) excluding power purchase cost**

The MGVL has submitted that the ARR for the control period FY 2011-12 to FY 2015-16 has been calculated excluding the power purchase cost to determine the Bulk Supply Tariff (BST) for each DISCOM since the BST methodology has been adopted by the utilities.

The ARR as projected by MGVL is as detailed in the table below:

**Madhya Gujarat Vij Company Limited**  
**Truing up for FY 2009-10, APR for FY 2010-11,**  
**ARR for FY 2011-12 to FY 2015-16 and Tariff for FY 2011-12**

**Table 6.83: Projected ARR for the control period excluding power purchase cost**

(Rs. crore)

Sl. No.	Particulars	FY 2011-12	FY 2012-13	FY 2013-14	FY 2014-15	FY 2015-16
1.	Operation & Maintenance Expenses	269.00	284.00	301.00	318.00	336.00
1.1	Employee Cost	222.00	234.00	248.00	262.00	277.00
1.2	Repair & Maintenance	40.00	42.00	45.00	47.00	50.00
1.3	Administration & General Charges	39.00	41.00	43.00	46.00	48.00
1.4	Other debits	7.00	8.00	8.00	9.00	9.00
1.5	Extraordinary items	-	-	-	-	-
1.6	Net prior period expenses /	15.00	16.00	17.00	18.00	19.00
1.7	Other expenses capitalized	(54.00)	(57.00)	(61.00)	(64.00)	(68.00)
2	Depreciation	121.00	134.00	147.00	159.00	170.00
3	Interest & Finance Charges	51.00	44.00	35.00	24.00	10.00
4	Interest on Working Capital	40.00	47.00	53.00	57.00	65.00
5	Provision for bad debts	6.00	6.00	7.00	7.00	8.00
6	<b>Sub-Total ( 1 to 5)</b>	<b>486.00</b>	<b>515.00</b>	<b>542.00</b>	<b>566.00</b>	<b>589.00</b>
7	Return on Equity	71.00	74.00	78.00	81.00	83.00
8	Provision for Tax	6.00	6.00	6.00	6.00	6.00
9	<b>Total Expenditure (7 to 9)</b>	<b>563.00</b>	<b>595.00</b>	<b>626.00</b>	<b>652.00</b>	<b>678.00</b>
10	Less: Non-Tariff Income	87.00	87.00	87.00	87.00	87.00
	<b>Aggregate Revenue Requirement without power purchase expenses (9-10)</b>	<b>476.00</b>	<b>508.00</b>	<b>539.00</b>	<b>566.00</b>	<b>591.00</b>

The Commission has analyzed the components of ARR in the foregoing paragraphs and approved the ARR as summarized in the table below:

**Table 6.84: Approved ARR for MGVCCL for the control period excluding power purchase cost**

(Rs. crore)

Sl. No.	Particulars	FY 2011-12	FY 2012-13	FY 2013-14	FY 2014-15	FY 2015-16
1	Operation & Maintenance Expenses	300.43	317.61	335.78	354.99	375.29
1.1	Employee Cost	221.70	234.38	247.79	261.97	276.95
1.2	Repair & Maintenance	40.18	42.48	44.91	47.48	50.19
1.3	Administration & General Charges	38.55	40.75	43.08	45.55	48.15
2	Other debits	9.07	9.07	9.07	9.07	9.07
3	Extraordinary items	0.00	0.00	0.00	0.00	0.00
4	Net prior period expenses	0.00	0.00	0.00	0.00	0.00
5	Other expenses capitalized (-)	-54.00	-57.00	-61.00	-64.00	-68.00
6	Depreciation	117.92	130.99	144.19	156.24	166.85



**Madhya Gujarat Vij Company Limited**  
**Truing up for FY 2009-10, APR for FY 2010-11,**  
**ARR for FY 2011-12 to FY 2015-16 and Tariff for FY 2011-12**

7	Interest & Finance Charges	52.41	45.42	36.99	26.74	21.00
8	Interest on Working Capital				0.87	5.08
9	Provision for bad debts	3.67	3.67	3.67	3.67	3.67
10	<b>Sub-Total (1 to 9)</b>	<b>429.50</b>	<b>449.76</b>	<b>468.70</b>	<b>487.58</b>	<b>512.95</b>
11	Return on Equity	70.22	73.87	77.53	80.55	82.82
12	Provision for Tax	5.84	5.84	5.84	5.84	5.84
13	<b>Total Expenditure (10 to 12)</b>	<b>505.55</b>	<b>529.48</b>	<b>552.06</b>	<b>573.97</b>	<b>601.61</b>
14	Less: Non-Tariff Income	86.75	86.75	86.75	86.75	86.75
	<b>Aggregate Revenue Requirement without power purchase expenses (13-14)</b>	<b>418.80</b>	<b>442.73</b>	<b>465.31</b>	<b>487.22</b>	<b>514.86</b>

### 6.11 Revenue from existing tariff

The MGVCCL has estimated the category-wise revenue based on existing tariff at Rs. 2753.00 crore for FY 2011-12 as detailed in the table below:

**Table 6.85: Revenue from existing tariff projected for FY 2011-12**

(Rs. crore)

<b>Consumer category</b>	<b>FY 2011-12</b>
<b>Low tension consumers</b>	
Residential	574.00
Commercial	327.00
Industrial LT	262.00
Public water works	47.00
Agriculture	88.00
Street light	21.00
LT total	1320.00
<b>High tension consumers</b>	
Industrial HT	1236.00
Railway traction	197.00
HT total	1433.00
<b>Total</b>	<b>2753.00</b>

### Petitioner's submission

The MGVCCL has submitted that FPPPA had been frozen at 12 paise per kWh over and above variation in base price and proposed to revise base cost of power purchase considered by the Commission in the Tariff order dated 17<sup>th</sup> January, 2009 with latest available audited data. MGVCCL has mentioned that it has taken actual of FY 2009-10 for central generating stations and IPPs and for GSECL stations actual variable cost for FY 2009-10 is considered and fixed cost is taken as approved for FY 2010-11. MGVCCL has requested to freeze the FPPPA at 61 paise per kWh being the actual for FY 2009-10 in place of existing 12 paise per kWh.



The MGVL has also mentioned that the real time, PPPA charges will be worked out based on actual cost of power plants in comparison to base price approved by the Commission and this will be charged over and above the freezed level of 61 paise per kWh.

### **Commission's Analysis**

The Commission has analyzed the category-wise sales projected by MGVL for the control period FY 2011-12 to FY 2015-16. Based on the analysis the Commission has revised the category-wise sales projection for the control period. Taking into consideration the average tariff under each category, the Commission has computed the revenue from sale of power at the existing tariff for FY 2011-12 as detailed in the table below:

**Table: 6.86: Approved sales and Revenue for FY 2011-12**

Sl. No.	Category	Average Tariff (Rs. /kWh)	Sales (MU)	Revenue (Rs.crore)
1	Domestic	3.12	1838	573.46
2	Commercial	4.93	663	326.86
3	Industrial LT	4.78	549	262.42
4	Public lighting	3.36	64	21.50
5	Agriculture	0.86	945	81.27
6	Water works	2.69	174	46.81
7	Industrial HT	4.88	2533	1236.10
8	Railway traction	5.08	388	197.10
	<b>Total</b>		<b>7154</b>	<b>2745.53</b>

### **6.12 Other consumer related income**

The MGVL has estimated the other consumer related income at Rs. 73.00 crore for FY 2011-12 as detailed in the table below:

**Table 6.87: Other consumer related income projected for FY 2011-12**

(Rs. crore)

Particulars	FY 2011-12
Rental for meters, service lines	33.00
Recoveries from theft of power	5.00
Wheeling charges	-
Misc. charges from consumers	20.00
<b>Other consumer related consumers</b>	<b>59.00</b>

### **Petitioner's submission**

The MGVL has submitted that the revenue from other consumer related income comprises revenue on account of charge imposed other than the basic charges





applicable to the consumers like meter rent, wheeling charges, inspection charges and miscellaneous charges.

### **Commission's Analysis**

The Commission has observed that MGVL has projected the other consumer related income for FY 2011-12 at the same level as actual for FY 2009-10.

**The Commission, accordingly, approves the other consumer related income at Rs. 59.00 crore each year of the control period FY 2011-12 to FY 2015-16.**

### **6.13 Agriculture subsidy**

The MGVL has submitted that the quantum of agricultural subsidy has been considered at the same level as past year i.e Rs. 1100 crore for FY 2011-12 and this is being shared by the four DISCOMs viz. MGVL, DGVCL, PGVCL and UGVCL in proportion to the respective percentage share in the agricultural consumption and accordingly the share of MGVL has been worked out to Rs. 80.00 crore as detailed in the table below:

**Table 6.88: Subsidy for FY 2011-12**

(Rs. crore)

<b>Particulars</b>	<b>FY 2011-12</b>
% share in un-metered agriculture sales	7.25%
Share of agriculture subsidy	80.00

### **Commission's Analysis**

The Commission has computed the agricultural consumption in respect of MGVL against the total agricultural consumption approved for all the four DISCOMs for the control period. Based on the share of MGVL's agricultural consumption the agricultural subsidy for MGVL is computed as detailed in the table below:

**Table 6.89: Approved agricultural susbsidy for FY 2011-12**

<b>DISCOM</b>	<b>Agriculture Sales (MU)</b>	<b>% Share of sales</b>	<b>Agriculture subsidy (Rs. crore)</b>
DGVCL	597	4.37	48
MGVL	944	6.91	76
PGVCL	4910	35.94	395
UGVCL	7211	52.78	581
<b>Total</b>	<b>13662</b>	<b>100.00</b>	<b>1100</b>



#### 6.14 Total revenue for the control period FY 2011-12 to FY 2015-16

The total expected revenue for MGVL comprises of revenue from sale of power at existing tariff, other consumer related income, agriculture subsidy and other subsidies.

The total revenue as estimated by the Commission for the control period FY 2011-12 to FY 2015-16 is shown in the table below:

**Table 6.90: MGVL - Revenue from existing tariff for the control period**

Sl. No.	Category	Av. Tariff (Paise / Unit)	Units sold / revenue									
			2011-12		2012-13		2013-14		2014-15		2015-16	
			MU	Rs. crore	MU	Rs. crore	MU	Rs. crore	MU	Rs. crore	MU	Rs. crore
1	Domestic	3.12	1838	573.46	2024	631.49	2227	694.82	2451	764.71	2698	841.78
2	Commercial	4.93	663	326.86	750	369.75	848	418.06	960	473.28	1086	535.40
3	Industrial-LT	4.78	549	262.42	589	281.54	632	302.10	677	323.61	726	347.03
4	Public lighting	3.36	64	21.50	68	22.85	72	24.19	77	25.87	82	27.55
5	Agriculture	0.86	945	81.27	994	85.48	1043	89.70	1092	93.91	1142	98.21
6	Water works	2.69	174	46.81	190	51.11	207	55.68	227	61.06	247	66.44
7	Industrial-HT	4.88	2533	1236.10	2762	1347.86	3012	1469.86	3285	1603.08	3582	1748.02
8	Railways	5.08	388	197.10	418	212.34	451	229.11	485	246.38	523	265.68
9	<b>Sub Total</b>		<b>7154</b>	<b>2745.53</b>	<b>7795</b>	<b>3002.42</b>	<b>8492</b>	<b>3283.52</b>	<b>9254</b>	<b>3591.91</b>	<b>10086</b>	<b>3930.11</b>
10	FPPPA	0.61		436.39		475.50		518.01		564.49		615.25
11	Add: Other income (consumer related)			59.00		59.00		59.00		59.00		59.00
12	<b>Total</b>			<b>3240.92</b>		<b>3536.92</b>		<b>3860.53</b>		<b>4215.40</b>		<b>4604.36</b>
13	Add: Agriculture subsidy			76		79		81		84		86
14	<b>Total revenue including subsidy</b>			<b>3316.92</b>		<b>3615.92</b>		<b>3941.53</b>		<b>4299.40</b>		<b>4690.36</b>

#### 6.15 Determination of differential Bulk Supply Tariff

As discussed in the paragraph 6.8.10, it would be possible to ensure uniform retail consumer tariffs in the four DISCOMs by adopting Bulk Supply Tariff methodology.

The BST for DISCOMs includes the cost of power purchase from various generating stations, the transmission costs of PGCIL and GETCO and the cost of bulk supplier i.e. GUVNL. The revenue earned from sale surplus power is subtracted from the total power purchase cost to arrive at net power purchase cost to be charged to the four



DISCOMs. The amount available for power purchase to the four DISCOMs is arrived at by subtracting the sum of total expenses other than the power purchase cost of all the four DISCOMs from the total revenue of the four DISCOMs with existing tariffs.

The difference between the net power purchase cost and the amount available with the four DISCOMs for power purchase indicates the revenue gap. This revenue gap varies from DISCOM to DISCOM. The bulk supply tariffs for the four DISCOMs are fixed keeping in view the magnitude of the revenue gap as discussed further in the following paragraphs.

