



**Order  
on  
True up for FY 2010-11,  
Aggregate Revenue Requirement  
for  
FY 2012-13 to FY 2014-15  
and  
Distribution Tariff (Wheeling & Retail Supply)  
for  
FY 2012-13  
for  
BSES Rajdhani Power Limited**



**DELHI ELECTRICITY REGULATORY COMMISSION  
JULY, 2012**



## DELHI ELECTRICITY REGULATORY COMMISSION

Viniyamak Bhawan, 'C' Block, Shivalik, Malviya Nagar, New Delhi- 110017.

F.11(771)/DERC/2011-12/

### Petition No. 03/2012

**In the matter of:** Petition for True-up for FY 2010-11, Review & Provisional True-up for FY 2011-12 & MYT Petition for Distribution (Wheeling & Retail Supply) Business for FY 2012-13 to FY 2014-15.

BSES Rajdhani Power Ltd.

Through its: **CEO**

BSES Bhawan,

Nehru Place,

New Delhi – 110019.

...Petitioner/Licensee

### **Coram:**

**Sh. P. D. Sudhakar, Chairman,**  
**Sh. Shyam Wadhera, Member &**  
**Sh. J. P. Singh, Member.**

### ORDER


(Date of Order: 13.07.2012)


Having deliberated upon the Petition for True-up for FY 2010-11, Review & Provisional True-up for FY 2011-12 & MYT Petition for Distribution (Wheeling & Retail Supply) Business for FY 2012-13 to FY 2014-15 filed M/s. BSES Rajdhani Power Ltd. alongwith the Business Plan for the said Control Period; and the subsequent filings by the Petitioner during the course of proceedings; and having considered the responses received from stakeholders, the Commission in exercise of the powers vested under the Electricity Act, 2003 and the Delhi Electricity Regulatory Commission (Terms and Conditions for Determination of Wheeling Tariff and Retail Supply Tariff) Regulations, 2011 hereby pass this Order signed, dated and issued on 13.07.2012.

The Tariff Schedule, issued by the Commission on 26.06.2012 vide Order no. F.11(771)/DERC/2011-12/1752 with the revised tariffs made applicable from 01.07.2012, is an integral part of this Order.

This Tariff Order shall remain in force till replaced by a subsequent Tariff Order and/or is amended, reviewed or modified, in accordance with the provisions of the Electricity Act, 2003 and the Regulations made thereunder.

  
(J. P. Singh)  
MEMBER

  
(Shyam Wadhera)  
MEMBER

  
(P. D. Sudhakar)  
CHAIRMAN

<b>A1: INTRODUCTION .....</b>	<b>12</b>
BSES RAJDHANI POWER LIMITED .....	12
DELHI ELECTRICITY REGULATORY COMMISSION .....	12
THE COORDINATION FORUM .....	12
MULTI YEAR TARIFF REGULATIONS .....	13
FILING OF PETITION FOR TRUE UP OF EXPENSES FOR FY 2010-11 AND APPROVAL OF ARR FOR FY 2012-13 TO FY 2014-15 .....	14
<i>Filing &amp; Acceptance of Petition</i> .....	14
INTERACTION WITH THE PETITIONER .....	14
PUBLIC HEARING .....	17
LAYOUT OF THE ORDER .....	19
PERFORMANCE REVIEW .....	20
APPROACH OF THE ORDER .....	21
<i>Approach for FY 2010-11</i> .....	21
<i>Approach for FY 2011-12</i> .....	22
<i>Approach for FY 2012-13 to FY 2014-15</i> .....	22
<b>A2: RESPONSES FROM STAKEHOLDERS.....</b>	<b>24</b>
PAYMENT TO PENSION TRUST FUND .....	24
<i>Stakeholders' View</i> .....	24
<i>Petitioner's Submission</i> .....	25
<i>Commission's View</i> .....	25
TARIFF FOR DMRC .....	26
<i>Stakeholders' View</i> .....	26
<i>Petitioner's Submission</i> .....	27
<i>Commission's View</i> .....	27
RAILWAYS TRACTION TARIFF .....	28
<i>Stakeholders' View</i> .....	28
<i>Petitioner's Submission</i> .....	29
<i>Commission's View</i> .....	29
TARIFF FOR DJB .....	30
<i>Stakeholders' View</i> .....	30
<i>Petitioner's Submission</i> .....	30
<i>Commission's View</i> .....	30
TARIFF FOR TELECOM TOWER OPERATORS .....	30
<i>Stakeholders' View</i> .....	30
<i>Petitioner's Submission</i> .....	31
<i>Commission's View</i> .....	31
MAINTENANCE COST .....	31
<i>Stakeholders' View</i> .....	31
<i>Petitioner's Submission</i> .....	32
<i>Commission's View</i> .....	32
POWER PURCHASE COST ADJUSTMENT .....	32
<i>Stakeholders' View</i> .....	32
<i>Petitioner's Submission</i> .....	32
<i>Commission's View</i> .....	33
O&M EXPENSES .....	34
<i>Stakeholders' View</i> .....	34
<i>Petitioner's Submission</i> .....	34
<i>Commission's View</i> .....	34
OWN CONSUMPTION .....	34
<i>Stakeholders' View</i> .....	34
<i>Petitioner's Submission</i> .....	34
<i>Commission's View</i> .....	35
SALE OF POWER AND POWER PURCHASE COST .....	35
<i>Petitioner's Submission</i> .....	35
<i>Commission's View</i> .....	37

ASSET REGISTER OF DISCOMS .....	38
<i>Stakeholders' View</i> .....	38
<i>Petitioner's Submission</i> .....	38
<i>Commission's View</i> .....	38
TIME OF DAY TARIFF .....	38
<i>Stakeholders' View</i> .....	38
<i>Petitioner's Submission</i> .....	39
<i>Commission's View</i> .....	39
BILLING BASED ON MDI RECORDING .....	40
<i>Stakeholders' View</i> .....	40
<i>Petitioner's Submission</i> .....	40
<i>Commission's View</i> .....	40
UNIFORM FIXED CHARGES TILL THE SANCTIONED LOAD OF 5 KW .....	40
<i>Stakeholders' View</i> .....	40
<i>Petitioner's Submission</i> .....	40
<i>Commission's View</i> .....	41
MERGER OF NDHT & NDLT (NON DOMESTIC) AND LIP & SIP (INDUSTRIAL) CONSUMER CATEGORIES .....	41
<i>Stakeholders' View</i> .....	41
<i>Petitioner's Submission</i> .....	41
<i>Commission's View</i> .....	41
RELIABILITY CHARGE TO BE LEVIED ON HIGH END CONSUMERS .....	42
<i>Stakeholders' View</i> .....	42
<i>Petitioner's Submission</i> .....	42
<i>Commission's View</i> .....	42
TRANSMISSION CHARGES (PERTAINING TO TPDDL) .....	42
<i>Stakeholders' View</i> .....	42
<i>Petitioner's Submission</i> .....	43
<i>Commission's View</i> .....	43
GENERAL COMMENTS .....	44
<b>A3: TRUE UP FOR FY 2010-11 .....</b>	<b>55</b>
BACKGROUND .....	55
CLAIM OF POWER PURCHASE REBATE PAID TO DTL .....	55
ENERGY SALES .....	56
AT&C LOSSES .....	64
POWER PURCHASE QUANTUM .....	68
POWER PURCHASE COST .....	70
REVIEW OF CONTROLLABLE PARAMETERS .....	73
<i>Employee Expenses</i> .....	74
<i>Administration &amp; General (A&amp;G) Expenses</i> .....	75
<i>Repairs &amp; Maintenance (R&amp;M) Expenses</i> .....	75
<i>Operation &amp; Maintenance Expense</i> .....	76
<i>Review of Capital Expenditure &amp; Capitalisation</i> .....	76
<i>Review of Depreciation</i> .....	77
<i>Review of Return on Capital Employed (RoCE)</i> .....	78
<i>Carrying Cost</i> .....	79
<i>Consumers' Security Deposits</i> .....	79
<i>Income Tax</i> .....	81
<i>Other Expenses</i> .....	82
<i>Non Tariff Income (NTI)</i> .....	84
ANNUAL REVENUE REQUIREMENT FOR FY 2010-11 .....	87
REVENUE AVAILABLE TOWARDS ARR .....	87
CONTINGENCY RESERVE .....	88
REVENUE (GAP)/ SURPLUS .....	89
<b>A4: ANALYSIS OF AGGREGATE REVENUE REQUIREMENT (ARR) FOR FY 2012-13 TO FY 2014-15 .....</b>	<b>90</b>
INTRODUCTION .....	90

ENERGY SALES .....	90
REVENUE IN FY 2012-13 TO FY 2014-15 AT EXISTING TARIFF .....	97
AT&C LOSSES .....	99
ENERGY REQUIREMENT .....	102
DETERMINATION OF AGGREGATE REVENUE REQUIREMENT .....	103
POWER PURCHASE .....	103
<i>Allocation of Power from Central and State Generating Stations .....</i>	<i>104</i>
<i>Energy Availability from the Generating Stations in Delhi System .....</i>	<i>107</i>
<i>Energy Availability from the Central Sector Generating Stations .....</i>	<i>108</i>
<i>Energy Availability from New Stations .....</i>	<i>112</i>
<i>Power Purchase Quantum from Other Sources: Intra-State, Bilateral &amp; Banking .....</i>	<i>115</i>
POWER PURCHASE COST .....	116
<i>Cost of Power Purchase from Existing Stations .....</i>	<i>116</i>
<i>Cost of Power Purchase from New Stations .....</i>	<i>120</i>
<i>Cost of Power from Other Sources .....</i>	<i>121</i>
<i>Transmission Losses and Charges .....</i>	<i>122</i>
<i>Rebate on Power Purchase and Transmission Charges .....</i>	<i>123</i>
ENERGY BALANCE .....	124
POWER PURCHASE ADJUSTMENT .....	126
OPERATION AND MAINTENANCE EXPENSES .....	131
<i>Base year and Inflation Factor .....</i>	<i>132</i>
<i>Employee Expenses .....</i>	<i>134</i>
<i>Administrative and General Expenses .....</i>	<i>139</i>
<i>Repairs and Maintenance Expenses .....</i>	<i>144</i>
<i>Efficiency Factor .....</i>	<i>147</i>
<i>Total Operation &amp; Maintenance Expenses .....</i>	<i>148</i>
CAPITAL INVESTMENT .....	149
ASSETS CAPITALISATION .....	150
DEPRECIATION .....	151
ACCUMULATED DEPRECIATION .....	157
ADVANCE AGAINST DEPRECIATION .....	158
RETURN ON CAPITAL EMPLOYED .....	160
<i>Regulated Rate Base .....</i>	<i>160</i>
WORKING CAPITAL REQUIREMENT .....	162
MEANS OF FINANCE .....	164
DETERMINATION OF WACC AND ROCE .....	166
CAPITALISATION OF EXPENSES .....	168
TAX EXPENSES .....	169
NON TARIFF INCOME .....	170
AGGREGATE REVENUE REQUIREMENT .....	171
<b>A5: TARIFF DESIGN .....</b>	<b>174</b>
COMPONENTS OF TARIFF DESIGN .....	174
CONSOLIDATED REVENUE (GAP)/ SURPLUS FOR THE SECTOR .....	174
<i>Revenue (Gap)/ Surplus till FY 2010-11 .....</i>	<i>174</i>
REVENUE (GAP)/ SURPLUS FOR FY 2012-13 AT EXISTING TARIFFS .....	175
TREATMENT OF REVENUE (GAP)/SURPLUS .....	176
REVENUE (GAP)/SURPLUS AT APPROVED TARIFFS .....	177
COST OF SERVICE MODEL .....	178
<i>Allocation of Wheeling ARR .....</i>	<i>179</i>
<i>Allocation of Retail Supply ARR .....</i>	<i>181</i>
CROSS-SUBSIDISATION IN TARIFF STRUCTURE .....	182
TIME OF DAY (TOD) TARIFF .....	183
TARIFF STRUCTURE .....	185
<i>Domestic Tariff .....</i>	<i>185</i>
<i>Non-Domestic Tariff .....</i>	<i>185</i>
<i>Industrial Tariff .....</i>	<i>187</i>
<i>Agriculture .....</i>	<i>188</i>

<i>Mushroom Cultivation</i> .....	188
<i>Public Lighting</i> .....	188
<i>Railway Traction</i> .....	188
<i>DMRC</i> .....	188
<i>Temporary Supply</i> .....	188
<i>Delhi Jal Board (DJB)</i> .....	189
<i>Delhi International Airport Limited (DIAL)</i> .....	189
<i>Advertisement and Hoardings</i> .....	189
TARIFF SCHEDULE.....	190
OTHER TERMS AND CONDITIONS OF THE TARIFF.....	193
<b>A6: DIRECTIVES</b> .....	<b>199</b>



## LIST OF TABLES

Table 1: List of Correspondence with BRPL.....	15
Table 2: Overall Standards of Performance for April 2010 – March 2011.....	20
Table 3: Average Energy Charges .....	57
Table 4: Trued Up Energy Sales for FY 2010-11 (MU).....	63
Table 5: AT&C loss for FY 2010-11 as submitted by the Petitioner.....	64
Table 6: Computation of Overachievement Incentive as submitted by the Petitioner .....	64
Table 7: AT&C loss for FY 2010-11 as submitted by the Petitioner.....	66
Table 8: AT&C loss for FY 2010-11 as approved by the Commission.....	67
Table 9: AT&C loss for FY 2010-11 .....	68
Table 10: Computation of Underachievement / Overachievement by the Commission .....	68
Table 11: Power Purchase Quantum for FY 2010-11 as claimed by the Petitioner (in MU).....	69
Table 12: Power Purchase Cost for FY 2010-11 as claimed by the Petitioner (Rs. Cr) .....	70
Table 13: Trued-up Power Purchase Cost for FY 2010-11 (Rs. Cr).....	73
Table 14: Revised Employee Expenses (Rs Cr) .....	74
Table 15: Employee Expenses approved by the Commission for FY 2010-11 (Rs. Cr) .....	74
Table 16: A&G Expenses proposed for FY 2010-11 (Rs. Cr).....	75
Table 17: A&G Expenses approved for FY 2010-11 (Rs. Cr).....	75
Table 18: R&M expenses proposed for FY 2010-11 (Rs. Cr).....	75
Table 19: R&M Expenses Approved by Commission for FY 2010-11 (Rs. Cr).....	76
Table 20: Amount approved by the Commission (Rs. Cr) .....	76
Table 21: Capex proposed by BRPL (Rs. Cr).....	77
Table 22: Revised capex proposed by BRPL (Rs. Cr).....	77
Table 23: Capitalisation claimed by the Petitioner (Rs. Cr) .....	77
Table 24: Depreciation submitted by Petitioner for FY 2010-11 (Rs. Cr).....	78
Table 25: Approved Depreciation for FY 2010-11 (Rs. Cr).....	78
Table 26: RoCE submitted by Petitioner for FY 2010-11 (Rs. Cr) .....	78
Table 27: Now Approved RoCE for FY 2010-11 (Rs. Cr).....	79
Table 28: Interest Rate considered for Carrying Cost.....	79
Table 29: Interest paid on Consumer Security Deposit (Rs. Cr).....	80
Table 30: Consumer Security Deposit (Rs. Cr) .....	80
Table 31: Interest on Consumer Security Deposit (Rs. Cr) .....	80
Table 32: Income tax expense claimed by the Petitioner.....	81
Table 33: Income tax expense approved.....	81
Table 34: Additional expenses claimed for FY 2010-11 (Rs. Cr) .....	83
Table 35: Other expenses approved by Commission for FY 2010-11 (Rs. Cr) .....	84
Table 36: Non Tariff Income for FY 2010-11 (Rs. Cr) .....	84
Table 37: Funding of LPSC (Rs. Cr) .....	86
Table 38: Trued-up Non Tariff Income approved by Commission (Rs. Cr).....	86
Table 39: Aggregate Revenue Requirement for FY 2010-11 (Rs. Cr) .....	87
Table 40: Revenue Details submitted by the Petitioner.....	88
Table 41: Revenue available towards ARR approved by Commission for FY 2010-11 .....	88
Table 42: Revenue (Gap)/ Surplus for FY 2010-11 (Rs. Cr).....	89
Table 43: Petitioner's Submission of Energy Sales for FY 2012-13 to FY 2014-15 (MU).....	91
Table 44: Approved Sales for FY 2012-13 to FY 2014-15 (MU) .....	96
Table 45: Power Factor considered by the Commission.....	97
Table 46: Revenue projected for FY 2012-13 (Rs. Cr).....	98
Table 47: Revenue projected for FY 2013-14 (Rs. Cr).....	98
Table 48: Revenue projected for FY 2014-15 (Rs. Cr).....	99
Table 49: Proposed AT&C losses for the Control Period.....	99
Table 50: AT&C Loss levels (FY 2002-03 - FY 2006-07).....	100
Table 51: AT&C Loss levels for FY 2007-08 to FY 2010-11 .....	100
Table 52: AT&C loss levels for FY 2011-12.....	101

Table 53: AT&C Loss Targets approved by the Commission .....	102
Table 54: Proposed Energy Balance for the Control Period .....	103
Table 55: Approved Energy Requirement (MU) .....	103
Table 56: Allocation of Power to Delhi from Central Sector Generating Stations .....	105
Table 57: Allocation of Unallocated quota to Delhi DISCOMs .....	106
Table 58: Allocation from Delhi Stations to BRPL .....	106
Table 59: Proposed energy availability from Delhi Generating Stations during the Control Period (MU) .....	107
Table 60: Approved Energy Available from Delhi Generating Stations (MU) .....	108
Table 61: Proposed energy availability from CSGS during the Control Period (MU) .....	109
Table 62: Energy Available from Central Sector Generating Stations (MU) approved by the Commission .....	111
Table 63: Proposed energy availability from new stations in the Control Period (MU) .....	112
Table 64: Dates of Energy Available from Future Stations as Approved by the Commission .....	113
Table 65: Energy Available from Future Stations as Approved by the Commission (MU) .....	115
Table 66: Energy Purchase /Sales through Other Sources approved by the Commission (MU) .....	116
Table 67: Proposed power purchase cost from existing stations for Control Period (Rs. Cr) .....	116
Table 68: Power purchase cost from existing stations approved by the Commission .....	118
Table 69: Approved Power Purchase Cost for New Generation Stations (Rs. Cr) .....	120
Table 70: Approved Power Purchase Cost for New Generation Stations (Rs. Cr) .....	121
Table 71: Approved Cost of Power Purchase/Sale through Other Sources (Rs. Cr) .....	122
Table 72: Proposed Transmission charges for the Control Period .....	122
Table 73: Transmission Losses and Charges approved by the Commission for Second Control Period .....	123
Table 74: Rebate on Power purchase and Transmission Charges approved by the Commission (Rs. Cr) .....	124
Table 75: Energy Balance for the Control Period submitted by the Petitioner .....	124
Table 76: Energy Balance for the Control Period approved by the Commission .....	125
Table 77: Schedule – Base Cost FY 2012-13* .....	129
Table 78: Actual CPI and WPI .....	133
Table 79: Projected CPI and WPI during the Control Period .....	133
Table 80: Inflation factor for the Control Period approved by the Commission .....	133
Table 81: Employee expenses for Second Control Period (Rs. Cr) .....	134
Table 82: Revised Employee Expenses (Rs Cr.) calculated by the Commission .....	135
Table 83: Analysis of Revised Employee Expenses (Rs Cr.) calculated by the Commission .....	136
Table 85: Employee Cost per consumer served .....	136
Table 86: Estimation of Base Employee Expenses .....	137
Table 87: Employee Expenses (Rs Cr.) approved by the Commission .....	137
Table 88: Approved SVRS Pension Expenses (Rs. Cr) .....	138
Table 90: Statement of Allocation of Employee Cost between Wheeling and Retail Supply .....	139
Table 91: Approved Allocation of Employee Cost (Rs. Cr) .....	139
Table 92: A&G expenses (Rs. Cr) submitted by the Petitioner .....	140
Table 93: Revised A&G expenses (Rs. Cr) calculated by the Commission .....	140
Table 95: A&G Cost per consumer as calculated by Commission .....	141
Table 96: Estimation of Base A&G Expenses .....	142
Table 97: A&G expenses (Rs. Cr) approved by the Commission .....	143
Table 98: Allocation of A&G Expenses between Wheeling & Retail Supply Business .....	143
Table 99: Approved Allocation of A&G Cost (Rs. Cr) .....	144
Table 100: R&M expenses for Second Control Period (Rs. Cr) .....	144
Table 101: R&M Expenses for FY 2007-08 to FY 2011-12 .....	145
Table 102: 'K' factor as approved by Commission for FY 2007-08 to FY 2011-12 .....	146
Table 103: R&M Expenses (Rs. Cr) approved by the Commission .....	146
Table 104: Allocation of R&M Expenses between Wheeling & Retail Supply Business .....	147
Table 105: Approved Allocation of R&M Expenses (Rs. Cr) .....	147
Table 106: O&M Expenses (Rs Cr.) approved by the Commission .....	149
Table 107: Proposed Capital Investment during the Second Control Period (Rs. Cr) .....	149
Table 108 Proposed capitalization and CWIP FY 2012-13 to FY 2014-15 .....	150
Table 109: Approved CWIP for the Control Period (Rs. Cr) .....	151



Table 110: Proposed Gross Fixed Assets and Depreciation (Rs. Cr) .....	151
Table 111: Proposed Depreciation for FY 2012-13 to FY 2014-15 (Rs. Cr).....	151
Table 112: GFA Approved by the Commission for previous Control Period (Rs. Cr).....	153
Table 113: GFA Approved by the Commission for current Control Period (Rs. Cr) .....	153
Table 114: Consumer contribution and grants for previous Control Period (Rs. Cr) .....	154
Table 115: Approved Consumer contribution and grants for current Control Period (Rs. Cr).....	154
Table 116: Approved Depreciation for the Control Period (Rs. Cr).....	154
Table 117: Statement of Allocation of GFA between Wheeling & Retail Supply Business .....	155
Table 118: Approved Allocation of GFA & Depreciation Expenses (Rs. Cr).....	156
Table 119: Depreciation allowed up to FY 2014-15 (Rs. Cr).....	157
Table 120: Accumulated Depreciation proposed for FY 2012-13 to FY 2014-15 (Rs. Cr).....	157
Table 121: Approved Accumulated Depreciation for FY 2012-13 to FY 2014-15 (Rs. Cr) .....	158
Table 122: Allocation of Accumulated Depreciation (Rs. Cr) .....	158
Table 123: AAD approved by Commission (Rs. Cr).....	159
Table 124: AAD approved by Commission for Wheeling and Retail Supply Business for FY 2012-13 to FY 2014-15 (Rs. Cr) .....	159
Table 125: Proposed RRB for FY 2012-13 to FY 2014-15 (Rs. Cr) .....	160
Table 126: Capitalised Consumer Contribution for FY 2012-13 to FY 2014-15 (Rs. Cr) .....	160
Table 127: Approved RRB for the previous Control Period (Rs. Cr).....	161
Table 128: Approved RRB for the current Control Period (Rs. Cr) .....	161
Table 129: Allocation of RRB for the Control Period (Rs. Cr) .....	162
Table 130: Proposed Working Capital for the Second Control Period (Rs. Cr) .....	162
Table 131: Approved Working Capital for Wheeling Business for Second Control Period (Rs. Cr) .....	163
Table 132: Approved Working Capital for Retail Supply Business for Second Control Period (Rs. Cr) .....	163
Table 133: Allocation of Working Capital for the Control Period (Rs. Cr).....	164
Table 134: Proposed means of finance FY 2012-13 to FY 2014-15 (Rs. Cr).....	164
Table 135: Approved Means of Finance for FY 2012-13 to FY 2014-15 (Rs. Cr).....	164
Table 136: Approved New Loan Details for Second Control Period .....	165
Table 137: Approved addition in Equity and Free Reserves (Rs. Cr) .....	166
Table 138: Approved Debt (Rs. Cr).....	166
Table 139: Proposed RoCE for FY 2012-13 to FY 2014-15 (Rs. Cr) .....	166
Table 140: Approved RoCE for FY 2012-13 to FY 2014-15 (Rs. Cr) .....	167
Table 141: Allocation of RoCE for FY 2012-13 to FY 2014-15 (Rs. Cr).....	167
Table 142: Approved Expense Capitalization for FY 2012-13 to FY 2014-15 (Rs. Cr) .....	168
Table 143 Allocation of Approved Expense Capitalization (Rs. Cr).....	169
Table 144: Proposed Tax Expenses FY 2012-13 to FY 2014-15 (Rs. Cr).....	169
Table 145 Approved Tax Expenses for FY 2012-13 to FY 2014-15.....	169
Table 146: Allocation of Income Tax into Wheeling and Retail Supply Business (Rs. Cr) .....	170
Table 147: Proposed Non-Tariff Income FY 2012-13 to FY 2014-15 (Rs. Cr) .....	170
Table 148: Approved Non-Tariff Income for FY 2012-13 to FY 2014-15 (Rs. Cr).....	170
Table 149: Allocation of NTI between Wheeling & Retail Supply Business.....	171
Table 150: Approved Allocation of NTI for FY 2012-13 to FY 2014-15 (Rs. Cr) .....	171
Table 151: Proposed ARR for FY 2012-13 to FY 2014-15 (Rs. Cr).....	171
Table 152: Proposed ARR for Wheeling Business for FY 2012-13 to FY 2014-15 (Rs. Cr).....	172
Table 153: ARR for Retail Supply Business for FY 2012-13 to FY 2014-15 (Rs. Cr) .....	172
Table 154: Approved ARR for FY 2012-13 to FY 2014-15 (Rs. Cr).....	172
Table 155: Approved ARR for Wheeling Business for FY 2012-13 to FY 2014-15 (Rs. Cr).....	173
Table 156: Approved ARR for Retail Supply Business for FY 2012-13 to FY 2014-15 (Rs. Cr) .....	173
Table 157: Revenue (Gap)/ Surplus of BRPL for till FY 2010-11 (Rs. Cr) .....	174
Table 158: Revenue (Gap)/ Surplus of TPDDL for till FY 2010-11 (Rs. Cr) .....	174
Table 159: Net Revenue (Gap)/ Surplus of BYPL till FY 2010-11 (Rs. Cr).....	175
Table 160: Revenue (Gap)/ Surplus for all DISCOMs at the end of FY 2010-11 (Rs. Cr) .....	175
Table 161: Revenue (Gap)/ Surplus of BRPL at Existing Tariffs for FY 2012-13 (Rs. Cr).....	175
Table 162: Revenue (Gap)/ Surplus of TPDDL at Existing Tariffs for FY 2012-13 (Rs. Cr).....	176

Table 163: Revenue (Gap)/ Surplus of BYPL at Existing Tariffs for FY 2012-13 (Rs. Cr).....	176
Table 164 Revenue (Gap)/ Surplus for all DISCOMs for FY 2012-13 (Rs. Cr) .....	176
Table 165: Revenue at existing tariffs (Rs. Cr) .....	177
Table 166: Revenue at revised tariffs for FY 2012-13 (Rs. Cr) .....	177
Table 167: Net Revenue (Gap)/ Surplus of BRPL at Revised Tariffs for FY 2012-13(Rs. Cr) .....	178
Table 168: Approved Energy Sales (MU) .....	179
Table 169: Distribution Loss (%) .....	179
Table 170: Approved Energy Input (MU) .....	180
Table 171: Wheeling Cost allocation asset wise (Rs. Cr) .....	180
Table 172: Wheeling Cost allocated to different voltages (Rs. Cr) .....	180
Table 173: Wheeling Charge (Paisa per unit) .....	181
Table 174: Retail Supply Charge (Paisa per unit) .....	181
Table 175: Cost of Supply for TPDDL (Paisa per Unit).....	181
Table 176: Cost of Supply for BRPL (Paisa per Unit) .....	181
Table 177: Cost of Supply for BYPL (Paisa per Unit) .....	182
Table 178: Ratio of ABR to Average CoS and category-wise tariff hike approved for FY 2012-13 .....	183

**List of Abbreviations**

Abbreviation	Explanation
ARR	Aggregate Revenue Requirement
A&G	Administrative and General
AAD	Advance Against Depreciation
ABT	Availability Based Tariff
ACD	Advance Consumption Deposit
AMR	Automated Meter Reading
APDRP	Accelerated Power Development and Reforms Program
AT&C	Aggregate Technical and Commercial
ATE	Appellate Tribunal for Electricity
BEST	Birhanmumbai Electric Supply and Transport
BHEL	Bharat Heavy Electrical Limited
BIS	Bureau of Indian Standards
BPTA	Bulk Power Transmission Agreement
BRPL	BSES Rajdhani Power Limited
BST	Bulk Supply Tariff
BTPS	Badarpur Thermal Power Station
BYPL	BSES Yamuna Power Limited
CAGR	Compounded Annual Growth Rate
CCGT	Combined Cycle Gas Turbine
CEA	Central Electricity Authority
CERC	Central Electricity Regulatory Commission
CFL	Compact Fluorescent Lamp
CGHS	Cooperative Group Housing Societies
CGS	Central Generating Stations
CIC	Central Information Commission
CISF	Central Industrial Security Force
CoS	Cost of Supply
CPI	Consumer Price Index
CPRI	Central Power Research Institute
CPSUs	Central Power Sector Utilities
CSGS	Central Sector Generating Stations
CWIP	Capital Work in Progress
DA	Dearness Allowance
DDA	Delhi Development Authority
DERA	Delhi Electricity Reform Act
DERC	Delhi Electricity Regulatory Commission
DIAL	Delhi International Airport Limited
DISCOMs	Distribution Companies (BRPL, BYPL, TPDDL & NDMC)
DMRC	Delhi Metro Rail Corporation
DPCL	Delhi Power Company Limited
DTL	Delhi Transco Limited
DVB	Delhi Vidyut Board

Abbreviation	Explanation
DVC	Damodar Valley Corporation
EHV	Extra High Voltage
EPS	Electric Power Survey
FBT	Fringe Benefit Tax
FPA	Fuel Price Adjustment
GFA	Gross Fixed Assets
GIS	Geographical Information System
GoNCTD	Government of National Capital Territory of Delhi
GTPS	Gas Turbine Power Station
HEP	Hydro Electric Power
HPSEB	Himachal Pradesh State Electricity Board
HRA	House Rent Allowance
HT	High Tension
HVDS	High Voltage Distribution System
IDC	Interest During Construction
IGI Airport	Indira Gandhi International Airport
IPGCL	Indraprastha Power Generation Company Limited
JJ Cluster	Jhugghi Jhopadi Cluster
KSEB	Kerala State Electricity Board
LED	Light Emitting Diode
LIP	Large Industrial Power
LT	Low Tension
LVDS	Low Voltage Distribution System
MCD	Municipal Corporation of Delhi
MES	Military Engineering Service
MLHT	Mixed Load High Tension
MMC	Monthly Minimum Charge
MoP	Ministry of Power
MTNL	Mahanagar Telephone Nigam Limited
MU	Million Units
MYT	Multi Year Tariff
NABL	National Accreditation Board for Testing and Calibration of Laboratories
NAPS	Narora Atomic Power Station
NCT	National Capital Territory
NCTPS	National Capital Thermal Power Station
NDLT	Non Domestic Low Tension
NDMC	New Delhi Municipal Corporation
NEP	National Electricity Policy
NGO	Non Government Organisation
NHPC	National Hydroelectric Power Corporation
NPCIL	Nuclear Power Corporation of India Limited
NRPC	Northern Regional Power Committee
NTI	Non Tariff Income

Abbreviation	Explanation
NTP	National Tariff Policy
O&M	Operations and Maintenance
OCFA	Opening Cost of Fixed Assets
PGCIL	Power Grid Corporation of India
PLF	Plant Load Factor
PLR	Prime Lending Rate
PPA	Power Purchase Agreement / Power Purchase Adjustment
PPCL	Pragati Power Corporation Limited
PTC	Power Trading Corporation
PWD	Public Works Department
R&M	Repair and Maintenance
RAPS	Rajasthan Atomic Power Station
REA	Regional Energy Account
RoCE	Return on Capital Employed
ROE	Return on Equity
RRB	Regulated Rate Base
RTI	Right to Information
RWA	Resident Welfare Associations
SBI	State Bank of India
SERC	State Electricity Regulatory Commission
SIP	Small Industrial Power
SJVNL	Satluj Jal Vidyut Nigam Limited
SLDC	State Load Despatch Centre
SPD	Single Point Delivery
SPUs	State Power Utilities
SVRS	Special Voluntary Retirement Scheme
THDC	Tehri Hydro Development Corporation
ToD	Time of Day
TPDDL	Tata Power Delhi Distribution Limited
TPS	Thermal Power Station
UI	Unscheduled Interchange
UoM	Units of Measurement
WACC	Weighted Average Cost of Capital
WC	Working Capital
WPI	Wholesale Price Index

## A1: INTRODUCTION

- 1.1 This Order relates to the petition filed by BSES Rajdhani Power Limited (hereinafter referred to as 'BRPL' or the 'Petitioner') for True-up for FY 2010-11, Review & Provisional True-up for FY 2011-12 under the Multi Year Tariff Principles specified in the Delhi Electricity Regulatory Commission (Terms and Conditions for Determination of Wheeling Tariff and Retail Supply Tariff) Regulations, 2007 (hereinafter referred to as the 'MYT Regulations 2007') and MYT Petition for Distribution (Wheeling & Retail Supply) Business for FY 2012-13 to FY 2014-15 under the Multi Year Tariff Principles specified in the Delhi Electricity Regulatory Commission (Terms and Conditions for Determination of Wheeling Tariff and Retail Supply Tariff) Regulations, 2011 (hereinafter referred to as the 'MYT Regulations').

### BSES Rajdhani Power Limited

- 1.2 BSES Rajdhani Power Limited is a company incorporated under the Companies Act, 1956 and is engaged in the business of distribution and retail supply of electricity in the specified area of South West of Delhi in the NCT of Delhi.

### Delhi Electricity Regulatory Commission

- 1.3 Delhi Electricity Regulatory Commission (hereinafter referred to as 'DERC or the 'Commission') was constituted by the GoNCTD on March 3, 1999 and it became operational from December 10, 1999.
- 1.4 The Commission's approach to regulation is driven by the Electricity Act 2003, the National Electricity Plan, the Tariff Policy and the Delhi Electricity Reform Act 2000 (hereinafter referred to as 'DERA'). The Act mandates the Commission to take measures conducive to the development and management of the electricity industry in an efficient, economic and competitive manner, which inter alia includes tariff determination.

### The Coordination Forum

- 1.5 The Commission has, since the constitution of the Co-ordination Forum on March 16, 2005, held 25 meetings. In the 24th and 25th Co-ordination Forum Meeting held on November 09, 2011 and March 19, 2012 respectively, the Commission discussed the following:

#### 24<sup>th</sup> Co-ordination Forum Meeting

- (a) Repair and utilization of distribution transformers of erstwhile DVB period handed over to DISCOMs.
- (b) Replacement of oil filled transformers by dry type transformers inside residential / commercial buildings.
- (c) Commissioning of Bawana Power Project by PPCL.



- (d) Regulation of power by central PSUs for BRPL and BYPL.
- (e) Commission advised the DISCOMs to examine their cash flow on monthly basis and make the payment on account of power purchase and wheeling charges on priority to central/ State Power utilities to avoid regulation of power.

### 25<sup>th</sup> Co-ordination Forum Meeting

- (a) Various issues such as replacement of oil filled type by dry type transformers, repair of distribution transformers etc. were discussed.
- (b) The guidelines of implementation of Intra State Open Access in Delhi were discussed and it was decided that suitable modification may be carried out to the draft guidelines.
- (c) Compliance of the directions issued by the Commission regarding Residual Back Flow, Absolute Earth Potential and Separate neutral for each connection were reviewed.
- (d) The distribution licensees were advised to carry out energy audit from time to time.
- (e) Introduction of Time of Day metering from FY 2012-13 onwards was discussed with the distribution companies.
- (f) The time of submission of the Asset Register was discussed with the distribution companies and DTL. They were directed to make the Asset Register available to the Commission within 15 days.

### Multi Year Tariff Regulations

- 1.6 The Commission issued regulations vide Order dated December 02, 2011 specifying Terms and Conditions for Determination of Tariff for Generation, Transmission and Distribution of electricity under the Multi Year Tariff (MYT) framework for the period FY 2012-13 to FY 2014-15 after going through the public hearing process following due process of law. The Regulations/ Amendment in Regulations were notified in the official Gazette on 19 January, 2012/ 15 March, 2012 respectively.

**Filing of Petition for True Up of expenses for FY 2010-11 and approval of ARR for FY 2012-13 to FY 2014-15****Filing & Acceptance of Petition**

- 1.7 BRPL has filed its petition before the Commission on January 30, 2012 for True-up for FY 2010-11, Review & Provisional True-up for FY 2011-12 & MYT Petition for Distribution (Wheeling & Retail Supply) Business for FY 2012-13 to FY 2014-15. The Commission admitted the petition vide its Order dated February 9, 2012 subject to clarifications/additional information, if any, which would be sought from the Petitioner from time to time. A copy of the Admission Order dated February 9, 2012 is enclosed as **Annexure I** to this Order.
- 1.8 Further, as requested by stakeholders, the Commission directed all the Power Utilities to submit a Hindi version of the Petition filed by them. The Hindi version of the Petition was uploaded on the website of the Commission as well as the website of the Petitioner for the benefit of stakeholders.

**Interaction with the Petitioner**

- 1.9 The Order has referred at numerous places to various actions taken by the “Commission”. It may be mentioned for the sake of clarity, that the term “Commission” in most of the cases refers to the Staff of the Commission and the Consultants appointed by the Commission for carrying out the due diligence on the petitions filed by the utilities, obtaining and analysing information/clarifications received from the utilities and submitting all issues for consideration by the Commission.
- 1.10 For this purpose, the Commission Staff and Consultants held discussions with the Petitioners, obtained information/clarifications wherever required and carried out technical validation with regard to the information provided.
- 1.11 The role of the Commission is to hold public hearings and to take the final view with respect to various issues concerning the principles and guidelines for tariff determination. The use of the term “Commission” may, therefore, be read in the context of the above clarification. The Commission has considered due diligence conducted by the Staff of the Commission and the Consultants in arriving at its final decision.
- 1.12 A preliminary scrutiny/analysis of the petition submitted by the Petitioner was conducted and certain deficiencies were observed. Accordingly, deficiency notes were issued to the Petitioner. Further, additional information/clarifications were solicited from the Petitioner as and when required. The Commission and the Petitioner also discussed key issues raised in the petition, which included details of capital expenditure and capitalisation plan, allocation of expenses into Wheeling and Retail Supply Business, AT&C loss reduction trajectory, liability towards SVRS expenditure, etc. The Petitioner submitted additional information through various letters, as listed in Table 1.