#### **6.15.1 Aggregate amount available with the four DISCOMs for Power Purchase**

The difference between the total revenues and the total expenses other than power purchase incurred by the four DISCOMs indicates the amount available for power purchase with the DISCOMs as shown below:

**Table 6.91 : Aggregate Revenue available for power purchase from FY 2011-12 to FY 2015-16**

(Rs. crore)

Particulars	FY 2011-12	FY 2012-13	FY 2013-14	FY 2014-15	FY 2015-16
<b>Total Revenue of DISCOM : (A)</b>					
DGVCL	4968.03	5273.41	5599.16	5945.16	6314.32
MGVCL	3316.92	3615.92	3941.53	4299.40	4690.36
PGVCL	5906.04	6229.86	6579.19	6958.57	7370.56
UGVCL	5157.34	5617.42	6144.92	6752.95	7454.80
<b>Total Revenue</b>	<b>19348.33</b>	<b>20736.61</b>	<b>22264.81</b>	<b>23956.08</b>	<b>25830.04</b>
<b>Expenditure other than Power Purchase : (B)</b>					
DGVCL	347.09	373.89	396.39	420.46	450.10
MGVCL	418.80	442.73	465.31	487.23	514.87
PGVCL	935.22	1,053.42	1,201.73	1,344.21	1,470.35
UGVCL	573.59	627.53	676.79	724.86	780.98
<b>Total Expenditure</b>	<b>2,274.70</b>	<b>2,497.56</b>	<b>2,740.22</b>	<b>2,976.77</b>	<b>3,216.30</b>
<b>Aggregate Amount Available with the DISCOM for Power Purchase : (A-B)</b>					
DGVCL	4620.94	4899.52	5202.77	5524.70	5864.22
MGVCL	2898.11	3173.19	3476.22	3812.17	4175.48
PGVCL	4970.82	5176.44	5377.46	5614.36	5900.21
UGVCL	4583.75	4989.90	5468.13	6028.08	6673.82
<b>Total Amount available for Power Purchase</b>	<b>17073.63</b>	<b>18239.05</b>	<b>19524.58</b>	<b>20979.31</b>	<b>22613.74</b>

#### **6.15.2 Calculation of Gap**

The difference between the net power purchase cost and the aggregate amount available for power purchase represents the gap. The gap is as shown below:



**Table 6.92 : Revenue Gap from FY 2011-12 to FY 2015-16**

(Rs. crore)					
Particulars	FY 2011-12	FY 2012-13	FY 2013-14	FY 2014-15	FY 2015-16
Total Power Purchase Cost (A)	17680.3	20434.03	22718.4	24295.43	27710.36
Aggregate Amount available for Power Purchase (B)	17073.63	18239.05	19524.58	20979.31	22613.74
<b>Gap (A-B)</b>	<b>606.67</b>	<b>2194.98</b>	<b>3193.82</b>	<b>3316.12</b>	<b>5096.62</b>

### 6.15.3 Allocation of Gap

The gap calculated above has been allocated among the various DISCOMs in the ratio of the energy sale (MU) of the respective companies to the sector total energy sale (MU). The percentage of sales of each DISCOM and the gap allocation for each DISCOM are given in the following tables.

**Table 6.93: Energy requirement and percentage of energy requirement**

Year	Energy requirement					Percentage of Energy requirement			
	DGVCL	MGVCL	PGVCL	UGVCL	Total	DGVCL	MGVCL	PGVCL	UGVCL
<b>FY 2011-12</b>	12371	8659	21694	17375	60099	20.58%	14.41%	36.10%	28.91%
<b>FY 2012-13</b>	13241	9447	22286	18548	63522	20.84%	14.87%	35.08%	29.20%
<b>FY 2013-14</b>	14053	10304	23063	19841	67261	20.89%	15.32%	34.29%	29.50%
<b>FY 2014-15</b>	14938	11213	23881	21343	71375	20.93%	15.71%	33.46%	29.90%
<b>FY 2015-16</b>	15928	12219	24901	22932	75980	20.96%	16.08%	32.77%	30.18%

**Table 6.94 : Allocation of Gap from FY 2011-12 to FY 2015-16**

(Rs. crore)

#### Allocation of Gap for FY 2011-12

Details	DGVCL	MGVCL	PGVCL	UGVCL
Total Gap for the year	606.67			
Ratio of Allocation of Gap	20.58%	14.41%	36.10%	28.91%
<b>Gap Allocated</b>	<b>124.88</b>	<b>87.41</b>	<b>218.99</b>	<b>175.39</b>

#### Allocation of Gap for FY 2012-13

Details	DGVCL	MGVCL	PGVCL	UGVCL
Total Gap for the year	2194.98			
Ratio of Allocation of Gap	20.84%	14.87%	35.08%	29.20%
<b>Gap Allocated</b>	<b>457.54</b>	<b>326.44</b>	<b>770.09</b>	<b>640.92</b>

#### Allocation of Gap for FY 2013-14

Details	DGVCL	MGVCL	PGVCL	UGVCL
Total Gap for the year	3193.82			
Ratio of Allocation of Gap	20.89%	15.32%	34.29%	29.50%
<b>Gap Allocated</b>	<b>667.29</b>	<b>489.27</b>	<b>1095.12</b>	<b>942.13</b>



**Allocation of Gap (Rs Crores) 2014-15**

Details	DGVCL	MGVCL	PGVCL	UGVCL
Total Gap for the year	3316.12			
Ratio of Allocation of Gap	20.93%	15.71%	33.46%	29.90%
<b>Gap Allocated</b>	<b>694.03</b>	<b>520.96</b>	<b>1109.52</b>	<b>991.61</b>

**Allocation of Gap for FY 2015-16**

Details	DGVCL	MGVCL	PGVCL	UGVCL
Total Gap for the year	5096.62			
Ratio of Allocation of Gap	20.96%	16.08%	32.77%	30.18%
<b>Gap Allocated</b>	<b>1068.43</b>	<b>819.63</b>	<b>1670.32</b>	<b>1538.24</b>

**6.15.4. Bulk Supply Tariff**

The allocated gap amount of each DISCOM has been added to the amount available for power purchase for that DISCOM and this amount has been divided by the number of units projected to be purchased by the DISCOM to arrive at BST at Rs/kWh. The details are given below:

**Table 6.95 : Bulk Supply Tariff**

(Rs. crore)

<b>Bulk Supply Tariff : 2011-12</b>	<b>DGVCL</b>	<b>MGVCL</b>	<b>PGVCL</b>	<b>UGVCL</b>
Amount available for Power Purchase	4620.94	2898.11	4970.82	4583.75
Gap Allocated	124.88	87.41	218.99	175.39
Power Purchase Cost for DISCOM	4745.82	2985.52	5189.81	4759.15
Energy Purchased by DISCOM	12371	8659	21694	17375
<b>Bulk Supply Tariff (Rs/KWh)</b>	<b>3.84</b>	<b>3.45</b>	<b>2.39</b>	<b>2.74</b>

<b>Bulk Supply Tariff : 2012-13</b>	<b>DGVCL</b>	<b>MGVCL</b>	<b>PGVCL</b>	<b>UGVCL</b>
Amount available for Power Purchase	4899.52	3173.19	5176.44	4989.90
Gap Allocated	457.54	326.44	770.09	640.92
Power Purchase Cost for DISCOM	5357.06	3499.63	5946.52	5630.82
Energy Purchased by DISCOM	13241	9447	22286	18548
<b>Bulk Supply Tariff (Rs/KWh)</b>	<b>4.05</b>	<b>3.70</b>	<b>2.67</b>	<b>3.04</b>

<b>Bulk Supply Tariff : 2013-14</b>	<b>DGVCL</b>	<b>MGVCL</b>	<b>PGVCL</b>	<b>UGVCL</b>
Amount available for Power Purchase	5202.77	3476.22	5377.46	5468.13
Gap Allocated	667.29	489.27	1095.12	942.13
Power Purchase Cost for DISCOM	5870.06	3965.49	6472.59	6410.26
Energy Purchased by DISCOM	14053	10304	23063	19841
<b>Bulk Supply Tariff (Rs/KWh)</b>	<b>4.18</b>	<b>3.85</b>	<b>2.81</b>	<b>3.23</b>



**Madhya Gujarat Vij Company Limited**  
**Truing up for FY 2009-10, APR for FY 2010-11,**  
**ARR for FY 2011-12 to FY 2015-16 and Tariff for FY 2011-12**

<b>Bulk Supply Tariff : 2014-15</b>	<b>DGVCL</b>	<b>MGVCL</b>	<b>PGVCL</b>	<b>UGVCL</b>
Amount available for Power Purchase	5524.70	3812.17	5614.36	6028.08
Gap Allocated	694.03	520.96	1109.52	991.61
Power Purchase Cost for DISCOM	6218.73	4333.13	6723.88	7019.69
Energy Purchased by DISCOM	14938	11213	23881	21343
<b>Bulk Supply Tariff (Rs/KWh)</b>	<b>4.16</b>	<b>3.86</b>	<b>2.82</b>	<b>3.29</b>

<b>Bulk Supply Tariff : 2015-16</b>	<b>DGVCL</b>	<b>MGVCL</b>	<b>PGVCL</b>	<b>UGVCL</b>
Amount available for Power Purchase	5864.22	4175.48	5900.21	6673.82
Gap Allocated	1068.43	819.63	1670.32	1538.24
Power Purchase Cost for DISCOM	6932.65	4995.11	7570.53	8212.06
Energy Purchased by DISCOM	15928	12219	24901	22932
<b>Bulk Supply Tariff (Rs/KWh)</b>	<b>4.35</b>	<b>4.09</b>	<b>3.04</b>	<b>3.58</b>

### 6.16. ARR for the control period FY 2011-12 to 2015-16

**6.16.1.** The Table below shows approval of Aggregate Revenue Requirement including power purchase cost of MGVCL for the control period FY 2011-12 to 2015-16.

**Table 6.96: ARR approved by the Commission for MGVCL from FY 2011-12 to FY 2015-16**  
(Rs. crore)

<b>Sl. No.</b>	<b>Particulars</b>	<b>FY 2011-12</b>	<b>FY 2012-13</b>	<b>FY 2013-14</b>	<b>FY 2014-15</b>	<b>FY 2015-16</b>
1	Cost of Power Purchase	2,985.52	3,499.63	3,965.49	4,333.13	4,995.11
2	Operation & Maintenance Expenses	300.43	317.61	335.78	354.99	375.29
2.1	Employee Cost	221.70	234.38	247.79	261.97	276.95
2.2	Repair & Maintenance	40.18	42.48	44.91	47.48	50.19
2.3	Administration & General Charges	38.55	40.75	43.08	45.55	48.15
2.4	Other Debits	9.07	9.07	9.07	9.07	9.07
2.5	Extraordinary Items	0.00	0.00	0.00	0.00	0.00
2.6	Net Prior Period Expenses / (Income)	0.00	0.00	0.00	0.00	0.00
2.7	Other Expenses Capitalised (-)	(54.00)	(57.00)	(61.00)	(64.00)	(68.00)
3	Depreciation	117.92	130.99	144.19	156.24	166.85
4	Interest & Finance Charges	52.41	45.42	36.99	26.74	21.00
5	Interest on Working Capital	0.00	0.00	0.00	0.88	5.09
6	Provision for Bad Debts	3.67	3.67	3.67	3.67	3.67
7	<b>Sub-Total [1 to 6]</b>	<b>3,415.02</b>	<b>3,949.39</b>	<b>4,434.19</b>	<b>4,820.72</b>	<b>5,508.08</b>
8	Return on Equity	70.22	73.87	77.53	80.55	82.82
9	Provision for Tax / Tax Paid	5.84	5.84	5.84	5.84	5.84
10	<b>Total Expenditure (7 to 9)</b>	<b>3,491.08</b>	<b>4,029.10</b>	<b>4,517.56</b>	<b>4,907.11</b>	<b>5,596.74</b>
11	Less: Non-Tariff Income	86.75	86.75	86.75	86.75	86.75
12	<b>Aggregate Revenue Requirement (10 - 11)</b>	<b>3,404.33</b>	<b>3,942.35</b>	<b>4,430.81</b>	<b>4,820.36</b>	<b>5,509.99</b>



## 6.17. Estimated Revenue Gap for FY 2011-12 for MGVCL

6.17.1. Based on the above, the estimated revenue gap for FY 2011-12 at existing tariff is as outlined in the table below:

**Table 6.97: Estimated Revenue Gap for FY 2011-12 at Existing Tariff for MGVCL**  
(Rs. crore)

Sl. No.	Particulars	Projected by MGVCL	Approved by the Commission
1	Aggregate revenue requirement	3523.00	3404.33
2	Revenue gap from True up of FY 2009-10	75.00	-
3	<b>Total Aggregate Revenue Requirement</b>	<b>3598.00</b>	<b>3404.33</b>
4	Revenue with existing tariff	2753.00	2745.53
5	PPPA charges @61 paise/kWh	441.00	436.39
6	Other income (Consumer related)	59.00	59.00
7	Agriculture Subsidy	80	76
8	<b>Total revenue including subsidy</b>	<b>3333.00</b>	<b>3316.92</b>
9	<b>Gap (3-8)</b>	<b>266.00</b>	<b>87.41</b>



## 7. Compliance of Directives

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### 7.1 Compliance of earlier Directives

The Commission, in its tariff order dated 31<sup>st</sup> March, 2010, had issued various directives to MGVCL, which has submitted a compliance report on the directives issued in the current petition for approval of ARR for the control period FY 2011-12 to FY 2015-16 and determination of tariff for FY 2011-12.

The Commission's comments on the status of compliance of the directives by MGVCL are given below. The Commission has also given fresh directives to the licensee, wherever required.

#### Directive 1: Consumption by agricultural pump sets

Petitioner is to accelerate the pace of metering. In order to achieve consumer buy-in for metering, the Petitioner should communicate with consumers, especially agriculture and consumers interior regions', highlighting the long-term benefits of metering. Further, submission of the report on agriculture consumption should be expedited.

#### Compliance:

The field offices are directed to coordinate actions to achieve the target of 100% metering, and in this regards to communicate with the consumers highlighting the long-term benefits of metering. Following sub-divisions are selected from each circle where all the consumers will be metered including Transformer centers. The present status as on Nov. 2010 is as under:

Sl. No.	Name of circle	Name of the sub-division	Total No. of consumers	Total No. of Distribution Transformers	Installations provided with meters as on November 2010	
1	Board OM	Koyali	31770	802	98.16	56.67
2	Anand	Sojitra	29645	610	98.73	56.64
3	Godhra	Dahod-R	57057	1183	98.73	56.64

The work of installation of DTR meters will be completed by the end of the year.





As regards study report on Ag Consumption covering all the DISCOMs, it is submitted that the work is assigned to M/s Feedback Ventures Pvt. Ltd., (FVPL). On receipt of the same, it will be submitted to Commission.

***Commission's comments***

*The progress of metering of consumers and distribution transformers is noted. Metering of balance distribution transformers shall be completed by end of the year as indicated in the compliance. The metering of all balance consumers shall also be expedited.*

**Directive 2: Distribution Loss**

The Commission directed to chalk out a comprehensive loss reduction program. During the Review Meeting dated 29.11.2010, the Commission appreciated the loss reduction measures taken by MGVCCL and results achieved. The Distribution loss calculation method was also appreciated and directed to submit the same.

**Compliance:**

The distribution loss reduction is on prime agenda of MGVCCL, and has received consistent results.

As desired by Commission, MGVCCL has conveyed the loss calculation method. The same is briefed as under:

The methodology adopted by MGVCCL is as follows:

DISCOMs receive power from:

1. Allocated generators measured at Interface points.

- The system of class of voltage 22KV/11KV and below is distribution system
- 33KV and above a Transmission system.
- The DISCOM receives power at 11KV side of the 66/11KV Power transformers installed at GETCO sub-stations located under respective DISCOM, i.e. called as interface points.

2. The energy being wheeled to recipient users situated under respective DISCOM area.



(As such the energy so generated and wheeled is adjusted in the monthly bill of the recipient users in terms of KWh units and hence does not reflect in assessment or revenue realized, the fact that the quantum of energy wheeled is catered through Distribution network the 1<sup>2</sup>R losses that DISCOM has to bear, could not be ignored.)

3. The wheeled energy quantum plays vital role especially where the quantum of wheeled energy is significantly large.

4. The larger the wheeled energy, higher the 1<sup>2</sup>R losses resulting on Distribution network, which if not taken in to account, would further result in to false Distribution losses.

It is also pertinent to add that because of the encouraging and incentivised policy of GoG the generation from Renewable resources, i.e. wind farm generators, biomass/gas and micro hydro plants has increased remarkably during last three years and thereby increased the burden and liability of DISCOM to cater the same across all recipient end users/consumers.

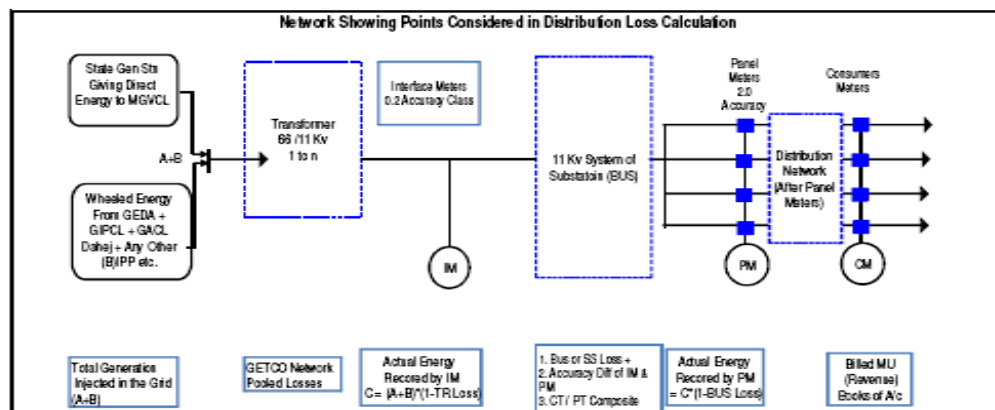
With above perception, for the sake of computing Distribution losses shall account the energy wheeled from CPPs/wind farms in to total energy received by DISCOMs at GETCO Interface points and also under energy sold out by DISCOM. The Distribution loss should therefore be computed as under:

$$\text{Distribution Loss} = (A-B) * 100$$

Where,

A = Total energy metered at GETCO Interface points including Wheeled Energy

B = Total energy metered at consumers' meters including Wheeled Energy



**Commission's comments:**

*Loss reduction mechanism taken by MGVL is appreciated. MGVL shall furnish the loss trajectory year-wise for the control based on the measures taken. The loss trajectory shall be furnished by November, 2011.*

**Directive 3: Jyoti Gram Yojna**

The MGVL shall report to the Commission to what extent the losses are reduced in each village / group of villages.

**Compliance:**

MGVL has chalked out long term as well as short term strategies to reduce the losses on JGY feeders, as follows:

**a. Long Term Strategies**

- System Improvement
- Feeder bifurcation
- Conductor renovation
- Distribution Transformer review
  - Augmentation/ de-augmentation
  - Load balancing
  - Taking DTR near the load centers
  - Pocket wise HVDS
- DTR Metering with complete Energy Accounting



**b. Short Term Strategies**

- A special task force to monitor distribution loss activities.
- Feeder Managers appointed
- Checking of consumption of consumers with help of PRT 176 is very much necessary.
- “0” consumption, “Faulty” meters as well s “Locked” consumers are found in huge nos. Regular Maintenance of Distribution Network
- Better Management of Distribution Transformers
- Load Balancing and Load Management

**Over all losses of JGY category in MGVCL are as under:**

Year	Sent MU	Sold MU	% loss
2008-09	1208.06	720.27	40.38
2009-10	1320.82	825.68	37.49
Sep-09	683.48	426.83	37.55
Sep-10	759.84	499.22	34.30

It can be seen that, year wise losses have reduced compared to previous periods. Moreover, total 141 feeders having high losses are closely monitored by the senior officers of the company. The losses of these feeders have also reduced year by year. The details are as under:

Year	Sent MU	Sold MU	Loss MU	% loss
2008-09	661.38	331.86	329.53	49.82
2009-10	696.68	363.37	333.31	47.84
Sep-09	338.09	178.85	159.25	47.10
Sep-10	376.72	214.42	162.30	43.08

Focused actions in the direction of reducing the losses in JGY category are being implemented and MGVCL has targeted to reduce the losses at optimum level.

***Commission's comments:***

*The loss reduction achieved in JGY category are noted. The programme for loss reduction for FY 2011-12 and FY 2012-13 shall be furnished by December, 2011.*

**Directive 4: Cent percent metering and replacement of meters**

100% metering is required for proper energy accounting, determination of exact cost of supply and determination of subsidy. MGVCL shall improve the status of metering of agricultural consumers and replacement of old meters.



**Compliance:**

There are two aspects:

- Providing meters on un-metered AG consumers
- Replacement of Non-working/ Faulty / old conventional meters / by static meters

**1. Providing meters on un-metered AG consumers**

As of September-10, out of 68705 Ag consumers, only 26116 consumers are un-metered which amounts to 1.01% of the total consumers served by MGVCCL. While MGVCCL is keen to achieve 100% metering for all the categories of consumers, the feedback from field offices indicate that the inhibitions of Agricultural consumers to the effect that the installation of meters will vitiate their present mode of HP based billing needs to be addressed.

MGVCCL is working on these aspects.

**2. Replacement of Non-working/ Faulty / old conventional meters / by static meters**

Planning of MGVCCL up to 2013 is as under:

Sl. No.	Particulars	FY 2010-11	FY 2011-12	FY 2012-13
1	Replacement of non-working / faulty meters and replacement of conventional meters by high precision meters	184560	184560	184560
2	New connections to be released	120000	120000	120000
	Total	313265	313265	313265

Since the un-replaced meters become non working / defective the figure of such meters is dynamic and MGVCCL strives to reduce the replacement period once the meter is identified as non working/ defective. We have ensured that the priority should be given to high revenue consumers and therefore 3 phase non working/ defective meters are pegged to nearly zero.

MGVCCL is also taking appropriate steps to step up the procurement of new meters to further reduce the number of non-working/ defective meters.



***Commission's comments:***

*The programme for one hundred percent metering of all consumers and replacement of defective / non-functioning meters for FY 2011-12 and by 2012-13 shall be furnished by November, 2011.*

**Directive 5: Allocation of PPAs**

The allocation of PPAs shall be firmed up at the earliest.

**Compliance:**

Distribution Companies are allocated their PPAs from 5th April, 2010. PPA allocation is reviewed and revised as and when new capacity addition is there or based on the requirement of the Discoms.

Since paying capacity of four distribution companies is different on account of different consumer mix and load, permanent allocation of PPA may distort the requirement of ARR and consequently tariffs. Therefore, PPA allocation shall be a dynamic exercise in which allocation will undergo changed very frequently. Hence, in the tariff petitions, power purchase cost is allocated by GUVNL out of the total pooled power purchase cost and not any PPA specific.

***Commission's comments:***

*The concept of bulk purchase of power by GUVNL and sale to DISCOMs and charging to DISCOMs at differential tariff now being implemented is noted.*

**Directive 6: Transformer failure**

The transformer failures have marginally gone up during 2007-08. Transformer failures shall be reduced.

**Compliance:**

The Commission has appreciated the reduction in transformer failure rate. The transformer failure rate is reduced from 13.01% in the year 2005-06 to 5.06% for the year 2009-10. As on Oct. 2010, the failure rate is 3.69%.

***Commission's comments:***

*The steps taken for reduction for distribution transformer failure are appreciated. It should be brought to below 1.0%.*



**Directive 7: Timely meter reading process**

The MGVL shall provide details of the internal processes and procedures which are put in place to ensure that meter readers read the meters on time. It shall also provide the details of the process taken to correct the discrepancies if found any.

**Compliance:**

The MGVL submitted that the Commission has noted the compliance submitted by MGVL in their petition for ARR for FY 2010-11.

**Commission's comments:**

*The MGVL is directed to submit a report that whether the measures taken are giving satisfactory results in reducing the consumer complaints and improving the revenue realization by November, 2011.*

**Directive 8: Theft cases**

The MGVL is directed to submit details of number of theft cases reported and status of penal action taken in its petition. Further, it shall also submit the total amount recovered from such consumers.

**Compliance:**

The updated details are as under:

Details of cases registered under Section 125			Details of cases registered under Section 135		
Financial Year	Total cases	Total Asst. (Rs. crore)	Financial Year	Total cases	Total Asst. (Rs. crore)
2009-10	2443	1.2874	2009-10	4904	5.4452
2010-11 (Upto to September 2010)	849	0.8715	2010-11 (Upto September 2010)	1612	2.2099

**Commission's comments:**

*Compliance is noted. Quarterly report may be submitted on details of theft loss and action taken.*



**Directive 9: Financial figures in crores**

The Commission has directed to submit all financial figures in its future ARR and APR petitions in units of Rupees crores.

**Compliance:**

All future APR & ARR petitions of the Company will be filed with the unit of Rupees crores.

***Commission's comments:***

*Compliance is noted.*

**Directive 10: O&M expenses estimation**

The Commission had directed that MGCVCL to include the estimated expenses of the following items of the ARR into O&M expenses.

- Other Debits
- Extraordinary Items
- Net Prior Period Expenses / (Income)
- Other Expenses Capitalized

**Compliance:**

Directive of the Commission is noted and petition is submitted accordingly.

***Commission's comments:***

*Compliance is noted.*

**Directive 11: Depreciation calculation**

The MGCVCL has calculated the depreciation by applying the new rates on the total gross assets without segregating the assets as mentioned in Clause 17 of CERC (Terms and Conditions of Tariff) Regulations, 2009. MGCVCL is directed to submit the recomputed depreciation as per clause 17 during the truing-up of FY 2009-10.

**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 31<sup>st</sup> 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 of transfer scheme where in the Government had vested assets to MGVL and thereafter also notified opening balance-sheet mentioning the gross values of such assets and accumulated depreciation.

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.

MGVL has started commercial operation w.e.f. 01/04/2005. For Aggregate Revenue Requirement petition filing, MGVL has provided depreciation at the rates notified by CERC/GERC applicable from time to time. 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 on block of assets which have been added in the asset-grouping after 01.04.2005 and thereafter the remaining depreciation will be on the balance useful life of the assets. In case of existing projects, the balance depreciable value after 12 years from 01.04.2005 will be worked out after deducting cumulative depreciation claimed till 31.03.2017 and will be spread on the balance useful life of the assets.

Therefore, the Commission is requested to allow MGVL 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 workout the depreciation on the balance useful life of the assets.

***Commission's comments:***

*The proposed computation is accedepeted.*

**Directive 12: Segregation of total loans**

The MGVCL is directed to segregate the total loans between loans utilized for financing the working capital and loans used for incurring capital expenditure in future petitions.

**Compliance:**

The said directive is noted and in the next ARR, same will be included accordingly.

***Commission's comments:***

*Compliance is noted.*

**7.2 Fresh Directives**

**Directive 1: Category-wise cost-to-serve (Cost of supply)**

Some of the stakeholders pointed out that the DISCOMs have not implemented the category-wise cost-to-serve as required under, section 61 of the Electricity Act, 2003. The DISCOM has submitted that the cost to serve report for FY 2009-10 is under preparation.

The DISCOM is directed to submit the report on category-wise, cost-to-serve report by November, 2011.

**Directive 2: Poor quality of supply and poor voltages**

Some of the stakeholders have complained during the public hearing and also in written submission that quality of supply and the voltages are poor, particularly, in the case of power supply to agricultural consumers.

The DISCOM is directed to ensure quality power supply with proper voltages to all categories of consumers particularly to consumers at tail end of feeders by providing required reactive compensation etc.



**Directive 3: L&T Meters**

While responding to a complaint by some of the stakeholders during the public hearing and through written submission on the functioning of L&T meters, the DISCOM has responded that the issue is 'sub-judice'. The DISCOM is directed to submit the report on the nature of complaint by the consumers and the present status of the case.

**Directive 4: Interest on Capital investment for agricultural connections / extension**

Some of the stakeholders have suggested that the State Government shall be asked to bear the burden of interest on capital investment on agricultural extensions and connections.

The DISCOM is directed to submit a report on the sources of funding for the extension of supply to agricultural consumers and service connections, and the costs and the interest on such investments, and how the interest on such investments is treated.

**Directive 5: Distribution losses**

It is pointed out by a number of stakeholders that the DISCOMs have not segregated the technical and commercial losses and the burden of commercial losses is being passed on to all consumers.

The DISCOM is directed to get the technical and commercial losses segregated by conducting proper energy audit. Such segregation is necessary as the measures required to be taken for the two types of losses are different.

Action taken shall be reported to the Commission by November, 2011.