- 1.13 The Commission also conducted multiple validation sessions with the Petitioner during which discrepancies in the petition and additional information required by the Commission were sought. Subsequently, the Petitioner submitted replies to the issues raised in these sessions and provided documentary evidence to substantiate its claims regarding various submissions.
- 1.14 The replies of the Petitioner, as mentioned in the table below, have been considered for approval of the ARR of the Petitioner:

**Table 1: List of Correspondence with BRPL**

Date	Letter No.	Subject
29/02/2012	RA/2011-12/01/A/334	Deficiency/ Additional information required for ARR Petition for FY 2012-13 to FY 2014-15 and True Up Petition FY 2010-11.
-	--	Business Plan FY 12-13 to FY 14-15
13/03/2012	RA/2011-12/01/A/342	Deficiency/Additional information required for ARR Petition FY 2012-13 to FY 2014-15 and True Up Petition for FY 2010-11
26/03/2012	RA/2011-12/01/A/357	Corrigendum to the Petition/ Application for True Up for FY 2010-11, Review & Provisional True Up for FY 2011-12 & MYT Petition for Distribution (Wheeling & Retails Supply ) business for FY 2012-13 to FY 2014-15.
28/03/2012	RA/2011-12/01/A/362	Deficiency/Additional information required for ARR Petition FY 2012-13 to FY 2014-15 and True Up Petition for FY 2010-11
29/03/2012	RA/2012-13/01/A/360	Submission of Additional Information
26/03/2012	RA/2011-12/01/A/357	Corrigendum to the Petition/ Application for True Up for FY 2010-11, Review & Provisional True Up for FY 2011-12 & MYT Petition for Distribution (Wheeling & Retails Supply ) business for FY 2012-13 to FY 2014-15.
02/04/2012	RA/2012-13/01/A/002	ARR Petition for FY 2012-13 to 2014-15 and True Up Petition for FY 2010-11.
03/04/2012	RA/2012-13/01/A/015	Submission of Additional Information
03/04/2012	RA/2012-13/01/A/007	Submission of Additional Information
03/04/2012	RA/2012-13/01/A/003	Prudence check / verification of sales/ Revenue data Power Purchase Bills & Forms 2.1 (a) Form 2.1 (a)
09.04.2012	Ref: RA/2012-13/01/A/004	Prudence check/verification of Sales/Revenue data, Power Purchase Bills & Form 2.1(a).
12/04/2012	RA/2012-13/01/A/017	Submission of Voltage wise information
13/04/2012	RA/2012-13/01/A/021	Submission of additional information (regarding projected demand and actual demand met for all 365 days 15 minutes slot wise for FY 2010-11
17/04/2012	RA/2012-13/01/A/023	Submission of Additional Information (MISUSE FY 2010-11
17/04/2012	RA/2012-13/01/A/023A	Submission of Additional Information (Public Lighting FY 2010-11)
17/04/2012	RA/2012-13/01/A/023A	Submission of Additional Information (Public Lighting FY 2010-11)
18.04.2012	Ref: RA/2012-13/01/A/025	Prudence check/verification of Sales/Revenue data, Power Purchase Bills & Form 2.1(a)
18/04/2012	RA/2012-13/01/A/26	Submission of Additional Information (Public Lighting FY 2010-11)
18/04/2012	RA/2012-13/01/A/024	Theft details in FY 2009-10 and FY 2010-11.
18/04/2012	RA/2012-13/01/A/26	Submission of Additional Information(Public Lighting FY

Date	Letter No.	Subject
		2010-11)
19/04/2012	RA/2012-13/01/A/029	Submission of Additional Information
20/04/2012	RA/2012-13/01/A/031	Reply in the matter of Petition filed by PPCL for determination of generation tariff for MYT control period FY 2012-13 to 2014-15.
20/04/2012	RA/2012-13/01/A/030	Reply in the matter of Petition filed by IPGCL for determination of generation tariff for MYT control period FY 2012-13 to 2014-15
20.04.2012	Ref: RA/2012-13/01/A/45	Prudence check/verification of Sales/Revenue data, power purchase Bills & Form 2.1(a).
23.04.2012	Ref: RA/2012-13/01/A/33	Prudence Check FY 2010-11/Prudence Check/verification of sales/revenue data, power purchases bills & Form 2.1(a).
25.04.2012	Ref: RA/2012-13/01/A/43	Prudence check/verification of Sales/Revenue data, Power purchase Bills & Form 2.1(a).
25/04/2012	RA/2012-12/01/A/037	Deficiency/ Additional information for ARR Petition for FY 2012-13 to FY 2014-15 and True Up Petition FY 2010-11.
25/04/2012	RA/2012-13/01/A/038	Amount Paid to DTL
25/04/2012	RA/2012-12/01/A/039	Deficiency/ Additional information for ARR Petition for FY 2012-13 to FY 2014-15 and True Up Petition FY 2010-11.
27.04.2012	Ref: RA/2012-13/01/A/50	Prudence Check/ verification of power purchase coast (PWC short term & long term)
03/05/2012	RA/2012-13/01/A/054	Submission of reply to responses.
07.05.2012	Ref: RA/2012-13/01/A/58	Details of amount billed/collected from enforcement reg:-
08.05.2012	Ref: RA/2012-12301/A/059	Details regarding Own/Self Consumption of Electricity of Distribution licensee.
08.05.2012	Ref: RA/2012-13/01/A/60	Prudence check/verification of Sales/Revenue data, power purchase Bills & Form 2.1(a).
08.05.2012	Ref: RA/2012-13/01/A/61	Prudence check/verification of Sales/Revenue data, power purchase Bills & Form 2.1(a).
08.05.2012	Ref: RA/2012-13/01/A/62	Prudence check/verification of Sales/Revenue data, power purchase Bills & Form 2.1(a).
21.05.2012	Ref: RA/2012-12301/A/72	Information regarding AT&C Losses etc.
22.05.2012	Ref: RA/2012-13/01/A/73	Prudence Check/verification of sales/revenue data, power purchase bills & Form 2.1 a.
22.05.2012	Ref: RA/2012-13/01/A/73	Prudence Check/verification of sales/revenue data, power purchase bills & Form 2.1 a.
23.05.2012	Ref: RA/2012-13/01/A/77	Prudence check/verification of power purchase cost.
23/05/2012	RA/2012-13/01/A/78	Technical Validation Session for O&M expenses, Income and loan details
23.05.2012	Ref: RA/2012-13/01/A/79	Prudence check/verification of Sales/Revenue data, power purchase Bills & Form 2.1(a).
25.05.2012	Ref: RA/2012-13/01/A/82	Submission of AT&C Loss & Form 2.1 a-D for FY 2011-12(provisional).
25.05.2012	Ref: RA/2012-13/01/A/81	Prudence check FY 2010-11.
25/05/2012	RA/2012-13/01/A/80	Approval of the term loan availed in FY 2010-11
28/05/2012	RA/2012-13/01/A/84	Technical Validation Session for O&M expenses, Income and loan details
25/05/2012	RA/2012-13/01/A/83	Details regarding Energy consumption under category "Public Lighting"
30/05/2012	RA/2012-13/01/A/89	Technical Validation Session for O&M expenses, Income and

Date	Letter No.	Subject
		loan details
30/05/2012	RA/2012-13/01/A/88	Approval of the term loan availed by BRPL
04.06.2012	Ref: RA/2012-13/01/A/95	Classification of Domestic Consumers other than Domestic Consumers.
04.06.2012	Ref: RA/2012-13/01/A/94	Prudence Check FY 2010-11.
08/06/2012	RA/2012-13/01/A/101	Technical Validation Session for O&M expenses, Income and loan detail
08.06.2012	Ref: RA/2012-13/01/A/102	Prudence check/ verification of Sales/Revenue data, Power Purchase Bills & Form 2.1(a)
12.06.2012	Ref: RA/2012-13/01/A/105	Technical Validation Session held on 05.06.2012 at DERC
13.06.2012	Ref: RA/2012-13/01/A/120	LI- DERC letter no. F.No.3(279)/Tariff/DERC/12-12/3429/1237 dated 11.06.2012.
13.06.2012	Ref: RA/2012-13/01/A/115	Prudence Check FY 2010-11
18.06.2012	Ref: RA/2012-13/01/A/126	Prudence Check FY 2010-11, Verification of Sales Revenue data.
19/06/2012	RA/2012-13/01/A/101	Training Expenses for MYT FY 2012-13 to FY 2014-15
22.06.2012	Ref: RA/2012-13/01/A/143	Clarification required from BRPL regarding power banking

## Public Hearing

1.15 The Petitioner published a Public Notice indicating salient features of its petition for inviting comments from the stakeholders, in the following newspapers on the respective dates mentioned alongside:

- |     |                           |            |
|-----|---------------------------|------------|
| (a) | Hindustan Times (English) | 10.03.2012 |
| (b) | Time of India (English)   | 10.03.2012 |
| (c) | Mint (English)            | 10.03.2012 |
| (d) | Hindustan (Hindi)         | 10.03.2012 |
| (e) | Milap (Urdu)              | 14.03.2012 |

1.16 Copies of the Public Notice in English, Hindi and Urdu are enclosed as **Annexure II** to this Order. A copy of the petition was also made available for purchase from the head-office of the Petitioner on any working day from March 15, 2012 to March 29, 2012 between 11 A.M. and 4 P.M. on payment of Rs 100/-. A copy of the complete petition was also uploaded on the website of the Commission, as well as that of the Petitioner, requesting for comments of the stakeholders thereon.

1.17 The Commission also published a Public Notice in the following newspapers on March 15, 2012 inviting comments from stakeholders on the MYT petitions filed by the petitioners latest by March 30, 2012.

- (a) Hindustan Times (English)

- (b) Times of India (English)
  - (c) The Pioneer (English)
  - (d) Dainik Jagran (Hindi)
  - (e) Dainik Bhaskar (Hindi)
  - (f) The Educator (Punjabi)
  - (g) Milap (Urdu)
- 1.18 Copies of the Public Notice in English, Hindi, Punjabi and Urdu are attached as **Annexure III** to this Order.
- 1.19 At the request of the stakeholders, the Commission extended the last date for filing objections and suggestions to April 10, 2012 for which the Public Notice was issued on March 31, 2012/April 1, 2012 in the following newspapers::
- (a) Hindustan Times (English)
  - (b) Times of India (English)
  - (c) The Pioneer (English)
  - (d) Dainik Jagran (Hindi)
  - (e) Dainik Bhaskar (Hindi)
  - (f) The Educator (Punjabi)
  - (g) Milap (Urdu)
- 1.20 Copies of the above Public Notice in English, Hindi, Punjabi and Urdu are attached as **Annexure IV** to this Order.
- 1.21 At the request of the stakeholders, to extend help to the consumers in understanding the ARR Petition and filing their comments, the Commission prepared a Staff Paper highlighting salient features of the MYT Petition filed by the Petitioner, which was uploaded on the Commissions' website. In this regard, two officers of the Commission viz. Joint Director (Tariff-Finance) and Joint Director (Tariff-Engineering) were made available to all the interested stakeholders for discussion on the ARR Petitions. This was duly highlighted in the Public Notices brought out by the Commission. In order to increase participation of the stakeholders, the Commission also uploaded the Hindi version of the Staff Paper on its website.
- 1.22 The Commission received comments from 136 stakeholders. The comments of the stakeholders were forwarded to the petitioner. The Petitioner responded to the



comments of the stakeholders with a copy of its replies to the Commission. The Commission invited all stakeholders who had filed their objections and suggestions to attend the Public Hearing. A list of the stakeholders who responded to the Public Notice on ARR and tariff petitions and/or who attended the public hearing is enclosed as **Annexure V** to this Order.

- 1.23 The public hearing was held at the Commission's Court Room from April 26, 2012 to April 28, 2012 from 10.30 a.m. onwards to discuss the issues related to the petition filed by the Petitioner. The issues and concerns voiced by various stakeholders have been examined by the Commission. The major issues discussed during the public hearing and/or written comment made by the stakeholders, the responses of the Petitioner thereon and the views of the Commission, have been summarized in Chapter A2.

## Layout of the Order

- 1.24 This Order is organised into six Chapters:
- (a) Chapter A1 provides details of the tariff setting process and the approach of the Order;
  - (b) Chapter A2 provides a brief of the Public Hearing process, including the details of comments of various stakeholders, the Petitioner's response and views of the Commission thereon;
  - (c) Chapter A3 provide details/ analysis of the true up for FY 2010-11;
  - (d) Chapter A4 provides analysis of the petition for determination of the Aggregate Revenue Requirement for FY 2012-13 to FY 2014-15 and Wheeling and Retail Supply Tariff for FY 2012-13;
  - (e) Chapter A5 details of the possible options for determination of Wheeling and Retail Supply Tariff for all consumer categories, and the approach adopted by the Commission in determining the tariff; and
  - (f) Chapter A6 provides details of the Directives of the Commission for compliance of the Petitioner.
- 1.25 The Order contains the following Annexure, which are an integral part of the Tariff Order:
- (a) Annexure I – Admission Order;
  - (b) Annexure II – Copies of Public Notices published by the Petitioner;
  - (c) Annexure III – Copies of the Public Notice published by the Commission inviting comments from the stakeholders;

- (d) Annexure IV – Copies of the Public Notice published by the Commission regarding extension of last date of submission of comments.
- (e) Annexure V – List of the respondent Stakeholders.

## Performance Review

- 1.26 Regulation 11.2 of the DERC (Terms & Conditions for determination of Wheeling and Retail Supply Tariff) Regulation, 2007 stipulates as under:

*“The Distribution Licensee shall submit information as part of annual review on actual performance to assess the performance vis-à-vis the targets approved by the Commission at the beginning of the Control Period. This shall include annual statements of its performance and accounts including latest available audited/actual accounts and tariff worked out in accordance with these Regulations.”*

- 1.27 The Commission sought inputs on overall Standards of Performance prescribed in Schedule-II of the Delhi Electricity Supply Code and Performance Standards Regulations, 2007. The details submitted by BRPL are given in Table 2.

**Table 2: Overall Standards of Performance for April 2010 – March 2011**

Service area	Overall Standard of Performance	Standard of performance achieved
Normal fuse-off calls	At least 99% calls received should be rectified within prescribed time limits in both cities and Towns and in Rural areas	99.58%
Line Breakdowns	At least 95% of cases resolved within time limit in both Cities and Towns and in Rural area	99.31%
Distribution Transformer failure	At least 95% of DTRs to be replaced within prescribed time limits in both Cities and Towns and in Rural areas	100%
Period of scheduled outage		
Maximum duration in a single stretch	At least 90% of cases resolved within time limit	99.96%
Restoration of supply by 6:00 PM		99.76%
Street Light Faults		
Rectification of line faults	At least 90% cases should be complied within prescribed time limits	
Replacement of fused / defective unit		
Continuity Indices *		
SAIFI	To be laid down by the Commission based on the targets proposed by the Licensees.	3.105
SAIDI		3.887
MAIFI		0.041
Frequency variations	To maintain supply frequency within range as per IEGC.	In an integrated system operation, it has maintained the supply

Service area	Overall Standard of Performance	Standard of performance achieved
		frequency within specified range as per IEGC
Voltage Unbalance	Maximum of 3% at point of commencement of supply	
Percentage billing mistakes	Not exceeding 0.2%	0.12%
Percentage faulty meters	Not exceeding 3%	0.61%

\* Since the DISCOMs inter-se have been following different formula for working out indices, the Commission, has not been able to decide the indices.

## Approach of the Order

### Approach for FY 2010-11

- 1.28 Under the MYT Framework, the Commission has projected the ARR for the Petitioner for each year of the Control Period in the MYT Order 2008-11 issued on February 23, 2008 (hereinafter referred to as the 'MYT Order'). The MYT Regulations, 2007 provides that actual expenses incurred by the Petitioner in respect of the uncontrollable parameters shall be trued up at the end of the respective Financial Year based on the audited accounts and Prudence check.
- 1.29 Under the MYT Regulations 2007, the components of ARR have been segregated into Controllable and Uncontrollable Parameters. As per Regulation 5.41 & 5.42 of the MYT Regulations, 2007 the Uncontrollable Parameters shall be trued up each year based on the audited accounts and prudence check by the Commission; and, the Controllable Parameters shall not be trued up. As per clause 4.16 of the MYT Regulations, 2007:

*“The true up across various controllable and uncontrollable parameters shall be conducted as per principle stated below:*

- (a) *Variation in revenue / expenditure on account of uncontrollable sales and power purchase shall be trued up every year;*
- (b) *For controllable parameters,*
  - (i) *Any surplus or deficit on account of O&M expenses shall be to the account of the Licensee and shall not be trued up in ARR; and*
  - (ii) *Depreciation and RoCE shall be trued up at the end of Control Period.”*

- 1.30 The Commission has accordingly, trued up the uncontrollable parameters viz. power purchase cost, energy sales and revenue based on the audited accounts and other information submitted by the Petitioner for FY 2010-11 after exercising prudence check. The true up of controllable parameters is governed by Regulation 4.16(b) of

the MYT Regulations, 2007 as mentioned above. The detailed treatment of each component of uncontrollable and controllable parameters is provided in Chapter A4 of this Order.

- 1.31 The Petitioner has raised certain issues that are presently under appeal before the Hon'ble Supreme Court, Hon'ble High Court and Hon'ble Appellate Tribunal of Electricity. Pending the decision of the Court/Tribunal on such issues, the Commission has decided to follow the stand it has already taken in this regard.

### Approach for FY 2011-12

- 1.32 The Petitioner has requested for a review and provisional true up of ARR for FY 2011-12 which had been determined earlier by the Commission in its Order dated August 26, 2011. The mechanism for True up as specified in the MYT Regulations envisages that variations on account of uncontrollable items like energy sales and power purchase cost shall be trued up. Truing up shall be carried out for each year based on actual / audited accounts and prudence checks undertaken by the Commission. Accordingly, the Commission is of the opinion that in accordance with the Regulations, the True up of FY 2011-12 can only be considered based on the audited financial statement once the Petitioner makes a regular tariff Petition for True up of FY 2011-12.

### Approach for FY 2012-13 to FY 2014-15

- 1.33 The ARR for the FY 2012-13 to FY 2014-15 shall be determined inter alia based on the following provision of the MYT Regulations, etc. pertaining to Distribution business:
- (a) Regulation 3.2 – ARR and Tariff for Wheeling Business and Retail Supply business separately.
  - (b) Regulations 4.5 and 4.6 – Base line values (operating and cost parameters) and performance targets.
  - (c) Regulations 4.7 and 4.8 – Targets for controllable Parameters including AT&C loss, O&M expenditure, Return on capital employed, Depreciation and quality of supply.
  - (d) Regulations 4.10, 4.11 and 4.12 – Sales forecast
  - (e) Regulations 5.28 and 5.29 – AT&C loss reduction trajectory for each year of the Control Period.
  - (f) Regulation 5.30 – Transmission and Load Dispatch Charges and Wheeling charges
  - (g) The allocation from the unallocated quota of Power at the disposal of GoNCTD may change from time to time and needs to be considered based on

the latest available data or the Commission may have to make reasonable assumptions with respect to allocation of power from the unallocated quota.

- (h) Availability of power from the new sources of generation, based on their actual / revised Commissioning schedule.

## A2: RESPONSES FROM STAKEHOLDERS

### Introduction

- 2.1 The public hearing was held at the Commission's Court Room from April 26, 2012 to April 28, 2012 from 10.30 a.m. onwards to discuss the issues related to the petition filed by the Petitioner. In the public hearing, the stakeholders put forth their comments/suggestions before the Commission in the presence of the Petitioner. The Petitioner was also given an opportunity to respond to the comments put forth by the stakeholders.-
- 2.2 The issues and concerns voiced by various stakeholders in their written comments as well as in the Public hearing along with the response of the Petitioner there on, have been examined by the Commission. The comments/suggestions of various stakeholders, the replies given by the Petitioner and the views of the Commission have been summarized under various sub-heads below:

### Payment to Pension Trust Fund

#### Stakeholders' View

- 2.3 Stakeholders have claimed that the successor entities of the erstwhile DVB are liable to make payment to the Pension Fund on account of 1) Actuarial Revaluation of the requirement of the Fund. 2) Reimbursement of actual payment to the retirees by the fund on account of medical reimbursement, LTC from 2002-11 and Pension Arrears paid on account of Sixth Pay Commission recommendations. (Total demand raised by the Fund up to Feb 2012 – Rs 285 Cr).
- 2.4 The Pension Trust Fund has claimed that the Commission had allowed, on provisional basis, a sum of Rs 150 Cr in the transmission tariff order of DTL for FY 2011-12 to be recovered from distribution utilities. The stakeholders have claimed that the Commission did not deliberate on the amount of liabilities accounted by DTL and IPGCL towards Pension Trust against the proportionate amount of actual payments disbursed by Pension Trust against medical, LTC and arrears of revised pension. As a result DTL and IPGCL, after having paid a sum of Rs 9 Cr and Rs 10 Cr in FY 2010-11 did not pay to Pension Trust the balance amount of the liabilities even though it is accounted for in their accounts.
- 2.5 The Delhi State Electricity Workers Union has submitted that an amount of Rs 150 Cr should be allowed in each financial year with an escalation of 15% per annum during FY 2012-13 to FY 2014-15 for all successor entities in ARR of DTL towards payment to Pension Trust. The Union has further requested that a carrying cost of 12% on the amount payable by the Petitioners to the Pension Trust from the date it had become due should be allowed.
- 2.6 The Union has also requested that the Commission may recommend to Govt. of NCT of Delhi to issue appropriate orders to the Petitioners for early payment of all outstanding dues.



**Petitioner's Submission**

- 2.7 The Petitioner has submitted that the DISCOMs are not liable for payments of all outstanding dues of pension, family pension. However, the contribution to pension trust for employees transferred to DISCOMs is being made to the trust. Further, they have submitted that they have abided by the dispensation for payment to pension trust directed by Hon'ble Commission in Tariff Order FY 2011-12 and has clarified that the claim with respect to the payments sought towards heads of LTC, medical and pension arrears has been in dispute with the Pension Trust and hence, are not payable by successor entities till the judgment on the same is through. Further, the Petitioner has submitted that they are already granting electricity concession to its FRSR governed employees, retirees.
- 2.8 Regarding the dispensation of the amount of Rs 150 Cr, the petitioner has submitted that no such component has been specified therein to form part of Petitioner's ARR. The issue of underfunding of Pension Trust is also sub judice in Hon'ble Delhi High Court which has been acknowledged by the Hon'ble Commission. Further, they have submitted that a one-time ad-hoc allowance by the Hon'ble Commission, taking into account various factors, cannot be a justification to allow this claim for the new control period.
- 2.9 Also, with regard to the claim of allowing carrying costs @12% on the outstanding dues, the Petitioner has submitted that such a claim is unjustified since carrying cost is allowed on a different concept where owing to deferment of legitimate and rightful entitlement to any sums of money the utility is compensated by interest costs.
- 2.10 BRPL has, however, has not submitted any reply to the issues raised by the Stakeholders.

**Commission's View**

- 2.11 During the public hearing, the distribution licensees submitted that the accounts of the Pension Trust have not been audited. Also in their view the funding of the Trust by GoNCTD is not based on an actuarial valuation. As a result of the under-funding, the Trust is able to meet its liability towards pension and other payments to retired employees. The matter is also before the Hon'ble High Court of Delhi.
- 2.12 The Commission intends to advise the Govt. of NCT of Delhi u/s 86(2) of the EA, 2003 to have the accounts audited immediately and also consider restructuring the Board of Trustees so that Government nominees are inducted on the Board. This is necessary for ensuring proper management of the Trust and servicing of the liabilities towards the retired employees, for which necessary provisions should be made by the respective employing entities in their accounts.
- 2.13 In order to avoid undue hardship to the retired employees (Pensioners) the Commission is making an ad-hoc one time provision of Rs. 160 crore in the DTL Tariff Order of FY 2012-13 for passing on to the Pension Trust. The Commission is of the view that ad-hoc provisions of this nature cannot continue in future and the

parties to the dispute before the Hon'ble High Court of Delhi should expedite the proceedings before the Court and explore other avenues for settlement of the dispute.

## Tariff for DMRC

### Stakeholders' View

- 2.14 DMRC has submitted that it may be continued to be treated as a separate category of consumer whose tariff would be based on the actual cost to serve (at 220 kV or 66 kV) excluding both the subsidy and cross subsidy elements. DMRC tariff has been fixed in the past years based on the principles deliberated and settled after discussions between DMRC, Distribution licensees and the GoNCTD. Also from technical considerations, DMRC needs supply at 66 kV/ 220kV and presently DMRC is taking electricity directly at the inter-connection points of Delhi Transco Limited. The entire distribution network and system beyond the inter-connection points is owned, operated, maintained, serviced, upgraded and utilized exclusively by DMRC, without any intervention to the services rendered by Distribution licensees. The only costs applicable to the Distribution licensees are that of metering and cost of input purchase.
- 2.15 DMRC requested for continuation of the principles adopted in earlier Tariff Orders of the Commission namely that the DMRC's tariff should be based on the cost at which electricity is available to the licensee at the inter-connection points of TRANSCO and it certainly should not include other expenses of Distribution licensees other than the said input cost.
- 2.16 It has been highlighted that DMRC has already been paying the Distribution licensees a tariff which is higher than the 'cost to serve' rates. Also the 'cost to serve' rates indicated by the Distribution licensees already include all charges inclusive of profit overheads etc. Any further hike in tariff will only contribute to increasing the difference between the cost to serve and the tariff charged to DMRC and hence will mean cross subsidizing other consumers.
- 2.17 BRPL and BYPL should be required to increase their collection efficiency like NDPL.
- 2.18 With regards to the power supply to commercial establishments in DMRC premises the Commission has issued an Order on February 29, 2012. DMRC has requested that the same be included in the tariff order.
- 2.19 DMRC has submitted that at present the security deposit for each connection is being paid by DMRC in the form of bank draft/cheque as the note of Rs 1500/kW or Rs 1275/kVA. On this security deposit, Discoms are crediting interest @ 6% through energy bill at the end of the year. Since now the fixed deposit interest rates are 10%, DMRC may be given an option of the security deposit in form of a bank guarantee.

**Petitioner's Submission**

- 2.20 The Petitioner has submitted that they have provided cost-to-service model for FY 2010-11 in its petition. Further, the Petitioner shall be shortly submitting the cost-to-service data for FY 2011-12 to FY 2014-15 to the Hon'ble Commission. BRPL has submitted that the cost allocation for various voltage levels is done by an independent cost auditor. The MYT petitions are filed on the basis of cost audit report which has been submitted with the ARR petition
- 2.21 BRPL has submitted that it has an exemplary collection efficiency track record with collection efficiency of more than 100% in past few years. Collection efficiency figures of more than 100% reflect the collection of past arrears and the petitioner's efficiency in recovering past losses. It has further submitted that that one of the main reasons it was able to achieve a high collection efficiency in the previous years was on account of the fact that the company was able to recover the arrears of past period including the arrears on account of DVB, which now have been either collected or written off. Further, as per the earlier MYT Regulations, 2007 the Collection Efficiency included portion of revenue realization from electricity duty and late payment surcharge collected during the financial year. For example in FY 2010-11, while distribution losses were in the range of 18.02%, the AT&C loss of 16.85% could be achieved through higher collection efficiency of 101.4%. If the Petitioner was required to exclude the same, the Collection Efficiency would be substantially lower. In view of the above, the Petitioner anticipates that the collection efficiency as per the revised definition would not be more than 98.5% as per the industry standards.
- 2.22 The Petitioner has proposed various alternative proposals for the consideration of the Hon'ble Commission including implementation of Power Purchase Price adjustment (PPPA). PPPA has been proposed to address the fluctuations in the power purchase cost that will happen after the tariff order issued.
- 2.23 Further, it is pertinent to mention that Banks do not issue the Bank Guarantee with lifetime validity. Further, it may also be appreciated that on the security deposit paid by the consumers, Discoms are also paying interest on the same.
- 2.24 The Petitioner has submitted that tariff fixation is the sole prerogative of the Commission.

**Commission's View**

- 2.25 The Commission reiterates its views acknowledging DMRC to be an essential service serviced by different distribution licensees in the NCT of Delhi. The Distribution licensees should ensure that DMRC receives uninterrupted power supply. The Commission is of the view that the electricity tariff to be charged from DMRC has to be fixed keeping in view the special nature of the supply to DMRC.
- 2.26 The Commission will examine the issue of interest rate on Security Deposit and, providing security deposit in form of Bank Guarantee, while finalizing the Draft Delhi Electricity Supply Code and Performance Standards Regulations, 2007.

2.27 The Order issued by the Commission dated 29 February 2012 regarding the Power supply to commercial establishments in DMRC premises has been made a part of this Tariff Order.

2.28 The respective tariff category is dealt with in the Tariff Design Chapter

## Railways Traction Tariff

### Stakeholders' View

2.29 Representative of Indian Railway submitted that there should be no increase in Railway Traction Tariff and should be kept at a reasonable rate, as per the recommendations of MoP and Public Accounts Committee of Lok Sabha. It was submitted that average electricity cost of realization for Railway traction should be brought down to reasonable level by cutting down energy charges and demand charges at par with NTPC/NHPC i.e. central generating units rate of supply.

2.30 The stakeholders stated that as per the National Tariff Policy notified by Ministry of Power, Government of India (GoI), the electricity tariff should progressively reflect the cost of supply. It was also submitted that the tariff for Railways should be linked to cost of supply, while taking into account the fact that it draws power at 66kV where losses are minimal.

2.31 It was submitted that there should be no discrimination in tariff between Railway and DMRC. Railways should be charged a tariff lower, if not equal to that applicable to DMRC.

2.32 It was further stated that the fixed charges being levied for Railways are very high (@Rs 150/kVA) compared to other neighbouring states like Haryana (@Rs 125/kVA). The billing demand should be 65% of the contract demand or recorded demand whichever is higher during the month.

2.33 Northern Railways should be exempted from payment of penalty charges on over drawl of power which becomes unavoidable in many situations arising on account of failure of supply from supplying authorities, accidents, and agitations etc which are beyond the control of the Railways. The stakeholder also stated that additional charges for MDI in excess of contract demand are very high. Given that Railways is unable to control its load at all times, it has been suggested that excess load of up to 10% of Contract Demand be allowed for short durations before application of load violation charges.

2.34 It has been submitted that the load of traction substation being fairly constant throughout the day and forms the base load of the system, Time Differential Tariffs should not be applied to Railways.

2.35 It has been submitted that UPERC has agreed for payment of ACD/security deposit in the shape of a bank guarantee instead of cash. On the similar lines, DERC may consider payment of ACD/security deposit, if any, in the shape of bank guarantee instead of cash for railway traction in Delhi.

**Petitioner's Submission**

- 2.36 The Petitioner has submitted that tariff fixation is the sole prerogative of the Commission.
- 2.37 The Petitioner has submitted that the Billing Demand concept followed is in line with Delhi Electricity Supply Code and Performance Standards Regulations 2007. The Penalty charged on over-drawal has to be in line with that of other categories of Consumers as per DERC directives. Exemption from the same to one category of Consumer may result into creating discrimination amongst consumers, which is against the basic tenets of the Electricity Act 2003. Also, it may be noted that the amount recovered from fixed charges is also included in the gross income and is considered towards revenue available for tariff determination.
- 2.38 The Petitioner has submitted that there are no 3 shift industries in Delhi; therefore, benefit of ToD may be limited as it's mainly the 3 shift industries, which can shift their loads. However, as per National Electricity Policy, it is recommended to go for ToD for reducing the peak demand. In line with the same, it is advisable to at least try & implement the ToD tariff for high end Consumers, based on experience of which, it can be implemented for lower end Consumers also. BRPL has submitted that the concept of time-differentiated tariff aims at shifting time of peak demand, thereby flattening the load curve for which the utility provides incentives to shift consumption to off-peak hours and offers dis-incentives for consumption during peak hours. The concern is as to how to encourage shifting of energy consumption from peak hour to non-peak hours to reduce the marginal cost of power required for meeting the peak demand. ToD Tariff as a concept is quite beneficial for the stakeholders.
- 2.39 Further, they have mentioned that Banks do not issue the Bank Guarantee with lifetime validity. Further, it may also be appreciated that on the security deposit paid by the consumers, Discoms are also paying interest on the same. Further, the Petitioner has submitted that it trusts that the request shall be considered appropriately by the Hon'ble Commission.

**Commission's View**

- 2.40 The Commission acknowledges the critical role played by the Railways in the economic development of the nation.
- 2.41 The Commission has examined the request of the Railways to exempt them from the payment of penalty charges on over drawl considering the unique nature of traction load. In the Tariff Order dated 9 June, 2004, the Commission has specified that whenever the MDI reading exceeds contract demand, a surcharge of 30% shall be levied on the fixed charges corresponding to excess demand for such billing cycle. The Commission would like to point out that such a surcharge is levied on all consumers as the Utilities have to plan in advance to cater to the load of the consumers including the Railways. In case of over drawl of electricity by any consumer, the Utility has to arrange for additional power from costlier sources to meet the demand of the consumer.

- 2.42 The Appellate Tribunal for Electricity in the matter of Northern Railway versus Delhi Electricity Regulatory Commission and others upheld the impugned Order of the Commission, whereby, the Commission treated the DMRC as a distinct special class for the purpose of the tariff. The Appellate Tribunal for Electricity further observed that the establishment of DMRC for providing the Mass Rapid Transit System is itself an important ground for treating the DMRC as a separate distinct class of consumers.
- 2.43 The Commission will examine the issue of interest rate on Security Deposit and, providing security deposit in form of Bank Guarantee, while finalizing the Draft Delhi Electricity Supply Code and Performance Standards Regulations, 2007.
- 2.44 The respective tariff category is dealt with in the Tariff Design Chapter

## Tariff for DJB

### Stakeholders' View

- 2.45 DJB has submitted that the tariff for DJB should be based cost to serve basis without any cross subsidy, at par with the tariff for DMRC.
- 2.46 It has also submitted that the Commission has not considered all the connections of DJB in the special category. Only 11 kV connections (130) were considered. The other connections (4366) are still in the commercial category. They have requested for inclusion of the other connections (mainly pump sets) also in the special category.
- 2.47 DJB has applied for open access system to DERC, the reply of which is still awaited. The decision of the Commission in the matter should be expedited.

### Petitioner's Submission

- 2.48 *{No replies have been received from the licensee}*

### Commission's View

- 2.49 The Commission recognises the fact that DJB is providing an essential service to the citizen of Delhi. As advised by APTEL in its judgement dated 10.04.2012, the commission has re-considered the tariff category for DJB and decided to bring it on par with Industrial establishments. Details are given in the Tariff Design Chapter.

## Tariff for Telecom Tower Operators

### Stakeholders' View

- 2.50 The stakeholder has submitted that the commercial tariff in the state is already amongst the highest in the country and should not be increased further.
- 2.51 It has further requested that a separate sub-category may be introduced for telecom towers in the NDLT category. The consumers have submitted that it should be treated



as separate category as it is an infrastructure service provider for essential services to be catered to 24\*7. Further the type of load catered by it is mixed load of radio frequency communication instrument as well as air-conditioning. Due to the nature of the services offered, the consumers are proposing a lower tariff than commercial and industrial consumers.

- 2.52 The stakeholder has requested compulsory installation of AMR meters and roll out of consolidated bills for large consumers with multiple connections. Consumers such as large telecom operators operate various telecom towers in Delhi, each of which is billed separately. Consolidated billing would increase efficiency by reducing the billing cost and improved collection efficiency. It would also help the consumers who would not have to pay individual bills.

### Petitioner's Submission

- 2.53 The Petitioner has submitted that deciding the Consumer Category and fixation of tariff for any Consumer category is the sole prerogative of the Commission.
- 2.54 BRPL has submitted that it welcomes the suggestions of the respondent regarding consolidated billing and AMRs. BRPL has already installed AMRs for all consumers above 45kW load and efforts are on to maximize their usage. AMRs would be installed for 10kW above consumers based on techno-economic feasibility. Moreover, BRPL has implemented the SAP for consolidated billing purpose which is already in use.

### Commission's View

- 2.55 The Commission is of the view that the tariff being charged from commercial category, which includes Telecom Tower Operators, has to be seen in totality with respect to the quality as well as reliability of supply. As such creation of a separate tariff category for Telecom Tower Operator is not considered necessary.
- 2.56 The Commission is of the view that installation of AMR meters and consolidated billing for Telecom tower connections may be considered by the Discoms based on the number of consumers being benefited and, the techno-commercial feasibility.
- 2.57 The respective tariff category is dealt with in the Tariff Design Chapter

### Maintenance Cost

#### Stakeholders' View

- 2.58 Stakeholders have submitted that if any fault arises at the consumer end the Distribution licensees levy charges on the consumers without any fault of the consumer i.e. during the course of any fault if it has been found that the cable is required to be replaced from feeder pillar to the consumer point, invariably the Discoms load the entire cost on consumers. The Stakeholders have requested the

Commission to clarify which kind of cost of maintenance is to be borne by the consumer and which type is to be borne by the Discom.

- 2.59 Also, stakeholders have requested that all connections must be provided with tamper proof electronic meters. Further, the Discoms are not undertaking adequate O&M. Due to poor O&M, the Discoms are not even following regulatory guidelines like minimum clearance, providing of cradle guards, suitable earthing of electrical equipment and standard maintenance guidelines of safety of shipment.

### **Petitioner's Submission**

- 2.60 The Petitioner has submitted that all electro-mechanical meters have already been replaced with static meters in line with CEA Central Electricity Authority (CEA) Regulations on Installation and Operation of Meters. However, some unscrupulous consumers keep on devising newer techniques to tamper these meters and as soon as we get to know the same, we address those issues by further adding tamper proof features, which is an ongoing process.

### **Commission's View**

- 2.61 The Commission also directs the Distribution licensees to carry out the annual and preventive maintenance as per the Maintenance Schedule. The Distribution licensees are directed to submit information on the maintenance undertaken as per the Maintenance Schedule and the amount spent on the same on a quarterly basis.
- 2.62 The Commission intends to appoint consultants to assist in monitoring proper maintenance of infrastructure and compliance with the provision of Delhi Electricity Supply Code and Performance Standards Regulations for reliable supply and meeting safety requirements as per Measures for Safety Regulation stipulated by CEA.

## **Power Purchase Cost Adjustment**

### **Stakeholders' View**

- 2.63 Some of the stake holders were opposed to the idea of introducing PPA while others Stakeholders have submitted that there should be no automatic adjustment of power purchase cost. The Commission should scrutinize and allow the increase in Power Purchase Cost.

### **Petitioner's Submission**

- 2.64 The Petitioner has submitted that for the uncontrollable power purchase costs, it is proposed that the Hon'ble Commission should consider implementation of quarterly/periodic Automatic Power Purchase Price Adjustment formula (PPPA). Implementation of PPPA would be beneficial for consumers as on yearly true up of power purchase costs, carrying cost is imposed while on recovery of quarterly/periodic differential power purchase cost there is no provision for carrying costs and therefore it results in a saving for consumers. Even Appellate Tribunal for

Electricity in its Order dated 11th Nov., 2011, in OP No. 1 of 2011 "Tariff Revision (Suo-Moto action on the letter received from Ministry of Power)" has directed that a mechanism for Power Purchase Cost Adjustment should be put in place.

### Commission's View

- 2.65 The power purchase cost accounts for about 80-90% of Annual Revenue Requirement of the distribution licensees and includes the cost paid for procurement of power, transmission charges, UI charges, SLDC/ RLDC charges.
- 2.66 The cost of long term power is being fixed by the Central Electricity Regulatory Commission (CERC) for plants supplying power to more than one State and by the Delhi Electricity Regulatory Commission (DERC) for plants located within the NCT of Delhi and supplying only to distribution utilities in Delhi. The charges for unscheduled interchanges and Inter State transmission charges including RLDC charges are being fixed by the CERC. The purchase/ sale of intra state power and intra state transmission charges are fixed by the DERC. The short term purchases/ sale are through traders, bilateral contracts, banking, and power exchanges at market determined prices.
- 2.67 The power purchase costs vary based upon price and calorific value of fuel (coal /gas) which is reflected in the bills submitted by the generators every month. Also, the level of generation from these stations each month determines the per unit impact of fixed charges. The above make the entire power purchase cost process unpredictable for the distribution utilities, and hence, uncontrollable in nature.
- 2.68 The Distribution Licensees pay for the power purchase each month with variations as above. Distribution Licensees have to arrange short term financing for making such additional payment which ultimately burdens the consumers in form of carrying cost. Timely recovery of such incremental amount through power purchase adjustment / fuel surcharge adjustment reduces the burden of carrying cost on consumers.
- 2.69 In order to offset the change in variable cost levied by the Generating Companies in the Power Purchase Bills of the Distribution Companies, Commission had implemented Fuel Price Adjustment (FPA) charges on quarterly basis vide Commission order dated August 26, 2011.
- 2.70 Hon'ble ATE vide in its judgment dated 11.11.2011 in the matter of Suo-Motu action on the letter received from Ministry of Power (O.P. 1 of 2011) has observed that the Power Purchase Cost is a major expenditure in the ARR of the Distribution Licensee. Both the Fuel and Power Purchase Cost are uncontrollable and both have to be allowed to be recovered as quickly as possible.
- 2.71 In view of the above, Commission has decided to implement a Power Purchase Cost Adjustment for generating stations having long term PPAs with DISCOMs on quarterly basis in order to adjust the changes in the Power Purchase Cost levied by these Generating Companies on the Distribution Companies.

## O&M Expenses

### Stakeholders' View

- 2.72 All litigation expenses of the Distribution licensees, included in the O&M expenses should be borne by the Distribution licensees themselves.

### Petitioner's Submission

- 2.73 The Petitioner has submitted that the larger benefits from the legal expenses incurred by them flow back to the consumers only. They are a professionally managed organization and legal expenses incurred are owing to various reasons such as litigation commenced by actions of third parties which have to be suitably defended by them. Legal expenses are also incurred by the Petitioner to enforce recovery of loss occasioned due to theft/misuse of electricity/accumulation of unpaid dues on premises which, if recovered, increase the collection of the petitioner and their ARR requirement gets reduced to that extent. Apart from this, there are other legitimate claims, disputes arising from time to time of a distribution licensee which may be pursued with generators, transmission companies, traders etc. which are organizations well supported by strong legal backup.
- 2.74 Further, they have submitted that decisions on all such expenses are taken prudently, taking into consideration the overall interest of the Company and Power Sector in General as prevalent in Delhi.

### Commission's View

- 2.75 Legal expenses form a part of the normative O&M expenses allowed by the Commission. The actual O&M expenses for the past 5 years have been analysed and only reasonable provisions have been allowed as part of the ARR approved by the Commission.

## Own Consumption

### Stakeholders' View

- 2.76 The own consumption of energy should not increase exponentially as it has been in case of BYPL. The own consumption of Distribution licensees should be metered.
- 2.77 Some of the stakeholders also suggested that sales to "own consumption" should be a part of the AT&C loss.

### Petitioner's Submission

- 2.78 The Petitioner has submitted that in audited accounts of TPDDL own consumption is not shown as sales. BRPL has submitted that Own consumption includes the energy consumed at various offices, buildings and sub-stations of the Petitioner. As regards the billing of such energy, it is submitted that the Petitioner's consumption of

electricity is billed at zero rate as has been the practice accepted and followed by the Hon'ble Commission in the previous years. This issue has been deliberated by the Hon'ble Commission in previous Tariff Orders.

### Commission's View

- 2.79 The distribution utilities have been showing "self consumption" at their offices/installations at zero cost, in their respective ARR's. While analysing the quantum of such "self consumption" charged by the distribution utilities, the Commission was unable to find a uniform basis or justification for the same. The Commission has considered the matter related to "Self Consumption" by DISCOMs and decided that 0.25% of total units sold during FY 2010-11 may be taken as benchmark on normative basis for determining "Self Consumption" for FY 2010-11. An increment at the rate of 2% (of the previous year's "Self Consumption") may be added each year till FY 2014 -15. The above norms will be reviewed after the end of the current MYT period.

### Sale of Power and Power Purchase Cost

- 2.80 BYPL has sold 1905 MU through UI and bilateral sales at an average rate of Rs 3.54/unit which is Rs 3.00/unit below the procurement cost but purchased power through UI exchange, 1389 MU at average price of Rs 5.18/unit. BYPL purchased 1022 MU from BRPL at Rs 5.51/unit but sold 1604 MU at Rs 3.36 /unit to RETL. The petitioner should be barred from transacting with RETL or RIL. (pertains to only BYPL)
- 2.81 Stakeholders have submitted that NTPC has increased the rate of electricity, due to which the Hon'ble Commission is bound to increase electricity tariff. Companies need to make such plans and policies so that they purchase electricity at low cost so that the consumers will also get electricity at cheaper rate. Further, UI sales & surplus power sale could be given to exchange with better prices as Rs.5.00, 6.00, 7.00/Unit for the Second Control Period to realize full cost of power, transmission loss, transmission charges, power theft.
- 2.82 Generation cost of NTPC should be scrutinized. The tariff for NTPC should be set by DERC and the public hearing for determination of tariff for CERC stations should be open to all consumers.
- 2.83 Some stakeholders submitted that since no Power Plant is being set up in Delhi the state ends up purchasing power from other states, which is costly. Also, solar power should not be procured as it is very costly, unless available at Thermal Power Rate/Hydro Power rate.

### Petitioner's Submission

- 2.84 The Petitioner has submitted that all the transactions with sister/group companies are undertaken through open and competitive bidding process (vendors like ABB, Alstom, L&T etc. participated) on commercial terms on arms – length basis and duly enclosed in the Annual Reports of the Company under "Related Party Transactions"

in accordance with the provision of Companies Act, 1956 and accounting policies and principles governing such disclosures. Such transactions are also advised to the Commission as per the directions issued by it from time to time. The subject matter regarding purchase by Discoms at inflated rates from sister/associate concerns is part of the Appeal filed by the Petitioner before the Hon'ble ATE and the matter is therefore sub-judice. (BYPL)

- 2.85 The subject matter regarding purchase by Discoms at inflated rates from sister/associate concerns is part of the Appeal filed by the Petitioner before the Hon'ble ATE and the matter is therefore sub-judice.
- 2.86 The Petitioner has submitted that the tariff increase required is due to increase in power purchase costs from companies like NTPC, NHPC etc. The power purchase cost has gone up by more than 80% in last 4 years from Rs. 2.86/- per unit in 2007-08 to Rs. 5.16/- per unit in 2011-12. It may be noted that bulk of the power is purchased under long term contracts from PSUs like NTPC, NHPC, SVJNL, THDC and State Govt. It may further be noted that TPDDL has made adequate arrangement from long term sources so that Consumers can be provided continuous supply at reasonable cost.
- 2.87 Further, the Petitioner submitted that Delhi has taken lot of steps towards setting up of new power plants within the state and tying up capacities from new projects in neighboring states. Details of the projects are as follows:
- (a) Rithala CCGT- Rithala, Delhi – 94.8 MW
  - (b) Pragati III (Bawana CCGT), Bawana, Delhi – 1370 MW
  - (c) Aravali (Jhajjar)- Jhajjar, Haryana – 1500 MW (Dedicated transmission line to Delhi)
  - (d) NTPC Dadri Stage II- Dadri, U.P. – 980 MW
  - (e) CLP (Jhajjar)- Jhajjar, Haryana – 1320 MW (132 MW for Delhi)
- 2.88 With regard to purchase of solar power, the petitioner has submitted that it is the Hon'ble Commission's prerogative to decide on the same.
- 2.89 The Petitioner has submitted that after implementation of CERC new UI regulations w.e.f. 3rd May, 2010, there has been a remarkable improvement in system frequency and hence substantial reduction in UI rates. Last couple of years, it has been observed that rate of bilateral power is being guided by UI rate. As a result, the rate of bilateral power has gone down substantially and there is no way, that utilities can sell the surplus power at rates higher than the prevailing market rates.



**Commission's View**

- 2.90 The Commission has already approved various PPAs entered into by the utilities for procurement of power from long term sources. The Commission has also directed the DISCOMs vide its letter dated 21.10.2009 that they should endeavour to provide uninterrupted power supply to the consumers in their respective areas. The licensees shall ensure that electricity which could not be served due to any reason what-so-ever (including maintenance schedule, break-downs, load shedding etc.) shall not exceed 1% of the total energy supplied by them in any particular month, except in cases of force-majeure events which are beyond the control of the Licensee.
- 2.91 The Commission has also noted that the load curve in Delhi is peculiar in nature with high morning and evening peaks and very low load demand during night hours. It is due to the fact that a majority of the load in Delhi is of commercial establishments, office buildings, which have requirement primarily during day time. The round-the-clock industries, which are a common feature in most of the States and which contribute towards flattening of the load curve are very little in Delhi.
- 2.92 The Central Electricity Regulatory Commission has issued amendments to UI Regulations vide Order dated 28.04.2010, effective from 03.05.2010, whereby the overdrawl of power by the beneficiaries in excess of their schedule is liable to a 40% additional UI for overdrawls below frequency of 49.5 Hz., which translates to Rs.12.22/kWh. Further, as an exemplary deterrent on overdrawls, the additional UI rate is 100% on overdrawls below grid frequency 49.2 Hz., which translates to Rs.17.46 /kWh. The effect of this quantum increase in penal UI Rates has been that other State Utilities are generally refraining from overdrawing beyond their schedule. This has resulted in optimum grid frequency and thereby very low UI Rates.
- 2.93 To cater to the peak demand during day time, DISCOMs have been buying Round-the-Clock (RTC) Power. The surplus power during night hours/off peak hours gets sold at the prevailing short-term market rate/Power Exchange Rate/UI Rates which are much lower. In order to optimise the cost of power purchase, the Commission has advised the distribution utilities to explore the possibility of higher purchase of peaking power, so as not to burden the consumers with avoidable purchases of RTC power which entail the sale of off-peak surplus at very low rates under the mechanism of Unscheduled Interchange (UI). The Commission has also urged the distribution utilities to explore possibility of selling surplus power to bulk consumers in adjoining areas in neighbouring states who are deprived of grid power and are resorting to generation of expensive power from captive units. This will result in a win-win situation for all concerned. In this regard, the Commission has also issued statutory advice to the Govt. of NCT of Delhi to facilitate this process.
- 2.94 The Commission has put in place a mechanism whereby all the power procurements are approved by Delhi Power Procurement Group, comprising of SLDC, DTL, NDPL, BRPL, BYPL. The Commission would like to inform that Bawana Power Plant of 1370 MW capacity has been set up in the NCT of Delhi and is nearing completion. One of the its unit has also started generation.



- 2.95 In order to even out the load curve, the Commission has approved a system of Time of Day(ToD) tariff whereby peak hour consumption is charged at higher rates and a rebate given on consumption during off-peak hours. This is expected to induce consumers to reduce load during peak hours and thus control rise in power purchase costs.
- 2.96 As regards the generation cost of central generating stations, the Commission intends to take up with the CERC regarding periodic scrutiny of such costs in order to maintain effective control and enhance consumer confidence. The Commission is also requesting CERC to conduct regular technical/ cost audits of the cost incurred by the central stations.
- 2.97 The Commission is issuing statutory advice to Government of NCT of Delhi for approaching the Government of India for higher allocations from the unallocated power from the central generating stations; and also for facilitating the reallocation of power from high cost sources till such time that the same is required for meeting the demand of power in the NCT of Delhi.

## Asset Register of Discoms

### Stakeholders' View

- 2.98 The verification of assets by Administrative Staff College of India and Asset Register duly filled in both asset wise and cost wise should be made available in the ARR showing annual addition/deletion of assets.

### Petitioner's Submission

- 2.99 The Petitioner has submitted that the Commission has already appointed a third party for review of Capex and Capitalisation. As regards the asset register, the same has already been submitted to the Hon'ble Commission during the ongoing prudence check.

### Commission's View

- 2.100 The Commission has appointed M/s Feed-back Infra for Capex review and capitalisation of assets through the process of open bidding; and the work is in progress.

## Time of Day Tariff

### Stakeholders' View

- 2.101 Some of the stakeholders submitted that the Time of Day (ToD) tariff should be introduced for large commercial and industrial consumers with connected load above 300 kVA and for those consumers who will find it easier to shift their consumption to off-peak hours.

**Petitioner's Submission**

- 2.102 The Petitioner has submitted that there are no 3 shift industries in Delhi and therefore, benefit of ToD may be limited as it is mainly the 3 shift industries which can shift their loads. However, as per National Electricity Policy, it is recommended to go for ToD for reducing the peak demand. In line with the same, it is advisable to at least try & implement the ToD tariff for high end Consumers, based on experience of which, it can be implemented for lower end Consumers also.

**Commission's View**

- 2.103 The Commission believes that Time of Day (ToD) tariff is an important Demand Side Management (DSM) measure to give a tariff signal so that peak hour consumption is charged at higher rates which reflect the higher cost of power purchase during peak hours. At the same time, a rebate is being offered on consumption during off-peak hours. This is also meant to incentivize consumers to shift to the extent possible a portion of their loads from peak time to off-peak time, thereby improving the system load factor and even out the load curve. The ToD tariff is aimed at optimizing the cost of power purchase, which constitutes over 80% of the tariff charged from the consumers. It also assumes importance in the context of propagating and implementing DSM and achieving energy efficiency. This is important in Delhi situation as daily load varies from 3000 MW to 5000 MW in summer causing problem of surplus during off peak hours.
- 2.104 Introduction of higher peak hour tariff would initially generate additional revenue which would compensate for the reduction in revenue on account of lower tariff during off- peak hours
- 2.105 In the long run, this would provide signal to the consumers to reduce the load during the peak hours and, where possible, shift this consumption to off-peak hours. Any loss of revenue to the utility on account of shifting of load from peak to off-peak hours in the long run would be compensated by way of reduction of off-peak surplus to the extent of increase in off-peak demand.
- 2.106 The ToD Tariff would thus have immediate as well as long term benefits for both, consumers as well as the utility and contribute toward controlling the rise in power purchase costs.
- 2.107 The Commission has decided to introduce ToD Tariff on a pilot basis for large industrial and commercial consumers (300 kVA and above). This pilot is targeted to the consumers segment which has the capacity to bear a higher tariff burden for peak hour consumption and also at least partly (if not fully) offset the impact of this increase through higher off-peak consumption at lower rates.
- 2.108 ToD tariff shall be applicable on all consumers (other than domestic) whose sanctioned load/MDI (whichever is higher) is 300 kVA or more.
- 2.109 The Commission has decided to implement the TOD tariff for Industrial and Commercial consumers having a load of 300 kVA and more, in this Tariff Order.

2.110 The ToD tariff Schedule has been made part of this Tariff Order in Chapter 5.

## Billing based on MDI Recording

### Stakeholders' View

2.111 Most of the stakeholders submitted that MDI billing should not be adopted for non domestic customers, while a few feel it is a good step in encouraging people to declare their actual load, especially for consumers with Sanctioned load between 10-100 kW and MDI greater than 100 kW.

### Petitioner's Submission

2.112 The Petitioner has submitted that honest consumers having sanctioned load more than 100 kW and MDI being less than equal to sanctioned load are getting unnecessarily burdened with higher tariff whereas unscrupulous Consumers who are having sanctioned load less than 100 kW and MDI being more than 100 kW, who end up paying lesser tariff, even after 30% surcharge for load violation, which is not fair for such honest consumers.

### Commission's View

2.113 The enhancement of sanctioned load of the consumers who are using load in excess of their sanctioned load has been allowed by the Commission on the directions of Hon'ble ATE in appeal no. 139 of 2010 and in compliance of Section 47 of the Electricity Act, 2003.

2.114 It is clarified that MDI based billing for non-domestic consumers has been in vogue since DVB times. In cases of load violation, the charges of relevant category based on MDI along with penalty for load violation are applicable.

## Uniform fixed charges till the sanctioned load of 5 kW

### Stakeholders' View

2.115 Most of the stakeholders have opposed the distribution licensees proposal of rationalizing the slab based fixed charges for the domestic category for the sanctioned load up to 5 kW to reduce the cross-subsidy burden. The stakeholders are of the opinion that such a structure might only result in the penalization of the low load consumers who will be forced to pay higher fixed charges if a uniform fixed charge is levied up to 5 kW of load.

### Petitioner's Submission

2.116 The Petitioner has submitted that the fixed charges incurred per consumer per month by the Discoms are much more than the present charges, causing other domestic consumers of sanctioned load above 5 kW and Consumers of other categories to cross-subsidize the consumers of sanctioned load lower than 5 kW. This gives undue

advantage to consumers, who have not increased their sanctioned load to the actual requirement. To avoid this, it has been proposed to restructure the fixed charges for the Domestic category so that a uniform fixed rate is applied to all consumers with sanctioned load up to 5 kW.

### Commission's View

- 2.117 The Commission fixes the tariff keeping in view the provision of the Tariff Policy regarding gradual reduction in the cross subsidies. The Commission feels that the proposal to levy uniform charges up to sanctioned load of 5 kW will burden the low end consumers falling within the tariff category of up to 2 kW.
- 2.118 In view of the above, the Commission decides to continue with the existing system of levying fixed charges.

### Merger of NDHT & NDLT (Non Domestic) and LIP & SIP (Industrial) Consumer Categories

#### Stakeholders' View

- 2.119 The stakeholders have objected to this proposal as they feel that the rationale behind maintaining separate categories for each is justified and clubbing them into one category might only result in forcing one class of consumer to pay a higher tariff.

#### Petitioner's Submission

- 2.120 The Petitioner has submitted that there is no rationale for charging differential tariff to the Non-Domestic (NDHT, NDLT Consumer categories) as these Consumers use electricity for the same "commercial activity" purpose and similarly, there should be one tariff for Industrial Consumers (SIP, LIP Consumer categories), as they use electricity for "industrial activity" purpose only. This shall help in reducing the number of categories and simplifying the tariff structure and to further curb the malpractices.

### Commission's View

- 2.121 The Commission has in its last Tariff order already rationalised tariff categories based on voltage of supply. Accordingly, Non-Domestic consumers are now charged either at NDLT or NDHT Tariff. Similarly, industrial consumers are charged on SIP(LT) of LIP(HT) tariff.
- 2.122 The Commission agrees with the view of the stakeholders that merger of Small Industrial Power (SIP) and Large Industrial Power (LIP) will impact the low end consumers (SIP) the most. Therefore, the merger is not being done.

## Reliability Charge to be levied on High End consumers

### Stakeholders' View

- 2.123 Some Stakeholders have agreed to the introduction of reliability charge on high consumption consumers and a new slab of consumers with consumption above 600 units.

### Petitioner's Submission

- 2.124 The Petitioner has submitted that Discoms have now managed to enhance the reliability of power supply to such an extent that even the requirement of managing alternate power supply arrangements (e.g. through Diesel Gensets etc.) by the consumers have gone down considerably. The intent of levying these Reliability charges is in lieu of the amount which the high end consumer category has been saving by not having to maintain and operate alternative arrangement of power sources and further to safeguard the low end consumers so that they are not subjected to burden in form of higher tariff rates, who in any case were not spending such high amounts for ensuring reliable supply.
- 2.125 "Reliability charges" as a separate component of tariff, are proposed to be levied on high end consumers having high consumption of electricity. These high end consumers in any case were spending Rs. 10-12/- per unit for ensuring continuous supply by operating and maintaining personal DG sets etc. and Discoms by ensuring reliability of supply have facilitated such consumers who are now no longer using DG sets, thus, their expenses for managing the same has gone down considerably.

### Commission's View

- 2.126 The Commission is of the view that it is the duty/universal obligation of the Distribution Licensee to provide un-interrupted power supply to their regular consumers. The Commission has already directed the distribution licensees to strive for uninterrupted power supply and minimum load shedding. The Commission has also directed the Distribution licensees that power which could not be supplied, due to any reason whatsoever, should not exceed 1% in a month. Therefore, levy of an additional reliability charge on any set of consumers has no merit.

## Transmission Charges (pertaining to TPDDL)

### Stakeholders' View

- 2.127 It has been pointed out that TPDDL has claimed Intra State Transmission Charges for FY 2010-11 as Rs. 110.54 crore against the bill raised by DTL amounting to Rs. 105.96 crore.
- 2.128 Similarly, for FY 2011-12, TPDDL has projected an amount of Rs. 298.25 crore against the bill raised by DTL amounting to Rs. 324.82 crore (provisional for March, 2012).

2.129 Further Intra State Transmission losses claimed by TPDDL for FY 2010-11 and 2011-12 are 116.04 MU and 116.07 MU respectively. However, as per State Energy Account, the actual Intra State Transmission Losses for TPDDL are 93.40 MU and 78.41 MU (up to Jan 2012) respectively. The Hon'ble Commission is required to consider the same while passing orders on petition of TPDDL.

### Petitioner's Submission

2.130 The Petitioner has submitted the details of the claimed amount as intrastate transmission charges as follows:

	Rs Cr
DTL wheeling charges	105.97
Credits on account of disbursement of STOA charges	-3.18
Tax bill pertaining to FY 09-10 raised in FY 10-11	4.57
SLDC Charges	2.31
BBMB Charges	0.43
Reactive Energy Charges paid to DTL	0.44
<b>Total</b>	<b>110.54</b>

2.131 TPDDL has submitted the details of the said amount are as follows:

	Rs Cr	
NRLDC SO Charges	0.71	Actual paid till Oct'11
SLDC charges	1.43	
Reactive Energy Charges	0.43	
Jhajjar Transmission Charges	1.93	
BBMB Charges	0.45	Actual till Oct'11 + estimated for Nov'11 to Mar'12
DTL Wheeling Charges	293.3	
<b>Total</b>	<b>298.25</b>	

2.132 The Petitioner has submitted that the intrastate transmission losses are calculated by applying 1.5% losses (DTL wheeling losses) on total power purchased by them at DTL periphery. Hence the figure of 116.04 MU and 116.07 MU for FY 2010-11 and FY 2011-12 are arrived.

2.133 The figures provided by DTL are actual losses calculated for the respective years which are considered for estimating the losses for next year as per the prevailing practice and decisions taken in the commercial committee meeting. For e.g., in the year FY 2010-11, losses of FY 2009-10 were applicable and similarly in the year FY 2011-12, losses of FY 2010-11 were applicable. So, actual losses are not considered for true up or for claiming ARR for any year.

### Commission's View

2.134 The Commission conducts the prudence check of Power purchase cost amongst other uncontrollable parameters; and, the Transmission charges are also verified as a part of this Prudence check. The prudence check has been carried out for FY 10-11 and is given in Chapter – 3 of this Tariff Order.

## General Comments

### Stakeholders' View

- 2.135 Tariff process should be kept in abeyance till the audit of the Distribution licensees is carried out by the CAG.

### Petitioner's Submission

- 2.136 The Petitioner has submitted that no occasion arises for the process of tariff determination to be kept in abeyance, owing to the audit report being sought of Discoms by CAG. The CAG audit being sought is for particular years in the past only. Further, they have submitted that they have furnished their comments on the issue of audit of Discoms by CAG in the matter before the Hon'ble Delhi High Court and would refrain from commenting further, since the matter is sub-judice.
- 2.137 BRPL has further submitted that that CAG being a creature of statute, both constitutionally as well as statutorily, its powers do not extend to private companies, like BRPL. Moreover, DERC itself, in its tariff order of 28.05.2009, had observed that the Discom being a company incorporated under the Companies Act 1956, presently there is no such provision on CAG audit in respect of private companies. The fact remains that the Petitioner Company's accounts are audited both internally and externally by statutory auditors as per the requirements of the Companies Act, 1956 and the Hon'ble Commission also undertakes detailed scrutiny of the accounting statements before admitting the expenses in the ARR proceedings. Further, it is also pertinent to note that the Hon'ble Commission determines the tariff only after considering the operational and capital expenditure required by the licensee for supplying power and maintaining its distribution network / infrastructure to meet the load requirements of the consumer. The Hon'ble Commission takes into account all relevant facts and figures for approving the expenses while determining the ARR of the licensees. The Hon'ble Commission determines the tariff to be charged from a category of consumers based on the approved ARR of the licensee.

### Commission's View

- 2.138 The Commission, in view of the overwhelming public sentiment in favour of CAG audit of account of DISCOMs and with a view to bringing transparency in the functioning of the DISCOMs, has reiterated its recommendation to the Delhi Government to have the accounts of DISCOMs audited for MYT period starting from 2007-08.

### Stakeholders' View

- 2.139 The carrying cost on the approved revenue gaps have added additional burden on consumers. This should have been avoided by giving them justified tariff hikes. In the case of allowing further carrying costs, the consumers should be informed of the quantum of the carrying cost and the incidence of it, namely the per unit rate and the period for which this will be recovered. Some mechanism should be created such that the consumer does not have to bear the burden of carrying costs.



**Petitioner's Submission**

2.140 The Petitioner has submitted that the Hon'ble Commission has implemented the fuel price adjustment mechanism to pass on the cost on timely basis. Further, the Petitioner has proposed to pass on the difference on account of total power purchase cost instead of fuel price only so as to pass on the cost on timely basis as well to avoid burden of carrying cost on the consumers. Regarding the period for recovery, the Petitioner has submitted that the Hon'ble Commission may like to decide, keeping in mind the fact, that any further deferral in allowing these legitimate costs will result into further allowance of interest cost (carrying cost), as the same is required to be funded through loans, resulting into additional burden and ultimately higher tariff for the consumers.

**Commission's View**

2.141 Power purchase cost constitutes about 80-90% of the ARR. In order to minimize the impact of carrying cost on the power purchase cost from GENCOs, the Commission has, in the previous Tariff Order for FY 2011-12, already implemented the fuel price adjustment mechanism to pass on the cost on timely basis, in order to avoid carrying cost. The Commission is now instituting a mechanism by which increase in cost of power from all plants where DISCOMs have a long term PPA with the generating companies is passed on timely basis.

2.142 Effective from 1.7.2012, the existing surcharge on account of FPA is being absorbed in the revised tariff and fresh Power Purchase Adjustment (PPA) shall be charged so that variation with respect to revised power purchase cost in a quarter are adjusted in the tariff in the succeeding quarter. This will further avoid carrying cost and is in line with APTEL order.

**Stakeholders' View**

2.143 Technology such as smart grid and AMI metering should be employed to decrease the AT&C losses of the Distribution licensees.

**Petitioner's Submission**

2.144 The Petitioner has submitted that they are already taking steps towards smart-grid and AMI. As a first step, 2 feeders shall be made smart to gauge the benefits arising out of the same and based on the experience; then it may be replicated for the entire network.

2.145 Automatic Meter Reading (AMR) is already in place for consumers of 45 kW and above. The Commission has already approved demand response scheme of TPDDL, which is a part of smart grid initiative in Delhi. Based on the responses of the pilot project in TPDDL areas, similar schemes will be taken up in other areas, as well.

**Commission's View**

2.146 AMR metering is already in place for HT consumers. Further Commission has approved a pilot project for smart grid for commercial and industrial consumers in TPDDL. Commission has also directed the Distribution licensees to provide AMRs to all consumers above 300kW.

**Stakeholders' View**

2.147 The consumers should be provided a copy of the petition free of cost.

**Petitioner's Submission**

2.148 With regards to the free copy of the Petition, the Petitioner has submitted that it is the prerogative of the Hon'ble Commission to decide the same.

**Commission's View**

2.149 The Commission feels that DISCOMs are charging a nominal amount from the consumers for a copy of the petition. In case, it is provided free of cost then DISCOMs will charge the cost to the ARR and this will also be to the account of consumers only. The Stakeholders can also download a copy of the Petition from the website of the Commission/Petitioners.

**Stakeholders' View**

2.150 The income from fixed charges is not being shown in its gross income by BRPL.

**Petitioner's Submission**

2.151 BRPL has submitted that all revenues earned by the licensee from Fixed Charges are considered as income in the ARR Petition submitted by the licensee. When a consumer is connected to the distribution system, the distribution utility has to provide/allocate certain capacity of the distribution system to serve the consumer. In addition to this, some expenses such as meter reading, billing, bill delivery, maintenance etc are fixed in nature and independent of the energy consumption. The petitioner also pays fixed charges in addition to the variable charges to the generating companies for sourcing power. The licensee also pays fixed charges to the Transmission Company for transmitting power. The rationale for levying fixed charges is to recover a part of the fixed cost of the utility so that at least a part of the fixed cost is recovered even if there is no consumption by the consumer. The fixed charges component in a two part tariff is aimed at defraying the capital related and other fixed costs. Section 45 (3) of Electricity Act, 2003 also provides for the levy of fixed charges.

**Commission's View**

2.152 While considering the collection of revenue by the Distribution licensees, the Commission considers revenue collection on account of fixed charges as well as energy charges.

**Stakeholders' View**

2.153 Distribution licensees should be advised to generate higher NTI from other sources like advertising etc. to reduce the revenue gap.

**Petitioner's Submission**

2.154 The Petitioner has submitted that the said directive has already been issued by the Hon'ble Commission vide their Tariff order dated 26.08.2011 for FY 2011-12 and different avenues are currently being explored for implementation thereof.

**Commission's View**

2.155 The Commission has already directed the DISCOM to explore all possible measures for raising revenue. This is necessary to reduce the impact of rising cost on retail tariff.

**Stakeholders' View**

2.156 The petitioner has not submitted the true up petition for controllable expenses during 2007-12. The tariff petition is thus incomplete. (BYPL)

**Petitioner's Submission**

2.157 Pertains to BYPL (No reply).

**Commission's View**

2.158 As per the MYT Regulations, the controllable expenses are not subject to true-up except the Depreciation and RoCE, which shall be trued-up at the end of the Control period based on the capitalisation approved by the Commission. In this regard, the Commission has extended the MYT Control period for one more year up to FY 2011-12. Hence the Petitions in this respect shall be received at the end of the control period, i.e. FY 2011-12.

**Stakeholders' View**

2.159 The stakeholder has claimed that BYPL has failed to achieve the AT&C loss reduction to 18% as fixed by the Commission in the MYT Regulation 2007-12 and attained a loss reduction of 21.67%. Additionally, stakeholders have requested for consideration of collection efficiency at 100% for the purpose of tariff determination. (BYPL). Also, the Hon'ble Commission has not indicated the loss reduction trajectory

in the MYT Regulation FY 2012-13 to FY 2014-15. Further, it is felt the loss reduction must be brought below 15% by 2012.

### **Petitioner's Submission**

2.160 Pertains to BYPL (No reply).

### **Commission's View**

2.161 The Commission has fixed the target AT&C loss reduction trajectory for the MYT period in this Order. The collection efficiency for fixing targets has been kept as 99.5%. The AT&C loss figures during 1st MYT period FY 2007-12 are being verified at the time of true up of expenses of a particular year and appropriate order passed in the True-up petitions.

### **Stakeholders' View**

2.162 Govt Run Hospital, College and School should not be charged at domestic tariff. The Govt. should provide direct subsidy to these consumers if it wishes to. However, there were a few stakeholders who have requested that Aided Schools may be considered for domestic tariff too. Further, a separate category should be created for senior citizens for getting electricity at concessional rates.

### **Petitioner's Submission**

2.163 The Petitioner has submitted that it is the prerogative of the Hon'ble Commission to fix tariffs for different categories.

### **Commission's View**

2.164 The suggestions received have been duly considered while finalising the respective tariff categories which are in the Tariff Design Chapter.

### **Stakeholders' View**

2.165 No special tariff should be allowed for Dhobi Ghats and dairy farms. The various farm houses should not get supply at agriculture tariff.

### **Petitioner's Submission**

2.166 The Petitioner has submitted that it is the prerogative of the Hon'ble Commission to fix tariffs for different categories.

**Commission's View**

2.167 After consideration of their suggestion, the tariff schedule has been finalised as given in the Tariff Design Chapter.

**Stakeholders' View**

2.168 Public utilities like Water Treatment Plant & Pumping System, MTNL, Telecom Companies are declared industry as per the Delhi Master Plan and Factory Act. However, the same are currently being billed as NDLT/NDHT consumers, the tariff for which is higher than industrial tariff.

**Petitioner's Submission**

2.169 The Petitioner has submitted that it is the prerogative of the Hon'ble Commission to fix tariffs for different categories.

**Commission's View**

2.170 Only those establishments that are having a valid factory license for MCD are eligible for industrial connection. The Commission is in the process of amending the Supply Code & Performance Standards Regulations. The Commission shall deal with this issue at the time of finalisation of Supply code and performance standard Regulations.

2.171 The respective tariff category is dealt with in the Tariff Design Chapter.

**Stakeholders' View**

2.172 Energy Audit should be done month wise to detect theft/loss. All supply point and nearby substation shall be metered to detect loss/theft.

**Petitioner's Submission**

2.173 The Petitioner has submitted that regular energy audit is being done in TPDDL at the District, Zonal, feeder and DT level to consumer level, where-in units supplied and units billed are compared, to identify the high loss making areas so that loss mitigation can be done.

**Commission's View**

2.174 Distribution licensees have already been directed by the Commission to carry out Energy Audit by an independent third party in their system as per the recommendation of the Standing Committee of the Parliamentary on energy.

2.175 Discoms have been submitting District/Zone wise, Distribution / AT&C losses of their system on monthly basis. Commission has already issued a directive in the last tariff order dated 26.08.2011 to reduce AT&C loss by at least 10% in respect of the Zones/Districts which are having loss in excess of 40% within one year.

**Stakeholders' View**

2.176 Certain consumers have appreciated the working of customer care services, timely reading of meters and billing, the staff of the companies is friendly and co-operative, improved quality of supply.

**Petitioner's Submission**

2.177 The Petitioner has expressed its gratitude towards the stakeholders for showing their confidence in the Distribution licensees and has assured them that the Distribution licensees is leaving no stone unturned to be the best in the industry.

**Commission's View**

2.178 The Commission is of the view that, it is the duty of the Distribution Licensee to provide quality service to their regular consumers.

**Stakeholders' View**

2.179 A genuine hike in tariff should be allowed so that the process of investment and improvement in supply of electricity is not interrupted.

**Petitioner's Submission**

2.180 The Petitioner has submitted that tariff needs to be cost reflective. Over the years power purchase cost has increased drastically resulting in higher supply cost whereas tariffs have not been increased in the same proportion. Deferment of legitimate increase in tariff will increase the further burden on consumers due to additional carrying cost on account of non-recovery of cost.

**Commission's View**

2.181 The Commission is of the view that it would be ideal to fix electricity tariff for all consumers on cost to serve basis. But considering that historically, there has been extensive cross subsidization in electricity sector, it would take time to bring about a regime with no cross subsidy. Efforts are being made by the Commission to gradually reduce the cross subsidies.

**Stakeholders' View**

- 2.182 Some of the Stakeholders feel that Distribution licensees should be brought under RTI.

**Petitioner's Submission**

- 2.183 The issue of Distribution licensees to be covered or excluded from ambit of RTI is sub-judice before the Hon'ble High court of Delhi and there is a stay order in favor of the Distribution licensees.

**Commission's View**

- 2.184 The Commission is of the view that Distribution licensees are Public Utilities and they must comply with the provisions of Right to Information (RTI) Act, 2005. The said opinion of the Commission pertaining to the status of Distribution licensees in the RTI Act was upheld by the Central Information Commission (CIC) in its Order dated 30 November 2006.
- 2.185 The said impugned Order of the CIC was subsequently challenged before the Hon'ble High Court of Delhi by the Distribution licensees and the said Order was stayed by the Hon'ble High Court. The Commission as one of the Respondents in this matter has filed its reply before the Hon'ble High Court of Delhi reiterating its stand that the distribution licensees should be covered under the RTI.

**Stakeholders' View**

- 2.186 Grievance Redressal at the hands of Distribution licensees is difficult as Redressal forums are establishments of Distribution licensees. As such, there is a requirement for an independent platform for the same.

**Petitioner's Submission**

- 2.187 The Petitioner feels that the contention of the stakeholders is erroneous since these Redressal forums (CGRF, Ombudsman) are statutory bodies created under the mandate of Electricity Act 2003. These forums have been accorded recognition and sanctity by the Hon'ble Supreme Court of India in various judgments. CGRF and Ombudsman are functioning under the aegis of DERC and update the DERC on performance of Discoms. Apart from this, consumers are free under existing Redressal mechanisms, to approach our various Consumer Care Centres, Call Centres, CCAG, Zonal Complaint Centres, Website etc. for getting their issues addressed.
- 2.188 BRPL has submitted that the Redressal forums are presided over by a retired Judge of a High Court and decide cases independently and impartially only by consent of both the parties and without intervention of the utility. It is noteworthy that the Electricity Ombudsman's report assessing the performance of the power distribution companies in Delhi over a period of six months has praised BSES DISCOMs for improving its performance to redress consumer grievances. We further say that several new



initiatives have been taken by BSES DISCOMs which resulted into significant reduction of complaints across all grievance forums.

### Commission's View

2.189 Consumer Grievance Redressal Forums are established in accordance with the provisions of Electricity Act, 2003 and Delhi Electricity Regulatory Commission (Redressal of Consumers' Grievances) Regulations, 2003 dated 10.06.2004. The appointment of Chairman and Members of CGRF are approved by the Commission. Ever since CGRF came into existence, about 80% of cases decided have gone in favour of consumers. Therefore, it is felt that the CGRF is functioning independently. The Distribution licensees have officers specifically for dealing with consumer grievances. The consumer grievances are also looked into by the Public Grievances Cell of the Government of NCT of Delhi which coordinates with the Distribution licensees for resolution of the grievances. The Commission has taken up the process of review of the existing regulations so as to strengthen the bodies and increase their independence.

### Stakeholders' View

2.190 Distribution licensees should reduce loss by 1% as recommended by Abraham Committee.

### Petitioner's Submission

2.191 Ever since privatization, Distribution licensees have been given stiff AT&C loss reduction targets on year-to-year basis, including in the MYT Control Period 2007-11. Distribution licensees have worked whole-heartedly and not only achieved these stiff targets but also over-achieved the targets. However, now that AT&C losses in the distribution area have approached acceptable minimum technical loss levels, further decrease would be increasingly arduous and will involve high order of Capex investments due to application of law of diminishing returns. Therefore, every incremental percentage decrease in loss will be extremely difficult in the case of technical losses and commercially unviable to secure in terms of human effort as well as capital investment. It may be appreciated that even to sustain AT&C losses at the present level is in itself a challenging proposition.

### Commission's View

2.192 The AT&C Loss reduction trajectory prescribed by the Commission for MYT period FY 2012-13 to FY 2014-15 is much more stringent than the Abraham Committee recommendations.

### Stakeholders' View

2.193 To consider the proposal of compulsory installation of AMR meters and roll out consolidated billing for large consumers with multiple connections.