## 8. Fuel and Power Purchase Price Adjustment

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### 8.1 Fuel Price and Power Purchase Price Adjustment

The Commission had approved the formula for Fuel Price and Power Purchase Cost Adjustment vide order, under Case No.2 of 2003 dated 25<sup>th</sup> June, 2004.

The MGVL in its MYT tariff petition for FY 2011-12 to FY 2015-16 has submitted that the entire procurement of power by DISCOMs is through GUVNL, which purchases power from GSECL and other sources. Therefore, power purchased by GUVNL/DISCOMs from GSECL power stations is also purchase of power, like purchase of power from other sources. Hence, it would not be appropriate to have separate fuel component for increase in fuel cost of GSECL stations in the formula. It is therefore, requested to have one component in the formula for variation in power purchase price including power purchase from GSECL owned stations.

The tariff for the entire power purchased by GUVNL / DISCOMs is determined / approved by the appropriate Commission and hence the entire power procurement by GUVNL / DISCOMs is purchase of power only.

### 8.2 Power Purchase Price Adjustment (FPPPA)

It is submitted by MGVL that the incremental cost paid by the GUVNL/DISCOMs compared to the base year for purchase of power from various sources is to be recovered by DISCOMs as per Power Purchase Price Adjustment mechanism. The proposed formula for calculation of per unit power purchase price adjustment charges is as follows:

$$\text{FPPPA} = [(\text{PPCA}-\text{PPCB})]/1-(\text{A})$$

<b>PPCA</b>	Is the average power purchase cost per unit of delivered energy, computed based on the operational parameters approved by the Commission or principles laid down in the power purchase agreements in Rs. / KWh for all the generating stations who have supplied power in the given quarter, calculated as total power purchase cost billed in Rs. Million divided by the total quantum of power purchase in million units made during the quarter.
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**Madhya Gujarat Vij Company Limited**  
**Truing up for FY 2009-10, APR for FY 2010-11,**  
**ARR for FY 2011-12 to FY 2015-16 and Tariff for FY 2011-12**

<b>PPCB</b>	Is the approved average base power purchase cost per unit of delivered energy for all the generating stations considered by the Commission for supplying power to the company in Rs. / KWh, calculated as the total power purchase cost approved by the Commission in Rs. Million divided by the total quantum of power purchase in million units considered by the Commission.
<b>LA</b>	Is the weighted average of the approved level of Transmission and Distribution losses for the four Discoms applicable for a particular quarter.

The MGVL has also furnished the contracted capacity from each source, the total fixed cost and the variable cost / kWh for central generating stations, IPPs, GSECL for the year FY 2011-12 as given below:

**Table 8.1: Existing capacity allocation to GUVNL for FY 2011-12**

Stations	Rated Capacity allocated to GUVNL (MW)	Auxiliary Consumption (%)	FC Approved MYT (Rs. crores)	VC (Rs./Unit)
<b>GSECL Plants</b>				
Ukai TPS	850	9	247	1.71
Ukai Hydro	305	1	24	0.00
Gandhinagar I to IV	660	10	266	2.38
Gandhinagar V	210	9	97	2.13
Wanakbori I to VI	1260	9	366	2.11
Wanakbori VII	210	9	95	2.02
Wanakbori Expansion	800	9	673	1.60
Sikka TPS	240	11	122	2.77
Kutch Lignite I to III	215	12	222	1.18
Kutch Lignite IV	75	12	129	1.11
Dhuvaran oil	-	-	-	-
Kadana Hydro	242	1	61	0.00
Utran Gas Based	135	4	52	2.37
Dhuvaran Gas Based - Stage-I	107	3	56	2.41
Dhuvaran Gas Based - Stage-II	112	3	67	2.39
Utran Extension	375	3	291	2.07
Ukai Expansion 6	500	9	401	1.54
Sikka 3 & 4	500	9	401	1.99
Dhuvaran CCPP Ext - 3	360	3	329	3.39
<b>Total of GSECL plants</b>	<b>7156</b>		<b>3899</b>	
<b>IPPs</b>				
ESSAR	300	3	251	2.95
GPEC	655	3	515	2.40
GIPCL II (160)	165	3	54	1.95
GIPCL-SLPP	250	10	158	1.14
GSEG	156	3	126	1.77



**Madhya Gujarat Vij Company Limited**  
**Truing up for FY 2009-10, APR for FY 2010-11,**  
**ARR for FY 2011-12 to FY 2015-16 and Tariff for FY 2011-12**

<b>Stations</b>	<b>Rated Capacity allocated to GUVNL (MW)</b>	<b>Auxiliary Consumption (%)</b>	<b>FC Approved MYT (Rs. crores)</b>	<b>VC (Rs./Unit)</b>
GIPCL - I (145)	42	3	23	2.15
GIPCL Addition	500	10	315	1.14
GMDC - Akrimota	250	10	203	0.74
GSEG Expansion	351	4	238	5.00
GIPCL, Expansion	250	10	158	1.14
GSPC-Pipavav	700	4	473	5.00
BECL	500	11	390	1.20
<b>Total of IPPs</b>	<b>4119</b>		<b>2903</b>	
<b>SHARE FROM CENTRAL SECTOR</b>				
NPC - Tarapur- 1&2	160	10	-	0.95
NPC - Kakrapar	125	13	-	2.19
NPC kakrapar addition	476	13	-	2.89
NPC - Tarapur- 3&4	274	10	-	2.32
NTPC - Lara	140	9	170	1.31
NTPC - KORBA	360	8	74	0.76
NTPC - VINDHYACHAL - I	230	9	58	1.27
NTPC - VINDHYACHAL - II	239	8	98	1.23
NTPC - VINDHYACHAL - III	266	8	165	1.21
NTPC - KAWAS	187	3	75	2.32
NTPC - JHANOR	237	3	132	2.14
NTPC - Sipat Stage-I	540	8	421	0.88
SSNNL - Hydro	232	1	-	2.05
NTPC - Kahalgaon (New)	141	8	172	1.78
NTPC - Sipat Stage-II	273	7	192	0.88
NTPC-Mauda STPS-I	240	7	242	0.89
NTPC - Barh STPS-I	260	7	169	0.81
NTPC - Vindhyachal STPS-IV	240	7	287	0.87
NTPC - Barh STPS-II	174	7	102	0.89
NTPC-Mauda STPS-II	240	7	470	1.05
NTPC - KORBA II	96	7	102	0.72
Mundra UMPP	1805	-	1448	0.91
Tilaiya UMPP	300	-	143	0.95
<b>Total from Central Sector</b>	<b>7235</b>		<b>4522</b>	
<b>OTHERS</b>				
Captive Power Plant (MU)	8	-	-	3.64
<b>Renewable</b>				
Wind Farms (1.75)	22			1.75
Wind Farms (3.37)	782			3.37
Wind Farms (3.56)	229			3.56
Solar Photovoltaic	944			15.00
Solar Thermal	25			11.00
Biomass	30			4.40
Hydro	9			3.52
<b>Competitive Bidding</b>				
APPL	2000		1634	1.43
Aryan	200		226	0.55



Stations	Rated Capacity allocated to GUVNL (MW)	Auxiliary Consumption (%)	FC Approved MYT (Rs. crores)	VC (Rs./Unit)
Essar - 1000 MW	1000		820	1 .27
Wardha Power - KSK Mahanadi Power Co	1010		1023	0 .62
Essar - 800 MW	800		798	1 .38
Shapoorji Pallonji	800		798	1 .38

### Commission's decision

The Commission has examined the request of MGCVCL. It is considered that the formula approved by the Commission covers both fuel price adjustment and power purchase adjustment components and could be applied to the extent required for fuel price adjustment or power purchase adjustment or both.

The FPPPA formula approved by the Commission in the order dated 25<sup>th</sup> June, 2004 is given below:

$$FPPPA = [ F_{OG} + PPP_1 + PPP_2 ] \div [S.E.]$$

Where,

$$F_{OG} = \sum_{n=1}^k [ (H_B \times OGD_A) \times (Fuel C_A - Fuel C_B) ]$$

Where,

$F_{OG}$	Adjustment on account of variations in delivered cost of Fuel at GEB's Thermal Power Stations Rs. in millions
$n$	1 to k, the thermal power stations in GEB. Details at Table-8.
$OGD_A$	is the actual level of delivered energy at the bus bar (net generation) from GEB's thermal plants in million units during the control period.
$H_B$	is the base station heat rate in K.Cal./ Kwh calculated on the net output using permitted auxiliary consumption (Table -8)
$FuelC_A$	is the new landed price of fuel at relevant GEB's generating stations, expressed in Rs. / Kcal calculated after <b><u>allowing only statutory / notified increases (or decreases) in the price of fuel/railway freight, taxes and duties on fuel as well as fuel price increase by central/state Government PSUs.@</u></b>
$FuelC_B$	is the base## landed price of fuel at relevant GEB's generating



	stations, expressed in Rs. / Kcal calculated using the base data. This parameter is constant (frozen) for the various quarters (periods) for which increases in fuel prices is being permitted.
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$$PPP_1 = \sum_{m=1}^k [(VC_A - VC_B) \times Q_A] ;$$

Where,

<b>PPP<sub>1</sub></b>	Adjustment on account of variable cost of power purchased in Rs. Millions
<b>m</b>	1 to k, the sources from which power is purchased
<b>VC<sub>A</sub></b>	Is the variable cost per unit of delivered energy, computed based on the principles laid down in the power purchase agreements in Rs. / KWh
<b>VC<sub>B</sub></b>	Is the base ## variable cost per unit of delivered energy from each source in Rs. / KWh
<b>Q<sub>A</sub></b>	Is the actual level of power purchases from each source in million units.

## Base year for this order is Financial Year 2003-04

$$PPP_2 = \sum_{m=1}^k [(FC_A - FC_B)]$$

Where,

<b>PPP<sub>2</sub></b>	Adjustment on account of fixed cost of power purchased in Rs. Millions
<b>m</b>	1 to k, the sources from which power is purchased
<b>FC<sub>A</sub></b>	Is the actual fixed cost paid in Rs. Millions
<b>FC<sub>B</sub></b>	Is the base ## fixed costs payable in Rs. Millions

## Base year for this tariff order is Financial Year 2003-04

and

$$S.E.(in MU) = [(Total Sales in MU + Excess T \& D loss in MU)]$$

Where,

Total Sales = Actual energy sold to metered categories in MU + Estimated energy supplied to un-metered consumers based on norms approved, in MU

Excess T & D loss in MU=

$$\{[(Net Generation in MU + Power Purchase in MU - Total sales in MU)] - \\ \{[(Net Generation in MU + Power Purchase in MU) \times (\%T \& D loss Norm)]\}$$





Where,

%T & D loss Norm = % T & D loss level approved by the Commission.

### 8.3 Base price of fuel of GSECL stations

The Commission has approved the operational parameters for each source / station variable cost / kWh, total fixed cost for GSECL central generating stations, IPPs and others for the FY 2011-12 as given below:

Stations	Rated Capacity allocated to GUVNL (MW)	Auxiliary Consumption (%)	FC Approved MYT (Rs. Crores)	VC (Rs./Unit)
<b>GSECL Plants</b>				
Ukai TPS	850	9	246.64	1.710
Ukai Hydro	305	1	24.42	0.000
Gandhinagar I to IV	660	10	266.37	2.375
Gandhinagar V	210	9	97.24	2.130
Wanakbori I to VI	1260	9	365.37	2.108
Wanakbori VII	210	9	94.58	2.022
Wanakbori Expansion	800	9	673.00	1.600
Sikka TPS	240	11	121.68	2.769
Kutch Lignite I to III	215	12	221.50	1.181
Kutch Lignite IV	75	12	129.34	1.109
Dhuvaran oil	-	-	-	-
Kadana Hydro	242	1	61.45	0.00
Utran Gas Based	135	4	51.88	2.367
Dhuvaran Gas Based-Stage-I	107	3	56.17	2.411
Dhuvaran Gas Based-Stage-II	112	3	67.41	2.388
Utran Extension	375	3	290.98	2.071
Ukai Expansion 6	500	9	401.00	1.540
Sikka 3 & 4	500	9	401.00	1.990
Dhuvaran CCPP Ext - 3	360	3	329.00	3.390
<b>Total of GSECL plants</b>	<b>7156</b>		<b>3899.42</b>	
<b>IPPs</b>				
ESSAR	300	3	251	2.95
GPEC	655	3	515	2.40
GIPCL II (160)	165	3	54	1.95
GIPCL-SLPP	250	10	158	1.14
GSEG	156	3	126	1.77
GIPCL - I (145)	42	3	23	2.15
GIPCL Addition	500	10	315	1.14
GMDC - Akrimota	250	10	203	0.74
GSEG Expansion	351	4	238	5.00



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**Truing up for FY 2009-10, APR for FY 2010-11,**  
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GIPCL, Expansion	250	10	158	1.14
GSPC-Pipavav	700	4	473	5.00
BECL	500	11	390	1.20
<b>Total of IPPs</b>	<b>4119</b>		<b>2903</b>	
<b>SHARE FROM CENTRAL SECTOR</b>				
NPC - Tarapur- 1&2	160	10	-	0.95
NPC - Kakrapar	125	13	-	2.19
NPC kakrapar addition	476	13	-	2.89
NPC - Tarapur- 3&4	274	10	-	2.32
NTPC - Lara	140	9	170	1.31
NTPC - KORBA	360	8	74	0.76
NTPC - VINDHYACHAL - I	230	9	58	1.27
NTPC - VINDHYACHAL - II	239	8	98	1.23
NTPC - VINDHYACHAL - III	266	8	165	1.21
NTPC - KAWAS	187	3	75	2.32
NTPC - JHANOR	237	3	132	2.14
NTPC - Sipat Stage - I	540	8	421	0.88
SSNNL - Hydro	232	1	-	2.05
NTPC - Kahalgaon (New)	141	8	172	1.78
NTPC - Sipat Stage-II	273	7	192	0.88
NTPC - Mauda STPS-I	240	7	242	0.89
NTPC - Barh STPS-I	260	7	169	0.81
NTPC - Vindhyachal STPS-IV	240	7	287	0.87
NTPC - Barh STPS-II	174	7	102	0.89
NTPC - Mauda STPS-II	240	7	470	1.05
NTPC - KORBA II	96	7	102	0.72
Mundra UMPP	1805	-	1448	0.91
Tilaiya UMPP	300	-	143	0.95
<b>Total from Central Sector</b>	<b>7235</b>		<b>4522</b>	
<b>OTHERS</b>				
Captive Power Plant (MU)	8	-	-	3.64
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Wind Farms (3.56)	229			3.56
Solar Photovoltaic	944			15.00
Solar Thermal	25			11.00
Biomass	30			4.40
Hydro	9			3.52
<b>Competitive Bidding</b>				
APPL	2000		1634	1.43
Aryan	200		226	0.55
Essar - 1000 MW	1000		820	1.27



<b>Stations</b>	<b>Rated Capacity allocated to GUVNL (MW)</b>	<b>Auxiliary Consumption (%)</b>	<b>FC Approved MYT (Rs. Crores)</b>	<b>VC (Rs./Unit)</b>
Wardha Power - KSK Mahanadi Power Co	1010		1023	0 .62
Essar - 800 MW	800		798	1 .38
Shapoorji Pallonji	800		798	1 .38

GUVNL may claim the increase in the power purchase cost in accordance with the formula approved by the Commission in June, 2004 and minor changes introduced by the order dated 5<sup>th</sup> May, 2006 and pass on the claim for payment to the DISCOM to be recovered from the consumers as per orders of the Commission from time to time.