**Petitioner's Submission**

2.194 The petitioner has submitted that all consumers in the TPDDL network above 11kW are being billed through AMR Meters. BRPL has submitted that it welcomes the suggestions of the respondent regarding consolidated billing and AMRs. BRPL has already installed AMRs for all consumers above 45kW load and efforts are on to maximize their usage. AMRs would be installed for 10kW above consumers based on techno-economic feasibility. Moreover, BRPL has implemented the SAP for consolidated billing purpose, which is already in use.

**Commission's View**

2.195 As informed by the distribution licensees, all consumers in Delhi having sanctioned load of 45 kW and above are on AMR metering. Regarding the issue of consolidated billing for large consumers with multiple connections, the Commission shall look into the issue separately, after the tariff order.

**Stakeholders' View**

2.196 Installation of CFL in place of tube lights on Street lighting to save energy.

**Petitioner's Submission**

2.197 The Petitioner has appreciated the suggestion while submitting that streetlights are owned by various Civic agencies like MCD etc. and the maintenance cost as well as capital cost is borne by such agencies.

**Commission's View**

2.198 Streetlights are owned by various civic agencies. The cost of street light maintenance and replacement of lights is borne by the road-owning agency. The Commission has specified the maintenance charges including charges of consumables, as per the specifications for street lights.

**Stakeholders' View**

2.199 The Distribution licensees should provide a rebate in case of early payment of bills in the same manner that they charge LPSC in case of delay in payment.

**Petitioner's Submission**

2.200 The Petitioner has submitted that the Commission has already provided in the Delhi Electricity Supply Code and Performance Standards Regulations 2007 that if a consumer intends to make advance payment of bills, the Licensee shall accept the same and the amount so paid shall be adjusted towards energy and other charges in the next bill. Further, Interest at the rate of 0.5% above the Savings Bank rate of State Bank of India as applicable on 1st January and 1st July of the Calendar year, for next six months, payable half yearly on such deposit shall be paid on balance amount lying unadjusted with the Licensee.

**Commission's View**

2.201 No such provision exists in the DERC Supply Code and Performance Standards Regulations, 2007.

**Stakeholders' View**

2.202 K factor cannot be allowed at more than 2.5% because most of the assets are new.

**Petitioner's Submission**

2.203 (TPDDL) The petitioner has submitted that it has sought the R&M based on last year R&M ratio vis-à-vis fixed assets along with inflation factor. It is submitted that addition of network in past years would require maintenance expenses in coming years.

**Commission's View**

2.204 The K factor for the MYT period FY 2012-13 to FY 2014-15 has been finalised in the MYT Regulations notified in Jan 2012.

**Stakeholders' View**

2.205 (TPDDL) The capitalization of asset in FY 2011-12 was considered at far higher rate than which has actually happened now. Pending full review and true up, no action about Regulatory Assets can be taken. All future surpluses cannot adjust from surplus revenue.

**Petitioner's Submission**

2.206 (TPDDL) The petitioner has submitted that it has considered the RoCE based on assets capitalization as allowed by the Commission in its order dated August 2011. As per MYT regulations; Assets capitalization will be trued up at the end of MYT Control Period i.e. along with true up of FY 2011-12.

**Commission's View**

2.207 The capitalization shall be firmed up at the end of the first Control period along with true up of FY 2011-12.

**A3: TRUE UP FOR FY 2010-11****Background**

- 3.1 The Commission had approved the Aggregate Revenue Requirement (ARR) of BSES Rajdhani Power Limited (BRPL) for each year of the Multi Year Tariff Control Period (FY 2007-08 to FY 2010-11) in its Multi Year Tariff Order for BRPL dated February 23, 2008. The MYT Regulations, 2007 provide for truing up of the uncontrollable parameters of the ARR at the end of each year of the Control Period based on the audited accounts and prudence check by the Commission.
- 3.2 BRPL in its petition has sought truing up of the expenditure and revenue for FY 2010-11. In this Chapter, the Commission has analysed the petition of BRPL in accordance with the principles laid down under MYT Regulations, 2007.

**Claim of Power Purchase Rebate paid to DTL**

- 3.3 The Petitioner through letter dated April 25, 2012 requested the Commission to allow Payment of Rs 6.39Cr on Rebate on power Purchase made to DTL.
- 3.4 The Commission, while truing up for FY 2006-07 had provisionally allowed Power Purchase Cost of Rs 2095.91 Cr as appearing in the DTL against the claim of the Petitioner of Rs 2102.96 Cr claimed by the Petitioner. The Petitioner had submitted that the difference is arising on account of dispute between the Petitioner and DTL on rebate methodology.
- 3.5 The Commission observed that difference in the claim was Rs 7.05 Cr. The difference was on account of rebate (Rs 6.39 Cr) and reactive energy charges (Rs 0.66 Cr). The Commission has already allowed reactive energy charges while truing up in Tariff Order dated August 26, 2011.
- 3.6 The Petitioner has now submitted that it has made payment of Rs 6.39 Cr to DTL on October 19, 2005. The Petitioner further submitted that it had not considered payment made to DTL under protest as expense in FY 2005-06 and considered as expense only in FY 2006-07. The Commission is of the opinion that as payment was made by the Petitioner in FY 2005-06 to DTL, it would appear as revenue earned from the Petitioner on account of sale of power in the DTL's account. The Commission further observed that power purchase cost approved for the Petitioner and revenue considered for DTL during FY 2005-06 from the Petitioner are also same. This means, either the payment made by the Petitioner has not been considered by the DTL as revenue or payment made by the Petitioner has already been included in power purchase cost of the Petitioner for FY 2005-06. The Commission, therefore, directed DTL to clarify on the same.
- 3.7 DTL vide its letter dated June 11, 2012 submitted that it has received Rs 6.39 Cr from the Petitioner in FY 2005-06 and due to payment under protest by the Petitioner, it took conservative view in the recognition of the said amounts in the books of accounts, and the receipt of the said amounts as disputed liability and not as income in the audited

accounts of FY 2005-06. DTL further submitted that in the annual accounts for FY 2006-07 it transferred the amount as income under prior period income.

- 3.8 The Commission observes that while truing up of FY 2006-07 for DTL, the Commission did not consider prior period income as income of DTL. After truing up for FY 2006-07, the Commission had determined a surplus for the DTL and deficit for BRPL. As this amount was not considered while calculating the surplus/deficit till FY 2006-07, the surplus of DTL will increase by Rs 6.39 Cr and deficit of BRPL will increase by Rs 6.39 Cr. The Commission directs DTL to adjust Rs 6.39 Cr along with carrying cost (considered by the Commission for revenue gap funding of BRPL) in first three bills for transmission charges issued by DTL after issuance of this tariff order.

## Energy Sales

### Petitioner's Submission

- 3.9 The Petitioner has submitted total sales of 8576.39 MU for FY 2010-11 in its True up petition as against 8025.99 MU approved by the Commission in its MYT Order dated February 23, 2008.

### Commission's Analysis

- 3.10 The Commission analysed category-wise monthly sales data submitted by the Petitioner for each month of FY 2010-11 (under Form 2.1(a)).
- 3.11 The Commission also directed the Petitioner to verify the sales details submitted in Form 2.1 (a) from their billing data base for FY 2010-11.
- 3.12 During validation of the billing database, Petitioner's officials submitted the collection details for FY 2010-11 and verified the billing database for FY 2010-11.
- 3.13 The billing data for FY 2010-11 was extracted from the billing servers of the BRPL through LAN connectivity. The data extracted from the system were integrated and Form 2.1 (a) for FY 2010-11 was prepared. Form 2.1 (a) generated from the billing server shown total sales as 8576.34 MU, difference of 0.05 MU. As the billing software is dynamic and several entries might have been changed for FY 2010-11 since the generation of Form 2.1(a), the Commission accepted this minor variation.
- 3.14 During the validation session, the Commission inquired about the methodology adopted by the Petitioner to record sales against cases of enforcement. The Petitioner informed the Commission that MU recorded as sales against cases of enforcement were derived by dividing the total payment received against enforcement cases by average billing rate for the year. As per Electricity Act, in all cases of enforcement/theft, energy has to be billed at twice the rate of the normal tariff. Ideally, the Petitioner should have divided the total payment received against enforcement cases by two times of average billing rate for the year to arrive at MU recorded as sales.

- 3.15 In Form 2.1 (a) for FY 2010-11, the Petitioner has shown sales against enforcement as 72.92 MU by dividing the total payment received against enforcement cases by average billing rate for the year. The Commission has revised this figure and has approved sales against enforcement as 36.46 MU.
- 3.16 The Commission also inquired about the methodology adopted by the Petitioner to record sales against cases of misuse of energy. The Petitioner informed the Commission that MU recorded as sales while preparing Form 2.1 (a) against cases of misuse were actual MU billed.
- 3.17 In validation session dated April 3, 2012, BRPL was directed to prepare month-wise Form 2.1 (a) from the live database for FY 2010-11. BRPL submitted that they have two databases which have been used for raising bills during FY 2010-11, EBS and SAP. BRPL downloaded the information from these databases and created Form 2.1 (a). The total sales in the Form 2.1 (a), thus created was 8576.34 MU.
- 3.18 The Commission analysed month-wise / category wise energy sales, and revenue data submitted by the Petitioner in the two databases maintained by BRPL for billing data, viz. SAP and EBS. During the validation exercise, the Commission observed that during some months, the average rate for sale of energy (revenue billed on account of energy charges excluding fixed charges divided by energy billed) were lower than the tariff approved by the Commission. Some of the deviations are shown below:

**Table 3: Average Energy Charges**

Category	Month	Energy Charges Approved by the Commission (Rs/Unit)	Database of the Petitioner	Average Energy Charge as per Form 2.1 (a) submitted by the Petitioner (Rs/Unit)
SIP (More than 10 kW)	May 2010	4.40	SAP	4.37
SIP (More than 10 kW)	June 2010	4.40	SAP	4.35
SIP (More than 10 kW)	February 2011	4.30	SAP	3.61
SIP (More than 10 kW)	March 2011	4.30	SAP	3.65
SIP (Less than 10 kW)	February 2011	4.95	SAP	2.74
SIP (Less than 10 kW)	September 2010	5.05	EBS	4.00
SIP (Less than 10 kW)	October 2010	5.05	EBS	4.77
SIP (Less than 10 kW)	February 2011	4.95	EBS	4.24
SIP (Less than 10 kW)	March 2011	4.95	EBS	4.08
NDLT (Less than 10 kW)	February 2011	5.40	EBS	5.09
NDLT (Less than 10 kW)	March 2011	5.40	EBS	5.19
NDLT (Less than 10 kW)	February 2011	5.40	SAP	2.41
NDLT (DJB Less than 10 kW)	February 2011	5.40	SAP	2.01
NDLT (More than 10 kW)	February 2011	4.92	SAP	4.10
NDLT (More than 10 kW)	March 2011	4.92	SAP	4.02
NDLT (DJB More than 10 kW)	February 2011	4.92	SAP	4.06
Agriculture	April 2010	1.55	EBS	1.40
Agriculture	May 2010	1.55	EBS	1.16
Agriculture	June 2010	1.55	EBS	1.38
Agriculture	August 2010	1.55	EBS	0.97
Agriculture	October 2010	1.55	EBS	1.26



Category	Month	Energy Charges Approved by the Commission (Rs/Unit)	Database of the Petitioner	Average Energy Charge as per Form 2.1 (a) submitted by the Petitioner (Rs/Unit)
Agriculture	November 2010	1.55	EBS	1.46
Agriculture	January 2011	1.55	EBS	1.28
Agriculture	February 2011	1.55	EBS	0.64
Mushroom	February 2011	3.05	EBS	0.02
Mushroom	March 2011	3.05	EBS	1.51
Agriculture	March 2011	1.55	SAP	1.29
Large Industrial Power (Supply at 400 kV)	May 2010	5.00	SAP	4.85

- 3.19 It was observed that for many of the consumer categories in a few months the average energy charge was much lower than that approved by the Commission. Hence, the Commission asked the Petitioner to come for a detailed validation exercise.
- 3.20 The Commission had scheduled validation session for 2.1 (a) of BRPL in afternoon of April 17, 2012, as it had scheduled the validation session for 2.1 (a) for BYPL in the morning session. In validation session with BYPL, the Commission observed cases where energy was billed at 'zero rate' and asked for explanation, which could not be furnished by BYPL. BRPL did not turn up for its validation session scheduled in afternoon and finally came for validation session in afternoon of April 18, 2011.
- 3.21 The Commission, in validation session dated April 18, 2012, directed the Petitioner to first download the consumer-wise billing record for the month of March 2011 from their SAP database for the NDLT consumers where connected load is more than 10 kW. The Commission observed that in the data extracted total energy sale to these consumers was 12.16 MU which was lower by 9.6 MU vis-à-vis that shown in Form 2.1 (a) (81.76 MU in Form 2.1 (a)) submitted by the Petitioner. During the session, there were no cases where energy was billed at zero rate. However, it was observed that approximately 10% of the consumers were having no consumption and they were just being billed fixed charges.
- 3.22 The Commission directed the Petitioner to repeat the above exercise for the month of March 2011 for the SIP consumers where connected load is more than 10 kW. The Commission observed that in the data extracted there were 4 cases (7.1 MU) where energy was billed at 'zero rate'. Further, total energy sold to SIP consumers was 34.84 MU which was lower by 4 MU vis-à-vis the total sales figure in Form 2.1 (a) (38.84 MU) for March 2011 submitted by the Petitioner. It was also observed that approximately 7% of the consumers were having no consumption and they were just being billed fixed charges.
- 3.23 The Commission further directed the Petitioner to repeat the exercise for February 2011 for the SIP consumers where connected load is more than 10 kW. The Commission observed that in the data extracted there were no cases where energy was billed at 'zero rate'. However, total energy sold to SIP consumers was 35.62 MU which is lower by 4.7 MU than 40.32 MU shown in Form 2.1 (a) submitted by the Petitioner. The Commission asked Petitioner's officials for explanation of the variation; however they could not provide any explanation. The Commission also



noticed that an abnormally high number of consumers were being billed only fixed charges (i.e no energy charge was billed as no consumption was recorded in the billing database).

- 3.24 The information downloaded from the SAP database for SIP / NDLT consumers for February and March 2011 were at large variance (more than 10%) vis-à-vis their earlier submissions. The Commission asked the Petitioner's officials to come prepared with explanations for the same for the next validation session on April 23, 2012.
- 3.25 The Petitioner's officials submitted the following explanation on April 23, 2012 before the start of the validation session:
- (a) The billing database is dynamic, that is why number of consumers and sales have changed
  - (b) For zero consumption, it was submitted that either these premises were locked or these were seasonal industries.
- 3.26 The Commission felt that the explanation provided by the Petitioner was not very convincing as the variations were very high and the number of cases where no energy was billed was also significant.
- 3.27 The Commission, in the validation session on April 23, 2012, again directed the Petitioner to download the consumer-wise billing record for March 2011 for the NDLT consumers where connected load is more than 10 kW. **The Commission observed total energy sold to these consumers was 92 MU. Now the sales were 11 MU higher than as submitted in Form 2.1 (a) as against lower by 9.6 MU in the validation session dated April 18, 2012.** The Commission also compared the consumer record-wise data download on April 18 and April 23. The Commission observed that there were records of several consumers which were present in data downloaded on April 23 which were not there in data downloaded on April 18 and other way around. It was decided to give one more opportunity to the Petitioner to explain the discrepancies.
- 3.28 The Petitioner submitted letter dated April 27, 2012 to the Commission, where it has given following explanation:
- (a) Downloaded data did not match as the downloaded data analysed was summation of kWh and kVah of all consumers instead of kWh.
  - (b) The consumers with billing at zero rate pointed out by the Commission were also pointed out by the internal audit report of the Petitioner. All these cases were amended in FY 2011-12.
  - (c) The Petitioner also submitted, vide the same letter, list of all cases where energy was billed at zero rate (other than own consumption). **The Petitioner has submitted that it had billed 28.91 MU in Feb 2011 and 29.41 MU in March 2011 at zero rate in SAP database.** The Petitioner submitted there was no

other zero billing case during the FY 2010-11. The Petitioner has also submitted that all these bills were reversed in Feb 2012. The Petitioner also submitted consumer-wise billing detail of SAP database (excluding domestic consumer) also.

- 3.29 The Commission did not accept the Petitioner's submission as the addition of the correct sales figures (kWh & kVAh) were done in the validation session dated April 23, 2011 by Petitioner's officials themselves and not by the Commission.
- 3.30 With reference to the submission of the Petitioner on billing at 'zero rate', during the initial validation session, only 4 zero billing cases during month of Feb 2011 and Mar 2011 were observed by the Commission, however, the details submitted by the Petitioner in the letter dated April 27, 2012 were 58.32 MU.
- 3.31 The Commission noticed inconsistency and changes in the various data submitted by the Petitioner and informed the Petitioner's officials about concerns the Commission had with respect to the information being provided by the Petitioner.
- 3.32 The subsequent validation sessions were held on May 2, 2012 and May 3, 2012. The Commission again directed the Petitioner download the consumer-wise billing record for **March 2011 and February 2011** (on the respective dates) for the NDLT and SIP consumers where connected load is more than 10 kW and less than 100 kW from the SAP database. The Commission observed that total energy sold to these consumers now downloaded matched with the information provided in Form 2.1 (a). **This was contrary to the explanation given by the Petitioner's officials in the validation session dated April 23, 2012, where they submitted that billing database is dynamic and that is why number of consumers and energy sales has changed.** The Commission also analysed the per unit rate for energy charges (revenue billed on account of energy charges excluding fixed charges divided by energy billed) and observed that now some consumers were billed at 'zero rate' and for some consumers billing rate was lower than the Commission approved tariff. The Commission therefore gave a list of sample cases to BRPL where billing rate was lower than the Commission approved tariff and directed them to furnish an explanation.
- 3.33 Further, during the same session, the Commission directed the Petitioner to download the data for Domestic consumers from **SAP database** for month of **March 2011**. The Commission observed from the downloaded data that there were 19 cases where consumption was more than 10000 units. The Commission directed the Petitioner to provide explanation of the same.
- 3.34 The Commission directed the Petitioner to download consumer-wise detail for NDLT consumers where connected load is less than 10 kW, Mushroom category and Agriculture category from **EBS database** for the month of **February 2011**. The Commission observed that in all these cases there were huge variations vis-a-vis sales submitted in Form 2.1 (a). The Petitioner's officials could not provide any explanation and submitted that it such variations might be happening because of failure in downloading some adjustments while downloading the details from EBS database. The Commission directed the Petitioner to submit consumer-wise billing details from EBS.

- 3.35 The validation session continued on May 7, 2012. The Commission directed the Petitioner to download the data for SIP, consumers from EBS database for month of Sep 2010. The Commission observed that in all these cases there were huge variations vis-à-vis sales submitted in Form 2.1 (a). The Petitioner's officials could not provide any explanation and submitted that such variations might be happening because of failure in downloading some adjustments while downloading the details from EBS database. The Commission analysed the per unit rate for energy charges (revenue billed on account of energy charges excluding fixed charges divided by energy billed) and observed that for some consumers billing rate was lower than the Commission approved tariff. The Commission directed the Petitioner to provide explanation for the same.
- 3.36 The Commission also directed the Petitioner to submit consumer-wise billing details for all months in SAP and EBS database. The Petitioner submitted to the Commission consumer-wise billing details all consumers of EBS and domestic consumers from SAP database. The Petitioner also mentioned that they have submitted list of cases where billing has been done at a different rate than approved rate and have given explanation for each case. However, the Commission found out that no such explanation has been given in the data provided by the Petitioner and informed their officials of the same.
- 3.37 It was also observed that the majority of the consumers for the Petitioner are billed through EBS database and the number of billing records is huge (approx one crore) for FY 2010-11. The Commission analysed the consumer-wise billing details submitted by the Petitioner on sample basis and found several discrepancies in EBS database also; i.e. there were cases where energy was billed at 'zero rate', cases where energy was being billed at 'lower rate' than approved tariff, cases where consumers were being refunded in the bills (in monetary terms) with no mention of refund in units etc. Further, the explanation submitted by BRPL vide letter dated May 11, 2012 for all the above made observations were not exhaustive in terms of covering all consumer cases pointed out by the Commission in the validation sessions mentioned above.
- 3.38 The next validation session was conducted on May 23, 2012. During the meeting, the Commission pointed out its observations to the Petitioner's officials with respect to analysis of the consumer-wise billing details of EBS database. The Petitioner's officials, who had submitted, up to then, that there were no case of 'zero rate' billing in the EBS database changed their submission during that session and admitted to the Commission that 3 MU has been billed at 'zero rate' in the EBS database. However, the Commission was able to show them that their submission of 3 MU of 'zero rate' billing for the entire year FY 2010-11 was again not correctly assessed as this amount is only a part of the entire database; as per the Commission's analysis around 10 MU of energy was billed at 'zero rate'. The Commission also inquired from the Petitioner's officials about the cases where huge refunds were given to the consumers but energy amount had not been adjusted.
- 3.39 Further, the Commission agreed to share a part of this analysis with the Petitioner (a sample of approximately 10000 cases identified). The Petitioner's officials agreed that they will analyse these cases (category-wise) appearing in the list and provide

explanation within 24 hours. The Commission sent across the list to the Petitioner's officials on May 23, 2012. However, the Commission did not receive any response from the Petitioner till June 1, 2012.

- 3.40 The Petitioner vide its letter dated June 1, 2012 submitted that it has not received list of consumers from the Commission's side. The Commission again sent across the copy of e-mail through which the Commission had sent the list of consumers to the Petitioner. The Petitioner vide its letter dated June 13, 2012 informed the Commission that list of consumer was sent by the Commission on a wrong e-mail id. The Commission again sent the list of consumer to the Petitioner vide email dated June 13, 2012.
- 3.41 The Petitioner vide its letter dated June 18, 2012 submitted its analysis on a selected 473 cases against approximately 10000 cases selected by the Commission. The Commission observed that the explanation provided by the Petitioner were not satisfactory and were provided without any backup data. The Petitioner has also not provided explanation for most of the cases. The Commission therefore rejects the Petitioner's explanation.
- 3.42 The information provided by the Petitioner during the entire validation session was inconsistent and changed many times. Notably, the Petitioner kept changing stand/submission with every validation session conducted by the Commission. The Commission gave enough opportunities to the Petitioner during the validation session to clarify the queries raised by the Commission. However, the Petitioner could not provide clarifications to the satisfaction of the Commission.
- 3.43 With reference to the submission of the Petitioner about reversal of 'zero rate' bills in February 2012, the Commission is of the opinion that the AT&C losses are yearly figure and has to be determined according to the correct figures for the year. The reversal entries done in February 2012, as claimed by the Petitioner, will be removed while truing up AT&C losses for FY 2011-12 after the prudence check.
- 3.44 The Commission has subtracted sales at zero rate in SAP database (58.33 MU) from the energy shown by the Petitioner as sales, as indicated by BRPL vide its letter dated April 27, 2012.
- 3.45 Therefore, the Commission has taken the proportion of sales disallowed on account of 'zero rate' billing in the SAP database to total sales in SAP database (total sales is approximately 4464 MU) and applied it to disallow sales in the EBS database (total sales is approximately 4037 MU), on the same account, on a pro-rata basis. As such, the total energy sales disallowed by the Commission in the EBS database are 53 MU.
- 3.46 In view of the above, total sales disallowed by the Commission due to 'zero billing', and other billing discrepancies like billing at lower rate, refunds given to the consumers without adjusting energy amount etc, is 111.33 MU (58.33 MU for SAP and 53 MU for EBS database)
- 3.47 The Commission also observed that sales under 'own consumption' for BRPL varied drastically across months in FY 2010-11. Total own consumption submitted by the

Petitioner during FY 2010-11 was 43.50 MU while during FY 2011-12 it was 32.6 MU. The Petitioner has submitted that own consumption during FY 2010-11 has reduced due to energy conservation measures carried out by the Petitioner. The Commission directed the Petitioner to submit month-wise consumption point-wise consumption detail for FY 2010-11, which was complied with by the Petitioner

- 3.48 The Commission analysed the information submitted by the Petitioner and observed that there are 16 consumption points which have consumed approx 30 MU of energy. The Commission asked for explanation from the Petitioner's officials. The Petitioner's officials submitted that units drawn under 'self consumption' is being recorded on a metered basis. It was also submitted that there were cases where energy was booked on assessment basis for the past period (for a period of 2 – 3 years in several cases). They also submitted a few sample assessment bills through their letter dated May 8, 2012.
- 3.49 The Commission directed the Petitioner to submit details of own consumption based upon actual meter reading. The Commission also directed the Petitioner to segregate consumption recorded in assessment cases into assessment for FY 2010-11 and assessment for period other than FY 2010-11. The Petitioner's officials agreed to provide the required information. The Commission again reminded about the information pending on own consumption in validation session held on May 23, 2012 but no such compilation was provided by the Petitioner. Based on the observation that only 16 connection points are consuming approximately 30 MU out of 43.5 MU own consumption shown by the Petitioner, the Commission approves own consumption for the Petitioner at 21 MU (@0.25% of the total sales) on a normative basis.
- 3.50 The Commission therefore, for truing up of sales, has considered the sales figures submitted by the Petitioner for FY 2010-11 along with reduction under enforcement (36.46 MU), billing at zero rate/lower rate/refunds without units (111.33 MU), own consumption (22.50 MU). The trued up sales for FY 2010-11 as approved by the Commission now is shown below:

**Table 4: Trued Up Energy Sales for FY 2010-11 (MU)**

Category	Approved in MYT Order	Actuals as per Petitioner's Submission	Trued Up
Domestic	3565.55	4593.87	
Non-Domestic (Including DIAL, DJB)	3279.54	2929.09	
Industrial	670.70	602.54	
Agriculture & Mushroom	15.31	17.68	
Public Lighting	215.75	152.06	
Railway Traction	23.51	24.77	
DMRC	142.00	139.97	
Others (Enforcement and Own Consumption)	113.63	116.41	
Total	8025.99	8576.39	8576.39
Less: Enforcement			36.46
Less: Billing at zero rate (other than own)			111.33

Category	Approved in MYT Order	Actuals as per Petitioner's Submission	Trued Up
consumption)			
Less: Own Consumption			22.50
<b>Approved Sales</b>			<b>8406.10</b>

## AT&C Losses

### Petitioner's Submission

- 3.51 The Petitioner has submitted that it has achieved the AT&C loss level of 16.85% for FY 2010-11 as against the target AT&C loss level of 17.00% prescribed in the MYT Order.
- 3.52 The Petitioner has submitted that total energy received for the consumption during the FY 2010-11 is 10461 MU.
- 3.53 The Petitioner has submitted its computation for AT&C loss level of 16.85% achieved during FY 2010-11 as summarised below:

**Table 5: AT&C loss for FY 2010-11 as submitted by the Petitioner**

S. No	Particulars	Units	FY 2010-11	Remarks
A	Units Consumed at BRPL Periphery for BRPL Consumers	MU	10461.0	
B	Units Billed	MU	8576.39	
C	Amount Billed	Rs Cr	3986.23	
D	Distribution Loss	%	18.02%	(1 - B/A)
E	Amount Collected	Rs Cr	4036.65	
F	Collection Efficiency	%	101.42%	F = E/C
G	Units Realized	MU	8697.9	G = (B x F)
E	<b>AT&amp;C Loss Level</b>	<b>%</b>	<b>16.85%</b>	<b>E = 1 - (G/A)</b>

- 3.54 The Petitioner has claimed a total benefit of Rs. 71. Cr (as computed in table below) on account of overachievement of 0.15% in AT&C loss reduction during FY 2010-11.

**Table 6: Computation of Overachievement Incentive as submitted by the Petitioner**

Particulars	Units	Target Level X	Actual Y
A. AT&C Losses	%	17.00%	16.85%
B. Over Achievement/ (Under Achievement)	%		0.15%
C. Energy Input	MU	10461.0	
D. Units Realized	MU	8682.63	8697.9
E. Average Billing Rate	Rs/unit	4.64	4.64
F. Amount Realized	Rs Cr	4029.6	4036.7
G. Total benefit on account overachievement beyond Target level (Y - X)	Rs Cr	7.1	
Profit Sharing between BRPL and Contingency			



Particulars	Units	Target Level	Actual
		X	Y
Reserve			
H. Benefits to be retained by the Petitioner (50%)	Rs Cr	3.5	
I. Benefits to be utilized to meet Revenue Gap (G - H)	Rs Cr	3.5	
J. Total Revenue available towards ARR for FY 2010-11 including E Tax, DVB Arrears Collected and LPSC at Target AT&C Loss Level (F - G)	Rs Cr	4029.6	
K. Add: Consumer's share on account of over achievement	Rs Cr	3.5	
L. Less: E Tax Paid	Rs Cr	167.7	
M. Less: LPSC considered in NTI	Rs Cr	29.2	
<b>N. Revenue available for Expenses (J+K-L-M)</b>	<b>Rs Cr</b>	<b>3836.2</b>	

### Commission's Analysis

- 3.55 As per the MYT Order dated February 3, 2008, the Commission has considered 12.92% reduction in AT&C losses (29.92% in FY 2006-07 to 17.00% in FY 2010-11) for the Control Period. The Commission has further observed in the MYT Order:

*"..... The Commission has also considered reduction of 25% of the total AT&C loss reduction target in each year of the Control Period. As specified in the MYT Regulation, 2007; the Petitioner has to reduce a minimum of 20% of the total AT&C loss reduction target for the Control Period in any year of the Control Period.*

*4. 34 For the purpose of calculating the incentive/ penalty on account of over/under achievement of AT&C loss reduction target the Commission would consider the following:*

- (a) *First year of the Control Period: The Petitioner shall be eligible for an incentive if the AT&C loss reduction in the first year of the Control Period is above 25%. Any under recovery in the revenue realised, if the AT&C loss reduction in the first year of the Control Period is below 20%, shall be to the account of the Petitioner. The Petitioner shall not be eligible for any incentive or penalty if the AT&C loss reduction in the first year of the Control Period is between 20% and 25%.*
- (b) *Second year of the Control Period: The Petitioner shall be eligible for an incentive if the cumulative value of loss reduction in that year and in the previous year is over 50%. Any under recovery in the revenue realised, if the AT&C loss reduction in the second year of the Control Period is below 20% and that the cumulative value of loss reduction in that year and in the previous year is below 45%, shall be to the account of the Petitioner. The Petitioner shall not be eligible for any incentive or penalty if the cumulative AT&C loss reduction in the first and second year of the Control Period is between 45% and 50%.*
- (c) *Third year of the Control Period: The Petitioner shall be eligible for an incentive if the cumulative value of loss reduction in that year and in the*



*previous two years is over 75%. Any under recovery in the revenue realised, if the AT&C loss reduction in the third year of the Control Period is below 20% and that the cumulative value of loss reduction in that year and in the previous two years is below 70%, shall be to the account of the Petitioner. The Petitioner shall not be eligible for any incentive or penalty if the cumulative AT&C loss reduction in the first, second and third year of the Control Period is between 70% and 75%.*

- (d) *Last year of the Control Period: The Petitioner shall be eligible for an incentive if the cumulative value of loss reduction at the end of the Control Period is over 100%. Any under recovery in the revenue realised, if the AT&C loss reduction in the last year of the Control Period is below 20% and that the cumulative value of loss reduction at the end of the Control Period is below 100%, shall be to the account of the Petitioner.. The Petitioner shall not be eligible for any incentive or penalty if the cumulative AT&C loss reduction at the end of the Control Period is 100%."*

- 3.56 A comparison of the AT&C loss level specified in the MYT Order and the actual AT&C loss level claimed by the Petitioner during FY 2010-11 is mentioned below:

**Table 7: AT&C loss for FY 2010-11 as submitted by the Petitioner**

Particulars	Approved in the MYT Order	Petitioner's Submission
AT&C Loss Target	17.00%	16.85%

- 3.57 The Commission analysed category-wise monthly sales data submitted by the Petitioner for each month of FY 2010-11 (under Form 2.1(a)).
- 3.58 The Commission gave an opportunity to the Petitioner to establish its claim on AT&C loss reduction and directed the Petitioner to show the relevant back up data with respect to energy billed (in MU and Rs Cr) and revenue collected (in Rs Cr) for FY 2010-11.
- 3.59 For the purposes of this validation, the Petitioner was required to provide supporting data to substantiate Form 2.1(a) and also to bring evidence in support of the entries which have gone into calculation of AT&C loss levels. The Petitioner was also directed to bring all such evidences which it wants to rely upon with a view to substantiate the AT&C loss levels calculations. Specific request was made to the Petitioner to bring source data for verifying the authenticity/credibility of the evidence being relied upon.
- 3.60 In order to conduct the prudence check to verify the reliability of data contained in Form 2.1(a), the Petitioner was directed to produce month-wise billing and collection details (category-wise) and daily collection details for the FY 2010-11.
- 3.61 During the course of validation exercise, Petitioner's officials submitted the daily collection details and billing database for FY 2010-11.

- 3.62 As detailed in earlier section, the Commission has approved sales for FY 2010-11 at 8406.10 MU.
- 3.63 With reference to amount billed, the Commission observed that revenue billed during the FY 2010-11 was Rs 3980.23 Cr as submitted by the Petitioner in Form 2.1 (a).
- 3.64 The Petitioner has submitted Rs 4036.65 Cr as revenue collected during FY 2010-11 on sale of electricity.
- 3.65 During the validation session, the Petitioner was able to derive Rs 4036.65 Cr from the system of the Petitioner. The Petitioner was able to match daily collection details shown to the Commission with the bank statements of the Petitioner.
- 3.66 The Commission observes that the revenue collection of Rs 4036.65 Cr includes the total LPSC of Rs 29.2 Cr collected by the Petitioner. However, as financing of LPSC is allowed as a cost to the Petitioner, the consumers get benefit of net LPSC in Non tariff Income (which is subtracted from the ARR of the Petitioner). As consumers do not get benefit of gross LPSC, it will be prudent for the Commission to consider the LPSC net of financing expenses in revenue collection used for calculation of AT&C loss. As the Commission has approved Rs 15.41 Cr towards the financing cost of LPSC for FY 2010-11, the Commission has subtracted this from the revenue collected while calculating the AT&C losses. Thus revenue collected has been considered as Rs 4021.24 Cr while computing AT&C losses.
- 3.67 For verification of the energy input, the Commission directed State Load Dispatch Centre (SLDC) to submit the energy input for the Petitioner during FY 2010-11. SLDC submitted to the Commission that total energy input to BRPL for FY 2010-11 was 10461 MU, which was same as shown by the Petitioner.
- 3.68 Based on the above, the Commission approves the AT&C loss level for FY 2010-11 as shown below:

**Table 8: AT&C loss for FY 2010-11 as approved by the Commission**

S. No	Particulars	Units	Now Approved	Remarks
A	Units Consumed at BRPL Periphery for BRPL Consumers	MU	10461.0	
B	Units Billed	MU	8406.10	
C	Amount Billed	Rs Cr	3980.23	
D	Average Billing Rate	Rs/kWh	4.73	$(C/B)*A$
E	Distribution Loss	%	19.64%	$(1 - B/A)$
F	Amount Collected	Rs Cr	4021.24	
G	Collection Efficiency	%	101.03%	$G = F/C$
H	Units Realized	MU	8492.71	$H = (B \times G)$
I	<b>AT&amp;C Loss Level</b>	<b>%</b>	<b>18.82%</b>	<b><math>I = 1 - (H/A)</math></b>

- 3.69 The AT&C loss level approved by the Commission for FY 2010-11 is summarised below:

Table 9: AT&amp;C loss for FY 2010-11

Particulars	Approved in the MYT Order	Petitioner's Submission	Now Approved
AT&C Loss	17.00%	16.85%	18.82%
Distribution Loss	16.58%	18.02%	19.64%
<b>Collection Efficiency</b>	<b>99.50%</b>	<b>101.42%</b>	<b>101.03%</b>

- 3.70 The approved AT&C loss of 18.82% is higher than the target AT&C loss level of 17.00% for the Petitioner as specified in the MYT Order. As per Regulation 4.9 of the MYT Regulations, 2007,

*“Any financial loss on account of under performance with respect to AT&C targets shall be to the Licensee's account.”*

- 3.71 Accordingly, the under-recovery in the revenue realized on account of non-achievement of the minimum AT&C loss target of the Petitioner for FY 2010-11 is as summarised below:

Table 10: Computation of Underachievement / Overachievement by the Commission

	Particulars	Units	MYT Order	Actual
A	AT&C Losses	%	17.00%	18.82%
B	Under Achievement	%		-1.82%
C	Energy Input (MUs)	MU	10461.0	10461.0
D	Units Realized	MU	8682.63	8492.71
E	Average Billing Rate	Rs./Unit		4.73
F	Amount Realized	Rs. Cr	4111.16	4021.24
G	Total financial impact on account underachievement (Y - X)	Rs. Cr	-89.93	
H	Total Revenue Available towards ARR for FY 2010-11 including E-Tax and Net LPSC	Rs Cr	4111.16	
I	Less: Net LPSC considered as Other Income	Rs. Cr	13.79	
J	Less: E-Tax Paid	Rs Cr	167.71	
K	<b>Net Revenue Available towards ARR</b>	<b>Rs Cr</b>	<b>3929.66</b>	

- 3.72 Hence, the total revenue available towards ARR for FY 2010-11 has been computed by the Commission to be Rs. 3929.66 Cr.

## Power Purchase Quantum

### Petitioner's Submission

- 3.73 Against the actual sales of 8576.31 MU during FY 2010-11, the Petitioner has claimed a net power purchase requirement of 10461.00 MU.
- 3.74 The Petitioner has submitted that the gross power purchase quantum for FY 2010-11 was 13519.14 MU. Further, the Petitioner has provided the details of 2289.83 MU of surplus energy sold/banked.

- 3.75 After deducting the inter-state transmission loss (PGCIL loss) of 629.31 MU and intra-state (DTL) transmission loss of 138.99 MU, the Petitioner has submitted a net power purchase quantum of 10461.00 MU for FY 2010-11.

**Table 11: Power Purchase Quantum for FY 2010-11 as claimed by the Petitioner (in MU)**

Source	Approved in MYT Order	Petitioner's Submission
Gross Power Purchase Quantum	12,391.26	13,519.14
Power Sold To Other Sources	2,272.77	2,289.83
Net Power Purchase	10,118.49	11,229.30
Transmission Losses:		
Inter-State Transmission Losses	379.46	629.31
Intra-State Transmission Losses	117.50	138.99
Total Transmission Losses	496.96	768.30
<b>Net Power Available after Transmission Losses</b>	<b>9,621.52</b>	<b>10,461.00</b>

### Commission's Analysis

- 3.76 The Commission, in its MYT Order dated February 23, 2008, had approved net power purchase quantum of 9621.52 MU (net of transmission loss) from all sources including central sector generating stations, inter-state bilateral, intra-state power and Delhi generating stations for FY 2010-11.
- 3.77 It is observed that the actual power purchase quantum for the Petitioner was higher than quantum approved by the Commission due to higher actual energy demand in the Petitioner's distribution area vis-à-vis the demand considered by the Commission in the MYT Order and higher transmission losses than approved in the Tariff Order.
- 3.78 The Commission directed the Petitioner to submit month wise station wise power purchase details along with the bills which was complied with by the Petitioner.
- 3.79 The Commission has reviewed the month wise station wise power purchase details submitted by the Petitioner and cross checked the same with the Monthly Regional Energy Accounts for FY 2010-11.
- 3.80 The Commission directed the Petitioner to submit details of Provisions made with respect to power purchase cost and quantum in FY 2009-10 and FY 2010-11 and details of adjustment in power purchase cost of the next year with respect to these provisions, which was duly complied with by the Petitioner.
- 3.81 The Commission observed that the Petitioner has not made any provision with respect to power purchase cost for FY 2010-11.
- 3.82 For calculation of AT&C loss the Commission has considered actual Power Purchase quantum as per the submission of the SLDC and approves net power purchase quantum of 10461.0 MU.