**8.4** Base FPPPA charge is fixed at 61 paise/unit.

Information regarding FPPPA recovery and the FPPPA calculations submitted to the Commission for approval shall be kept on website of the Licensee / GUVNL as and when such proposal is submitted by the Licensee / GUVNL.

For any increase in FPPPA beyond ten (10) paise per kWh in a quarter, prior approval of the Commission shall be necessary, and only on approval of such increase by the Commission, the FPPPA can be billed to the consumers.

For any claim of FPPPA, the documents for approval of FPPPA shall be submitted to the Commission within one month from end of the relevant quarter.



## 9. Wheeling charges and cross subsidy surcharge

### 9.1 Allocation matrix

Regulations 88.1 of MYT Regulations, 2011 of GERC stipulates that the Commission shall specify the wheeling charges of distribution wires business of the distribution licensees in its ARR and Tariff Order.

The MGVCCL has provided the allocation matrix for allocation of costs between wires business and retail supply business as notified in the GERC (MYT) Regulations, 2011 (Regulation 81.1) as shown in the table below:

**Table 9.1 Allocation matrix for segregation of wheeling and retail supply for MGVCCL for the FY 2011-12**

Sl. No.	Allocation Matrix	Wire Business	Retail Supply Business
1	Power Purchase Expenses	0%	100%
2.1	Employee expenses	60%	40%
2.2	Repair & Maintenance expenses	90%	10%
2.3	Administration & General Expenses	50%	50%
2.4	Other Debits	50%	50%
2.5	Extraordinary Items	50%	50%
2.6	Net Prior Period Expenses / (Income)	25%	75%
2.7	Other Expenses Capitalised	55%	45%
3	Depreciation	90%	10%
4	Interest & Finance charges	90%	10%
5	Interest on Working Capital & Security Deposit	10%	90%
6	Bad debts written off	0%	100%
7	Income tax	90%	10%
8	Return on Equity	90%	10%
9	Non tariff income	10%	90%

It is further submitted that the allocation for other debits, extraordinary items, net prior period expenses (income), with expenses capitalized has been done as per the weighted average expense of wires and retail supply business in these elements (as per the audited accounts for FY 2009-10).

Based on the above allocation the approved ARR for wires business and retail supply business are computed for MGVCCL for FY 2011-12.



**Table 9.2: Allocation of ARR between wheeling and retail supply business for MGVL for FY 2011-12.**

Sl. No.	Particulars	FY 2011-12	Wire Business	Retail Supply Business
1	Cost of Power Purchase	2985.52	0.00	2985.52
2	Operation & Maintenance Expenses	0.00		
2.1	Employee Cost	221.70	133.02	88.68
2.2	Repair & Maintenance	40.18	36.16	4.02
2.3	Administration & General Charges	38.55	19.28	19.28
2.4	Other Debits	9.07	4.54	4.54
2.5	Extraordinary Items	0.00	0.00	0.00
2.6	Net Prior Period Expenses / (Income)	0.00	0.00	0.00
2.7	Other Expenses Capitalised (-)	(54.00)	(29.70)	(24.30)
3	Depreciation	117.92	106.13	11.79
4	Interest & Finance Charges	52.41	47.17	5.24
5	Interest on Working Capital	0.00	0.00	0.00
6	Provision for Bad Debts	3.67	0.00	3.84
7	<b>Sub-Total [1 to 6]</b>	<b>3415.02</b>	<b>316.59</b>	<b>3098.60</b>
8	Return on Equity	70.22	63.20	7.02
9	Provision for Tax / Tax Paid	5.84	5.26	0.58
10	<b>Total Expenditure (7 to 9)</b>	<b>3491.08</b>	<b>385.04</b>	<b>3106.21</b>
11	Less: Non-Tariff Income	86.75	8.68	78.08
12	<b>Aggregate Revenue Requirement (10-11)</b>	<b>3404.33</b>	<b>376.37</b>	<b>3028.13</b>
13	Less: other income consumer related	59.00	5.90	53.10
14	<b>Net ARR</b>	<b>3345.33</b>	<b>370.47</b>	<b>2975.03</b>

## 9.2 Wheeling charges

The wheeling charges for the four Distribution Companies, DGVCL, MGVL, PGVCL and UGVCL for the FY 2011-12, the first year of the control period (FY2011-12 to FY 2015-16) as given below are applicable for use of the distribution system of a licensee by other licenses or generating companies or captive power plants or consumers / users who are permitted open access under section 42 (2) of the Electricity Act, 2003.

Sl.No.	Particulars	Units	Amount
1	Distribution costs of the four DISCOMs	Rs. crore	2020.89
2	Distribution cost of the four DISCOMs at 11 kV level (30% of total distribution cost)	Rs. crore	606.27
3	Energy input at 11 kV	MU	56687
4	Wheeling charges at 11 kV	Ps./kWh	11
5	Wheeling charges at 400 V (LT)	Ps./kWh	39



Detailed computation of wheeling charges is shown in the Annexure-9.1.

### **Distribution losses**

**The distribution loss at 11 kV and 400 V during FY 2011-12 are given below:**

<b>Particulars</b>	<b>Point of energy delivered</b>	
	11 kV	400 Volts
11 kV, 22 kV and 33 kV	10%	18.73%
400 Volts	-	13.64%

**The losses in HT and LT network are 10% and 13.59% respectively, with respect to energy input to the segment of the system. In case injection at 11 kV levels and drawal at LT level envisages use of both the networks i.e. 11 kV and LT, in that case, the combined loss works out to 18.69% of the energy injection at 11 kV network.**

The above wheeling charges payable shall be uniform in all the four distribution companies, DGVCL, MGVCL, PGVCL and UGVCL.

## **9.3 Cross subsidy charges**

**The cross subsidy surcharge is based on the formula given in the Tariff Policy as below:**

$$S = T - [ C(1+L/100) + D ]$$

Where,

**S** is the surcharge

**T** is the Tariff payable by the relevant category of consumers;

**C** is the Weighted average cost of power purchase of top 5% at the margin excluding liquid fuel based generation and renewable power

**D** is the Wheeling charges

**L** is the System losses for the applicable voltage level, expressed as percentage.

The cross subsidy surcharge based on the above formula is worked out as shown in the Table below:



**Table 9.3: cross subsidy surcharge for FY 2011-12**

Sl. No.	Particulars	HT Industry
1	T	Rs. 5.41/kWh
2	C	Rs. 4.46/kWh
3	D	11 paise/kWh
4	L	10%
5	S= cross subsidy surcharge	39 Ps/kWh

### Computation

#### 1. Discom Average HT Tariff

Particulars	Average HT Tariff (Rs./kwh)	FPPPA (Rs./kwh)	Total (Rs./kwh)
HT industry	4.80	0.61	5.41

#### 2. Wt. average Power Purchase cost of top 5% at the margin excluding fuel base generation and renewable power.

Stations	Energy procured (MU)	Avg. Rate (Rs./kWh)	Total cost of power (Rs. cr.)
ESSAR	1028	4.91	504.75
GPEC	1663	4.25	706.78
SIKKA	314	4.07	127.80
Total	3005		1339.33

Average power purchase cost =  $(1339.33/3005)*10$  = Rs. 4.46 /kWh

#### Cross Subsidy Surcharge

H.T             $S=5.41-[4.46(1+10/100)+0.11]$  = Rs.0.39 / kWh



## Annexure 9.1

### Computation of Wheeling charges

Sl. No.	Particulars	Unit	DGVCL	MGVCL	PGVCL	UGVCL	Total
1	Distribution		325.43	370.47	824.13	500.87	2020.89
	(a) 11 kV level (at 30%)	Rs. crore	97.63	111.14	247.24	150.26	606.27
	(b) LT level (at 70%)	Rs. crore	227.80	259.33	576.89	350.61	1414.63
2	Energy input at DISCOM periphery	MU	11720.00	8198.00	20452.00	16317.00	56687.00
<b>3</b>	<b>Wheeling charges at 11 kV 1(a/2)*1000</b>	<b>Ps./kWh</b>	<b>8.33</b>	<b>13.56</b>	<b>12.09</b>	<b>9.21</b>	<b>10.70</b>
4	11 kV losses (@10%)	MU	1172.00	819.80	2045.20	1631.70	5668.70
5	Sales at 11 kV	MU	4093.00	2921.00	4099.00	3639.00	14752.00
6	Energy input at LT (MU) (2-(4+5))	MU	6455.00	4457.20	14307.80	11046.30	36266.30
<b>7</b>	<b>Wheeling charges at LT (1(b)/6)*1000</b>	<b>Ps./kWh</b>	<b>35.29</b>	<b>58.18</b>	<b>40.32</b>	<b>31.74</b>	<b>39.01</b>
8	Sales at LT level	MU	6190.00	4232.00	10422.00	10475.00	31319.00
9	LT loss (6-8)	MU	265.00	225.20	3885.80	571.30	4947.30
		%	4.11	5.05	27.16	5.17	13.64
10	Total losses (4+9)	MU	1437.00	1045.00	5931.00	2203.00	10616.00
		%	12.26	12.75	29.00	13.50	18.73





## 10. Tariff philosophy and Tariff Proposals

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### 10.1 Introduction

The Commission has been guided by the provisions of the Electricity Act, 2003, the National Electricity Policy (NEP), the Tariff Policy, the Regulations on Terms and Conditions of Tariff issued by the Central Electricity Regulatory Commission (CERC) and the Regulations on Terms and Conditions of Tariff, 2005 and MYT Regulations, 2011 notified by the Commission.

Section 61 of the Act lays down the broad principles and guidelines for determination of retail supply tariff. The basic principle is to ensure that tariff should progressively reflect the cost of supply of electricity and reduce the cross subsidies amongst categories within a period to be specified by the Commission.

The Commission notified the Multi-Year Tariff (MYT) Framework for determination of tariff on 22<sup>nd</sup> March 2011. The ARR approved in this order is for the control period FY 2011-12 to FY 2015-16 and the retail supply tariffs are determined for FY 2011-12, the first year of the control period.

The Commission has carried forward the process of rationalization of tariff in order to ensure that the tariffs reflect, as far as practicable, the cost of supply. The Commission has also tried to address operational and field level issues – keeping in view the interest of consumers – while nationalizing the tariff structure.

For example, tariff rate commonly known as commercial tariff was applied to commercial establishments in respect of lighting and fan. Such establishments had to pay at the industrial rate in respect of motive power. A consumer had to keep two meters, which means avoidable cost and inconvenience to both the consumer and the utility. The commercial tariff was also applied to a range of consumers including shops, restaurants, theatres, IT units, telecom units, and even offices, hospitals and educational institutions. In other words, it was applied to almost the entire service sector. In recent times, the structure of the economy has changed; the tertiary or



service sector has been playing a dominant role in economic growth. In the context of development policy, a number of such activities are treated as industrial activities and given priority. Thus, the tariff structure, which was designed in the past, has become anachronistic; in practice and very often it become difficult to distinguish between industrial activities and so called commercial activities, which are mostly service activities at present. This also results in confusion and ambiguity for field level officials of the utilities. In order to address these issues, the Commission has restructured the tariff in respect of High Tension power supply in the tariff order of 31<sup>st</sup> March 2010. It greatly helped to simplify the processes and procedures, particularly in field and was well received by the utilities and consumers. As a sequel to the process of rationalization, the Commission has, in the present order, attempted to rationalize the tariff structure in respect of Low Tension power supply.

The mandate of the NEP that the tariff should be within plus or minus 20% of the average cost of supply by FY 2010-11 has been the guiding principle. In working out the cost of supply the Commission worked out the basis of average cost of supply, in the absence of relevant data for working out consumer category-wise cost of supply.

## **10.2 Proposal of MGVCL for tariff increase and changes in tariff structure**

### **10.2.1 Tariff proposal**

The MGVCL has proposed a tariff increase of 25 paise / kWh for all categories of consumers except agriculture and BPL (1-30kWh) households. MGVCL has also requested that the uncovered gap be allowed as “Regulatory Asset” to be recovered in future.

### **10.2.2 Proposed changes in the tariff structure (LT category)**

The MGVCL has proposed certain modifications to the current tariff structure as below:

#### **A. Tariff Rate LFD-II (For Commercial Purposes):**

This tariff will apply to the services for the purposes specified in the rate LFD-II in respect of commercial premises, such as shops, offices, banks, studio, storage,



distribution pumping stations, refilling of gas, oil and other material, Railway Stations, hostels, laboratories, hospitals, telephone exchanges, infocom, broadcasting and telecasting, stations, training centres, public gardens, cinema theatres, drama theatres, video parlors, public meeting house, recreation places, multiplexes, malls, workshop, hotels, restaurants, showrooms, educational institutes other than specified under LFD-III etc.