- 3.83 The Commission directed the Petitioner to submit the details of process followed by the Petitioner for load forecast, projection of surplus /deficit power, procurement / sale of deficit / surplus power.
- 3.84 The Commission observed that the Petitioner was using a fixed percentage for projection of demand, where actual demand of last year was increased by a fixed percentage. Projected demand was used to project surplus / deficit of power and Petitioner entered into short term power purchase contracts based on the requirement so computed. The Commission noted with concern that neither any software tools was used by the Petitioner nor any adjustment for weather forecast, increase in population, pending connections, change in specific consumption of consumers was made by the Petitioner.
- 3.85 During the validation session, the Commission observed that the Petitioner has sold 2,289.83 MU of surplus energy out of which, 587.83 MU (25.67%) was sold through UI, 206.70 MU (9.03%) was banked, 1008.76 MU (44.05%) was sold through exchange, 471.33 MU (20.58%) was sold through bilateral arrangements and 15.22 MU (0.66%) through intra-state arrangements.
- 3.86 The Commission also observed that the Petitioner has purchased total 2576.46 MU from bilateral/exchange/UI. The Petitioner has purchased 1703.44 MU (66.12%) of energy from bilateral sources, 703.78 MU (27.32%) of energy from banking, 110.42 MU (4.29%) from intra-state arrangements, 37.53 MU (1.46%) of energy from UI and 21.29 MU (0.83%) from exchange.

## Power Purchase Cost

### Petitioner's Submission

- 3.87 The Petitioner has submitted gross power purchase cost of Rs. 4821.13 Cr. against the gross power purchase quantum of 8366.80 MU in FY 2010-11 from all sources including Intra-state, Bilateral and UI. From the gross power purchase cost, the revenue realized of Rs. 735.03 Cr on account of sale of surplus energy through bilateral, intra-state and UI has been deducted.
- 3.88 Further, the Petitioner has claimed total transmission charges of Rs. 425.80 Cr for the total power purchased during FY 2010-11.
- 3.89 Considering the above power purchase and transmission cost, the Petitioner has claimed total power purchase cost of Rs. 2606.12 Cr during FY 2010-11 for True-Up.

**Table 12: Power Purchase Cost for FY 2010-11 as claimed by the Petitioner (Rs. Cr)**

Source	Approved in MYT Order	Petitioner's Submission
Gross Power Purchase Cost	3228.22	4821.13
Power Sold To Other Sources	749.02	735.03
Net Power Purchase Cost	2479.20	4086.10
Transmission Charges		

Source	Approved in MYT Order	Petitioner's Submission
Inter-State Transmission Charges	146.24	255.60
Intra-State Transmission Charges	162.32	170.20
Total Transmission Charges	308.56	425.80
<b>Net Power Purchase Cost including Transmission Charges</b>	<b>2787.75</b>	<b>4511.90</b>

### Commission's Analysis

- 3.90 The Commission, in its MYT Order dated February 23, 2008 had approved total power purchase cost (including transmission charges) of Rs. 2787.75 Cr as against Rs. 4511.90 Cr claimed by the Petitioner for FY 2010-11. The increase in power purchase cost claimed by the Petitioner against the cost approved by the Commission in its Order is primarily on account of increase in quantum of units purchased through bilateral sources, increase in per unit rate of bilateral power purchase, lower rate for sale of surplus power and increase in the variable cost on account of escalation in fuel prices during FY 2010-11.
- 3.91 The Commission has verified the station wise month wise power purchase cost shown by the Petitioner with the bills received by the Petitioner on sample basis.
- 3.92 For verification of cost of short term power purchase, the Commission directed the Petitioner to submit the details of the process followed by the Petitioner for purchase/sale of short term power. The Petitioner informed the Commission that BRPL issued one tender for power procurement for the period from May 2010 to September 2010. It was noted that signing of the contracts using bid received through tender was done only in month of February 2010.
- 3.93 It was further observed that BRPL entered into most contracts for the period May-September 2010 way ahead in (as early as February 2010).
- 3.94 For those contracts entered in March 2010 - May 2010, a competitive bidding process was not followed and power has been contracted on the basis of request for offers from traders (through verbal communication). As such, there were no supporting documents to validate the selection of the contracts against all the offers that may have been received.
- 3.95 The Commission observed that BRPL had entered into Round The Clock (RTC) power purchase contracts for the months of May, June, July, August and September 2010. BRPL has bought RTC power is in the range of Rs 4.90 per unit to Rs 6.79 per unit, while the price at which power was purchased at different slots was in the range of Rs 4.05 per unit to Rs 7.07 per unit.
- 3.96 BRPL has submitted that it had floated tenders for sale of surplus short term power during the winter months; however, very few offers were received at very low bids due to which BRPL did not place any offer through tenders. Further, BRPL managed to sell this power by participating through traders in tenders floated by other utilities, apart from bidding for sale through IEX. BRPL has further submitted that it has sold



short term power through contracts mostly on a day-ahead basis during the summer months. For sale during December, January and February, most contracts were signed in the month of November 2010 and for sale in March 2011, contracts were signed in December 2010.

- 3.97 It has been observed that RTC power was sold in the range of Rs 2.81 per unit to Rs 4.85 per unit, while power during different time-slots were sold in the range of Rs 3.00 per unit to Rs 4.46 per unit.
- 3.98 BRPL has purchased total 2576.46 MU from bilateral/exchange/UI. BRPL has purchased 1703.44 MU (66.12%) of energy from bilateral sources, 703.78 MU (27.32%) of energy from banking, 110.42 MU (4.29%) from intra-state arrangements, 37.53 MU (1.46%) of energy from UI and 21.29 MU (0.83%) from exchange.
- 3.99 BRPL has incurred Rs 1319.80 Cr (@ Rs 5.12 per unit) in short term power procurement, out of which Rs 965.76 Cr (73.17% @ Rs 5.67 per unit) was incurred in bilateral energy purchase, Rs 283.08 Cr (21.45% @ Rs 4.02 per unit) was incurred for purchase of energy under banking, Rs 12.48 Cr (0.95% @ Rs 3.32 per unit) was incurred for UI, Rs 16.13 Cr (1.22% @ Rs 7.58 per unit) was incurred for purchase of energy from exchange and Rs 42.35 Cr (3.21% @ Rs 3.84 per unit) was incurred for purchase under intra-state arrangements.
- 3.100 During the validation session, it was observed that BRPL has sold 2,289.83 MU of surplus energy out of which, 587.83 MU (25.67%) was sold through UI, 206.70 MU (9.03%) was banked, 1008.76 MU (44.05%) was sold through exchange, 471.33 MU (20.58%) was sold through bilateral arrangements and 15.22 MU (0.66%) through intra-state arrangements.
- 3.101 BRPL has earned Rs 735.03 Cr (@ Rs 3.21 per unit) in short term power sale, out of which Rs 319.18 Cr (43.42% @ Rs 3.16 per unit) was earned through sale of energy under exchange, Rs 159.41 Cr (21.69% @ Rs 2.71 per unit) was earned through UI, Rs 72.34 (9.84% @ Rs 3.50 per unit) under banking arrangement, Rs 178.04 Cr (24.22% @ Rs 3.78 per unit) was earned through sale of power through bilateral arrangement and Rs 6.06 Cr (0.82% @ Rs 3.98 per unit) was earned for sale of energy under intra-state arrangement.
- 3.102 The gross energy cost for BRPL was Rs 3.566 per unit (even after short term power purchase @ Rs 5.12 per unit, without short term power @ Rs 3.20 per unit), while the net energy cost for the BRPL was Rs 3.91 Per unit (after considering sale of surplus power @ Rs 3.21 per unit and transmission loss of 758.3 MU).
- 3.103 The Commission observed that there were scope for better management of the process of short term power purchase and sale of the surplus power so as to significantly promote the interests of the consumers. Contracts for purchase of short term power were finalised early in the year and no competitive process seems to have been followed. Significantly high (2/3<sup>rd</sup>) quantum of the short term power procurement was through bilateral sources whereas purchase through the exchange is considered more transparent and gives a better yield. It is also noted that approximately same quantity



of short term power was purchased as well as sold; however, the yield from the sale was only half of the purchase price.

- 3.104 The Commission further observes that UI charges paid by the Petitioner also includes Penal UI charges of Rs 5.50 Cr. The Commission has, as a member of FOR, already decided that any Penal UI charges will not be allowed in the power purchase cost, therefore the Commission has not considered Penal UI charges in power purchase cost.
- 3.105 The Commission approves the total power purchase cost for FY 2010-11 at Rs. 4506.40 Cr after verification of power purchase bills for FY 2010-11 as mentioned below:

**Table 13: Trued-up Power Purchase Cost for FY 2010-11 (Rs. Cr)**

Source	Approved in MYT Order	Petitioner's Submission	Now Approved
Gross Power Purchase Cost	3228.22	4821.13	4821.13
Power Sold To Other Sources	749.02	735.03	735.03
Net Power Purchase Cost	2479.20	4086.10	4086.10
Transmission Charges			
Inter-State Transmission Charges	146.24	255.60	255.60
Intra-State Transmission Charges	162.32	170.20	170.20
Total Transmission Charges	308.56	425.80	425.80
Net Power Purchase Cost including Transmission Charges	2787.75	4511.90	4511.90
Less: Penal UI Charges			5.50
<b>Power Purchase Cost Trued Up</b>			<b>4506.40</b>

## Review of Controllable Parameters

- 3.106 As per Regulation 8.8 and 11.2 of the MYT Regulations, the Petitioner is required to submit information as a part of annual review on actual performance to assess the performance vis-à-vis the targets approved by the Commission. The Petitioner in its petition has submitted expenses on account of Controllable Parameters for FY 2010-11 as approved by the Commission in MYT Order.
- 3.107 As per Regulation 4.7 of the MYT Regulations, 2007, the Commission has specified targets for controllable parameters which inter alia include Operation & Maintenance expenditure (comprising employee expenses, repair & maintenance expenses, administration & general expenses and other miscellaneous expenses, viz. audit fee, rent, legal fees etc.), Return on Capital Employed and depreciation. Further, as per Regulation 4.14 of the MYT Regulations, 2007, adjustment to depreciation and return on capital employed for actual capital investment vis-a-vis approved capital investment shall be done at the end of the Control Period.
- 3.108 As per Regulation 4.16(b), for controllable parameters, any surplus or deficit on account of O&M expenses shall be to the account of the Licensee and shall not be

trued up in the ARR; and, depreciation and RoCE shall be trued up at the end of the Control Period.

3.109 The Commission has reviewed the Controllable components in the subsequent paragraphs based on inter alia the above Regulations.

## Employee Expenses

### Petitioner's Submission

3.110 The Petitioner in its petition has submitted employee expenses in accordance with the employee expenses approved by the Commission in Tariff Order dated August 26, 2011.

**Table 14: Revised Employee Expenses (Rs Cr)**

Particulars	Approved in MYT Order	Approved in TO dated Aug 26, 2011	Petitioner's Submission
Employee Cost (excluding 6th Pay Commission)	172.01	165.09	165.09
Increase in Salaries in FY 2010-11		47.5	47.5
Total Employee Cost Revised		212.59	212.59
Less: Employee Expenses Capitalised	9.33	9.52	9.52
Total Employee Expenses	162.68	203.07	203.07
Add: SVRS Pension	9.99	9.99	9.99
<b>Total</b>	<b>172.67</b>	<b>213.07</b>	<b>213.07</b>

### Commission's Analysis

3.111 In the MYT Order, the Commission has stated following for SVRS pension

*“the Commission now allows the monthly pension provisionally subject to the outcome of the Tribunal Order with the condition that any refund/relief provided on this account to the Petitioner by the Trust will be available for adjustment in the future employee expenses”*

3.112 As the final Order on the pension liability is not out yet, the Commission has approved the SVRS pension at the level approved in MYT Order. The Commission will review the expenditure under SVRS pension, while truing up for the first MYT Control Period.

3.113 The Commission approves the employee expenses for FY 2010-11 as shown in the table below.

**Table 15: Employee Expenses approved by the Commission for FY 2010-11 (Rs. Cr)**

Particulars	Approved in MYT Order	Approved in TO dated Aug 26, 2011	Petitioner's Submission	Now Approved
Employee Cost (excluding 6th Pay Commission)	172.01	165.09	165.09	165.09

Particulars	Approved in MYT Order	Approved in TO dated Aug 26, 2011	Petitioner's Submission	Now Approved
Increase in Salaries in FY 2010-11		47.5	47.5	47.5
Total Employee Cost Revised		212.59	212.59	212.59
Less: Employee Expenses Capitalised	9.33	9.52	9.52	9.52
Total Employee Expenses	162.68	203.07	203.07	203.07
Add: SVRS Pension	9.99	9.99	9.99	9.99
<b>Total</b>	<b>172.67</b>	<b>213.07</b>	<b>213.07</b>	<b>213.07</b>

## Administration & General (A&G) Expenses

### Petitioner's Submission

3.114 The Petitioner has submitted A&G expenses of Rs 74.88 Cr for FY 2010-11 as approved by the Commission Tariff Order dated August 26, 2011.

**Table 16: A&G Expenses proposed for FY 2010-11 (Rs. Cr)**

Particulars	Approved in the MYT Order	Approved in TO dated Aug 26, 2011	Petitioner's Submission
A&G Expenses	73.42	74.88	74.88

### Commission's Analysis

3.115 In terms of Regulation 4.16 (a) (i) of the MYT Regulations 2007, the Commission approves the A&G Expenses for FY 2010-11 as approved in Tariff Order dated August 26, 2011 as shown in the table below:

**Table 17: A&G Expenses approved for FY 2010-11 (Rs. Cr)**

Particulars	Approved in the MYT Order	Approved in TO dated Aug 26, 2011	Petitioner's Submission	Now Approved
A&G Expenses	73.42	74.88	74.88	74.88

## Repairs & Maintenance (R&M) Expenses

### Petitioner's Submission

3.116 The Petitioner has submitted R&M expenses of the same amount as approved in the MYT Order, viz. 129.57 Cr.

**Table 18: R&M expenses proposed for FY 2010-11 (Rs. Cr)**

Particulars	Approved in the MYT Order	Petitioner's Submission
R&M Expenses	129.57	129.57

**Commission's Analysis**

3.117 In terms of Regulation 4.16 (a) (i) of the MYT Regulations 2007, R&M expenses are approved at the same level as provided in the MYT Order for FY 2010-11 as shown below:

**Table 19: R&M Expenses Approved by Commission for FY 2010-11 (Rs. Cr)**

Particulars	Approved in the MYT Order	Petitioner's Submission	Now Approved
R&M Expenses	129.57	129.57	129.57

**Operation & Maintenance Expense****Petitioner's Submission**

3.118 Operation & Maintenance (O&M) Expense is the sum total of expenses incurred towards employee, A&G and R&M expenses. After considering expense capitalization of Rs. 9.52 Cr and efficiency factor at 4%, the Petitioner has claimed net O&M expenses of Rs. 400.82 Cr.

**Commission's Analysis**

3.119 The O&M Expenses approved by the Commission is shown in the following table:

**Table 20: Amount approved by the Commission (Rs. Cr)**

Particulars	Approved in the MYT Order	Approved in TO dated Aug 26, 2011	Petitioner's Submission	Now Approved
Employee Expenses (Net of capitalisation)	162.68	203.08	203.08	203.08
SVRS Pension	9.99	9.99	9.99	9.99
A&G Expenses	73.42	74.88	74.88	74.88
R&M Expenses	129.57	129.57	129.57	129.57
Gross O&M Expenses	375.66	417.52	417.52	417.52
Efficiency improvement	4%	4%	4%	4%
<b>Net O&amp;M Expenses</b>	<b>360.63</b>	<b>400.82</b>	<b>400.82</b>	<b>401.22<sup>#</sup></b>

<sup>#</sup> No efficiency factor on SVRS pension is considered as per the Commission's submission in the ATE

**Review of Capital Expenditure & Capitalisation****Capital Expenditure Review**

3.120 Regulation 4.14 of MYT Regulations, 2007 stipulates as under:

*"The Commission shall review the actual capital investment at the end of each year of the Control Period. Adjustment to depreciation and return on capital employed for the actual capital investment vis-à-vis approved capital investment shall be done at the end of Control Period". (Emphasis supplied)*

3.121 Capital expenditure (Capex) proposed by the Petitioner in its Business Plan was Rs. 1772 Cr. The year-wise division was as under:

**Table 21: Capex proposed by BRPL (Rs. Cr)**

Particulars	FY 2007-08	FY 2008-09	FY 2009-10	FY 2010-11	Total
CAPEX	431	510	462	369	1772

3.122 However in the MYT Petition it was scaled down to Rs. 1731 Cr by the Petitioner:

**Table 22: Revised capex proposed by BRPL (Rs. Cr)**

Particulars	FY 2007-08	FY 2008-09	FY 2009-10	FY 2010-11	Total
CAPEX	380	484	474.74	392.84	1731.57

3.123 The Petitioner has submitted that capital expenditure of Rs. 301.84 Cr has been incurred during FY 2010-11.

3.124 The Commission is of the opinion that instead of capital expenditure incurred, the actual capitalisation figures are more important since they have more relevance in terms of the assets actually having been put to use.

3.125 The Commission emphasizes that capital expenditure and capitalization would need to be seen separately. The capital expenditure has to be reviewed with respect to schemes proposed by the distribution licensees, approval by the Commission and actual expenditure against approved schemes (along with the opening and closing levels of CWIP). This would indicate the progress in implementation of approved schemes. The year wise capitalisation has to be compared to the capitalisation approved in the MYT Order for the impact in the fixed cost in Tariff.

3.126 The Petitioner has claimed the following capitalisation for the MYT period so far:

**Table 23: Capitalisation claimed by the Petitioner (Rs. Cr)**

Particulars	FY 2007-08	FY 2008-09	FY 2009-10	FY 2010-11
Approved in MYT Order	528.24	540.85	550.00	450.06
Actual as per DISCOM	252	458.69	298.94	356.93

3.127 The Commission emphasizes that as per the MYT Regulations, any shortfall in Capital Expenditure with respect to the figures considered in the MYT Order shall be considered at the end of the MYT Control Period. Necessary adjustment to various parameters relating to capital expenditure at the end of the Control Period will be done along with carrying cost.

## Review of Depreciation

### Petitioner's Submission

3.128 The Petitioner has submitted depreciation of the same amount as approved in the Tariff Order dated August 26, 2011, viz. 129.93 Cr.

**Table 24: Depreciation submitted by Petitioner for FY 2010-11 (Rs. Cr)**

Particulars	Approved in the MYT Order	Approved in TO dated Aug 26, 2011	Petitioner's Submission
Depreciation	142.20	129.93	129.93

**Commission's Analysis**

- 3.129 The Commission had approved an amount of Rs. 142.20 Cr for FY 2010-11 in the MYT Order. The Commission in Tariff Order dated August 26, 2011 had approved revised depreciation for each year of the Control Period after correcting mistakes in the MYT Order. The revised depreciation amount for FY 2010-11 was Rs 129.93 Cr.
- 3.130 As per MYT Regulations, 2007, Depreciation is a controllable parameter, for which the Commission has set targets for each year of the Control Period. Further, adjustment to depreciation for the actual investment vis-à-vis approved capital investment shall be done at the end of the Control Period. The Commission approves Rs 129.93 Cr towards depreciation for FY 2010-11 as shown below:

**Table 25: Approved Depreciation for FY 2010-11 (Rs. Cr)**

Particulars	Approved in the MYT Order	Approved in TO dated Aug 26, 2011	Petitioner's Submission	Now Approved
Depreciation	142.20	129.93	129.93	129.93

**Review of Return on Capital Employed (RoCE)****Petitioner's Submission**

- 3.131 The Petitioner has submitted RoCE including supply margin as Rs. 301.96 Cr for FY 2010-11 as approved by the Commission in the Tariff Order dated August 26, 2011

**Table 26: RoCE submitted by Petitioner for FY 2010-11 (Rs. Cr)**

Particulars	Approved in the MYT Order	Approved in TO dated Aug 26, 2011	Petitioner's Submission
RoCE	292.69	285.59	285.59
Supply Margin	19.82	16.37	16.37
<b>RoCE with Supply Margin</b>	<b>312.51</b>	<b>301.96</b>	<b>301.96</b>

**Commission's Analysis**

- 3.132 The Commission had approved Rs. 312.51 Cr towards Return on Capital Employed and Supply Margin in the MYT Order for the FY 2010-11. The Commission Tariff Order dated August 26, 2011 had approved revised RRB for each year of the Control Period after correcting mistakes in the MYT Order. The Commission also revised WACC and RoCE for each year of the Control Period in the same Order. The revised RoCE amount for FY 2010-11 was Rs 301.96 Cr.

- 3.133 As per MYT Regulations, 2007, RoCE is a controllable parameter, for which the Commission has set targets for each year of the Control Period. Further, adjustment to RoCE for the actual investment vis-à-vis approved capital investment shall be done at the end of the Control Period. The Commission approves Rs 301.96 Cr towards RoCE for FY 2010-11 as shown below:

Table 27: Now Approved RoCE for FY 2010-11 (Rs. Cr)

Particulars	Approved in the MYT Order	Approved in TO dated Aug 26, 2011	Petitioner's Submission	Now Approved
RoCE	292.69	285.59	285.59	285.59
Supply Margin	19.82	16.37	16.37	16.37
<b>RoCE with Supply Margin</b>	<b>312.51</b>	<b>301.96</b>	<b>301.96</b>	<b>301.96</b>

### Carrying Cost

- 3.134 The Commission during the validation session with the Petitioner inquired about the details of the loan taken by the Petitioner for funding of the gap. The officials of the Petitioners informed the Commission that it will not be possible for them to identify the loans taken specifically for funding of revenue gap. Whatever loan Petitioner has taken in any year, part of it was utilised towards capital expenditure and part of it towards funding of the revenue gap.
- 3.135 The Commission directed the Petitioner to submit the year-wise average interest rate incurred by the Petitioner for FY 2010-11.
- 3.136 The Petitioner in its letter dated March 13, 2012 submitted an auditor certificate on the average interest rate on loans taken for funding of revenue gap as 11.66%. The Petitioner in its letter dated May 28, 2011 has also submitted the loan details of loan taken for working capital and funding of uncovered gap.
- 3.137 The Commission has also calculated weighted average interest rate for loan taken for funding of uncovered gap from the loan details submitted by the Petitioner and which is considered as interest rate applicable for funding of the uncovered gap, is shown below:

Table 28: Interest Rate considered for Carrying Cost

Particulars	FY 2010-11
Weighted Average Interest Rate considered for Carrying Cost	11.66%

### Consumers' Security Deposits

- 3.138 The Commission observed that the Petitioner has not accounted for consumers' security deposits in its Petition. The Commission directed the Petitioner to submit the details of consumers' security deposits, interest paid on it (specifying the amount



accruing to interest payment for the security deposit for the pre privatization period received by DVB) and their utilization during the MYT Period.

- 3.139 The Petitioner through its letter dated March 13, 2012 submitted the details of total interest paid on the Consumer Security Deposit during FY 2010-11 as shown below (including interest on consumer security deposit paid for pre privatization period received by DVB) and informed the Commission that it has invested the consumers' security deposits in the business.

**Table 29: Interest paid on Consumer Security Deposit (Rs. Cr)**

Particulars	FY 2010-11
Interest on Consumer Security Deposit Paid	12.44

- 3.140 The Commission has considered the opening and closing balance of Consumer Security Deposit for FY 2010-11 as per the audited accounts of BRPL for FY 2010-11, as shown below:

**Table 30: Consumer Security Deposit (Rs. Cr)**

Particulars	FY 2010-11
Opening Consumer Security Deposit	311.12
Closing Consumer Security Deposit	346.75
<b>Average Consumer Security Deposit</b>	<b>328.94</b>

- 3.141 The Petitioner through its letter dated June 15, 2012 informed that Rs 12.44 Cr includes Rs 3.53 Cr on account of interest on consumer security deposit paid for pre privatization period received by DVB which is yet to be transferred to the Petitioner. The Commission in its Order dated April 23, 2007 has already decided that this amount is to be paid by DPCL and therefore cannot be allowed.

- 3.142 As per the MYT Regulations,

*5.24 Interest on security deposits, in excess of the rate specified by the Commission in the "Delhi Electricity Supply Code and Performance Standards Regulations, 2007" shall be considered as Non Tariff income of the Licensees.*

- 3.143 As the Petitioner has invested the consumers' security deposits in the business, the Commission is treating the same as funding the revenue gap for the Petitioner. The Commission has allowed carrying cost @ 11.66% for FY 2010-11 for the Petitioner therefore the Commission has assumed consumer security deposit earning @ 11.67% during FY 2010-11. The normative income on consumer security deposit calculated by the Commission is shown below:

**Table 31: Interest on Consumer Security Deposit (Rs. Cr)**

Particulars	FY 2010-11
Interest on Consumer Security Deposit paid @6%	8.91
Average Consumer Security Deposit	328.94
Normative Interest on Consumer Security Deposit @ 11.66%	38.35

Difference Considered towards Non Tariff Income	29.44
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- 3.144 The Commission has included the difference between normative income earned on consumer security deposit and interest paid to consumers as Non tariff Income as per the MYT Regulations.

## Income Tax

### Petitioner's Submission

- 3.145 The Petitioner has submitted that it incurred Rs. 72.13 Cr in FY 2010-11 on income taxes, while it was allowed only Rs. 5 Cr in the MYT Order.

**Table 32: Income tax expense claimed by the Petitioner**

Particulars (Rs. Cr)	Approved in MYT Order	Petitioner's Submission
Income tax	5.0	72.13

### Commission's Analysis

- 3.146 As per the MYT Regulations,

*"5.22 Tax on income, if any, liable to be paid shall be limited to tax on return on the equity component of capital employed. However any tax liability on incentives due to improved performance shall not be considered."*

- 3.147 The Commission directed the Petitioner to submit the details of actual income tax paid during FY 2010-11.
- 3.148 The Petitioner vide its letter dated February 29, 2012 submitted that it has claimed income tax of Rs 72.13 Cr as provided in the audited accounts of the Petitioner. However, the actual income tax paid by the Petitioner was Rs 39.16 Cr for FY 2010-11 and Rs 6.75 Cr for FY 2005-06 in the current year.
- 3.149 The Commission observed that income tax paid for FY 2010-11 includes Rs 2.28 Cr on penal interest. The Commission approves the amount of Rs. 43.63 Cr towards Income Tax after deducting the penal interest. The Commission will do a final true up for the Income Tax expenses for each year of the Control Period after truing up the RoCE and final income tax liability can be determined once return on equity component of the capital employed is determined.

**Table 33: Income tax expense approved**

Particulars (Rs. Cr)	Approved in MYT Order	Petitioner's Submission	Now Approved
Income tax	5.0	72.13	43.63

**Other Expenses****Petitioner's Submission**

3.150 BRPL has submitted the following additional expenses for consideration in ARR. Computation:

- (a) **Credit Rating:** An amount of Rs 0.28 Cr incurred towards annual surveillance fees towards credit rating.
- (b) **Cost of auditor's certificate:** During the year FY 2010-11, the Commission has directed to get the veracity of certain figures, information like power purchase cost, billing data etc. be certified from the Auditor of the company. BRPL has incurred an amount of Rs 0.07 Cr towards the same.
- (c) **License Fees on energy bill:** As per clause 12.1, of the Distribution and Retail Supply License, the Petitioner is required to pay annually 0.05% of amount billed of previous year as license fees to the Commission. Since the same is linked to sales which is uncontrollable and is trued up, the license fee too needs to be trued up. The actual amount incurred in FY 2010-11 is Rs. 1.8 Cr on this account. The Commission has allowed Rs. 1.2 Cr towards license fee for FY 2010-11. Thus, the additional amount spent on this account is Rs. 0.60 Cr.
- (d) **Tender cost for procurement of material:** The Commission has issued the Competitive Bidding Guidelines during the FY 2009-10 which provided for procurement of any materials/services of an amount exceeding Rs 0.25 Cr through open tendering. The limit of Rs 0.25 Cr was subsequently increased to Rs 1 Cr, vide revised guidelines issued by the Commission in FY 2009-10. BRPL has submitted that this has resulted in an increase in advertisement expenses in FY 2009-10 onwards and it should be allowed an amount of Rs 0.09 Cr which has been incurred towards advertisement for Open Tendering during the FY 2010-11.
- (e) **Training Expense:** BRPL had organized various training sessions for training and development of its personnel in FY 2010-11, under the National Training Policy for the Power Sector in India (7th June 2002) formulated by CEA. BRPL has incurred an amount of Rs 0.65 Cr in FY 2010-11 under this account.
- (f) **Expense in terms of ATE order in Appeal no 153/2009:** BRPL has requested the Commission to allow the amount of Rs 27.6 Cr incurred on this account on actual while allowing the ARR for FY 2010-11. BRPL has submitted that this amount includes Rs 20.19 Cr of financing cost of LPSC, Rs 3.27 Cr of rebate (above 1%) earned on early payment and Rs 4.12 Cr of interest on unutilised return.
- (g) **Expenses due to implementation of Hon'ble Supreme Court's Order:** Due to Hon'ble Supreme Court's order in SLP no. 4270/2006, BRPL has incurred

Rs 3.16 Cr during the FY 2010-11 towards liabilities relating to employees who ceased to be the employees of erstwhile Delhi Electric Supply Undertaking (Predecessor of Delhi Vidyut Board-DVB) prior to 1.7.2002 on account of their retirement, removal, dismissal or compulsory retirement in accordance with the provisions of Delhi Electricity Reforms Act 2000.

3.151 The costs stated above are summarised below:

**Table 34: Additional expenses claimed for FY 2010-11 (Rs. Cr)**

Other Expenses	FY 2010-11
	Petitioner's Submission
Credit Rating	0.28
Cost of Auditor's Certificate	0.07
Training Expense	0.65
Tender Cost for procurement of material	0.09
Incremental License Fees paid to DERC	0.60
Expense due to Order of Supreme Court in SLP no. 4270/2006	3.16
Expense in terms of ATE order no 153/2009	27.6
<b>Total</b>	<b>32.45</b>

### Commission's Analysis

- 3.152 In the MYT Order, the Commission had not made any provision for additional expenses apart from the expenses considered and approved in the Order.
- 3.153 The Commission allows additional expenses on account of expenses related to cost of auditor's certificate, and expenses on obtaining a credit rating to the extent requested in the this petition as the Petitioner has incurred these expenses for the first time during the MYT Control Period and hence these were not included in the O&M Expenses for the base year while preparing the MYT Order.
- 3.154 With regard to the incremental license fee paid to DERC by the Petitioner, the Commission finds merit in the Petitioner's claim as license fee is linked with the sales of the Petitioner, which is an uncontrollable parameter. The license fee paid by the Petitioner becomes part of A&G expenses. The Commission has already considered an increase in the license fee included as a part of A&G expenses as per the inflation index (4.66%). Thus licensee fee approved by the Commission for FY 2010-11 will be Rs 1.38 Cr (net of efficiency factor). The Petitioner has paid license fee of Rs 1.80 Cr during FY 2010-11 (0.05% of the revenue billed during FY 2009-10). Hence the Commission approves Rs. 0.42 Cr (1.80 Cr – 1.38 Cr) on this account. However, for all previous years, the Commission shall true up the license fees paid by the Petitioner to DERC vis-à-vis normative license fees payable for each year @ 0.05% of revenue billed during the previous year, after the end of the Second Control Period.
- 3.155 The Commission notes the importance of training exercises in an organisation and allows training expense paid by the Petitioner as training expense of this nature was not part of the A&G expense in FY 2006-07.

- 3.156 The Commission has considered the impact of ATE judgement no 153/2009 and has included in Non Tariff Income Calculation (in the next sub-section).
- 3.157 The Commission rejects the Petitioner's claim of tendering cost of Rs 0.09 Cr for procurement of material through open tender as the Petitioner was always required to procuring material through tenders. Any cost incurred by the Petitioner during the Policy Direction Period on account of tenders must be part of the A&G expense of the Petitioner. This is not a new initiative and cannot be allowed in the ARR.
- 3.158 With reference to additional expenses claimed by the Petitioner with due to Order of Hon'ble Supreme Court in SLP no. 4270/2006, the Commission approves these expenses as the Petitioner has incurred these expenses for the first time during the MYT Control Period and hence these were not included in the O&M Expenses for the base year while preparing the MYT Order
- 3.159 The total amount approved by the Commission under the head 'Other Expenses' is as shown below:

**Table 35: Other expenses approved by Commission for FY 2010-11 (Rs. Cr)**

Other Expenses	Approved in the MYT Order	FY 2010-11 Petitioner's Submission	Now Approved
Credit Rating		0.28	0.28
Cost of Auditor's Certificate		0.07	0.07
Training Expense		0.65	0.65
Tender Cost for procurement of material		0.09	0.00
Incremental License Fees paid to DERC		0.60	0.42
Expense due to SC Order on SLP 4270/2006		3.16	3.16
Expense in terms of ATE order no 153/2009		27.6	0.00*
<b>Total</b>	<b>0.00</b>	<b>32.45</b>	<b>4.58</b>

*\*Impact of ATE judgement is already considered and included in Non Tariff Income Calculation*

## Non Tariff Income (NTI)

### Petitioner's Submission

- 3.160 The Petitioner in its True up Petition has considered Non Tariff Income of Rs. 133.71 Cr for FY 2010-11, while the amount approved in the MYT Order was Rs. 54.63 Cr. The details of Non Tariff Income proposed by the Petitioner is shown below:

**Table 36: Non Tariff Income for FY 2010-11 (Rs. Cr)**

Particulars	Petitioner's Submission
Other Income	34.53
Income from Operations (Non-Energy)	120.06
Non Tariff Income as per audited accounts	154.59

Particulars	Petitioner's Submission
<i>Less:</i>	
<i>Less: Excess Provisions written back (pertaining to O&amp;M expenses and bad debts written off)</i>	3.49
<i>Less: Transfer from Consumer Contribution for Capital Works</i>	10.63
<i>Less: Bad debts recovered</i>	1.21
<i>Less: Penalties from contractors</i>	1.14
<i>Less: Sale of Scrap</i>	4.41
<b>Total Non Tariff Income</b>	<b>133.71</b>

### Commission's Analysis

- 3.161 Regulation 5.25 of the MYT Regulations, 2007 states that *"The amount received by the licensee on account of Non Tariff Income shall be deducted from the aggregate revenue requirement in calculating the net revenue requirement of such licensee"*. Clause 5.27 further elaborates that *"The net aggregate revenue requirement of the licensee eligible for recovery during each year of the Control Period shall be determined after deducting from the aggregate revenue requirement, the non tariff income and the other income"*. A joint reading of both the above clauses indicates that NTI being an integral part of the revenue requirement shall be trued up at the end of each year of the Control Period.
- 3.162 As per the MYT Regulations only two sets of parameters are recognized i.e. controllable and uncontrollable. While the uncontrollable parameters include revenue / expenditure on account of sales and power purchase and provide for its annual true up, the controllable parameters include O&M expense, Capex related expenses and RoCE, and does not specifically include Non Tariff Income. Also, the MYT Regulations in regard to controllable expenses specifically provide for true up of Capex related expenditure i.e. RoCE and Depreciation at the end of the Control Period.
- 3.163 The Petitioner has submitted that it has claimed total rebate of Rs 27.08 Cr, of which Rs 23.81 Cr was up to 1% rebate earned on timely payment of power purchase bills. However, BRPL has considered the entire rebate earned on timely payment of power purchase bills in Non Tariff Income and shown rebate earned above 1% as a separate head in other expenses.
- 3.164 The Commission has considered entire rebate on power purchase earned by the Petitioner towards Non Tariff Income.
- 3.165 The Petitioner had collected late payment surcharge (LPSC) of Rs 29.20 Cr in FY 2010-11 from its Consumers (submitted vide letter dated March 13, 2012). As the Petitioner charges LPSC @ 18% per annum (1.5% per month), the principle amount on which LPSC has been charged will be 162.22 Cr. The Petitioner has submitted that it has considered funding of LPSC @ 12.13% for FY 2010-11 and shown total financing cost as Rs 20.19 Cr. The Commission observes that the Petitioner has not subtracted financing cost of LPSC from Non Tariff Income while determining the



Non Tariff Income available towards ARR and shown financing cost on LPSC as a separate head in other expenses.