- LFD – II category may be split into LFD- II(a) and LFD- II(b)
- LFD – II (a) shall be contracted load based and up to 15 KW, and LFD-II (b) shall be demand based for the contracted load of 15 KW and above.

The DISCOM submits that the data pertaining to LFD-II (a) & (b) category of consumers is currently not available and hence has not been submitted in the formats. However, LFD-II on a consolidated basis has been submitted for reference. MGVCCL requests the Commission to consider the above category keeping in view the practical issue of DISCOM.

#### **B. LTP – I Tariff Category:**

Under the head of Minimum Bill per Installation for seasonal consumer, the following clause shall be inserted

- “Up to 10% of monthly average consumption of the previous seasonal period, upto 15% of contracted load can be availed every month during off-seasonal period. In case the consumer exceeds any of these conditions, such consumer, for the relevant billing period, shall be billed under tariff category of LTP-I as if non-seasonal consumer.

#### **C. LTP – III Tariff Category:**

LTP-III tariff is a switch over tariff i.e from LTP-I to LTP-III and vice versa. It is proposed to make these tariff categories mutually exclusive; however, LTP –I consumer shall have an option to switch over to LTP – III.

- Sl. no. 4 of the Note provided at the end of tariff provisions be modified as under:  
*“4. In the event actual maximum demand exceeds 100 KW more than three occasions during the period of six months, the consumer has to switch over to HT Power Supply within a time period of 3 months from last occurrence.”*



**D. Street Light:**

- Minimum Charges clause deleted

**E. Agriculture:**

Clause 7.2 “No machinery other than to pump water for irrigation (and a single bulb or CFL upto 40 watts) will be permitted under this tariff. Any other machinery connected to the installation shall be charged separately at appropriate tariff for which consumers shall have to take separate connection.”

- BHP is replaced with HP in all categories.

**10.2.3 HT category**

**A. HTP-I:**

Maximum Demand and its measurement is proposed as under:

“The maximum demand in KW or KVA, as the case may be, shall mean an average KW/KVA supplied during the consecutive 30/15 minutes or if consumer having parallel operation with the grid and has opted for 3 minutes, period of maximum use where such meter with the features of reading the maximum demand in KW/ KVA directly, has been provided”.

B. Under the head seasonal consumers taking HT supply, the following clause shall be inserted.

“Up to 10% of monthly average consumption of the previous seasonal period and upto 15% of contracted load can be availed every month during off-seasonal period. In case the consumer exceeds any of these conditions, such consumer, for the relevant billing period shall be billed under tariff category of HTP-I as if non-seasonal consumer.”

**C. Time of Use Charges:**

These charges shall be levied from all consumers

## **Commission's Analysis and Decision**

With the existing structure of the tariff categories there are different tariff rates for lighting consumption and for motive power consumption. In view of this, a consumer is required to put separate meters for recording separately consumption of lighting and motive power in same premises. There are chances that the consumers may, due to ignorance or oversight, connect small appliances/gadgets in motive power circuits intentionally and other-wise and this can be considered as 'theft of Electricity' under the Electricity Act, 2003. Some of Consumer Associations requested the Commission to remove this categorisation of lighting tariff rates and motive power tariff rates in single premises.

In view of the above, the Commission has decided to combine lighting consumption and motive power consumption into the same category for the purpose of determining tariff.

The existing LFD-I tariff category provides tariff rates for lighting consumption of Residential premises and existing LTP-I category provides tariff rates for motive power consumption (excluding water works) of Residential premises. Now, this category is renamed as "RGP" and modified to cover aggregate consumption of Residential premises having connected load upto 100 kVA.

The existing LFD-II category provides tariff rates for lighting consumption of Commercial/Industrial premises and existing LTP-I category provides tariff rates for motive power consumption of Commercial/Industrial premises. Both of these categories are now merged and installations having connected load upto 40 kW of commercial, industrial, office premises, institutional and other premises are clubbed into one category named as "Non-RGP".

Installations having aggregate connected load above 40 kW of Commercial / Industrial / office / institutional premises are now covered under existing LTP-III tariff category, which is renamed as "LTMD" category.

The existing LFD-III and LTP-II categories applicable for educational and other institutions registered with Charity Commissioner and R&D laboratories are merged into one category and renamed as "GLP" category with appropriate tariff.



**(i) HTP-I**

The proposal for the method of measurement of maximum demand and the additional condition for HT seasonal loads proposed to be introduced is approved.

**(ii) Time of Use charges**

Time of Use charges are introduced for HT consumers below 500 kVA.

**Change in Tariff Rates**

- For 'RGP' tariff category, Energy charge in paise per unit is revised as below:

Consumption/ Month	Urban		Rural	
	Existing	Revised	Existing	Revised
1-50 unit	280	295	230	255
51-100 unit	310	325	260	285
101-250 unit	375	390	325	350
Above 250 unit	475	480	435	450

- For 'Non-RGP' tariff category, fixed charge for connected load of 10 BHP is revised from existing rate of Rs. 22 per BHP per month to Rs. 30 per kW per month. For connected load above 10 BHP and up to 50 BHP, the existing rate of Rs. 40 per BHP per month is revised to Rs. 55 per kW per month. Energy charge for this category is increased by 20 paise per unit.
- For 'LTMD' category, Energy charge is increased by 20 paise.
- For AG (Agricultural) category, the HP based tariff is increased from Rs. 160 per BHP per month to Rs. 175 per BHP per month.
- For 'Temporary' category, fixed charge is now introduced as Rs. 14 per kW per day and energy charge is fixed at Rs. 4.25 per unit.
- For 'HTP-I' category, demand charges are revised as given below

Billing Demand	Existing Rate	Revised Rate
First 500 kVA	Rs. 100 per kVA	Rs. 100 per kVA
Next 500 kVA	Rs. 140 per kVA	Rs. 200 per kVA
Next 1500 kVA	Rs. 210 per kVA	Rs. 270 per kVA
Above 2500 kVA	Rs. 240 per kVA	Rs. 270 per kVA

There is no change in energy charge for this category.

- For 'HTP-II' category, demand charges are revised as given below



<b>Billing Demand</b>	<b>Existing Rate</b>	<b>Revised Rate</b>
First 500 kVA	Rs. 90 per kVA	Rs. 90 per kVA
Next 500 kVA	Rs. 130 per kVA	Rs. 190 per kVA
Next 1500 kVA	Rs. 190 per kVA	Rs. 250 per kVA
Above 2500 kVA	Rs. 220 per kVA	Rs. 250 per kVA

There is no change in energy charge for this category.

- 'Time of Use' charge of 35 paise per unit is introduced for HT consumers having billing demand up to 500 kVA.
- For other LT categories (except metered Ag. Consumers), energy charges are increased by 25 paise per unit.

### **10.3 Revenue Gap / Surplus**

#### **Gap / Surplus of MGVCL for FY 2011-12**

The total revenue based on the existing tariff for FY 2011-12 is Rs. 3316.92 crore and the net gap is Rs. 87.41 crore. The Commission has revised the tariff which brings in additional revenue of Rs. 88.84 crore resulting into surplus of Rs. 1.43 crore. The Commission has decided that it will review the same during true up for FY 2011-12 when the audited accounts would be made available to the Commission.

The consolidated gap at existing tariff for 4 Licensees viz. UGVCL, DGVCL, MGVCL and PGVCL is Rs. 606.67 crore for FY 2011-12. Additional revenue due to revision in tariff is expected to be Rs. 611.88 crore, resulting into consolidated surplus of Rs. 5.21 crore.

### **10.4 Impact of Electricity Duty**

During the public hearing, several consumer organizations and others brought to the notice of the Commission the high rates of Electricity Duty in Gujarat. It may be noted that imposition of Electricity Duty is the prerogative of the Government. However, the Commission has noted the issue and observes that there is a need to rationalize Electricity Duty. The Commission feels that the system of *ad-valorem* duty increases the impact of any tariff increase even further.



The *ad-valorem* structure increases the burden on the consumers, impacts on the finances of the utilities and distorts the tariff structure. With the rationalization of the tariff structure by the Commission, there is a need to revisit the structure of electricity duty. The Commission has therefore, suggested that the Government should consider rationalizing Electricity Duty, keeping in view the above aspects and the practices in other States, so that it becomes reasonable, stable and predictable.





## COMMISSION'S ORDER

The Commission approves the Aggregate Revenue Requirement (ARR) for Madhya Gujarat Vij Company Limited (MGVCL) for the control period FY 2011-12 to FY 2015-16 as shown in the following table.

### ARR approved for the control period FY 2011-12 to 2015-16

(Rs. crore)

Sl. No.	Particulars	FY 2011-12	FY 2012-13	FY 2013-14	FY 2014-15	FY 2015-16
1	Cost of Power Purchase	2,985.52	3,499.63	3,965.49	4,333.13	4,995.11
2	Operation & Maintenance Expenses	300.43	317.61	335.78	354.99	375.29
2.1	Employee Cost	221.70	234.38	247.79	261.97	276.95
2.2	Repair & Maintenance	40.18	42.48	44.91	47.48	50.19
2.3	Administration & General Charges	38.55	40.75	43.08	45.55	48.15
2.4	Other Debits	9.07	9.07	9.07	9.07	9.07
2.5	Extraordinary Items	0.00	0.00	0.00	0.00	0.00
2.6	Net Prior Period Expenses / (Income)	0.00	0.00	0.00	0.00	0.00
2.7	Other Expenses Capitalised (-)	(54.00)	(57.00)	(61.00)	(64.00)	(68.00)
3	Depreciation	117.92	130.99	144.19	156.24	166.85
4	Interest & Finance Charges	52.41	45.42	36.99	26.74	21.00
5	Interest on Working Capital	0.00	0.00	0.00	0.88	5.09
6	Provision for Bad Debts	3.67	3.67	3.67	3.67	3.67
7	<b>Sub-Total [1 to 6]</b>	<b>3,415.02</b>	<b>3,949.39</b>	<b>4,434.19</b>	<b>4,820.72</b>	<b>5,508.08</b>
8	Return on Equity	70.22	73.87	77.53	80.55	82.82
9	Provision for Tax / Tax Paid	5.84	5.84	5.84	5.84	5.84
10	<b>Total Expenditure (7 to 9)</b>	<b>3,491.08</b>	<b>4,029.10</b>	<b>4,517.56</b>	<b>4,907.11</b>	<b>5,596.74</b>
11	Less: Non-Tariff Income	86.75	86.75	86.75	86.75	86.75
12	<b>Aggregate Revenue Requirement (10 - 11)</b>	<b>3,404.33</b>	<b>3,942.35</b>	<b>4,430.81</b>	<b>4,820.36</b>	<b>5,509.99</b>

The approved retail supply tariff will be in accordance with the Tariff Schedule annexed to this order. The order shall come into force from 1<sup>st</sup> September, 2011.

Sd/-

**DR. M.K. IYER**  
Member

Sd/-

**SHRI PRAVINBHAI PATEL**  
Member

Sd/-

**DR. P.K. MISHRA**  
Chairman

Place : Ahmedabad

Date : 06.09.2011





**ANNEXURE: TARIFF SCHEDULE FOR FY 2011-12**

**TARIFF SCHEDULE**

**TARIFF FOR SUPPLY OF ELECTRICITY AT LOW TENSION, HIGH TENSION, AND  
EXTRA HIGH TENSION**

**Effective from 1<sup>st</sup> September, 2011**

**GENERAL**

1. The tariff figures indicated in this tariff schedule are the tariff rates payable by the consumers of unbundled Distribution Licensees of the erstwhile GEB viz. UGVCL, DGVCL, MGVCL and PGVCL.
2. These tariffs are exclusive of Electricity Duty, tax on sale of electricity, taxes and other charges levied by the Government or other competent authorities from time to time which are payable by the consumers, in addition to the charges levied as per the tariff.
3. All these tariffs for power supply are applicable to only one point of supply.
4. The charges specified are on monthly basis. Distribution Licensee may decide the period of billing and adjust the tariff rate accordingly.
5. The energy supplied under these tariffs can be utilized only within the compact area of the premises not intervened by any area/road belonging to any person or authority other than the consumer.
6. Except in cases where the supply is used for the purpose for which the Distribution Licensee has permitted lower tariff, the power supplied to any consumer shall be utilized only for the purpose for which supply is taken and as provided for in the tariff.
7. Meter charges shall be applicable as prescribed under 'GERC (Licensee's Power to Recover Expenditure incurred in providing supply and other Miscellaneous Charges) Regulations, 2005 as in force from time to time.
8. The various provisions of the GERC (licensee's power to recover expenditure incurred in providing supply and other miscellaneous charges) Regulations will continue to apply.
9. Conversion of Ratings of electrical appliances and equipments from kilowatt to B.H.P. or vice versa will be done, when necessary, at the rate of 0.746 kilowatt equal to 1 B.H.P.
10. The Connected Load for the purpose of billing will be taken as the maximum load connected during the billing period.
11. The Fixed charges, minimum charges, demand charges, meter rent and the slabs of consumption of energy for energy charges mentioned shall not be subject to any adjustment on account of existence of any broken period within billing period arising from consumer supply being connected or disconnected any time within the duration of billing period for any reason.



12. Contract Demand shall mean the maximum kW for the supply of which licensee undertakes to provide facilities to the consumer from time to time.
13. Fuel Cost and Power Purchase Adjustment Charges shall be applicable in accordance with the Formula approved by the Gujarat Electricity Regulatory Commission from time to time.
14. Payment of penal charges for usage in excess of contract demand / load for any billing period does not entitle the consumer to draw in excess of contract demand / load as a matter of right.
15. The payment of power factor penalty does not exempt the consumer from taking steps to improve the power factor to the levels specified in the Regulations notified under the Electricity Act, 2003 and licensee shall be entitled to take any other action deemed necessary and authorized under the Act.
16. Delayed payment charges for all consumers:

No delayed payment charges shall be levied if the bill is paid within ten days from the date of billing (excluding date of billing).