- 3.166 The Commission in its MYT Order dated Feb 23, 2008 had approved funding of working capital @ 9.5% considering SBI PLR of 12.25% prevalent at the time of issuing MYT Order. As prevailing SBI PLR as on April 1, 2010 was 12.25%, the Commission has allowed the financing cost for LPSC @ 9.5%. The financing cost approved by the Commission is shown below:

**Table 37: Funding of LPSC (Rs. Cr)**

Particular	FY 2010-11
LPSC Collected (@ 18%)	29.20
Principle amount on which LPSC was charged	162.22
Interest Rate for funding of Principle of LPSC	9.5%
Interest approved on funding of Principle amount of LPSC	15.41

- 3.167 The Commission has subtracted financing cost of LPSC from the gross Non tariff Income for calculating Non Tariff Income available towards ARR.
- 3.168 The Commission is of the view that the income from penal charges earned from contractors will form a part of the Non-Tariff Income as the Capital Expenditure allowed to the Petitioner for FY 2010-11 in MYT Order had already covered such expenses and hence cannot be allowed again. Similarly, profit earned from sale of scrap has been already included in the depreciation allowed to the Petitioner for FY 2010-11 in MYT Order (as well as the revised amount allowed in the Tariff Order dated August 26, 2011) and so will be considered as a part of Non-Tariff Income.
- 3.169 The Petitioner has also claimed Rs 4.12 Cr shown under Interest on unutilised return in the Non Tariff Income in the accounts of the Petitioner as other expenses.
- 3.170 The Commission observes that Rs 4.12 Cr shown by the Petitioner includes Rs 2.91 Cr of interest earned on government securities, which is interest earned on contingency reserve. The Commission has, therefore, subtracted Rs 1.21 Cr (remaining interest income) from the Non tariff Income.
- 3.171 The Commission has also included the normative interest earned on Consumer Security Deposit for FY 2010-11 in the non tariff income of the Petitioner as explained in Para 3.138 to 3.144.
- 3.172 Hence, the Commission has approved the amount of Non Tariff Income as summarised below:

**Table 38: Trued-up Non Tariff Income approved by Commission (Rs. Cr)**

Particulars	Petitioner's Submission
Non Tariff Income as per audited accounts	154.59
<i>Less:</i>	
<i>Less: Excess Provisions written back (pertaining to O&amp;M expenses and bad debts written off)</i>	3.49
<i>Less: Transfer from Consumer Contribution for Capital</i>	10.63



Particulars	Petitioner's Submission
<i>Works</i>	
<i>Less: Bad debts recovered</i>	1.21
<i>Less: Financing Cost of LPSC</i>	15.41
<i>Less: Interest earned on unutilised return</i>	1.21
<i>Add:</i>	
<i>Interest on Consumer Security Deposit</i>	29.44
Total Non Tariff Income	152.08

## Annual Revenue Requirement for FY 2010-11

3.173 The ARR approved in the MYT Order, Tariff Order dated August 26, 2011, as claimed by the Petitioner and the trued up ARR is summarised below:

**Table 39: Aggregate Revenue Requirement for FY 2010-11 (Rs. Cr)**

Aggregate Revenue Requirement	FY 2010-11			
	Approved in MYT Order	Approved in TO dated Aug 26, 2011	Petitioner's Submission	Now Approved
Power purchase cost	2479.20	2479.20	4086.10	4080.60
Inter-State Transmission charges	146.24	146.24	255.60	255.60
Intra-state Transmission (Delhi Transco) charges	165.39	165.39	170.20	170.20
Net O&M Expenses	360.63	400.82	400.82	401.22
Depreciation	142.2	129.93	129.93	129.93
RoCE including supply margin allowed	312.51	301.96	301.96	301.96
Income Tax expenses	5.0	5.0	72.13	43.63
Other Expenses	0.00	0.00	32.45	4.58
<i>Less:</i>				
Other income including Non Tariff Income	54.63	54.63	133.71	152.08
Interest/other expenses capitalized	12.2	12.2	-	-
Aggregate Revenue Requirement	3544.38	3560.99	5315.48	5235.64

## Revenue available towards ARR

### Petitioner's Submission

3.174 The Petitioner has submitted the net revenue from sale of power to be considered towards annual revenue requirement as Rs. 3,836.2 Cr after adjustment towards electricity tax and the Petitioner's share of over-achievement incentive. The Petitioner has retained the consumers' share in the incentive on account of overachievement in AT&C loss reduction for meeting the revenue gap for FY 2010-11 as summarized below:

**Table 40: Revenue Details submitted by the Petitioner**

Particulars	Petitioner's Submission
Total Amount Realized	4,036.65
Less: E Tax	167.71
Less: Benefit to be retained by the Petitioner	3.50
Less: LPSC considered as part of Other Income	29.24
Revenue available for Expenses	3,836.20

**Commission's Analysis**

- 3.175 The Petitioner has offered the consumer share of the overachievement towards meeting the revenue gap for FY 2010-11. However, there is no overachievement earned by the Petitioner during FY 2010-11.
- 3.176 The Commission has computed the total revenue of the Petitioner available towards ARR as detailed below:

**Table 41: Revenue available towards ARR approved by Commission for FY 2010-11**

Particulars	Now Approved
Total Amount Realized	4111.16
Less: Net LPSC Considered as Other Income	13.79
Less: E Tax	167.71
Revenue available for Expenses	3929.66

**Contingency Reserve**

- 3.177 As per the provisions of MYT Regulations, a Contingency Reserve is to be maintained for Tariff Stability and passing the benefits derived to the consumers under the MYT Framework. The Commission had also directed the Petitioner to maintain separate accounts in its books and reflect the balance in the MYT Contingency Reserve Account in the Balance Sheet. The Petitioner shall use the amount for investing in safe securities and earning returns based on the market conditions. However, the Petitioner is refrained from using the money for speculative purposes. The Commission also directed the Petitioner to transfer the refunds received from DTL, IP Station, Rajghat Power House, GTPS and PPCL as specified in the MYT Order of the respective Companies/ licenses to the Contingency Reserve.
- 3.178 The Commission in its True up Order for FY 2009-10, directed the Petitioner to utilise the Contingency Reserve for meeting the revenue gap. The closing contingency reserve was Rs 28.91 Cr during FY2009-10. The Commission has considered the same available towards meeting revenue deficit and subtracted the same from opening revenue gap for FY 2010-11 approved by the Commission in this Order.
- 3.179 The Petitioner has offered the consumer share of the overachievement towards meeting the revenue gap for FY 2010-11. The Commission has accepted the Petitioner's requested and not transferred the consumer's share in benefit on account

of reduction of AT&C losses better than the target given to the Petitioner. Thus, there will be no addition to the contingency reserve during FY 2010-11.

## Revenue (Gap)/ Surplus

3.180 The revenue (gap)/ surplus for FY 2010-11 as submitted by the Petitioner and trued up by the Commission is summarised below:

**Table 42: Revenue (Gap)/ Surplus for FY 2010-11 (Rs. Cr)**

Particulars (Rs. Cr)	Petitioner's Submission	Now Approved
ARR for FY 2010-11	5,315.48	5,235.64
Revenue available towards ARR	3,836.20	3,929.66
<b>Revenue (Gap)/ Surplus</b>	(1,479.28)	(1,305.98)

3.181 As shown above, the approved net revenue gap is Rs. 1305.98 Cr for FY 2010-11 which would be adjusted in the determination of Aggregate Revenue Requirement for FY 2012-13. The treatment of this net revenue gap is dealt with in Chapter A5.

**A4: ANALYSIS OF AGGREGATE REVENUE REQUIREMENT (ARR)  
FOR MYT CONTROL PERIOD (FY 2012-13 TO FY 2014-15)****Introduction**

- 4.1 BRPL has filed a Petition for determination of Aggregate Revenue Requirement for each year of the MYT Control Period (FY 2012-13 to FY 2014-15). The Commission has analysed the Petition submitted by the Petitioner for approval of Aggregate Revenue Requirement (ARR) for each year of the Control Period (FY 2012-13 to FY 2014-15) and determination of Wheeling and Retail Supply Tariffs for the FY 2012-13.
- 4.2 The Commission held several rounds of discussions to validate the data submitted by the Petitioner and sought further clarifications on various issues. The Commission has considered all information submitted by the Petitioner as part of the tariff petition, audited accounts for past years, responses to various queries raised during the discussions and also during the public hearing, for determination of tariff.
- 4.3 This Chapter contains detailed analysis of the Petition submitted by the Petitioner and the various parameters approved by the Commission for determination of ARR for the Petitioner for each year of the Control Period (FY 2012-13 to FY 2014-15).

**Energy Sales****Petitioner's Submission**

- 4.4 The Petitioner had originally submitted the actual energy sales data for the period April 2011 to January 2012, on the basis of which the total sales for FY 2012-13 to FY 2014-15 had been estimated in the Petition. Later the Petitioner submitted the actual sales information till March 2012.
- 4.5 Further, the Petitioner has submitted that it relied upon the report on 17<sup>th</sup> Electric Power Survey of India published by the Central Electricity Authority (hereinafter referred to as "17<sup>th</sup> EPS") for projection of sales for FY 2011-12. The EPS takes into account international forecasting methodologies as well as various factors affecting the actual consumption of electricity. The Petitioner has maintained the same growth rate in demand as projected in the 17<sup>th</sup> EPS for all categories of consumers, except for Industrial category, Agriculture and Railways (in which case the Petitioner has considered a stagnant growth rate over the Second Control Period).
- 4.6 The Petitioner has not made any projections for Theft units and Temporary Connections for the Second Control Period.
- 4.7 For projecting the connected load and number of consumers in each consumer category, the Petitioner has assumed a proportionate growth rate as has been observed in the previous years. Further, slab-wise consumption has been considered in the same proportion as was observed in FY 2010-11.

- 4.8 The Petitioner's proposed sales for various consumer categories in FY 2012-13 to FY 2014-15 is given below:

**Table 43: Petitioner's Submission of Energy Sales for FY 2012-13 to FY 2014-15 (MU)**

Particulars	FY 2012-13	FY 2013-14	FY 2014-15
Domestic	5,664.19	6,323.15	7,058.77
Non-Domestic*	3,340.74	3,789.52	4,298.58
Industrial	602.54	602.54	602.54
Public Lighting	167.70	176.11	184.95
Irrigation & Agriculture	17.68	17.68	17.68
Railway Traction	24.77	24.77	24.77
DMRC	277.49	314.77	357.05
Others #	528.76	590.8	660.7
<b>Total</b>	<b>10,623.87</b>	<b>11,839.34</b>	<b>13,205.03</b>

\* Excluding DIAL and DJB

# Including DIAL and DJB.

- 4.9 In the "Others" category, the Petitioner has included sales under "own consumption" and "Enforcement", "Staff" and Hospitals/Worship places at 11 kV, and sales to DIAL and DJB.

### Commission's Analysis

- 4.10 The Commission is of the view that there are various factors which can have an impact on the actual consumption of electricity that are often beyond the control of the licensee, such as Government policy, economic climate, weather conditions, force-majeure events like natural disasters, etc. Hence, an attempt has been made to take into consideration various factors affecting electricity consumption and estimate the interrelationships among them to arrive at a reasonably accurate forecast of energy sales within a range for the purpose of estimating future costs/ revenues.
- 4.11 Accordingly, for projecting the category-wise energy sales of each Distribution Licensee for FY 2012-13 to FY 2014-15, the Commission has considered the past growth trends in each consumer category as explained below:
- The Commission has adopted an Adjusted Trend Analysis Method for projecting the sales/ connected load/ number of consumers of Domestic, Non Domestic, Industrial, Agriculture, Public Lighting and Other categories. This method assumes that the underlying factors which drive the demand for electricity are expected to follow the same trend as in the past. The Commission has however, discounted for any outlier (relative to the trend) observed in the growth rates over the period of 5 years and excluded them while projecting energy sales for FY 2012-13 to FY 2014-15.
  - The strength of this method, when used with balanced judgment, lies in its ability to reflect recent changes and therefore makes it well suited as a basis for short-term projections in context of ARR determination.

- (c) This method makes use of two statistical tools, namely the Compounded Annual Growth Rate (CAGR) and a simple average of the year-on-year growth rates (excluding the outliers), wherever appropriate. As per this method, Compounded Annual Growth Rates (CAGRs) were calculated from the past figures for each category, corresponding to different lengths of time in the past five years, along with the year on year growth rates since FY 2006-07. Pertinently, the CAGR is computed for each category for the past 5-year period FY 2006-07 to FY 2011-12, the 4-year period FY 2007-08 to FY 2011-12, the 3-year period FY 2008-09 to FY 2011-12, and the 2-year period FY 2009-10 to FY 2011-12, along with the 1-year growth rate of FY 2011-12 over FY 2010-11.
- (d) Subject to the specific characteristics of each consumer category, either a particular CAGR or an average of the year-on-year growth rates is chosen as the basis of sales projection for that category. For example, if an abnormal growth rate (high or low), relative to the trend, is observed at the beginning of the five year period considered, then a shorter period is considered for the trend analysis and projections, i.e. appropriately a 3-year CAGR or a 4-year CAGR has been considered. However, if any outlier(s) is observed in the middle of this 5 year period, then a simple average of the year-on-year growth rates, excluding the outliers has been considered while making projections for FY 2012-13 to FY 2014-15.
- (e) For making projections of sales and connected load/ number of consumers, the actual sales for FY 2011-12 for each consumer category, as submitted by the Petitioner, is taken as the base, i.e. the CAGR is applied over the actual sales for FY 2011-12 to make projections for each category for FY 2012-13; and for projections for FY 2013-14, the growth rate is applied on the projected sales of FY 2012-13, while for FY 2014-15, the projected sales for FY 2013-14 is considered the base.
- (f) Further, for projection of number of consumers, sale and connected load of subcategories/ slabs of any consumer category, the Commission has used the ratio of actual sales in the subcategory to total sales of the category for the Petitioner observed in FY 2011-12. Although the Commission has not accepted Form 2.1 (a) of the Petitioner for FY 2011-12, (which shall be considered by the Commission in the True-up exercise for FY 2011-12 after validation of the same), the Commission has considered the category wise / slab wise number of consumers, sales and connected load shown in it for the projection of the number of consumers, sale and connected load of subcategories/slabs of consumers category as the Commission felt that it shall not be prudent to make assumptions regarding the same.
- (g) For projection of sales for DIAL and DJB, which were included in the Non Domestic category till FY 2008-09 but were approved as a separate tariff category since FY 2009-10, the Commission is of the view that the sudden exclusion of DIAL and DJB from the Non Domestic category and their subsequent segregation into a separate tariff category would depict an extremely distorted picture for making projections for FY 2012-13 to FY



2014-15. The Commission has, therefore, decided that DIAL and DJB shall be included in the Non Domestic category only for the limited purpose of projecting the total sales of the Non Domestic category in FY 2012-13 to FY 2014-15. Thereafter, the specific quantum of sales to DIAL and DJB is isolated proportionately from the total quantum of Non Domestic sales, based on the average of actual proportion of this sales to the total sales to the Non Domestic category (inclusive of DIAL and DJB) observed in FY 2011-12.

- 4.12 The Commission has approved the sales/ connected load/ number of consumers of each consumer category as detailed below:

### **Domestic Consumers**

- 4.13 The consumption of power by the domestic category in FY 2011-12 is 4749.36 MU (excluding temporary connections in this category), which represents a growth of 3.94% with respect to the preceding year FY 2010-11. The CAGR calculated over the past five year period (FY 2006-07 to FY 2011-12), four year period (FY 2007-08 to FY 2011-12), three year period (FY 2008-09 to FY 2011-12) and two year period (FY 2009-10 to FY 2011-12) are 10.48%, 10.51%, 10.36% and 6.28% respectively.
- 4.14 The major reasons contributing to the increase in domestic sales in the recent past were metering of un-metered consumers, electrification of JJ clusters, billing of SPD under the slab “Domestic lighting/fan and power”, etc. Considering the above, the Commission has projected an increase in sales to this category at the rate of 9.99% for FY 2012-13 over the actual sales for FY 2011-12, for FY 2013-14 over that of FY 2012-13 and for FY 2014-15 over that of FY 2013-14. This rate of growth of 9.99% is arrived at by averaging the year-on-year growth rates in the last five years, excluding the exceptional growth rate observed in FY 2009-10 over FY 2008-09 (19.00%) and the low rate of 3.94% in FY 2011-12 over FY 2010-11.
- 4.15 Based on the methodology detailed above, the Commission approves energy sales of 5223.97 MU, 5746.01 MU and 6320.22 MU for the domestic category for FY 2012-13, FY 2013-14 and FY 2014-15 respectively.
- 4.16 For projection of sale to subcategories of domestic consumers, the Commission has used the ratio of actual sales in the subcategory to total domestic sales of the Petitioner observed in FY 2011-12.
- 4.17 For projection of number of consumers and connected load in the Domestic category in FY 2012-13, FY 2013-14 and FY 2014-15 the above mentioned approach has been followed. Accordingly, growth rates of 8.10% and 9.32% respectively have been used to project the number of consumers and connected load for FY 2012-13 to FY 2014-15.

### **Non-Domestic Consumers**

- 4.18 In the non-domestic category, the CAGR calculated over the past five year period (FY 2006-07 to FY 2011-12), four year period (FY 2007-08 to FY 2011-12), three year period (FY 2008-09 to FY 2011-12) and two year period (FY 2009-10 to FY 2011-12)

are 8.44%, 8.21%, 7.23% and 6.69% respectively, while growth rate for FY 2011-12 over the past year FY 2010-11 is 1.61%.

- 4.19 The Commission feels that using an extremely short-term basis for projecting the sales under this category would not be sufficient to capture the growth trend justifiably. The Commission has, therefore, decided to project the quantum of sales to this category using a 4-year CAGR of 8.21%.
- 4.20 Based on the methodology detailed above, the Commission has arrived at energy sales of 3247.66 MU to the non-domestic category (inclusive of DIAL and DJB and exclusive of temporary connections to this category) for FY 2012-13, vis-à-vis 3001.14 MU in FY 2011-12. The energy sales for FY 2013-14 and FY 2014-15 are respectively 3514.42 MU and 3803.10 MU.
- 4.21 Based on the proportion of sales to DIAL and DJB to the total sales of the non-domestic category (including DIAL and DJB) in FY 2011-12, the Commission has projected sales of 249.76 MU to DIAL and of 111.44 MU to DJB in FY 2012-13. The energy sales to DIAL for FY 2013-14 and FY 2014-15 have been projected at 270.28 MU and 292.48 MU respectively. While, the energy sales to DJB for FY 2013-14 and FY 2014-15 have been projected at 120.59 MU and 130.50 MU respectively. Energy sale to DIAL and DJB in FY 2011-12 was 230.80 MU and 102.98 MU respectively.
- 4.22 For computing revenue as per the approved tariff schedule which treats DIAL and DJB as a part of the 'Others' category, the remaining energy sales for FY 2012-13 of 2886.46 MU (3247.66 MU deducted by 249.76 MU and 111.44 MU) are considered as sales to the non-domestic category, excluding DIAL and DJB, while sales to DIAL and DJB are taken as a part of the 'Others' category. Similarly, the energy sale to Non-Domestic, excluding DIAL and DJB for FY 2013-14 and FY 2014-15 are 3123.55 MU and 3380.12 MU respectively.
- 4.23 For projection of sale to subcategories of non domestic consumers, the Commission has used the ratio of actual sales in the subcategory to total non domestic sales of the Petitioner observed in FY 2011-12.
- 4.24 For projection of number of consumers and connected load in the non-domestic category in FY 2012-13 to FY 2014-15, the above mentioned approach has been followed. Accordingly, growth rates of 8.08% and 11.81% have been used to project the number of consumers and connected load respectively.

### Industrial Consumers

- 4.25 An assessment of the growth in sales to this category indicates variations in growth in the BRPL area with the CAGR ranging from -2.85% to -10.46% in the past five years. While the 5-year CAGR for sales is -2.85%, the 4-year CAGR for sales is -4.67%, the 3-year CAGR is -5.36% and the 2-year CAGR is -7.11%, the rate of growth of sales in FY 2011-12 over FY 2010-11 is negative at -10.46%. This trend of negative rates of growth is attributable to the adverse impact on industrial activity in Delhi in the past few years due to reasons such as the global recessionary scenario, and

relocation/decline of industries pursuant to various Court Orders and the Pollution Control Board's initiatives.

- 4.26 The consumption in the industrial category in FY 2011-12 is 539.54 MU, which is 10.46% lower than 602.54 MU sold to this category in FY 2010-11.
- 4.27 For projecting the sales for FY 2012-13 to FY 2014-15, the Commission analysed the trend in sales and the economic outlook of the State for the forthcoming year. In line with the approach of excluding the outliers in the growth rates observed in the last five years, the Commission has projected an increase in sales to this category at a growth rate of -5.36% (negative) which is the 3-year CAGR for this category, the same being the most appropriate indicator of the trend.
- 4.28 Based on the methodology detailed above, the Commission approves energy sales of 510.64 MU to the Industrial category for FY 2012-13, 483.30 MU for FY 2013-14 and 457.41 MU for FY 2014-15.
- 4.29 For projection of sale to subcategories of industrial consumers the Commission has used the ratio of actual sales in the subcategory to total industrial sales of the Petitioner observed in FY 2011-12.
- 4.30 For projection of number of consumers and connected load in the industrial category in FY 2012-13 to FY 2014-15, the above mentioned approach has been followed. Accordingly, growth rates of -3.53% and -4.53% have been used to project the number of consumers and connected load respectively.

### Public Lighting

- 4.31 The sales to this category have shown widely varying growth rates in recent years. The immediate growth rate in FY 2011-12 over FY 2010-11 has been observed to be -10.08% and 2-year, 3-year, 4-year and 5-year CAGR are -0.37%, 1.64%, 7.27% and -0.09% respectively. Considering the huge variations in sales in respect of this category, the Commission has decided to project the sales considering the 5-year CAGR of -0.09% for FY 2011-12 in order to smoothen out year-to-year variations in sales.
- 4.32 The quantum of energy sales to this category is, therefore, projected at 136.60 MU, 136.47 MU and 136.35 MU for FY 2012-13, FY 2013-14 and FY 2014-15 respectively. The quantum of energy sales to this category was 136.73 MU in FY 2011-12.

### Irrigation and Agriculture

- 4.33 The Commission has analysed that the actual sales under this category have also shown widely varying growth in the recent years. While the immediate growth rate in FY 2011-12 over FY 2010-11 comes out to be -0.69%, 2-year, 3-year, 4-year and 5-year CAGR are -5.60%, -9.93%, -8.40% and -13.64% respectively. Considering the huge variations in sales in respect of this category, the Commission has decided to

project the sales under this category for FY 2012-13 to FY 2014-15 considering the 5-year CAGR of -13.64%.

- 4.34 The quantum of energy sales to this category is, therefore, projected at 15.16 MU for FY 2012-13, 13.09 MU in FY 2013-14 and 11.31 MU in FY 2014-15, vis-à-vis 17.55 MU sold to this category in FY 2011-12.

### Railway Traction

- 4.35 The Commission has approved sales projections to this category at 24.77 MU each for FY 2012-13, FY 2013-14 and FY 2014-15, as per the submissions made by the Petitioner to the Commission.

### DMRC

- 4.36 The Commission has considered the submissions made by DMRC to the Commission for approving sales at 280 MU for FY 2012-13, 330 MU for FY 2013-14 and 340 MU for FY 2014-15.

### Other Categories

- 4.37 The Petitioner's own consumption, enforcement and temporary connections have been included in the "Others" category.
- 4.38 An assessment of the growth in sales to this category indicates large variations in growth rates in the BRPL area on a year-to-year basis, with the CAGR ranging from 57.54% (1-year CAGR) to 3.03% (4-year growth rate). The Commission feels that it is difficult to project the sales to this category, based on past years trend and therefore, has decided to keep the sales under this category for FY 2012- 13 to FY 2014-15 at the level of last Financial Year, FY 2011-12, i.e. 183.62 MU.

### All Categories

- 4.39 The Commission approves the following energy sales for the Petitioner for FY 2012-13 to FY 2014-15:

**Table 44: Approved Sales for FY 2012-13 to FY 2014-15 (MU)**

Particulars	FY 2012-13		FY 2013-14		FY 2014-15	
	Petitioner's Submission	Approved	Petitioner's Submission	Approved	Petitioner's Submission	Approved
Domestic	5,664.19	5,223.97	6,323.15	5,746.01	7,058.77	6,320.22
Non-Domestic*	3,340.74	2,886.46	3,789.52	3,123.55	4,298.58	3,380.12
Industrial	602.54	510.64	602.54	483.30	602.54	457.41
Public Lighting	167.70	136.60	176.11	136.47	184.95	136.35
Irrigation & Agriculture	17.68	15.16	17.68	13.09	17.68	11.31
Railway Traction	24.77	24.77	24.77	24.77	24.77	24.77
DMRC	277.49	280.00	314.77	330.00	357.05	340.00

Particulars	FY 2012-13		FY 2013-14		FY 2014-15	
	Petitioner's Submission	Approved	Petitioner's Submission	Approved	Petitioner's Submission	Approved
Others <sup>#</sup>	528.76	544.83	590.8	574.49	660.7	606.60
<b>Total</b>	<b>10,623.87</b>	<b>9,622.43</b>	<b>11,839.34</b>	<b>10,431.69</b>	<b>13,205.03</b>	<b>11,276.78</b>

\* Excluding DIAL and DJB; # Including DIAL and DJB.

## Revenue in FY 2012-13 to FY 2014-15 at Existing Tariff

- 4.40 As per the two-part tariff principle followed in the NCT of Delhi, the tariff for each category consists of fixed/ demand charges as well as energy charges. The fixed/ demand charges are specified for different categories as a fixed amount per month, or as a fixed amount per kW of connected load per month. The energy charges, on the other hand, are always usage-based and are specified per unit of electricity consumed.
- 4.41 For Domestic consumers with connected load less than 2 kW, the revenue from fixed charges is calculated by multiplying the corresponding fixed charge with the number of consumers in that particular tariff slab. For Domestic consumers with connected load exceeding 5 kW, the revenue from demand charges is calculated by multiplying the specified demand charge with the connected load (in kW) of the category. For calculation of revenue from energy charges, the actual usage is multiplied by the applicable tariff category slab.
- 4.42 For the Non Domestic, Industrial, Railway Traction, DMRC and DJB categories, billing is done either on kW or kVA basis, as specified in the approved tariff schedule for FY 2011-12. Since projections for FY 2012-13 to FY 2014-15 are done only on kW basis for connected load and on kWh basis for energy sales, whenever the tariff is specified in kVA/ kVAh terms, the relevant kW/ kWh projection is divided by the Power Factor in order to obtain the corresponding kVA/ kVAh projection. Thereafter, revenue from demand charges is calculated by multiplying the demand charge of each tariff slab with the connected load of that slab, while revenue from energy charges is calculated by multiplying the energy charges specified for each tariff slab with the energy consumption projected for that slab.
- 4.43 The Power Factor for each tariff slab where the tariff is specified in kVA/ kVAh terms has been considered as per Form 2.1(a) for FY 2011-12 submitted by the Petitioner. The Power Factor considered by the Commission for different categories is shown below:

**Table 45: Power Factor considered by the Commission**

Consumer slab	Power Factor
Consumer slab	Power Factor
Non Domestic Low Tension (NDLT)	
Up to 10 kW	0.89
Between 10-100 kW	0.93
Above 100 kW	0.93
Non Domestic High Tension (NDHT)	0.95

Consumer slab	Power Factor
Small Industrial Power (SIP)	
<i>Between 10-100 kW</i>	<i>0.91</i>
<i>Above 100 kW</i>	<i>0.93</i>
Large Industrial Power (LIP)	0.97
Railway Traction (other than DMRC)	0.94
DMRC	1.00
DJB	0.88

- 4.44 Based on the above methodology, the Commission has projected the total revenue billed in FY 2012-13, FY 2013-14 and FY 2014-15 to be Rs. 5257.23 Cr, Rs 5681.78 Cr and Rs 6133.10 Cr respectively. The category-wise revenue billed projected by the Commission for FY 2012-13 to FY 2014-15 is shown below:

Table 46: Revenue projected for FY 2012-13 (Rs. Cr)

Summary of Revenue	Fixed Charges	Energy Charges	Total Revenue Billed
Domestic	109.02	2116.56	2225.57
Non-Domestic	253.75	1857.65	2111.40
Industrial	34.19	303.04	337.24
Public Lighting	0.00	76.50	76.50
Irrigation & Agriculture	0.34	2.75	3.09
Railway Traction	2.45	11.91	14.37
DMRC	6.00	106.40	112.40
Others (DIAL, DJB, Temporary, Misuse, Enforcement etc.)	24.41	352.24	376.65
<b>Total</b>	<b>430.17</b>	<b>4827.06</b>	<b>5257.23</b>
<b>Total Revenue Collected @ 99.50% Collection Efficiency</b>			<b>5230.94</b>

Table 47: Revenue projected for FY 2013-14 (Rs. Cr)

Summary of Revenue	Fixed Charges	Energy Charges	Total Revenue Billed
Domestic	118.22	2328.07	2446.28
Non-Domestic	283.73	2010.24	2293.97
Industrial	32.64	286.81	319.46
Public Lighting	0.00	76.43	76.43
Irrigation & Agriculture	0.34	2.37	2.71
Railway Traction	2.45	11.91	14.37
DMRC	6.00	125.40	131.40
Others (DIAL, DJB, Temporary, Misuse, Enforcement etc.)	27.29	369.86	397.16
<b>Total</b>	<b>470.68</b>	<b>5211.10</b>	<b>5681.78</b>
<b>Total Revenue Collected @ 99.50% Collection Efficiency</b>			<b>5653.37</b>



Table 48: Revenue projected for FY 2014-15 (Rs. Cr)

Summary of Revenue	Fixed Charges	Energy Charges	Total Revenue Billed
Domestic	128.20	2560.71	2688.91
Non-Domestic	317.25	2175.36	2492.61
Industrial	31.17	271.45	302.62
Public Lighting	0.00	76.35	76.35
Irrigation & Agriculture	0.33	2.05	2.38
Railway Traction	2.45	11.91	14.37
DMRC	7.20	129.20	136.40
Others (DIAL, DJB, Temporary, Misuse, Enforcement etc.)	30.52	388.93	419.45
<b>Total</b>	<b>517.12</b>	<b>5615.98</b>	<b>6133.10</b>
<b>Total Revenue Collected @ 99.50% Collection Efficiency</b>			<b>6102.44</b>

## AT&C Losses

### Petitioner's Submission

- 4.45 The Petitioner has proposed trajectories for distribution loss level as well as collection efficiency over the Control Period, and on the basis of the same, proposed a trajectory for AT&C losses over the same period. The Petitioner has proposed distribution losses for FY 2012-13 to FY 2014-15 by estimating reduction in distribution loss individually for each of its 19 business divisions based on the actual distribution loss profile in FY 2010-11.
- 4.46 Regarding collection efficiency, the Petitioner has submitted that the high collection efficiency (sometimes exceeding 100%) achieved in the past was in part attributable to the fact that the company was able to recover arrears of past period including those on account of DVB, which have now been either collected or written off. Hence, the Petitioner has submitted that its collection efficiency, without including receipts on account of electricity duty or late payment surcharge as per industry standards, would not more than 98.5% in the Control Period.
- 4.47 On the basis of proposed distribution loss and collection efficiency trajectories, the Petitioner has proposed the trajectory for AT&C losses in the Control Period as shown in Table 49 below:

Table 49: Proposed AT&amp;C losses for the Control Period

Particulars	FY 2012-13	FY 2013-14	FY 2014-15
Distribution Loss	15.98%	15%	14.17%
Collection Efficiency*	98.5%	98.5%	98.5%
AT&C loss	17.24%	16.27%	15.45%

\* Based on the new regulation excluding the LPSC income, DVB arrear etc

**Commission's Analysis**

- 4.48 During the Policy Direction Period, Delhi adopted AT&C loss (Aggregate Technical and Commercial Loss) as a measure of efficiency which indicated the difference between units input into the distribution system and the units for which payment is collected or realised. The opening level of losses was determined by the Commission in its Order on "Bulk Supply Tariffs for February-March 2002 and Opening Level of AT&C Losses" for the three Distribution Licensees on February 22, 2002.
- 4.49 AT&C loss reduction target for the Policy Direction Period from FY 2002-03 till FY 2006-07 was used as a bidding parameter for privatising the distribution system. GoNCTD had stipulated minimum loss reduction target of 20% from the baseline loss levels, which was later agreed at 17% over a period of 5 years for each of the three licensees.
- 4.50 The incentivisation framework specified that any benefit of loss reduction beyond the target level but below the Government stipulated minimum level was passed onto consumer entirely, while the achievement above the Government stipulated minimum level was shared equally between consumer and licensee. Any revenue loss due to underachievement in target loss reduction was borne by the licensee.
- 4.51 The targets fixed under the transfer scheme and the AT&C losses achieved by the distribution companies from FY 2002-03 to FY 2006-07 i.e. prior to the previous MYT Control Period have been as under:

**Table 50: AT&C Loss levels (FY 2002-03 - FY 2006-07)**

DISCOM	Opening levels		FY 2002-03	FY 2003-04	FY 2004-05	FY 2005-06	FY 2006-07
BYPL	57.2	Target	56.45	54.70	50.70	45.05	39.95
		Achievement	61.89	54.29	50.12	43.89	39.03
BRPL	48.1	Target	47.55	46.00	42.70	36.70	31.10
		Achievement	47.40	45.06	40.64	35.53	29.92
NDPL	48.1	Target	47.60	45.35	40.85	35.35	31.10
		Achievement	47.79	44.86	33.79	26.52	23.73

- 4.52 The Commission introduced the previous MYT Regulations for the period FY 2007-08 to FY 2010-11 and fixed the AT&C Loss reduction targets to be achieved by the distribution utilities at the end of the Control Period. The year wise targets and actual achievement for FY 2007-08 to FY 2010-11 has been as under:

**Table 51: AT&C Loss levels for FY 2007-08 to FY 2010-11**

DISCOM		FY 2007-08	FY 2008-09	FY 2009-10	FY 2010-11
BYPL	Target	34.77	30.52	26.26	22.00
	Achievement	29.80	24.02 *	24.32	21.95
BRPL	Target	26.69	23.46	20.23	17.00
	Achievement	27.17	20.59*	20.53	18.82
NDPL	Target	22.03	20.35	18.67	17.00

DISCOM		FY 2007-08	FY 2008-09	FY 2009-10	FY 2010-11
	Achievement	18.56	16.74	15.16	13.10*
NDMC	Target	11.13	10.75	10.38	10.00
	Achievement	14.79	13.72	10.25	11.94

\*As claimed by the Discom, but not approved by the Commission

- 4.53 During the true-up for FY 2008-09 and FY 2009-10, it came to light that there were certain inconsistencies in the methodology for computing the actual achievements of AT&C loss (for estimation of energy in kWh corresponding to enforcement amount realised, exclusion of DVB arrears from amount realised, considering LPSC realised after allowing borrowing cost etc.) which were corrected while doing these true-ups. The revised methodology is now being carried forward in subsequent true-ups also.
- 4.54 The above achievements against the challenging targets have been possible as a result of the substantial capital investments which have been made by the distribution licensees for improving the distribution network and thereby reducing technical and commercial losses, government support in the form of special courts for power theft related cases, police support during theft control drives, etc.
- 4.55 In view of a writ petition No. 4821/201 filed in the High Court of Delhi, the process of tariff determination for FY 2010-11 could not be completed and no Tariff Order could be issued and also new MYT Regulations could not be framed. The Commission on May 10, 2011 passed an Order extending the previous MYT Regulations by one more year and fixed the following AT&C loss targets for FY 2011-12:

**Table 52: AT&C loss levels for FY 2011-12**

DISCOM	FY 2011-12
BYPL	18.00
BRPL	15.00
NDPL	13.00
NDMC	9.60

#### **AT&C Loss reduction targets for the Control Period (FY 2012-13 to FY 2014-15)**

- 4.56 While fixing the AT&C loss reduction targets for the Control Period (FY 2012-13 to FY2014-15), the Commission has been guided by:
- The achievements in AT&C loss reduction vis-à-vis targets fixed by the Commission since 2002, capital expenditure programs, review of the consumer mix of Delhi, metering status, etc.
  - Delhi is an urban area with very small number of agricultural consumers (less than 0.1% of total sales) and with 100 percent retail consumer metering.
  - Loss levels in similar private urban distribution licensees, such as Ahmedabad Electricity Supply Company, BEST and BSES, Mumbai, Torrent Power

Limited, Gujarat and public utilities viz., MGVCL in Gujarat and BESCOM in Karnataka.

- 4.57 Considering the past trend of AT&C loss reduction vis-à-vis targets fixed, the expectations of various stakeholders as expressed during the Public Hearings, the need is felt to continue with the trajectory of AT&C loss reduction into the next Control Period, especially in view of the fact that all distribution licensees still have areas where losses are significantly higher than the average AT&C losses achieved by them (above 40% in many areas). None of the distribution licensees have pleaded for higher AT&C loss targets on the grounds of the targets proposed by the Commission being technically incapable of being achieved. This matter, therefore, has to be seen in the context of the higher level of commercial losses for which the distribution utilities have to intensify their efforts. The Commission is of the view that it is not only desirable to fix challenging targets, but to make all efforts to see that these are achieved in the overall interest of determining tariffs which are fair and equitable and help in taking the Delhi Distribution business towards achievements of performance benchmarks set by the best distribution utilities in the country.
- 4.58 The AT&C loss target as approved by the Commission for the Control Period is given below:

**Table 53: AT&C Loss Targets approved by the Commission**

Particulars	FY 2012-13	FY 2013-14	FY 2014-15
Distribution Loss Target	13.73%	12.89%	12.06%
Collection Efficiency Target	99.50%	99.50%	99.50%
AT&C Loss Target	14.16%	13.33%	12.50%

## Energy Requirement

- 4.59 The quantum of power purchase is decided by the expected sale of energy by the Licensee, as well as the targeted loss levels. Higher expected sales require a greater quantum of power to be purchased. Similarly, higher loss levels also require a proportionately greater amount of power purchase by the Licensee because it needs to meet the expected sales (in MU) after accounting for various losses in the process of supplying electricity.
- 4.60 The energy sale for each year is grossed up by the distribution loss level for the year, to arrive at the required quantum of power purchase for that year in the following manner:

$$\text{Quantum of power purchase (MU)} = \frac{\text{Energy sales}}{(1 - \text{Distribution Loss (\%)/100})}$$

## Petitioner's Submission

- 4.61 Based on the proposed loss reduction trajectory and energy sales proposed, the Petitioner has proposed the following energy balance for each year of the Control Period:

**Table 54: Proposed Energy Balance for the Control Period**

Particulars	FY 2012-13	FY 2013-14	FY 2014-15
Sales (MU)	10624	11839	13205
Distribution losses (%)	15.98%	15.00%	14.17%
<b>Energy Input (MU) Requirement</b>	<b>12644</b>	<b>13929</b>	<b>15385</b>

**Commission's Analysis**

- 4.62 The Commission has computed the energy requirement for the Control Period as per the approved sales and T&D losses. The approved energy requirement for the Control Period is summarised below:

**Table 55: Approved Energy Requirement (MU)**

Particulars	FY 2012-13	FY 2013-14	FY 2014-15
Sales (in MU)	9622.43	10431.69	11276.78
Distribution Losses (%)	13.73%	12.89%	12.06%
<b>Energy Requirement (in MU)</b>	<b>11153.68</b>	<b>11975.92</b>	<b>12823.30</b>

**Determination of Aggregate Revenue Requirement**

- 4.63 The Commission has analyzed all the components of the Aggregate Revenue Requirement (ARR) submitted by the Petitioner to approve suitable values for each component, for each year of the Control Period. As per the MYT Regulations, 2011 the ARR for the distribution function shall include the following components:

- (a) Power Purchase Cost (including transmission charges and load dispatch charges)
- (b) Operations and Maintenance Expenses;
- (c) Return on Capital Employed;
- (d) Depreciation;
- (e) Income Tax;
- (f) Interest on Consumer Security Deposit
- (g) Less: Non-Tariff Income; and
- (h) Less: Income from other businesses or other receipts.

**Power Purchase**

- 4.64 Power purchase cost is the single largest component in the ARR of a distribution company. Hence, it is imperative that the element of cost is estimated with utmost

care based on the most efficient way of procuring power from the generating stations through long term/short term arrangements or through bilateral purchases agreements.

### Allocation of Power from Central and State Generating Stations

#### Petitioner's Submission

- 4.65 The Petitioner has considered allocation of firm and unallocated power of CSGS as per NRPC Notification no. NRPC/SE (O)/Allocations/2011-12 dated 12 November, 2011.
- 4.66 The Petitioner's share from State Generating stations is submitted to be as per the Commission's Order No. F.17 (115)/Engg./DERC/2006-07/4757 dated 31 March, 2007.
- 4.67 The Petitioner has considered the allocation of unallocated power as per the GoNCTD order No F.11 (41)/2007-Power/PF-1/1430 dated May 20, 2011 valid with effect from April 1, 2011 and has assumed the same allocation to continue further up to March 2015.
- 4.68 On the subject of power purchase allocation, the Petitioner has submitted that with uniform retail supply tariff, the average billing rate of the Petitioner is lower compared to other DISCOMs in Delhi on account of the unfavourable consumer mix in the Petitioner's area of supply. Therefore, although for the purpose of projections the Petitioner has assumed power allocation as per the Commission's PPA Reassignment Order, the Petitioner has requested the Commission to consider the matter of power allocation in a favourable manner for the Petitioner in order to neutralize the impact of skewed consumer mix.