Delayed payment charges will be levied at the rate of 15% per annum in case of all consumers except Agricultural category for the period from the due date till the date of payment if the bill is paid after due date. Delayed payment charges will be levied at the rate of 12% per annum for the consumer governed under Rate AG from the due date till the date of payment if the bill is paid after due date.

For Government dues, the delayed payment charges will be levied at the rate provided under the relevant Electricity Duty Act.



**PART - I**

**SCHEDULE OF TARIFF FOR SUPPLY OF ELECTRICITY**

**AT LOW AND MEDIUM VOLTAGE**

**1.0 Rate: RGP**

This tariff is applicable to all services in the residential premises which are not covered under 'Rate: RGP (Rural)' Category.

Single-phase supply- Aggregate load up to 6kW

Three-phase supply- Aggregate load above 6kW

**1.1 Fixed Charges/Month:**

Range of Connected Load: (Other than BPL Consumers)

(a)	Up to and including 2 kW	Rs. 5/- per month
(b)	Above 2 to 4 kW	Rs. 15/- per month
(c)	Above 4 to 6 kW	Rs. 30/- per month
(d)	Above 6 kW	Rs. 45/- per month

For BPL Household Consumers:

Fixed charges	Rs. 5/- per month
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**PLUS**

**1.2 Energy Charges: For the total monthly consumption: (Other than BPL consumers)**

(a)	First 50 units	295 Paise per Unit
(b)	Next 50 units	325 Paise per Unit
(c)	Next 150 units	390 Paise per Unit
(d)	Above 250 units	480 Paise per Unit

**1.3 Energy charges: For the total monthly consumption – For the consumer below poverty line (BPL)\*\***

(a)	First 30 units	150 Paise per Unit
(c)	For remaining units	Rate as per RGP



\*\*The consumer who wants to avail the benefit of the above tariff has to produce a copy of the Card issued by the authority concerned at the sub-division office of the Distribution Licensee. The concessional tariff is only for 30 units per month.

#### **1.4 Minimum bill (excluding meter charges)**

Payment of fixed charges as specified in 1.1 above.

#### **2.0 Rate: RGP (Rural)**

This tariff is applicable to all services for residential premises located in areas within Gram Panchayat as defined in the Gujarat Panchayats Act.

However, this is not applicable to villages which are located within the geographical jurisdiction of Urban Development Authority.

Single-phase supply- Aggregate load upto 6kW

Three-phase supply- Aggregate load above 6kW

#### **2.1 Fixed Charges/Month:**

Range of Connected Load: (Other than BPL Consumers)

(a)	Upto and including 2 kW	Rs. 5/- per month
(b)	Above 2 to 4 kW	Rs. 15/- per month
(c)	Above 4 to 6 kW	Rs. 30/- per month
(d)	Above 6 kW	Rs. 45/- per month

For BPL Household Consumers:

Fixed charges	Rs. 5/- per month
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**PLUS**

#### **2.2 Energy Charges: For the total monthly consumption: (Other than BPL consumers)**

(a)	First 50 units	255 Paise per Unit
(b)	Next 50 units	285 Paise per Unit
(c)	Next 150 units	350 Paise per Unit
(d)	Above 250 units	450 Paise per Unit



**2.3 Energy charges: For the total monthly consumption – For the consumer below poverty line (BPL) \*\***

(a)	First 30 units	150 Paise per Unit
(c)	For remaining units	Rate as per RGP (Rural)

\*\*The consumer who wants to avail the benefit of the above tariff has to produce a copy of the Card issued by the authority concerned at the sub-division office of the Distribution Licensee. The concessional tariff is only for 30 units per month.

**2.4 Minimum bill (excluding meter charges):**

Payment of fixed charges as specified in 2.1 above.

*Note: If the part of the residential premises is used for non-residential (commercial) purposes by the consumers located within 'Gram Panchayat' as defined in Gujarat Panchayat Act, entire consumption will be charged under this tariff.*

**3.0 Rate: GLP**

This tariff is applicable to the educational institutes and other institutions registered with the Charity Commissioner and research and development laboratories.

(a)	Fixed charges	Rs. 45/- per month
(b)	Energy charges	345 Paise per Unit

**4.0 Rate: Non-RGP**

This tariff is applicable to the services for the premises those are not covered in any other tariff categories and having aggregate load upto and including 40kW.

**4.1 Fixed charges per month:**

(i) First 10 kW of connected load	Rs. 30/- per kW
(ii) For next 30 kW of connected load	Rs. 55/- per kW

PLUS



#### **4.2 Energy charges:**

(a)	For installation having contracted load upto and including 10kW: for entire consumption during the month	390 Paise per Unit
(b)	For installation having contracted load exceeding 10kW: for entire consumption during the month	420 Paise per Unit

#### **4.3 Minimum Bill**

Minimum bill per installation per month for consumers other than Seasonal Consumers:

Rs. 140 per kW

#### **4.4 Minimum Bill Per Installation for Seasonal Consumers**

- (a) "Seasonal Consumer", shall mean a consumer who takes and uses power supply for ice factory, ice candy machines, ginning and pressing factory, oil mill, rice mill, huller, salt industry, sugar factory, khandsari, cold storage plants (including such plants in fisheries industry), tapioca industries manufacturing starch, etc.
- (b) Any consumer, who desires to be billed for the minimum charges on annual basis shall intimate to that effect in writing in advance about the off-season period during which energy consumption, if any, shall be mainly for overhauling of the plant and machinery. The total period of the off-season so declared and observed shall be not less than three calendar months in a calendar year.
- (c) The total minimum amount under the head "Fixed and Energy Charges" payable by the seasonal consumer satisfying the eligibility criteria under sub-clause (a) above and complying with the provision stipulated under sub-clause (b) above shall be Rs. 1600/- per annum per kW of the contracted load.
- (d) The units consumed during the off-season period shall be charged for at a flat rate of 435 Paise per unit.
- (e) The electricity bills related to the off-season period shall not be taken into





account towards the amount payable against the annual minimum bill. The amount paid by the consumer towards the electricity bills related to the seasonal period only under the heads “Fixed Charges” and “Energy Charges”, shall be taken into account while determining the amount of short-fall payable towards the annual minimum bill as specified under sub-clause (c) above.

## **5.0 Rate: LTMD**

This tariff is applicable to the services for the premises those are not covered in any other tariff categories and having aggregate load above 40kW and upto 100kW.

This tariff shall also be applicable to consumer covered in category- ‘Rate: Non-RGP’ so opts to be charged in place of ‘Rate: Non-RGP’ tariff.

### **5.1 Fixed charges:**

	<b>For billing demand up to the contract demand</b>	
<b>(a)</b>	(i) For first 40 kW of billing demand	Rs. 65/- per kW per month
	(ii) Next 20 kW of billing demand	Rs. 100/- per kW per month
	(iii) Above 60 kW of billing demand	Rs. 165/- per kW per month
<b>(b)</b>	<b>For billing demand in excess of the contract demand</b>	Rs. 210/- per kW

**PLUS**

### **5.2 Energy charges:**

For the entire consumption during the month	425 Paise per Unit
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**PLUS**

### **5.3 Reactive Energy Charges:**

For all the reactive units (KVARH) drawn during the month	10 paise per KVARH
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#### **5.4 Billing Demand**

The billing demand shall be highest of the following, rounded to the next full kW:

- (a) Eighty-five percent of the contract demand
- (b) Actual maximum demand registered during the month
- (c) 15 kW

#### **5.5 Minimum Bill**

Payment of demand charges every month based on the billing demand.

#### **5.6 Seasonal Consumers taking LTMD Supply:**

- 5.6.1 The expression, “Seasonal Consumer”, shall mean a consumer who takes and uses power supply for ice factory, ice-candy machines, ginning and pressing factory, oil mill, rice mill, salt industry, sugar factory, khandsari, cold storage plants (including such plants in fishery industry), tapioca industries manufacturing starch, pumping load or irrigation, white coal manufacturers etc.
- 5.6.2 A consumer, who desires to be billed for minimum charges on annual basis, shall intimate in writing in advance about the off-season during which energy consumption, if any, shall be mainly for overhauling of the plant and machinery. The off-season period at any time shall be a full calendar month/months. The total period of off-season so declared and observed shall be not less than three calendar months in a calendar year.
- 5.6.3 The total minimum amount under the head “Demand and Energy Charges” payable by a seasonal consumer satisfying the eligibility criteria under sub clause 5.6.1 above and complying with provisions stipulated under sub clause 5.6.2 above shall be Rs. 2700/- per annum per kW of the billing demand.
- 5.6.4 The billing demand shall be the highest of the following:
- (a) The highest of the actual maximum demand registered during the calendar year.



- (b) Eighty-five percent of the arithmetic average of contract demand during the year.
- (c) 15 kW.

5.6.5 Units consumed during the off-season period shall be charged for at the flat rate of 435 Paise per unit.

## **6.0 Rate: Non-RGP Night**

This tariff is applicable for aggregate load upto 40kW and using electricity **exclusively during night hours** from 10.00 PM to 06.00 AM next day. (The supply hours shall be regulated through time switch to be provided by the consumer at his cost.)

### **6.1 Fixed Charges per month:**

Fixed charges specified in Rate Non-RGP above.
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**PLUS**

### **6.2 Energy Charges:**

For entire consumption during the month	220 Paise per Unit
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### **NOTE:**

1. 10% of total units consumed and 15% of the contract load can be availed beyond the prescribed hours.
2. This tariff shall be applicable if the consumer so opts to be charged in place of Non-RGP tariff by using electricity exclusively during night hours as above.
3. The option can be exercised to switch over from Non-RGP tariff to Non-RGP Night tariff and vice versa twice in a calendar year by giving not less than one month's notice in writing.
4. In case the consumer is not fulfilling the conditions of this tariff category, then such consumer for the relevant billing period will be billed under tariff category Non-RGP.



## 7.0 Rate: LTMD- Night

This tariff is applicable for aggregate load above 40kW and using electricity **exclusively during night hours** from 10.00 PM to 06.00 AM next day. (The supply hours shall be regulated through time switch to be provided by the consumer at his cost.)

### 7.1 Fixed Charges per month:

Fixed charges specified in Rate <b>LTMD</b> above.
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**PLUS**

### 7.2 Energy Charges:

For entire consumption during the month	220	Paise per Unit
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### 7.3 Reactive Energy Charges:

For all reactive units (KVARH) drawn during the month	10 Paise per KVARH
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#### NOTE:

1. 10% of total units consumed and 15% of the contract load can be availed beyond the prescribed hours.
2. This tariff shall be applicable if the consumer so opts to be charged in place of LTMD tariff by using electricity exclusively during night hours as above.
3. The option can be exercised to switch over from LTMD tariff to LTMD- Night tariff and vice versa twice in a calendar year by giving not less than one month's notice in writing.
4. In case the consumer is not fulfilling the conditions of this tariff category, then such consumer for the relevant billing period will be billed under tariff category LTMD.

## 8.0 Rate: LTP- Lift Irrigation

Applicable for supply of electricity to Low Tension Agricultural consumers contracting load up to 125 HP requiring continuous (**twenty-four** hours) power supply for lifting water from surface water sources such as cannel, river, & dam and supplying water directly to the fields



of farmers for agricultural irrigation only.

(a)	Fixed charges per month	Rs. 25/- per HP
<b>PLUS</b>		
(b)	Energy charges For entire consumption during the month	160 Paise per Unit

#### **9.0 Rate: WWSP**

This tariff shall be applicable to services used for water works and sewerage pumping purposes.

9.1 Type I – Water works and sewerage pumps operated by other than local authority:

(a)	Fixed charges per month	Rs.15/- per HP
<b>PLUS</b>		
(b)	Energy charges per month: For entire consumption during the month	385 Paise per Unit

9.2 Type II – Water works and sewerage pumps operated by local authority such as Municipal Corporation. Gujarat Water Supply & Sewerage Board located outside Gram Panchayat Area will also attract this tariff:

(a)	Fixed charges per month	Rs.9 per HP
<b>PLUS</b>		
(b)	Energy charges per month: For entire consumption during the month	365 Paise per Unit

9.3 Type III – Water works and sewerage pumps operated by Municipalities/Nagarpalikas and Gram Panchayat or Gujarat Water Supply & Sewerage Board for its installations located in Gram Panchayats:



**Madhya Gujarat Vij Company Limited**  
**Truing up for FY 2009-10, APR for FY 2010-11,**  
**ARR for FY 2011-12 to FY 2015-16 and Tariff for FY 2011-12**

Energy charges per month: For entire consumption during the month	275 Paise/Unit
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**9.4 Time of Use Discount:**

Applicable to all the water works consumers having connected load of 50 HP and above for the Energy consumption during the Off-Peak Load Hours of the Day.

For energy consumption during the off-peak period, viz., 1100 Hrs to 1800 Hrs.	30 Paise per Unit
For energy consumption during night hours, viz., 2200 Hrs to 0600 Hrs. next day	75 Paise per Unit

**10.0 Rate: AG**

This tariff is applicable to services used for irrigation purposes only excluding installations covered under LTP- Lift Irrigation category.

10.1 The rates for following group are as under:

**10.1.1 HP Based Tariff:**

For entire contracted load	Rs.175/HP/month
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**ALTERNATIVELY**

**10.1.2 Metered Tariff:**

Fixed Charges	Rs. 10 per HP per month
Energy Charges:For entire consumption	50 Paise per Unit per month

**10.1.3 Tatkal Scheme:**

Fixed Charges	Rs. 10 per HP per month
Energy Charges: For entire consumption	70 Paise per Unit per month



**NOTE:** The consumers under Tatkal Scheme shall be eligible for normal metered tariff as above, on completion of five years period from the date of commencement of supply.