#### Commission's Analysis

- 4.69 Delhi has firm allocated share in Central Sector Generating Stations (CSGS) of National Thermal Power Corporation (NTPC), National Hydroelectric Power Corporation (NHPC), Tehri Hydro Development Corporation (THDC), Satluj Jal Vidyut Nigam Limited (SJVNL) and Nuclear Power Corporation Limited (NPCIL). The Commission has considered allocation of firm power from the above mentioned generating stations as per the allocation specified in the notification no. Revision # 03 / 2012-13 dated 21 April, 2012 of Northern Regional Power Committee.
- 4.70 The distribution of unallocated quota from the above mentioned plants varies from time to time based on power requirement and power shortages in different States. Therefore, the Commission has considered the unallocated share for the said stations equivalent to the unallocated quota for FY 2011-12 which has arrived based on the total percentage share of each station and percentage allocation of firm share for each station in Delhi for FY 2011-12. The total share is sourced from REA of March 2012, Notification No. ERPC/COM-I/REA/2012/183-223 dated April 3, 2012.
- 4.71 The firm share, unallocated share and Delhi's share of firm & unallocated share from the Central Sector Generating Stations is summarised below:



Table 56: Allocation of Power to Delhi from Central Sector Generating Stations

Stations	Installed Capacity (MW)	Firm Share of Delhi (%)	Unallocated Share of Delhi (%)	Firm & unallocated Delhi Share (%)
<b>NTPC Plants</b>				
ANTA GAS	419.33	10.50%	0.45%	10.95%
AURAIYA GAS	663.36	10.86%	0.31%	11.17%
DADRI GAS	829.78	10.96%	0.21%	11.17%
FARAKKA	1600.00	1.39%	-	1.39%
KAHALGAON –I	840	6.07%	-	6.07%
KAHALGAON-II	1500	10.49%	-	10.49%
NCPP (DADRI THERMAL)-I	840	90%	-	90.00%
RIHAND –I	1000	10.00%	0.44%	10.44%
RIHAND –II	1000	12.60%	0.44%	13.04%
SINGRAULI	2000	7.50%	0.44%	7.94%
UNCHAHAAR-I	420	5.71%	0.14%	5.85%
UNCHAHAAR-II	420	11.19%	0.44%	11.63%
UNCHAHAAR-III	210	13.81%	0.44%	14.25%
DADRI-II	980	75%	-	75.00%
<b>NHPC Plants</b>				
BAIRA SIUL	180	11.00%	-	11.00%
CHAMERA-I	540	7.90%	-	7.90%
CHAMERA-II	300	13.33%	0.53%	13.86%
DHAULIGANGA	280	13.21%	0.44%	13.65%
DULHASTI	390	12.83%	0.44%	13.27%
SALAL	690	11.62%	-	11.62%
TANAKPUR	94.20	12.81%	-	12.81%
URI-I	480	11.04%	-	11.04%
SEWA-II	120	13.33%	0.44%	13.77%
<b>Others</b>				
TEHRI HEP	1000	10.30%	0.29%	10.59%
NJPC (SATLUJ)	1500	9.47%	0.29%	9.76%
TALA HEP	1020	2.94%	-	2.94%
MEJIA # 6	250	11.76%	-	11.76%
<b>NPCIL</b>				
NPCIL - RAPS – 3&4	440	-	-	-
NPCIL - RAPS – 5&6	440	12.69%	0.67%	13.36%
NPCIL – NAPS	440	10.68%	0.43%	11.11%

- 4.72 Government of NCT of Delhi (GoNCTD) through its letter no. F.11 (41)/2007-Power/PF-1/14350 dated 20 May, 2011 has revised the allocation of unallocated power generation share of GoNCTD in Central Power Station (Dadri and BTPS) and Delhi Power Generation Stations (RPH, GT, PPCL). According to the above, the allocation of 323.5 MW of unallocated power quota is extended for auxiliary consumption for IP station equivalent to 1 MW. Also, 0.9 MW power which was allocated to Aravali power plant, Jhajjar for construction activities is now available to Delhi as the plant has now become operational. Therefore, 0.9 MW has been equally

allocated among BRPL, BYPL and TPDDL. As per the said letter, the allocation of balance 321.6 MW power quota among distribution companies is reassigned as follows:

**Table 57: Allocation of Unallocated quota to Delhi DISCOMs**

DISCOM	Quantum of power
BYPL	39.65% of available power i.e. 127.5 MW + 0.3 MW = 127.8 MW
TPDDL	30.94% of the available power i.e. 99.5 MW + 0.3 MW = 99.8 MW (From 10.00 A.M to 05.00 P.M) 37.16% of the available power i.e. 119.5 MW + 0.3 MW = 119.8 MW (For rest of the time)
BRPL	23.19% of available power i.e. 74.5 MW+ 0.3 MW = 74.8 MW
NDMC	6.22% of the available power i.e. 20 MW (10:00 AM to 05:00 P.M)

- 4.73 The unallocated power (15%) from NDMC's share in Dadri, BTPS and Pragati would be at the disposal of the GoNCTD and may be allotted by the Government to the needy DISCOM(s).
- 4.74 If GoNCTD allocates the unallocated power in any manner other than the assumption considered in the preceding paragraphs above, the same shall be accounted for at the time of True-Up of power purchase costs in the subsequent Orders.
- 4.75 The allocation considered by the Commission for projection of power availability from the Delhi Stations is summarised below:

**Table 58: Allocation from Delhi Stations to BRPL**

Stations	Assigned Capacity (MW) <sup>^^</sup>	Firm Allocation to Delhi (85%) (MW) <sup>^^</sup>	Unallocated Share (MW) <sup>^^</sup>	Share from Firm Allocation	Share from Unallocated Power	Total Share for FY 2011-12 (MW)
BTPS <sup>*</sup>	530	450.50	79.50	43.58%	23.19%	219.11
Dadri <sup>**</sup>	631	536	94.65	43.58%	23.19%	260.04
IP Station <sup>***</sup>	0	0	0	43.58%	23.19%	0.00
Rajghat <sup>#</sup>	133.1	113	19.97	43.58%	23.19%	54.23 <sup>^</sup>
Gas Turbine <sup>##</sup>	270	229.5	40.50	43.58%	23.19%	109.41
Pragati <sup>###</sup>	230	195.50	34.50	43.58%	23.19%	96.68
<b>Total</b>	<b>1794.10</b>	<b>1524.99</b>	<b>269.12</b>			<b>739.47</b>

<sup>\*</sup> Total installed capacity of BTPS is 705 MW. However, 530MW is allocated to BRPL, BYPL and TPDDL. Remaining 175 MW is allocated to NDMC and MES.

<sup>\*\*</sup> Total installed capacity of Dadri is 840 MW, 756 MW allocated to Delhi of which 631MW is allocated to BRPL, BYPL and TPDDL. Remaining 125MW is allocated to NDMC.

<sup>\*\*\*</sup> IP station has been decommissioned

<sup>#</sup> Total installed capacity of Rajghat is 135MW. However 0.9 MW power was given as construction power to Aravali Power Project at Jhajjar and 1.0 MW as auxiliary power for IP station

<sup>##</sup> The capacity has been derated from 330 MW to 270 MW

<sup>###</sup> Total installed capacity of Pragati 330 MW. However, 230MW is allocated to BRPL, BYPL and TPDDL. Remaining 100 MW is allocated to NDMC.

<sup>^</sup> The total share of Rajghat includes 0.3 MW additional power as per GoNCT letter dated 20.05.2011

\$ Figures rounded off to zero decimal places

^^ Excluding allocation to NDMC and MES

## Energy Availability from the Generating Stations in Delhi System

### Petitioner's Submission

- 4.76 While projecting energy availability from generating stations, the Petitioner has submitted that it has considered the actual energy available (firm and unallocated) from the generating stations for the period April 2011 to November 2011. For the remaining period, the Petitioner has estimated energy availability based on the following assumptions:
- Energy available from existing Thermal Plants (except for APCL Jhajjar, Dadri-II and Kahalgaon-II) has been derived based on the installed capacity and PLF for each plant. PLF has been projected as per NRPC methodology for projection of demand. Energy availability from APCL, Dadri-II and Kahalgaon-II has been considered based on the actual average PLF up to November 2011. Auxiliary consumption applicable as per CERC Tariff Regulations, 2009 has been assumed while estimating the net generation.
  - Effective share of the Petitioner as per the PPA Reassignment Order (Order no. F.17 (115)/Engg./DERC/2006 07/) dated 31 March, 2007 and notification no. F.11/41/2007 Power/PF I/1430 dated May 20, 2011 has been applied on the ex bus generation from all stations to estimate the total energy purchases from the respective stations.
- 4.77 On the basis of the above mentioned assumptions, the Petitioner has proposed the quantum of energy availability from Delhi Generating Stations during the Control Period to be as shown below:

**Table 59: Proposed energy availability from Delhi Generating Stations during the Control Period (MU)**

Generating Station	FY 2012-13	FY 2013-14	FY 2014-15
Gas Turbine	567.15	566.93	567.32
Pragati –I	756.85	757.31	757.45
<b>SGS Total</b>	<b>1324.00</b>	<b>1324.25</b>	<b>1324.77</b>

### Commission's Analysis

- 4.78 The Commission has computed energy availability from the State Generating Stations i.e. Rajghat, Gas Turbine and PPCL based on the approved PLF and auxiliary consumption in the respective Tariff Order for IPGCL and PPCL stations for the Control Period. Availability of IP station has not been considered as the same has been decommissioned w.e.f. December, 31, 2009.
- 4.79 For BTPS, energy availability has been computed based on the station PLF taken as an average for the last three Financial Years (FY 2009-10 to FY 2011-12) and auxiliary consumption as approved in the Central Electricity Regulatory Commission

(Terms and Conditions of Tariff) Regulations, 2009, hereinafter referred to as “CERC Tariff Regulations, 2009”.

- 4.80 For Dadri-I, energy availability has been computed based on the station PLF taken as an average for last three Financial Years (FY 2009-10 to FY 2011-12) and auxiliary consumption as per the CERC Tariff Regulations, 2009.
- 4.81 The effective share of firm and unallocated power from these plants has been applied on the net energy available from each plant to compute the total energy available for the Petitioner during each year. The effective share for the Petitioner has been computed based on the allocation of power from Delhi system generating stations discussed earlier under “Allocation of Power from Central and State Generating Stations”.
- 4.82 The Commission is of the opinion that actual power availability from the generating stations in Delhi System may vary from the projected units based on the actual units generated and share of the Petitioner in unallocated power. However, since power purchase quantum is an uncontrollable parameter, it will be subjected to true up at the end of the year.
- 4.83 The projected net energy available to the Petitioner during each year of the Control Period from the generating stations in Delhi System is summarised below:

**Table 60: Approved Energy Available from Delhi Generating Stations (MU)**

Generating Station	FY 2012-13	FY 2013-14	FY 2014-15
BTPS*	1369.51	1369.51	1369.51
NCPP (Dadri Thermal)*	1725.33	1725.33	1725.33
Rajghat	316.13	316.13	316.13
Gas Turbine (GTPS)	743.73	743.73	743.73
Pragati -I	698.27	698.27	698.27
<b>Total Units</b>	<b>4852.96</b>	<b>4852.96</b>	<b>4852.96</b>

*\*included by the Petitioner under Central Generating Stations*

## Energy Availability from the Central Sector Generating Stations

### Petitioner's Submission

- 4.84 While projecting energy availability from generating stations, the Petitioner has submitted that it has considered the actual energy available (firm and unallocated) from the generating stations for the period April 2011 to November 2011. For the remaining period, the Petitioner has estimated energy availability based on the following assumptions:
- (a) Energy available from existing Thermal Plants (except for APCL Jhajjar, Dadri-II and Kahalgaon-II) has been derived based on the installed capacity and PLF for each plant. PLF has been projected as per NRPC methodology for projection of demand. Energy availability from APCL, Dadri-II and Kahalgaon-II has been considered based on the actual average PLF up to

November 2011. Auxiliary consumption applicable as per CERC Tariff Regulations, 2009 has been assumed while estimating the net generation.

- (b) Power purchase quantum from Hydro Plants (except Tehri HEP, Tala and Nathpa Jhakri HEP) has been estimated by considering the monthly availability factor based on the design energy of respective plants (as per latest CERC orders). Auxiliary consumption & Free energy for home state has been considered as per CERC Tariff Regulations, 2009.
  - (c) Power availability from Tehri HEP has been considered based on the program energy of the respective plants as per monthly CEA reports whereas power availability from Nathpa Jhakri HEP as been considered based on the design energy submitted in its tariff petition.
  - (d) Energy availability from the NPCIL based on the installed capacity and PLF for each plant where PLF is taken as per NRPC methodology for projection of demand.
- 4.85 The Petitioner has also considered the latest plant Maintenance program of Generating stations from the maintenance schedule for thermal, gas and nuclear units from January 2011 to March 2012 as intimated to the Petitioner vide letter number NRPC/SE(O)/LGBR/2011-12 dated January 20, 2011.
- 4.86 On the basis of the above mentioned assumptions, the Petitioner has proposed the quantum of energy availability from Central Generating Stations during the Control Period to be as shown below:

**Table 61: Proposed energy availability from CSGS during the Control Period (MU)**

Station	FY 2012-13	FY 2013-14	FY 2014-15
<b>NTPC</b>			
ANTA GAS	109.70	109.90	109.70
AURAIYA GAS	182.30	181.70	181.70
BTPS	1777.10	1571.50	1661.00
DADRI GAS	234.70	234.40	234.50
FARAKKA	61.00	61.10	60.90
KAHALGAON	145.40	144.70	144.30
NCPP Dadri	2058.90	1919.40	2010.70
RIHAND -I	315.90	317.20	316.80
RIHAND -II	408.60	407.70	408.00
SINGRAULI	469.90	469.20	469.30
UNCHAHAAR-I	76.80	76.40	76.40
UNCHAHAAR-II	148.20	148.00	147.90
UNCHAHAAR-III	90.90	92.10	91.80
KAHALGAON STAGE-II	383.50	383.50	383.50
Dadri Ext	2363.50	2220.10	2312.50
Aravali Power Corporation Ltd	1793.20	2084.40	2084.40
<b>NTPC – Total</b>	<b>10619.53</b>	<b>10421.20</b>	<b>10693.40</b>

Station	FY 2012-13	FY 2013-14	FY 2014-15
<b>NHPC</b>			
BAIRA SIUL	25.80	26.30	26.00
CHAMERA-I	47.40	47.90	47.50
CHAMERA-II	39.40	39.60	39.40
DHAULIGANGA	52.60	52.40	52.20
DULHASTI	89.60	89.00	88.30
SALAL	121.30	121.20	121.20
TANAKPUR	20.00	20.30	20.40
URI	101.40	101.20	100.60
SEWA-II	21.20	21.20	21.20
<b>NHPC – Total</b>	<b>518.51</b>	<b>519.10</b>	<b>517.00</b>
<b>NUCLEAR</b>			
RAPS - 3 & 4	-	-	-
RAPS - 5 & 6	141.80	141.80	141.80
NPCIL - NAPS	35.80	35.60	35.70
<b>Nuclear – Total</b>	<b>177.61</b>	<b>177.40</b>	<b>177.50</b>
<b>OTHERS</b>			
Tehri HEP	95.40	95.40	95.40
NJPC (Satluj)	223.00	222.90	222.40
Tala HEP	67.40	67.40	67.40
DVC	81.50	81.50	81.50
Koteshwar	35.34	36.89	36.89
<b>Others – Total</b>	<b>502.56</b>	<b>504.08</b>	<b>503.57</b>
<b>Grand Total</b>	<b>11818.21</b>	<b>11621.78</b>	<b>11891.47</b>

### Commission's Analysis

- 4.87 The Commission has computed the gross energy available from the existing NTPC stations based on the installed capacity and PLF for each plant which is taken as an average for the last three Financial Years (FY 2009-10 to FY 2011-12). Net energy sent out from each plant is estimated after deducting the auxiliary consumption applicable as per CERC Tariff Regulations, 2009.
- 4.88 The effective share of the Petitioner from each generating station has been applied to compute the total energy availability from NTPC stations.
- 4.89 Power purchase quantum from NHPC Stations has been computed as per the month-wise design energy shown by each plant in their respective water studies (as mentioned in various CERC Orders) and the auxiliary consumption has been considered as per CERC Tariff Regulations, 2009.
- 4.90 The power availability from other hydro plants like Nathpa Jhakri and Tala HEP has been considered based on the design energy of the respective plants whereas the power availability for Tehri HEP has been considered based on the program energy. The auxiliary consumption has been considered as per CERC Tariff Regulations, 2009.



- 4.91 The Commission has considered energy availability from the NPCIL-NAPS and RAPS 5&6 station based on the actual PLF recorded by CEA in its monthly generation report (for February) for FY 2011-12, the same has been considered for approving energy availability from NAPS station. The auxiliary consumption for NAPS has been considered as given in the MYT Order.
- 4.92 The effective share of the Petitioner is applied on the energy sent out to estimate the energy availability for the Petitioner from respective stations. The energy available to the Petitioner as per the projections made by the Commission is summarised below:

**Table 62: Energy Available from Central Sector Generating Stations (MU) approved by the Commission**

Station	FY 2012-13	FY 2013-14	FY 2014-15
<b>NTPC</b>			
ANTA GAS	119.54	119.54	119.54
AURAIYA GAS	201.23	201.23	201.23
DADRI GAS	270.35	270.35	270.35
FARAKKA	58.27	58.27	58.27
KAHALGAON-I	116.73	116.73	116.73
KAHALGAON STAGE-II	370.11	370.11	370.11
RIHAND –I	339.81	339.81	339.81
RIHAND -II	436.76	436.76	436.76
SINGRAULI	510.66	510.66	510.66
UNCHAHAAR-I	79.75	79.75	79.75
UNCHAHAAR-II	155.59	155.59	155.59
UNCHAHAAR-III	97.15	97.15	97.15
Dadri Ext. unit 5&6	2288.11	2288.11	2288.11
<b>Total of NTPC stations</b>	<b>5044.66</b>	<b>5044.66</b>	<b>5044.66</b>
<b>NHPC stations</b>			
BAIRA SIUL	37.10	37.10	37.10
CHAMERA-I	56.62	56.62	56.62
CHAMERA-II	89.53	89.53	89.53
DHAULIGANGA	66.70	66.70	66.70
DULHASTI	108.97	108.97	108.97
SALAL	154.51	154.51	154.51
TANAKPUR	24.99	24.99	24.99
URI-I	122.99	122.99	122.99
Sewa-II	20.16	20.16	20.16
<b>Total of NHPC stations</b>	<b>681.57</b>	<b>681.57</b>	<b>681.57</b>
<b>Nuclear</b>			
RAPS - 3&4	0.00	0.00	0.00
RAPS - 5&6	173.69	173.69	173.69
NPCIL - NAPS	83.56	83.56	83.56
<b>Total of Nuclear power stations</b>	<b>257.25</b>	<b>257.25</b>	<b>257.25</b>
<b>Others</b>			
TEHRI HEP	141.17	141.17	141.17
NJPC (SATLUJ)	293.63	293.63	293.63

Station	FY 2012-13	FY 2013-14	FY 2014-15
TALA HEP	51.00	51.00	51.00
DVC Mejia-6	89.20	89.20	89.20
<b>Total of Other stations</b>	<b>575.00</b>	<b>575.00</b>	<b>575.00</b>
<b>Total of CSGS</b>	<b>6557.88</b>	<b>6557.88</b>	<b>6557.88</b>

### Energy Availability from New Stations

#### Petitioner's Submission

- 4.93 The Petitioner has submitted that the CoD for Future Generating Stations has been taken as per CEA Broad status of Central Sector Thermal Power projects as on November 2011 and the CEA Report on Status of Hydro Electric Projects under execution as on September 2011.
- 4.94 Energy availability from future thermal generating stations estimated based on 80% PLF. Energy availability from renewable energy sources, Timarpur (TOWMCL) and Tyagraj Solar Plant, has been considered based on the installed capacity and PLF as per CERC (Terms and Conditions for Tariff determination from Renewable Energy sources) Regulations 2012.
- 4.95 The Petitioner has submitted the availability of energy from new generating stations for the Control Period as tabulated under:

**Table 63: Proposed energy availability from new stations in the Control Period (MU)**

Future Stations	FY 2012-13	FY 2013-14	FY 2014-15
Chamera-III	30.50	30.50	30.50
Parbati -III	27.10	49.20	49.20
Uri -II	38.90	38.90	38.90
Pragati -III, Bawana	2667.60	2667.60	2667.60
Mejia TPS Extn (unit 1 & 2)	2331.90	2431.80	2431.80
Chandrapur Extn	1111.70	1111.70	1111.70
Koderma TPS	2065.40	2153.90	2153.90
Durgapur Steel	1250.60	1250.60	1250.60
Koldam HEP	31.70	82.60	101.80
Rihand-III	91.50	183.40	183.40
Barh-I (3*660 MW)	83.00	419.00	430.80
Sasan UMPP (6*660 MW)	-	155.30	901.70
Barh-II (2*660 MW)	-	175.10	175.10
Parbati -II	-	-	76.10
TOWMCL	42.60	44.70	50.50
Thyagraj Solar	1.50	1.50	1.50
<b>Future Stations Total</b>	<b>9773.91</b>	<b>10795.79</b>	<b>11655.02</b>

**Commission's Analysis**

- 4.96 The Commission has analysed the Petitioner's submission of energy availability from new plants to be commissioned during the Control Period. The Commission has considered the availability of power from a number of thermal and hydel stations which are due to be commissioned during the Control Period. Since the actual CoD for these stations may be delayed the Commission vide letter dated March 12, 2012, March 30, 2012 and April 11, 2012 requested CEA to provide the details regarding the upcoming plants up to FY 2014-15. Subsequently, CEA vide letter dated March 16, 2012 provided the list of stations along with installed capacity, Delhi's share and estimated CoD. Therefore, the Commission has considered the latest data made available by the CEA to project energy availability from new stations.
- 4.97 The Commission has also supplemented the information obtained from CEA with submissions made by the licensees and the latest information available on the status of various projects.
- 4.98 For projection of energy availability from DVC stations, the Commission vide letter dated February 21, 2012 requested DVC to provide the details of the stations from which Delhi DISCOMs will be receiving power. DVC vide letter dated March 9, 2012 provided the list of stations along with share of each DISCOM in Delhi in the allocated capacity.
- 4.99 The Commission has, however, not considered any power for the purpose of projection of energy availability during the Control Period from APCL Jhajjar as the discoms have already surrendered the power from that station up to June 2012 and have applied for surrender in subsequent months.
- 4.100 The date of CoD and availability of power from the new stations as considered by the Commission FY 2012-13 to FY 2014-15 is shown in the table below.

**Table 64: Dates of Energy Available from Future Stations as Approved by the Commission**

Plant	Owning Agency	CoD Considered by the Commission
Barh –I	NTPC	Not Considered till FY15
Barh –II		Beyond March-13
Koldam HEP		Beyond September-13
Rihand III		Unit V : Beyond Sep-12 Unit VI : Beyond Feb-13
Aravali Power Corporation Ltd		Not Considered
Chamera III	NHPC	Beyond March-13
Parbati III		Unit I : Beyond Sep-12 Unit II : Beyond Dec-12 Unit III : Beyond Sep-13 Unit IV : Beyond Dec-13
Parbati II		Beyond Sep-14
Uri II		Beyond March-13
Mejia-II 7&8	DVC	Unit 7 : 02-Aug-11 Unit 8 : 01-Apr-12

Plant	Owning Agency	CoD Considered by the Commission
Durgapur 1&2		Unit 1 : 16-May-12 Unit 2 : Beyond Sep-13
Koderma 1&2		Unit 1 : Beyond Apr-13 Unit 2 : Beyond Jan-14
Chandrapura 7&8		Unit 7 : 15-Jul-11 Unit 8 : 02-Nov-11
Maithon TPS	Tata Power & DVC	Unit I : Beyond Apr-12 Unit II : Beyond Oct-12
Koteshwar	THDC	Beyond April-12
Tehri Pump Storage		Not Considered till FY15
Rampur		Not Considered till FY15
Pragati -III, Bawana	SGS	GT 1 : 27-Dec-11 GT 2: Beyond July-12 STG 1: Beyond Apr-12 GT 1 : Beyond Sep-12 GT 2: Beyond Jan-13 STG 2: Beyond Nov-12
Sasan UMPP	Reliance	Beyond Oct-13
Subansiri Lower	NHPC	Beyond Sep-13
TOWMCL	-	Beyond April 2012

- 4.101 The Commission has considered energy availability from new generating stations based on 85% availability for thermal and gas plants. For hydel stations (excluding Chamera III, Uri II and Koteshwar HEP), the Commission has considered the Capacity Utilisation Factor (CUF) at 45%. The energy availability from Chamera III, Uri II and Koteshwar HEP has been taken equal to 1104 MU, 1124 MU and 1234 MU respectively as per the design energy of the station.
- 4.102 Since the generation for hydel stations vary in each month of the year and the monthly design energy for new plants is not available therefore, to estimate the monthly power availability from new hydro stations, the Commission has applied the percentages which have been arrived at by taking the monthly design energy for existing stations over the annual design energy for the same stations.
- 4.103 Auxiliary consumption for new stations has been considered in line with the CERC Tariff Regulations, 2009.
- 4.104 The share of the Petitioner in energy available from PPCL-III, Bawana has been considered at 30.89% as per information provided by DTL vide letter no F/DTL/207/11-12/Mgr (SO)/75 dated March 30, 2012.
- 4.105 The effective share of the Petitioner as per the reassignment Order (Order No. F.11 (41)/2007-power/PF-1/1430 dated 20 May, 2011) has been applied on the ex-bus generation from all other future stations to estimate the total energy purchases from the respective NTPC, NHPC, DVC and other stations for each year of the Control Period.

4.106 The energy available to the Petitioner as per the revised projections by the Commission for each year of the Control Period from the new stations is summarised below:

**Table 65: Energy Available from Future Stations as Approved by the Commission (MU)**

Station	FY 2012-13	FY 2013-14	FY 2014-15
Barh –II (2*660 MW)	-	307.10	307.10
Chamera III	-	53.61	53.61
Chandrapur Extn (U7 & U8)	885.88	885.88	885.88
Durgapur TPS	597.56	1023.05	1365.32
Koderma TPS	-	1465.59	2351.38
Koldam HEP	-	37.80	147.96
Koteshwar HEP	52.49	52.49	52.49
Mejia Unit 7&8	2654.79	2654.79	2654.79
Parbati–II	-	-	28.24
Parbati –III	6.62	42.34	71.43
Pragati -III, Bawana	1379.95	3059.04	3059.04
Rihand III	112.01	383.88	383.88
Sasan UMPP (6*660 MW)	-	91.62	221.47
Subansiri Lower	-	130.62	511.24
TOWMCL	42.58	44.69	50.46
Uri II	-	60.62	60.62
<b>Total</b>	<b>5731.88</b>	<b>10293.12</b>	<b>12204.92</b>

### Power Purchase Quantum from Other Sources: Intra-State, Bilateral & Banking

#### Petitioner's Submission

- 4.107 The Petitioner has submitted that Deficit or Surplus power in a particular month, if any, after considering purchases from long term sources, has been considered as a part of Bilateral Purchase or Sale for that month.
- 4.108 The Petitioner has not projected any short term / bilateral purchase for the Control Period, in view of proposed energy availability.

#### Commission's Analysis

- 4.109 Based on the analysis of energy availability from various sources and the requirement of power for sale in the distribution area of the Petitioner, the Commission is of the view that the Petitioner would have an overall surplus power for sale to others in each year of the Control Period.
- 4.110 The Commission has not considered any quantum of power to be purchased through intra-state purchases during each year of the Control Period.
- 4.111 The Commission has assumed that the surplus power available to the Petitioner will be sold entirely under bilateral arrangements for each year of the Control Period.

4.112 The Commission has considered that the energy which will be banked through forward banking, same day banking, same day/ day ahead trading in energy exchange and forward trading, if any, will be accounted for at the time of True-Up exercise. The units purchased and sold through other sources are summarised below:

**Table 66: Energy Purchase /Sales through Other Sources approved by the Commission (MU)**

	FY 2012-13	FY 2013-14	FY 2014-15
Bilateral Sales (MU)	5181.08	8654.41	9600.55

## Power Purchase Cost

### Cost of Power Purchase from Existing Stations

#### Petitioner's Submission

- 4.113 The Petitioner has stated that since all parameters/elements of the power purchase cost are uncontrollable and unpredictable in nature, the Petitioner has assumed the price of power purchase as approved by the Commission in its Tariff Order for True up of FY 2008-09 & FY 2009-10 and ARR for FY 2011-12 dated 26 August 2011.
- 4.114 The Petitioner has requested that variation in power purchase cost be allowed through PPPAC formula proposed by the Petitioner in its petition.
- 4.115 The Petitioner has proposed the following cost from existing stations for the Control Period:

**Table 67: Proposed power purchase cost from existing stations for Control Period (Rs. Cr)**

Source	FY 2012-13	FY 2013-14	FY 2014-15
<b>Central Generating Stations</b>			
<b>NTPC</b>			
ANTA GAS	35.3	35.3	35.3
AURAIYA GAS	52.5	52.3	52.3
BTPS	710.1	628.0	663.8
DADRI GAS	66.0	65.9	66.0
FARAKKA	22.6	22.7	22.6
KAHALGAON	46.9	46.7	46.6
NCPP	643.9	600.2	628.8
RIHAND –I	63.1	63.3	63.3
RIHAND –II	90.1	89.9	89.9
SINGRAULI	85.8	85.7	85.7
UNCHAHAAR-I	20.8	20.6	20.6
UNCHAHAAR-II	41.8	41.7	41.7
UNCHAHAAR-III	29.1	29.5	29.4
KAHALGAON STAGE-II	131.1	131.1	131.1
Dadri Ext	803.0	754.3	785.7
Aravali Power Corporation Ltd	842.6	979.5	979.5

Source	FY 2012-13	FY 2013-14	FY 2014-15
NTPC-Total	3,684.78	3,646.88	3,742.27
<b>NHPC</b>			
BAIRA SIUL	3.5	3.6	3.5
CHAMERA-I	8.4	8.5	8.4
CHAMERA-II	11.2	11.2	11.2
DHAULIGANGA	14.4	14.3	14.3
DULHASTI	52.8	52.5	52.1
SALAL	10.5	10.5	10.5
TANAKPUR	4.1	4.2	4.2
URI	14.8	14.8	14.7
SEWA-II	14.0	14.1	14.1
NHPC-Total	133.76	133.66	133.01
TEHRI HEP	24.5	24.5	24.5
Koteshwar	12.4	12.9	12.9
NJPC (SATLUJ)	48.2	48.2	48.1
TALA HEP	12.4	12.4	12.4
DVC	27.7	27.7	27.7
<b>NUCLEAR</b>			
RAPS - 3 & 4	-	-	-
RAPS - 5 & 6	42.8	42.8	42.8
NPCIL – NAPS	7.3	7.3	7.3
Nuclear Total	50.13	50.1	50.12
<b>State generating Stations</b>			
IP Station	-	-	-
Rajghat	-	-	-
GAS TURBINE	239.4	239.3	239.5
Pragati -I	224.2	224.4	224.4
State Generating Stations-Total	463.66	463.71	463.91
<b>Total Cost</b>	<b>4,457.50</b>	<b>4,420.00</b>	<b>4,514.90</b>

### Commission's Analysis

4.116 The following methodology has been adopted by the Commission for estimation of the power purchase cost for each year of the Control Period from existing stations:

- The Commission has projected the variable cost for NTPC stations based on the average of the variable cost and FPA, submitted by BYPL and TPDDL for March 2012 as additional information, and an escalation of 5% during each year.
- The fixed charges for NTPC stations have been taken from the latest Tariff Orders issued by CERC up to June 15, 2012. The fixed charges for FY 2014-15 have been taken equal the fixed charges approved for each station in FY 2013-14.



- (c) The Commission has approved the annual fixed charges for NHPC stations as per the latest order for the stations for which the order was passed by CERC for the period FY 2009-10 to FY 2013-14. The fixed charges for FY 2014-15 have been taken equal the fixed charges approved for each station in FY 2013-14.
- (d) The Commission has considered the normative availability for hydel stations as per the CERC Tariff Regulations, 2009 and allowed the fixed cost based on the same.
- (e) The fixed and variable cost for state generating stations has been considered as per the MYT Order issued by the Commission for the Control Period.
- (f) The Commission has considered the actual single part tariff of NPCIL plants. For NAPS, the Commission has considered the rate as per March 2012 bills raised by NPCIL and for RAPS 5&6, as per the bills raised by NPCIL for the month of March 2012.
- (g) The Commission for approving the annual fixed charges for Tehri HEP has considered the formula given in the March 2012 bills raised by THDC.
- (h) The Commission has considered single part tariff for TALA HEP at Rs 2.02/kWh. Based on the power purchase bill raised by PTC for the month of March 2012.
- (i) In case of Mejia unit-6, single part tariff of Rs 4.00/kWh is considered as is taken for other future stations of DVC.
- (j) The Commission has computed the total power purchase cost considering fixed cost, variable cost (including FPA) and other charges (income tax, water cess etc) for each plant taking into account the approved energy availability and share of the Petitioner.

4.117 The total power purchase cost approved by the Commission is summarised below:

**Table 68: Power purchase cost from existing stations approved by the Commission**

Generating stations	FY 2012-13		FY 2013-14		FY 2014-15	
	MU	Rs Cr	MU	Rs Cr	MU	Rs Cr
Central Generating Stations						
NTPC						
ANTA GAS	119.54	40.79	119.54	42.52	119.54	44.14
AURAIYA GAS	201.23	70.49	201.23	75.19	201.23	78.24
DADRI GAS	270.35	93.32	270.35	99.26	270.35	103.23
FARAKKA	58.27	23.87	58.27	25.17	58.27	26.14
KAHALGAON-I	116.73	45.78	116.73	47.67	116.73	49.31
KAHALGAON STAGE-II*	370.11	145.33	370.11	151.05	370.11	155.69
RIHAND –I	339.81	67.22	339.81	70.20	339.81	72.41
RIHAND –II	436.76	92.10	436.76	94.73	436.76	97.67

Generating stations	FY 2012-13		FY 2013-14		FY 2014-15	
	MU	Rs Cr	MU	Rs Cr	MU	Rs Cr
SINGRAULI	510.66	106.21	510.66	110.96	510.66	115.15
UNCHAHAR-I	79.75	26.72	79.75	27.87	79.75	28.95
UNCHAHAR-II	155.59	54.39	155.59	54.85	155.59	56.96
UNCHAHAR-III	97.15	37.66	97.15	38.87	97.15	40.20
DADRI Extn Unit 5&6*	2288.11	981.02	2288.11	1012.04	2288.11	1044.71
ARAVALI POWER CORPORATION LIMITED	0.00	0.00	0.00	0.00	0.00	0.00
NTPC Total	5044.06	1784.89	5044.06	1850.39	5044.06	1912.80
NHPC						
BAIRA SIUL	37.10	5.31	37.10	5.45	37.10	5.45
CHAMERA-I	56.62	10.25	56.62	10.37	56.62	10.37
CHAMERA-II	89.53	23.21	89.53	22.98	89.53	22.98
DHAULIGANGA	66.70	18.29	66.70	18.32	66.70	18.32
DULHASTI	108.97	63.56	108.97	63.21	108.97	63.21
SALAL	154.51	13.84	154.51	14.07	154.51	14.07
TANAKPUR	24.99	5.39	24.99	5.50	24.99	5.50
URI	122.99	18.24	122.99	18.38	122.99	18.38
SEWA-II	20.16	13.08	20.16	12.95	20.16	12.95
NHPC Total	681.57	171.17	681.57	171.23	681.57	171.23
Other stations						
TEHRI HEP	141.17	34.45	141.17	34.45	141.17	34.45
NJPC (SATLUJ)	293.63	63.46	293.63	63.46	293.63	63.46
TALA HEP	51.00	10.30	51.00	10.30	51.00	10.30
MEJIA TPS (Unit 6)	89.20	35.68	89.20	35.68	89.20	35.68
Others Total	575.00	143.90	575.00	143.90	575.00	143.90
NUCLEAR						
NPCIL - RAPS – 3&4	-	-	-	-	-	-
NPCIL - RAPS – 5&6*	173.69	59.25	173.69	59.25	173.69	59.25
NPCIL – NAPS	83.56	20.29	83.56	20.29	83.56	20.29
Nuclear Total	257.25	79.55	257.25	79.55	257.25	79.55
Generating Stations in Delhi System						
BTPS	1369.51	642.91	1369.51	669.05	1369.51	696.50
NCPP	1725.33	665.05	1725.33	697.67	1725.33	725.44
Rajghat	316.13	157.18	316.13	163.85	316.13	170.94
GAS TURBINE	743.73	305.94	743.73	318.82	743.73	332.44
Pragati -I	698.27	227.69	698.27	235.60	698.27	244.88
SGS Total	4852.96	1998.77	4852.96	2084.99	4852.96	2170.20
<b>Total Power Purchase</b>	<b>11410.85</b>	<b>4178.28</b>	<b>11410.85</b>	<b>4330.05</b>	<b>11410.85</b>	<b>4477.67</b>

**Cost of Power Purchase from New Stations****Petitioner's Submission**

4.118 The Petitioner has proposed the following cost from new generating stations for the Control Period:

**Table 69: Approved Power Purchase Cost for New Generation Stations (Rs. Cr)**

Source	FY 2012-13	FY 2013-14	FY 2014-15
Future Stations			
Chamera-III	10.6	10.6	10.6
Parbati –III	9.5	17.2	17.2
Uri –II	13.6	13.6	13.6
Pragati -III, Bawana	1,085.7	1,085.7	1,085.7
Mejia TPS Extn (unit 1 & 2)	792.8	826.8	826.8
Chandrapur Extn	378.0	378.0	378.0
Koderma TPS	702.2	732.3	732.3
Durgapur Steel	425.2	425.2	425.2
Koldam HEP	11.1	28.9	35.6
Rihand-III	20.2	40.4	40.4
Barh-I (3*660 MW)	28.2	142.5	146.5
Sasan UMPP (6*660)	-	16.3	154.2
Barh -II (2*660 MW)	-	59.5	59.5
Parbati –II	-	-	26.6
TOWMCL	11.0	11.6	13.1
Thyagraj Solar	2.7	2.7	2.7
Future Stations Total	3,490.83	3,791.26	3,967.92

**Commission's Analysis**

4.119 The Commission has considered power purchase cost for the following new generating stations as under:

- In case of Pragati-III, the Commission has considered the power purchase rate as Rs 4.50/kWh.
- The rate for TOWMCL has been considered equal to Rs 2.59/unit as per the submission of the Petitioner.

4.120 For NHPC hydro plants, Rs. 4.50/kWh has been assumed for computing the power purchase cost.

4.121 In the absence of definite tariff for power available from DVC plants, the Commission has considered single part tariff of Rs. 4.00/kWh for the power procured from the DVC plants which is in line with the average tariff charged by DVC during FY 2011-12.

- 4.122 The Commission is of the view that the power purchase cost as considered from new plants may vary and will be subject to True-Up based on the actual cost at the end of each year.