- 10.2 No machinery other than pump water for irrigation (and a single bulb or CFL up to 40 watts) will be permitted under this tariff. Any other machinery connected in the installation governed under this tariff shall be charged separately at appropriate tariff for which consumers shall have to take separate connection.
- 10.3 Agricultural consumers who desire to supply water to brick manufacturing units shall have to pay Rs. 100/HP per annum subject to minimum of Rs. 2000/- per year for each brick Mfg. Unit to which water is supplied in addition to existing rate of HP based / metered agricultural tariff.
- 10.4 Such Agricultural consumers shall have to pay the above charges for a full financial year irrespective of whether they supply water to the brick manufacturing unit for full or part of the Financial Year.

Agricultural consumers shall have to declare their intension for supply of the water to such brick manufacturing units in advance and pay charges accordingly before commencement of the financial year (i.e. in March every year).

## **11.0 Rate: SL**

### **11.1 Tariff for Street Light for Local Authorities and Industrial Estates:**

This tariff includes the provision of maintenance, operation and control of the street lighting system.

#### **11.1.1 Energy Charges:**

For all the units consumed during the month:	360 Paise per Unit
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#### **11.1.2 Optional kVAh Charges:**

For all the kVAh units consumed during the month:	270 Paise per Unit
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#### **11.1.3 Renewal and Replacements of Lamps:**

The consumer shall arrange for renewal and replacement of lamp at his cost by person



authorised by him in this behalf under Rule-3 of the Indian Electricity Rules, 1956 / Rules issued by CEA under the Electricity Act, 2003.

**11.2 Tariff for power supply for street lighting purposes to consumers other than the local authorities and industrial estates:**

**11.2.1 Fixed Charges:**

Rs. 20 per kW per month
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**11.2.2 Energy charges:**

For all units consumed during the month	360 Paise per kWh
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**11.2.3 Renewal and Replacement of Lamps:**

The consumer shall arrange for renewal and replacement of lamp at his cost by person authorised by him in this behalf under Rule-3 of the Indian Electricity Rules, 1956 / Rules issued by CEA under the Electricity Act, 2003.

**11.2.4 Maintenance other than Replacement of Lamps:**

Maintenance of the street lighting system shall be carried out by Distribution Licensee.

**12.0 Rate: TMP**

This tariff is applicable to services of electricity supply for temporary period at the low voltage.

**12.1 FIXED CHARGE**

Fixed Charge per Installation	Rs.14 per kW per Day
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**12.2 ENERGY CHARGE**

A flat rate of	425 Paise per Unit
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*Note: Payment of bills is to be made within seven days from the date of issue of the bill. Supply would be disconnected for non-payment of dues on 24 hours notice.*





## PART-II

### TARIFFS FOR SUPPLY OF ELECTRICITY AT HIGH TENSION (3.3 KV AND ABOVE, 3-PHASE 50 C/S), AND EXTRA HIGH TENSION

The following tariffs are available for supply at high tension for large power services for contract demand not less than 100 kVA

#### 13.0 Rate: HTP-I

This tariff will be applicable for supply of electricity to HT consumers contracted for 100 kVA and above for regular power supply and requiring the power supply for the purposes not specified in any other HT Categories.

#### 13.1 Demand Charges;

13.1.1 For billing demand upto contract demand

(a)	For first 500 kVA of billing demand	Rs. 100/- per kVA per month
(b)	For next 500 kVA of billing demand	Rs. 200/- per kVA per month
(d)	For billing demand in excess of 1000 kVA	Rs. 270/- per kVA per month

13.1.2 For Billing Demand in Excess of Contract Demand

For billing demand in excess over the contract demand	Rs. 370 per kVA per month
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**PLUS**

#### 13.2 Energy Charges

For entire consumption during the month		
(b)	upto 500 kVA of billing demand	390 Paise per Unit
(c)	For next 2000 kVA of billing demand	410 paise per Unit
(d)	For billing demand in excess of 2500 kVA	420 Paise per Unit

**PLUS**



### **13.3 Time of Use Charges:**

For energy consumption during the two peak periods, viz., 0700 Hrs to 1100 Hrs and 1800 Hrs to 2200 Hrs	
(a) For Billing Demand upto 500kVA	35 Paise per Unit
(b) For Billing Demand above 500kVA	75 Paise per Unit

### **13.4 Billing Demand:**

The billing demand shall be the highest of the following:

- (a) Actual maximum demand established during the month
- (b) Eighty-five percent of the contract demand
- (c) One hundred kVA

### **13.5 Minimum Bills:**

Payment of “demand charges” based on kVA of billing demand.

### **13.6 Power Factor Adjustment Charges:**

#### **13.6.1 Penalty for poor Power Factor:**

- (a) The power factor adjustment charges shall be levied at the rate of 1% on the total amount of electricity bills for the month under the head “Energy Charges” for every 1% drop or part thereof in the average power factor during the month below 90% upto 85%.
- (b) In addition to the above clause, for every 1% drop or part thereof in average power factor during the month below 85% at the rate of 2% on the total amount of electricity bill for that month under the head “Energy Charges”, will be charged.

#### **13.6.2 Power Factor Rebate:**

If the power factor of the consumer’s installation in any month is above 95%, the consumer will be entitled to a rebate at the rate of 0.5% (half percent) in excess of 95% power factor on the total amount of electricity bill for that month under the head “Energy Charges” for every 1% rise or part thereof in the average power factor during the month above 95%.



### **13.7 Maximum Demand and its Measurement:**

The maximum demand in kW or kVA, as the case may be, shall mean an average KW/KVA supplied during consecutive 30/15 minutes or if consumer is having parallel operation with the grid and has opted for 3 minutes, period of maximum use where such meter with the features of reading the maximum demand in KW/KVA directly, have been provided.

### **13.8 Contract Demand:**

The contract demand shall mean the maximum KW/KVA for the supply, of which the supplier undertakes to provide facilities from time to time.

### **13.9 Rebate for Supply at EHV:**

<b>On Energy charges:</b>		<b>Rebate @</b>
(a)	If supply is availed at 33/66 kV	0.5%
(b)	If supply is availed at 132 kV and above	1.0%

### **13.10 Concession for Use of Electricity during Night Hours:**

For the consumer eligible for using supply at any time during 24 hours, entire consumption shall be billed at the energy charges specified above. However, the energy consumed during night hours of 10.00 PM to 06.00 AM next morning (recorded by a polyphase meter operated through time-switch) as is in excess of one third of the total energy consumed during the month, shall be eligible for concession at the rate of 75 Paise per unit. The polyphase meter and time switch shall be procured and installed by the consumer at his cost and sealed by the Distribution Licensee.

### **5.7 Seasonal Consumers taking HT Supply:**

13.11.1 The expression, "Seasonal Consumer", shall mean a consumer who takes and uses power supply for ice factory, ice-candy machines, ginning and pressing factory, oil mill, rice mill, salt industry, sugar factory, khandsari, cold storage plants (including such plants in fishery industry), tapioca industries manufacturing starch, pumping load or irrigation, white coal manufacturers etc.



13.11.2 A consumer, who desires to be billed for minimum charges on annual basis, shall intimate in writing in advance about the off-season during which energy consumption, if any, shall be mainly for overhauling of the plant and machinery. The off-season period at any time shall be a full calendar month/months. The total period of off-season so declared and observed shall be not less than three calendar months in a calendar year.

13.11.3 The total minimum amount under the head “Demand and Energy Charges” payable by a seasonal consumer satisfying the eligibility criteria under sub clause 13.12.1 above and complying with provisions stipulated under sub clauses 13.12.2 above shall be Rs.4000/- per annum per kVA of the billing demand.

13.11.4 The billing demand shall be the highest of the following:

- (d) The highest of the actual maximum demand registered during the calendar year.
- (e) Eighty-five percent of the arithmetic average of contract demand during the year.
- (f) One hundred kVA.

13.11.5 Units consumed during the off-season period shall be charged for at the flat rate of 420 Paise per unit.

13.11.6 Electricity bills paid during off-season period shall not be taken into account towards the amount payable against the annual minimum bill. The amount paid by the consumer towards the electricity bills for seasonal period only under the heads “Demand Charges” and “Energy Charges” shall be taken into account while determining the amount payable towards the annual minimum bill.

#### **14.0 Rate HTP-II**

Applicability: This tariff shall be applicable for supply of energy to HT consumers contracting for 100 KVA and above, requiring power supply for Water Works and Sewerage pumping stations run by Local Authorities and GW & SB. GIDC Water Works.



**14.1 Demand Charges:**

14.1.1 For billing demand upto contract demand

(a)	For first 500 kVA of billing demand	Rs.90/- per kVA per month
(b)	For next 500 kVA of billing demand	Rs.190/- per kVA per month
(c)	For billing demand in excess of 1000 kVA	Rs.250/- per kVA per month

14.1.2 For billing demand in excess of contract demand

For billing demand in excess of contract demand	Rs.335 per kVA per month
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**PLUS**

**14.2 Energy Charges:**

<b>For entire consumption during the month</b>		
(b)	upto 500 kVA of billing demand	390 Paise per Unit
(c)	For next 2000 kVA of billing demand	410 Paise per Unit
(d)	For billing demand in excess of 2500 kVA	420 Paise per Unit

**PLUS**

**14.3 Time of Use Charges:**

For energy consumption during the two peak periods, viz., 0700 Hrs to 1100 Hrs and 1800 Hrs to 2200 Hrs		
(a)	For Billing Demand upto 500kVA	35 Paise per Unit
(b)	For Billing Demand above 500kVA	75 Paise per Unit

14.4 Billing demand

14.5 Minimum bill

14.6 Power Factor Adjustment Charges

14.7 Maximum demand and its measurement

14.8 Contract Demand

14.9 Rebate for supply at EHV

Same as per HTP-I Tariff



### **15.0 Rate: HTP-III**

This tariff shall be applicable to a consumer taking supply of electricity at high voltage, contracting for not less than 100 kVA for temporary period. A consumer not taking supply on regular basis under a proper agreement shall be deemed to be taking supply for temporary period.

#### **15.1 Demand Charges:**

For billing demand upto contract demand	Rs.462/- per kVA per month
For billing demand in excess of contract demand	Rs. 550/- per kVA per month

**PLUS**

#### **15.2 Energy Charges:**

For all units consumed during the month	630 Paise/Unit
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**PLUS**

#### **15.3 Time of Use Charges:**

Additional charge for energy consumption during two peak periods, viz., 0700 Hrs to 1100 Hrs and 1800 Hrs to 2200 Hrs	75 Paise per Unit
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15.4 Billing demand

15.5 Minimum bill

15.6 Power Factor Adjustment Charges

15.7 Maximum demand and its measurement

15.8 Contract Demand

15.9 Rebate for supply at EHV

} Same as per HTP-I Tariff

### **16.0 Rate: HTP-IV**

This tariff shall be applicable for supply of electricity to HT consumers opting to use electricity exclusively during night hours from 10.00 PM to 06.00 AM next day and contracted for regular power supply of 100 kVA and above.



**16.1 Demand Charges:**

Same rates as specified in Rate HTP-I
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**PLUS**

**16.2 Energy Charges:**

For all units consumed during the month	200 Paise per Unit
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<p>16.3 Billing demand</p> <p>16.4 Minimum bill</p> <p>16.5 Power Factor Adjustment Charges</p> <p>16.6 Maximum demand and its measurement</p> <p>16.7 Contract Demand</p> <p>16.8 Rebate for supply at EHV</p>	<p style="font-size: 3em;">}</p>	<p>Same as per HTP-I Tariff</p>
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**NOTE:**

1. 10% of total units consumed and 15% of the contract demand can be availed beyond the prescribed hours for the purpose of maintenance.
2. For the purpose of office lighting, fans etc. the consumer may apply for a separate connection.
3. This tariff shall be applicable if the consumer so opts to be charged in place of HTP-I tariff by using electricity exclusively during night hours as above.
4. The option can be exercised to switch over from HTP-I tariff to HTP-IV tariff and vice versa twice in a calendar year by giving not less than one month's notice in writing.
5. In case the consumer is not fulfilling the conditions of this tariff category, then such consumer for the relevant billing period will be billed under tariff category HTP-I.



**17.0      Rate: HTP- V**

**HT - Agricultural (for HT Lift Irrigation scheme only)**

This tariff shall be applicable for supply of electricity to High Tension Agricultural consumers contracting for 100 kVA and above, requiring power supply for lifting water from surface water sources such as canal, river and dam, and supplying water directly to the fields of farmers for agricultural irrigation only.

**17.1      Demand Charges:**

Demand Charges Rs. 25 per kVA per Month
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**PLUS**

**17.2      Energy Charges:**

For all units consumed during the month	160 Paise per Unit
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17.3      Billing demand	}	Same as per HTP-I Tariff
17.4      Minimum bill		
17.5      Power Factor Adjustment Charges		
17.6      Maximum demand and its measurement		
17.7      Contract Demand		
17.8      Rebate for supply at EHV		

**18.0      Rate: RAILWAY TRACTION**

This tariff is applicable for power supply to Railway Traction at 132 kV/66 kV.

**18.1      Demand Charges:**

(a) For billing demand upto the contract demand	Rs. 160 per kVA per month
(b) For billing demand in excess of contract demand	Rs. 400 per kVA per month





NOTE: In case of the load transfer for traction supply due to non-availability of power supply at preceding or succeeding point of supply or maintenance at Discom's level, excess demand over the contract demand shall be charged at normal rate at appropriate point of supply.

Normal Demand Charges will also apply in case of bunching of trains. However, Discoms shall charge excess demand charges while raising the bills and Railways have to give convincing details and documentary proof of bunching of trains if they want to be charged at the normal demand charges. If satisfactory proof of bunching of trains is provided, Discom shall consider that occasion for normal demand charges, otherwise excess demand charges will be applicable specified as above at 18.1(b).

**PLUS**

**18.2 Energy Charges:**

For all units consumed during the month	455 Paise per Unit
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18.3 Billing demand	}	Same as per HTP-I Tariff
18.4 Minimum bill		
18.5 Power Factor Adjustment Charges		
18.6 Maximum demand and its measurement		
18.7 Contract Demand		
18.8 Rebate for supply at EHV		