**Table 70: Approved Power Purchase Cost for New Generation Stations (Rs. Cr)**

Source	FY 2012-13		FY 2013-14		FY 2014-15	
	MU	Rs Cr	MU	Rs Cr	MU	Rs Cr
Barh II	-	-	307.10	138.20	307.10	138.20
Koldam	-	-	37.80	17.01	147.96	66.58
Rihand III	112.01	50.40	383.88	172.75	383.88	172.75
Chamera-III (Unit-I, II & III)	-	-	53.61	24.12	53.61	24.12
Uri-II (Unit-I, II & III)	-	-	60.62	27.28	60.62	27.28
Parabati III	6.62	2.98	42.34	19.05	71.43	32.14
Parbati II	-	-	-	-	28.24	12.71
Subansiri Lower	-	-	130.62	58.78	511.24	230.06
Mejia-II (Unit 7&8)	2654.79	1061.92	2654.79	1061.92	2654.79	1061.92
Durgapur	597.56	239.02	1023.05	409.22	1365.32	546.13
Koderma	-	-	1465.59	586.24	2351.38	940.55
Chandrapura- 7&8	885.88	354.35	885.88	354.35	885.88	354.35
Koteshwar(Unit-1, II, III, IV)	52.49	23.62	52.49	23.62	52.49	23.62
PPCL-III, Bawana	1379.95	620.98	3059.04	1376.57	3059.04	1376.57
Sasan	-	-	91.62	10.96	221.47	26.49
TOWMCL	42.58	11.03	44.69	11.58	50.46	13.07
<b>Total for new stations</b>	<b>5731.88</b>	<b>2364.31</b>	<b>10293.12</b>	<b>4291.64</b>	<b>12204.92</b>	<b>5046.54</b>

### Cost of Power from Other Sources

#### Petitioner's Submission

- 4.123 The Petitioner has not considered any bilateral or direct purchase assuming surplus power being available from FY 2012-13 onwards, due to upcoming power plants in future. Any sudden shortage will be met through day-ahead market through power exchange.

#### Commission's Analysis

- 4.124 The Commission has considered that there will be no requirement of power purchase for meeting the seasonal demand in the Petitioner's area of operation through intra-state purchase.
- 4.125 With regards to the rate of sale of surplus power, the Commission observes that the estimated average landed cost of power purchase (after including transmission losses and charges) for the Petitioner is Rs 4.26/unit in FY 2012-13, Rs 4.35/unit in FY 2013-14 and Rs 4.42/unit in FY 2014-15. As against this the Petitioner has proposed the rate of sale of surplus power at only Rs 3.60/unit.

- 4.126 The average rate at which power was sold by the Petitioner during FY 2010-11 was Rs 3.21/unit. In the same year the average rate of sale of power achieved by TPDDL, BYPL and NDMC was Rs 2.96/unit, Rs 3.54/unit and Rs 2.94/unit respectively.
- 4.127 The Commission observes that if the Petitioner were to sell surplus power at a rate that is lower than the average landed cost (/unit) at which it purchases the power, it shall result in an additional burden being imposed on the consumers on account of the transaction of sale and purchase of power.
- 4.128 Taking into account the interests of the consumers and the actual rate at which power has been sold by the DISCOMs in the past, the Commission has considered a rate of Rs 4.00/unit for the sale of surplus power by the Petitioner during each year of the Control Period.

**Table 71: Approved Cost of Power Purchase/Sale through Other Sources (Rs. Cr)**

	FY 2012-13	FY 2013-14	FY 2014-15
Bilateral Sales	2072.43	3461.76	3840.22

## Transmission Losses and Charges

### Petitioner's Submission

- 4.129 The Petitioner has considered intra-state transmission losses of 1.25% based on the losses reported by DTL vide letter no. F.DTL/207/DGM(SO)/2011-12/467 dated 31.10.2011
- 4.130 Inter-state transmission losses have been considered based on CERC Order on Determination of POC rates and transmission losses in accordance with Regulation 17(2) of Central Electricity Regulatory Commission (sharing of interstate transmission charges and losses) Regulations, 2010.
- 4.131 The Petitioner has submitted that since transmission charges are uncontrollable in nature and are subject to true-up, it has considered intra-state transmission charges and inter-state transmission charges for the Control Period as approved by the Commission in its Order on True up of FY 2008-09 & FY 2009-10 and ARR for FY 2011-12 dated 26 August, 2011.

**Table 72: Proposed Transmission charges for the Control Period**

Particulars	FY 2012-13	FY 2013-14	FY 2014-15
<b>Intra-state transmission</b>			
Transmission Loss (MU)	273.03	282.55	295.5
<b>Transmission Charges (Rs. Cr)</b>	<b>475.0</b>	<b>475.0</b>	<b>475.0</b>
<b>Inter-state transmission</b>			
Transmission Loss (MU)	916.38	970.06	1038.16
<b>Transmission Charges (Rs. Cr)</b>	<b>314.4</b>	<b>346.5</b>	<b>382.8</b>

**Commission's Analysis**

- 4.132 In the absence of consolidated data for the eastern grid for FY 2011-12, the Commission has considered the eastern region losses based on the average of the weekly losses reported by ERPC on its website from April 1, 2010 to March 27, 2011 at 2.43%. The losses for the northern region have considered based the average losses for FY 2011-12 at 3.55%, as reported on the NRPC website.
- 4.133 The intra-state transmission losses of 1.20% have been approved based on the actual losses for FY 2011-12 reported by Delhi Transco Limited on its website.
- 4.134 Since the actual PGCIL transmission charges for BRPL for FY 2011-12 were not available, the Commission has estimated the same by considering the actual PGCIL transmission charges submitted by TPDDL for FY 2011-12 and the allocation of total long term PPAs to BRPL and TPDDL. The Commission has approved inter-state transmission charges for FY 2012-13 to FY 2014-15 by considering an inflation factor of 5% per annum on the estimated charges for FY 2011-12.
- 4.135 The intra-state transmission charges have been allowed based on the ARR approved by the Commission for Delhi Transco Limited (DTL) for each year of the Control Period. The charges for SLDC have been projected by escalating the approved SLDC charges for FY 2010-11 by 5% per annum.
- 4.136 The PGCIL and DTL transmission losses and the cost is summarised below:

**Table 73: Transmission Losses and Charges approved by the Commission for Second Control Period**

Particulars	FY 2012-13	FY 2013-14	FY 2014-15
<b>Transmission Losses (in MU)</b>			
Inter-State (PGCIL)	609.05	822.41	918.85
Intra-State (DTL)	198.92	251.22	273.06
Total Transmission Losses (MU)	807.96	1073.63	1191.92
<b>Transmission Charges (Rs. Cr)</b>			
Inter-State (PGCIL)	257.74	270.63	284.16
Intra-State (DTL) including SLDC Charges	305.56	259.32	297.64
<b>Total Transmission Charges (Rs. Cr)</b>	<b>563.30</b>	<b>529.95</b>	<b>581.81</b>

**Rebate on Power Purchase and Transmission Charges****Commission's Analysis**

- 4.137 With regards to rebate on power purchase and transmission charges the MYT Regulations 2011 states that –

*“5.23 Distribution Licensee shall be allowed to recover the net cost of power it procures from sources approved by the Commission, viz. Intra-state and Inter-state Trading Licensees, Bilateral Purchases, Bulk Suppliers, State generators, Independent Power Producers, Central generating stations, non-conventional energy generators, generation business of the Distribution Licensee and others, assuming maximum normative rebate available from each source for payment of bills through letter of credit on presentation of bills for supply to consumers of Retail Supply Business;”*

- 4.138 Accordingly, the Commission has considered power purchase rebate @ 2% of the gross power purchase cost and transmission rebate @ 2% of the total transmission and SLDC charges for projection of the normative rebate on the power purchase cost.

**Table 74: Rebate on Power purchase and Transmission Charges approved by the Commission (Rs. Cr)**

Particulars	FY 2012-13	FY 2013-14	FY 2014-15
Power Purchase Rebate @ 2%	130.85	172.43	190.48
Rebate on Transmission Charges @ 2%	11.27	10.60	11.64

## Energy Balance

### Petitioner's Submission

- 4.139 Total power purchase for the Control Period submitted by the Petitioner is summarised in the table below.

**Table 75: Energy Balance for the Control Period submitted by the Petitioner**

Source	FY 2012-13			FY 2013-14			FY 2014-15		
	Quantum (MU)	Amount (Rs. Cr.)	Rate (Rs/unit)	Quantum (MU)	Amount (Rs. Cr.)	Rate (Rs/unit)	Quantum (MU)	Amount (Rs. Cr.)	Rate (Rs/unit)
NTPC Total	10619.53	3,684.78	3.47	10421.20	3,646.88	3.5	10693.36	3,742.27	3.5
NHPC Total	518.51	133.76	2.58	519.05	133.66	2.58	516.99	133.01	2.57
Nuclear Total	177.61	50.13	2.82	177.43	50.1	2.82	177.54	50.12	2.82
SGS Total	1,324.00	463.66	3.5	1,324.25	463.71	3.5	1,324.77	463.91	3.5
Others	502.56	125.16	2.49	504.08	125.7	2.49	503.57	125.59	2.49
Future Stations Total	9773.91	3,490.83	3.57	10795.79	3,791.26	3.51	11655.02	3,967.92	3.4
Power Purchase from other Sources*									
Other Purchases Total	-	-		-	-		-	-	
Power Sold to other Sources*									
Intra State Power Sale	-	-		-	-		-	-	



Source	FY 2012-13			FY 2013-14			FY 2014-15		
	Quantum (MU)	Amount (Rs. Cr.)	Rate (Rs/unit)	Quantum (MU)	Amount (Rs. Cr.)	Rate (Rs/unit)	Quantum (MU)	Amount (Rs. Cr.)	Rate (Rs/unit)
BILATERAL SALE/BANKING	9,082.66	3,269.76	3.6	8,560.56	3,081.80	3.6	8,153.14	2,935.13	3.6
Banking	-	-		-	-		-	-	
UI Sale	-	-		-	-		-	-	
Sale Total	9,082.66	3,269.76	3.6	8,560.56	3,081.80	3.6	8,153.14	2,935.13	3.6
Other payments made/ARREARS									
GRAND TOTAL	13833.46	4,678.57	3.38	15181.23	5,129.51	3.38	16718.10	5,547.69	3.32
Total Inter-State transmission losses/ charges(including SLDC charges)	916.38	314.4		970.06	346.5		1,038.16	382.8	
Total Intra-State transmission losses/ charges	273.03	475		282.55	475		295.5	475	
<b>Total energy input to Distribution Company system</b>	<b>12644.05</b>	<b>5,467.97</b>	<b>4.32</b>	<b>13928.62</b>	<b>5,951.01</b>	<b>4.27</b>	<b>15384.45</b>	<b>6,405.49</b>	<b>4.16</b>

### Commission's Analysis

4.140 Total power purchase for the Control Period as approved by the Commission is summarised

**Table 76: Energy Balance for the Control Period approved by the Commission**

Source	FY 2012-13			FY 2013-14			FY 2014-15		
	Quantum (MU)	Amount (Rs. Cr.)	Rate (Rs/unit)	Quantum (MU)	Amount (Rs. Cr.)	Rate (Rs/unit)	Quantum (MU)	Amount (Rs. Cr.)	Rate (Rs/unit)
Power Purchase from CSGS <sup>#</sup>	14015.09	5208.86	3.72	18576.34	7234.37	3.89	20488.13	8079.45	3.94
PGCIL losses & Charges	609.05	257.74		822.41	270.63		918.85	284.16	
Power purchase from Delhi Stations <sup>\$</sup>	3127.63	1333.72	4.26	3127.63	1387.32	4.44	3127.63	1444.76	4.62
Power Available at Delhi Periphery	16533.68	6800.32		20881.56	8892.32		22696.91	9808.37	
DTL loss & Charges including SLDC Charges	198.92	305.56	15.36	251.22	259.32	10.32	273.06	297.64	10.9
Power Purchase Rebate @ 2%		130.85			172.43			190.48	

Source	FY 2012-13			FY 2013-14			FY 2014-15		
	Quantum (MU)	Amount (Rs. Cr.)	Rate (Rs/unit)	Quantum (MU)	Amount (Rs. Cr.)	Rate (Rs/unit)	Quantum (MU)	Amount (Rs. Cr.)	Rate (Rs/unit)
Rebate on Transmission Charges @ 2%		11.27			10.6			11.64	
Power available to DISCOM	16334.76	6963.76	4.26	20630.34	8968.61	4.35	22423.85	9903.89	4.42
Sales	9622.43			10431.69			11276.78		
Distribution loss	1531.25			1544.23			1546.53		
Required Power	11153.68	4891.33	4.39	11975.92	5506.84	4.6	12823.3	6063.68	4.73
<b>Surplus/ (Deficit) Power available at DISCOM Boundary</b>	<b>5181.08</b>	<b>2072.43</b>	<b>4.00</b>	<b>8654.41</b>	<b>3461.76</b>	<b>4.00</b>	<b>9600.55</b>	<b>3840.22</b>	<b>4.00</b>

\* Average cost in Rs per unit

# Includes NTPC (except BTPS), NHPC, SJVNL, THDC, NPCIL, Dadri TPS, and Future Stations

\$ Includes BTPS, PPCL, IP Stations, Rajghat and GTPS

## Power Purchase Adjustment

4.141 The Distribution Licensees procure power from central generating stations, state generating stations through the long-term power purchase agreements and through short-term purchases. The power purchase cost accounts for about 80% of Annual Revenue Requirement of the distribution licensees and includes the cost paid for procurement of power, transmission charges, UI charges, SLDC/RLDC charges. The net power purchase cost after deducting amounts realized from sale of surplus power is considered for purpose of ARR.

4.142 The Commission recognizes that the power purchase costs are uncontrollable in nature and are volatile making it difficult to accurately estimate power purchase costs at the time of annual tariff fixation. The power purchase cost is beyond the control of distribution licensees and dependent upon following factors:

- Price of Fuel (Coal/Gas) which is highly unpredictable as has been seen from the data of past few years.
- Availability of power from new sources.
- Weather conditions such as extreme harsh summers/cold which have direct impact on the demand.
- Demand supply gap of power within the country.

4.143 Any fluctuation in the cost of fuel is a pass through for the generator through a fuel price adjustment formula and is payable by the distribution licensees in their monthly bills.

- 4.144 Power purchase cost being uncontrollable, in nature, is pass-through to the consumers but the difference in actual cost of procurement of power and the estimated cost of purchase of power gets trued up only after 2 years. The time lag of two years puts additional burden on consumers by way of interest charges which have to be borne by the consumers, additionally.
- 4.145 A public hearing was held in the Commission's court room from April 26, 2012 to April 30, 2012 regarding the petitions filed by the TPDDL, BRPL, BYPL and NDMC for true-up of expenses for FY 2010-11 and approval of ARR and Generation Tariff for FY 2012-13 to FY 2014-15. In the public hearing, stakeholders put forth their comments/suggestions before the Commission in the presence of the Petitioner. Some of the stakeholders put forth their views on power purchase adjustments also.
- 4.146 The Commission heard the stakeholders, consumers and the petitioners at length. The Commission has also pursued the suggestions and objections of various stakeholders and consumers received in the Commission. Further, the Commission has examined the entire record placed before the Commission and also considered the relevant provisions of the Electricity Act, 2003, Rules & Regulations made there under, Tariff Policy and National Electricity Policy.
- 4.147 The Commission observed that Section 62(4) of the Electricity Act, 2003 provides that:
- "No tariff or part of any tariff may ordinarily be amended, more frequently than once in any financial year, except in respect of any changes expressly permitted under the terms of any fuel surcharge formula as may be specified"*
- 4.148 The provision 5.3(4) of the Tariff Policy provides that:
- "Uncontrollable costs should be recovered speedily to ensure that future consumers are not burdened with past costs. Uncontrollable costs would include (but not limited to) fuel costs, costs on account of inflation taxes and cess, variations in power purchase unit costs including on account of hydro-thermal mix in case of adverse natural events."*
- 4.149 The Hon'ble ATE vide in its judgment dated November 11, 2011 in the matter of suo motu action on the letter received from Ministry of Power (O.P. 1 of 2011) has observed that the Power Purchase Cost is a major expenditure in the ARR of the Distribution Licensee. Both the Fuel and Power Purchase Cost are uncontrollable and both have to be allowed to be recovered as quickly as possible.
- 4.150 In view of the above, Commission has decided to implement a Power Purchase Cost Adjustment for generating stations having long term PPA's with DISCOMs on quarterly basis in order to adjust the changes in the Power Purchase Cost levied by these Generating Companies on the Distribution Companies.
- 4.151 The power purchase adjustment mechanism will ensure that these changes are passed on to the consumer in a timely manner instead of being deferred to the time when true up is carried out for the Discoms and then recovered with carrying cost.

4.152 The Commission does not intend to include the variation on account of short term power purchase and sale in the power purchase adjustment since it would require prudence check and would delay quarterly Power Purchase Adjustment.

4.153 The Power Purchase Adjustment would be done according to the formula given below:

#### Power Purchase Adjustment (PPA) formula

$$\text{PPA for } n^{\text{th}} \text{ Qtr. (\%)} = \frac{(A-B)*C}{\{Z * (1 - \frac{\text{Distribution losses in \%}}{100})\} * \text{ABR}}$$

Where,

A = Total units procured in (n-1)<sup>th</sup> Qtr (in kWh) from power stations having long term PPAs – (To be taken from the bills of the Gencos issued to distribution licensees)

B = Proportionate bulk sale of power from Power stations having long term PPAs in (n-1)<sup>th</sup> Qtr (in kWh)

$$= \frac{\text{Total bulk sale in (n-1)}^{\text{th}} \text{ Qtr (in kWh)} * A}{\text{Gross Power Purchase including short term power in (n-1)}^{\text{th}} \text{ Qtr (in kWh)}}$$

Total bulk sale and gross power purchase in (n-1)<sup>th</sup> Qtr to be taken from provisional accounts to be issued by SLDC by the 10<sup>th</sup> of each month

C = Actual average Power Purchase Cost (PPC) from power stations having long term PPAs in (n-1)<sup>th</sup> Qtr (Rs./ kWh) – Projected average Power Purchase Cost (PPC) from power stations having long term PPAs (Rs./ kWh) (from tariff order)

$$Z = \frac{[\{\text{Actual Power purchased from Central Generating Stations having long term PPA in (n-1)}^{\text{th}} \text{ Qtr (in kWh)} * (1 - \frac{\text{PGCIL losses in \%}}{100}) + \text{Power from Delhi Gencos including BTPS (in kWh)}\} * (1 - \frac{\text{DTL losses in \%}}{100}) - B]}{\text{in kWh}}$$

Power from Delhi Gencos including BTPS to be taken from provisional accounts to be issued by SLDC by the 10<sup>th</sup> of each month

ABR = Average Billing Rate for the year (to be taken from the Tariff Order)

Distribution Losses (in %) = Target Distribution Losses (from Tariff Order)

PGCIL Losses (in %)

$$= 100 \times \frac{\text{Approved PGCIL losses in Tariff Order (kWh)}}{\text{in kWh}}$$

Approved Long Term Power Purchase from Central Generating Stations having long term PPA in the Tariff Order (kWh)

$$\text{DTL Losses (in \%age)} = \frac{\text{Approved DTL Losses (from the Tariff Order)}}{\text{Power available at Delhi periphery (from energy balance table tariff order)}}$$

**Table 77: Schedule – Base Cost FY 2012-13\***

Name of the station	Gross power purchase	Total Cost	Average rate
ANTA GAS	119.54	40.79	3.41
AURAIYA GAS	201.23	70.49	3.50
DADRI GAS	270.35	93.32	3.45
FARAKKA	58.27	23.87	4.10
KAHALGAON-I	116.73	45.78	3.92
KAHALGAON STAGE-II	370.11	145.33	3.93
RIHAND -I	339.81	67.22	1.98
RIHAND -II	436.76	92.10	2.11
SINGRAULI	510.66	106.21	2.08
UNCHAHAR-I	79.75	26.72	3.35
UNCHAHAR-II	155.59	54.39	3.50
UNCHAHAR-III	97.15	37.66	3.88
Dadri Ext. unit 5&6	2288.11	981.02	4.29
RAPS - 5&6	173.69	59.25	3.41
NPCIL - NAPS	83.56	20.29	2.43
BTPS	1369.51	642.91	4.69
NCTPS (Dadri)	1725.33	665.05	3.85
Rajghat	316.13	157.18	4.97
GAS TURBINE	743.73	305.94	4.11
Pragati -I	698.27	227.69	3.26
BAIRA SIUL	37.10	5.31	1.43
CHAMERA-I	56.62	10.25	1.81
CHAMERA-II	89.53	23.21	2.59
DHAULIGANGA	66.70	18.29	2.74
DULHASTI	108.97	63.56	5.83
SALAL	154.51	13.84	0.90
TANAKPUR	24.99	5.39	2.16
URI-I	122.99	18.24	1.48
Sewa-II	20.16	13.08	6.49
TEHRI HEP	141.17	34.45	2.44
NJPC (SATLUJ)	293.63	63.46	2.16
TALA HEP	51.00	10.30	2.02
DVC Mejia-6	89.20	35.68	4.00
Mejia-II (Unit 7&8)	2654.79	1061.92	4.00

Name of the station	Gross power purchase	Total Cost	Average rate
Chandrapura - 7&8	885.88	354.35	4.00
Maithon (Unit-1 & 2)	0.00	0.00	0.00
Koteshwar (Unit-1, II, III, IV)	52.49	23.62	4.50
PPCL-III, Bawana	1379.95	620.98	4.50
TOWMCL	42.58	11.03	2.59
<b>GRAND TOTAL</b>	<b>16426.53</b>	<b>6250.17</b>	<b>3.80</b>

*\*Power Purchase Cost of stations from which power is being received as on March 31, 2012 have been considered for calculation of the Base Rate*

4.154 In order to give effect to the Power Purchase Adjustment (PPA) on quarterly basis the following be implemented:

- The PPA will be charged to all categories of consumers.
- The PPA for any quarter would be charged only after it is approved by the Commission.
- The weighted average base cost in Rs/kWh shall be as approved in this Tariff Order for FY 2012-13, as given below.

$$\text{BRPL} = \text{Rs. } 3.80^*$$

\* Detailed computation is given in Table 77. The Schedule will be revised in every subsequent Tariff Order.

- In case power is procured from those sources considered as surrendered in this tariff order, then PPAC shall be considered as applicable to them as well.
- The Distribution licensee shall submit to the Commission the details in respect of changes in power purchase cost of plants having long term PPAs, as listed in Table 77, for the (n-1)<sup>th</sup> quarter. Further, Auditor's Certificate along with statement indicating plant-wise details of fixed charges, variable charges, other charges and units purchased from each plant having long term PPA, as listed in Table 77, for the (n-1)<sup>th</sup> quarter shall be furnished along with the proposal of PPA surcharge submitted for the Commission's approval.
- The percentage of PPA will be rounded off to two decimal places.
- The percentage increase on account of PPA will be applied as a surcharge on the total energy and fixed charges (excluding theft bills, arrears, LPSC, E. Tax etc.) billed to a consumer of the utility.
- The bill format shall clearly identify the PPA percentage and amount of PPA billed as separate entries.

- (i) The PPA calculated for any quarter, the first quarter being July-September 2012, shall be applied prospectively for 3 months after approval is received from the Commission.
- (j) In view of the fact that PPA computed for any quarter will be applied after a time delay for a subsequent 3-month period, there would necessarily be a difference between the actual power purchase cost increase and the recovery by the distribution utility through the quarterly adjustments. The difference will be adjusted at the time of annual true-up undertaken by the Commission for that year.
- (k) This Power Purchase Adjustment (PPA) formula shall remain applicable till it is amended, reviewed, revised or otherwise amended.

## Operation and Maintenance Expenses

4.155 As per MYT Regulations 2011 the Operation and Maintenance (O&M) expenses for a licensee shall include:

- (a) Salaries, wages, pension contribution and other employee costs;
- (b) Administrative and General expenses which shall also include expense related to raising of loans;
- (c) Repairs and Maintenance; and
- (d) Other miscellaneous expenses, statutory levies and taxes (except corporate income tax).

4.156 The Commission has specified the following methodology for calculation of O&M expenses for the Control Period –

*“5.4 The Licensee shall submit the O&M expenses for the Control Period as prescribed in Multi Year Tariff filing procedure. The O&M expenses for the Base Year shall be approved by the Commission taking into account the latest available audited accounts, business plan filed by the Licensees, estimates of the actuals for the Base Year, prudence check and any other factor considered appropriate by the Commission.*

*5.5 O&M expenses permissible towards ARR for each year of the Control Period shall be determined using the formula detailed below:*

$$(a) \quad O\&M_n = (R\&M_n + EMP_n + A\&G_n) * (1 - X_n)$$

Where,

$$(i) \quad R\&M_n = K * GFA_{n-1};$$



- (ii)  $EMP_n + A\&G_n = (EMP_{n-1} + A\&G_{n-1}) * (INDX)$ ;
- (iii)  $INDX = 0.55 * CPI + 0.45 * WPI$ ;
- (iv)  $X_n$  is an efficiency factor for  $n^{th}$  year. Value of  $X_n$  shall be determined by the Commission in the MYT Tariff order based on Licensee's filing, benchmarking, approved cost by the Commission in past and any other factor the Commission feels appropriate;
- (v)  $EMP_n$  – Employee Costs of the Licensee for the  $n^{th}$  year;
- (vi)  $A\&G_n$  – Administrative and General Costs of the Licensee for the  $n^{th}$  year; and
- (vii)  $R\&M_n$  – Repair and Maintenance Costs of the Licensee for the  $n^{th}$  year.

Where,

*'K' is a constant (could be expressed in %). Value of K for each year of the Control Period shall be determined by the Commission in the MYT Tariff order based on Licensee's filing, benchmarking, approved cost by the Commission in past and any other factor considered appropriate by the Commission;*

*INDX - Inflation Factor to be used for indexing. Value of INDX shall be a combination of the Consumer Price Index (CPI) and the Wholesale Price Index (WPI) for immediately preceding five years before the base year."*

4.157 The Commission has used the methodology as specified in the MYT Regulations 2011 for calculation of O&M expenses for the Control Period. The same is detailed in the following sections.

### **Base year and Inflation Factor**

4.158 As per the MYT Regulations 2011, the O&M expenses for the Base Year shall be approved by the Commission taking into account the latest available audited accounts, business plan filed by the Licensees, estimates of the actuals for the Base Year, prudence check and any other factor considered appropriate by the Commission.

4.159 The Commission directed the Petitioner to submit head wise break-up of the employee, R&M and A&G expenses for FY 2006-07 to FY 2011-12 and has examined the same for determination of the base year expenses. The value of the Employee, R&M and A&G expenses for the Base Year as arrived at by the Commission are detailed in the respective sections dealing with these expenses.

4.160 As per Regulation 5.5 of the MYT Regulations 2011, the inflation factor (INDX) to be used for projection of employee and A&G expenses shall be a combination of the Consumer Price Index (CPI) and the Wholesale Price Index (WPI) for immediately preceding five years before the base year.

4.161 The CPI and WPI values for calculation of the inflation factor are given in the table below.

**Table 78: Actual CPI and WPI**

Year	CPI (Overall)	% Growth	WPI (Overall)	% Growth
2005-06	117.12		104.47	
2006-07	125.00	6.73%	111.35	6.59%
2007-08	132.75	6.20%	116.63	4.74%
2008-09	144.83	9.10%	126.02	8.05%
2009-10	162.75	12.37%	130.82	3.81%
2010-11	179.75	10.45%	143.33	9.56%
Average		8.97%		6.55%

Source: Ministry of Labour Website, <http://labourbureau.nic.in> and Ministry of Commerce and Industry Website, <http://eaindustry.nic.in/>

4.162 Based on these values, the Commission has calculated the annual growth in values of CPI (overall) for Industrial Workers and WPI (overall) for the period FY 2006-07 to FY 2010-11 and has considered the same for determination of indices during the base year and the Control Period. The summary of the same is provided in the table below.

**Table 79: Projected CPI and WPI during the Control Period**

Year	CPI (Overall)	Projected Growth in CPI	WPI (Overall)	Projected Growth in WPI
2011-12 (Base Year)	195.87	8.97%	152.71	6.55%
2012-13	213.44	8.97%	162.72	6.55%
2013-14	232.59	8.97%	173.37	6.55%
2014-15	253.45	8.97%	184.73	6.55%

4.163 The Commission has determined the inflation factor for the nth year (INDX<sub>n</sub>) using a weighted average of CPI and WPI as specified in the MYT Regulations 2011. The inflation factor is then used to calculate the inflation factor for each year (INDX<sub>n</sub>/INDX<sub>n-1</sub>) as shown in the table below.

**Table 80: Inflation factor for the Control Period approved by the Commission**

Year	Index (Consolidated)	Escalation Factor
2010-11	163.36	
2011-12	176.45	1.08
2012-13	190.62	1.08
2013-14	205.94	1.08
2014-15	222.53	1.08

**Employee Expenses****Petitioner's Submission**

- 4.164 BRPL has submitted that the proposed methodology of allowance of employees expenses based on the formula of  $EMP_n - 1 * INDX$  only addresses the increase required in employees cost due to inflation but fails to address the increase required for following :
- 4.165 There are two structures of employees with the Licensee BRPL i.e. i) FRSR Structure comprising of the employees who were transferred from erstwhile Delhi Vidyut Board. Any increase in the salary of FRSR employees is uncontrollable in the hands of licensee. ii) Non-FRSR Structure – The formula in MYT Regulations, 2011 of allowance in increase in the salary does not address the increase required for the factors beyond average inflation like
- (a) current inflation,
  - (b) increase required in proportion to increase in consumers,
- 4.166 The total employee expenses for the Control Period as projected by BRPL, based on the estimate of Rs 288.7 Cr for FY 2011-12 are shown in the following table.

**Table 81: Employee expenses for Second Control Period (Rs. Cr)**

Particulars	FY 2011-12 Revised Estimates as per petition	FY 2012-13 Projections as per petition	FY 2013-14 Projections as per petition	FY 2014-15 Projections as per petition
Estimated base Employee Cost	288.7			
Inflation Index	8.41%	8.41%	8.41%	8.41%
Number of consumers	1777864	1916920	2067077	2229135
% increase		7.82%	7.83%	7.84%
Total Employee Cost		337.4	394.4	461.1

- 4.167 The Petitioner has not submitted the details of the allocation of employee expenses in wheeling and retail supply business.

**Commission's Analysis**

- 4.168 The Commission has determined employee expenses of the Petitioner for the Control Period in line with the formula specified in the MYT Regulations 2011 –

$$EMP_n + A \& G_n = (EMP_{n-1} + A \& G_{n-1}) * (INDX);$$

Where,

$$INDX = 0.55 * CPI + 0.45 * WPI;$$

$EMP_n$  – Employee Costs of the Licensee for the  $n^{th}$  year;

*INDX - Inflation Factor to be used for indexing. Value of INDX shall be a combination of the Consumer Price Index (CPI) and the Wholesale Price Index (WPI) for immediately preceding five years before the base year."*

- 4.169 As per the MYT Regulations 2011, the O&M expenses for the Base Year shall be approved by the Commission taking into account the latest available audited accounts, business plan filed by the Licensees, estimates of the actuals for the Base Year, prudence check and any other factor considered appropriate by the Commission.
- 4.170 The Commission directed the Petitioner to submit the bifurcation of various heads under employee expenses for FY 2006-07 to FY 2011-12 and has examined the same for determination of the base employee expenses. The Petitioner was also directed to submit reasons with justification for hike/fluctuations in the employee costs during FY 2006-07 to FY 2011-12.
- 4.171 The Commission is of the view that the expenses pertaining to FY 2011-12 seem to be abnormally high in some of the DISCOMs as compared to the trend of the expenses observed during the previous financial years. Hence the projections have been made by considering the trend of expenses for the period from FY 2007-08 to FY 2010-11.
- 4.172 The Petitioner was further directed to identify any arrears and component wise impact of the 6<sup>th</sup> Pay Commission on employee cost from FY 2006-07 onwards. The Petitioner submitted impact of the 6<sup>th</sup> Pay Commission from FY 2006-07 to FY 2009-10. The Petitioner, vide letter dated May 23, 2012 and May 30, 2012, submitted that no arrears were included in the employee cost for FY 2010-11.
- 4.173 The Commission calculated the employee expenses for the preceding financial years after deducting the Pay Commission Arrears and including the component wise impact of the 6<sup>th</sup> Pay Commission as submitted by the Petitioner to analyze the trend in the employee expenses.
- 4.174 The Commission also subtracted the SVRS pensions from the total employee expenses for analyzing the trend in employee expenses and arriving at the base employee expenses. The same shall be allowed for each year based on the actual SVRS pensions paid out.

**Table 82: Revised Employee Expenses (Rs Cr.) calculated by the Commission**

Particulars	2006-07	2007-08	2008-09	2009-10	2010-11
Gross Employee cost submitted by the Petitioner	153.89	172.88	195.97	330.16	262.1
Less: Arrears paid out			8.9	135.73	
Add: Impact of 6th Pay Commission	27.06	27.91	36.8	46.13	
Less: SVRS	16.35	14.16	10.87	18.27	9.96
<b>Net employee expenses</b>	<b>164.59</b>	<b>186.60</b>	<b>213.00</b>	<b>222.28</b>	<b>252.14</b>

- 4.175 The Commission also analysed the year-on-year increase in the normalized employee cost arrived at after making the above adjustments for FRSR and non-FRSR employees separately.

**Table 83: Analysis of Revised Employee Expenses (Rs Cr.) calculated by the Commission**

Particulars	2006-07	2007-08	2008-09	2009-10	2010-11
Normalized FRSR employee cost	112.64	123.99	150.16	152.56	181.28
Normalized Non-FRSR employee cost	51.95	62.61	62.84	69.72	70.856
Total net employee expenses	164.59	186.6	213	222.28	252.136
Y-o-Y increase employee cost		13%	14%	4%	13%

- 4.176 The Commission also calculated the employee cost per unit of sales and employee cost per consumer served for FY 2006-07 to FY 2010-11 for the Petitioner to take into account the impact of sales and number of consumers on the employee cost of the Petitioner. The Commission also compared the same with the employee cost per unit of sales and employee cost per consumer served for other DISCOMs. The results of the comparison are shown in the table below.

**Table 84: Employee Cost per unit of sales as calculated by Commission**

	FY 2006-07	FY 2007- 08	FY 2008-09	FY 2009-10	FY 2010-11	% Inc
TPDDL	20%	0.34	0.38	0.39	0.41	20%
BYPL	3%	0.42	0.44	0.41	0.44	3%
BRPL	5%	0.29	0.30	0.28	0.29	5%
<i>Average Increase</i>						<b>9%</b>

**Table 85: Employee Cost per consumer served**

	FY 2006-07	FY 2007- 08	FY 2008-09	FY 2009-10	FY 2010-11	% Inc
TPDDL	1695	1844	1896	1975	2180	29%
BYPL	1454	1509	1658	1605	1742	20%
BRPL	1509	1592	1528	1455	1527	1%
<i>Average Increase</i>						<b>17%</b>

- 4.177 As can be seen from the above tables the increase in employee cost of the Petitioner, between FY 2006-07 and FY 2010-11, measured in terms of both employee cost per unit of sales and employee cost per consumer served, is the lower than that of other DISCOMs.
- 4.178 The Commission has benchmarked the employee cost of the Petitioner with other licensees in Delhi to arrive at the employee cost of the Base Year using the methodology as detailed below.
- 4.179 In case the increase in employee cost per unit of sales for a licensee is greater than the average increase in employee cost per unit of sales across the three DISCOMs, the employee cost per unit of sales for FY 2010-11 is worked out by applying the average increase in employee cost per unit of sales on the employee cost per unit of sales of FY 2006-07. The same is multiplied with sales for FY 2010-11 to estimate the employee expenses for FY 2010-11. In case the increase in employee cost per unit of sales for a licensee is less than the average increase in employee cost per unit of sales across the three DISCOMs, the actual employee expenses for FY 2010-11 is used to estimate the employee expenses for FY 2010-11. (A)

- 4.180 In case the increase in employee cost per consumer for a licensee is greater than the average increase in employee cost per consumer across the three DISCOMs, the employee cost per consumer for FY 2010-11 is worked out by applying the average increase in employee cost per consumer on the employee cost per consumer of FY 2006-07. The same is multiplied with the number of consumer for FY 2010-11 to estimate the employee expenses for FY 2010-11. In case the increase in employee cost per consumer for a licensee is less than the average increase in employee cost per unit of sales across the three DISCOMs, the actual employee expenses for FY 2010-11 is used to estimate the employee expenses for FY 2010-11. (B)
- 4.181 The employee expenses for FY 2010-11 are calculated by taking a weighted average (using 50% weights) of the employee expenses estimated in step (A) and (B).
- 4.182 The employee expenses for the Base Year i.e. FY 2011-12 are calculated by escalating employee expenses for FY 2010-11 by the inflation factor arrived at in Table 80.
- 4.183 The employee cost for the Base Year as calculated for the Petitioner using the above methodology is given the table below:

**Table 86: Estimation of Base Employee Expenses**

Particulars	UoM	
Employee Expenses per unit sales - Actual in FY 2006-07	Rs/unit sales	0.28
Employee Expenses per consumer - Actual in FY 2006-07	Rs/consumer	1509
Increase considered in Employee Expenses per unit sales	%	5%
Increase considered in Employee Expenses per consumer	%	1%
Employee Expenses per unit sales (A) - Estimated	Rs/unit sales	0.29
Employee Expenses per consumer (B) - Estimated	Rs/consumer	1527
Employee Expenses (calculated on basis of A) (C)	Rs Cr	252.14
Employee Expenses (calculated on basis of B) (D)	Rs Cr	252.14
Estimated Employee Expenses for FY 2010-11 (weighted average of C and D)	Rs Cr	252.14
Inflation factor		1.08
Employee Expenses for the base year (FY 2011-12)	RS Cr	272.34

- 4.184 For the calculation of the employee cost for each year of the Control Period the Commission has escalated the employee cost for the Base Year, determined as described above, by the inflation factor mentioned in Table 80.
- 4.185 The capitalisation of employee expenses has been discussed later in this Tariff Order in the section “Capitalisation of Expenses and Interest charges”.
- 4.186 The approved gross employee expenses of the Petitioner for each year of the Control Period are as shown below.

**Table 87: Employee Expenses (Rs Cr.) approved by the Commission**

Particulars	FY 2012-13	FY 2013-14	FY 2014-15
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Particulars	FY 2012-13	FY 2013-14	FY 2014-15
Gross Employee Expenses	294.21	317.86	343.46
Less: Capitalisation	29.42	31.79	34.35
<b>Net Employee Expenses</b>	<b>264.78</b>	<b>286.07</b>	<b>309.11</b>

SVRS Related Expenses

- 4.187 In the MYT petition, the Petitioner has proposed yearly payments towards terminal benefits and pension liabilities arising to those who opted for VRS/VSS formulated by the Petitioner. The Commission has already discussed the treatment of VRS/VSS pension related expenses in the truing up section. The Commission follows the same approach, as discussed in the truing up section for the treatment of such expenses during the Control Period.
- 4.188 The petitioner has not projected VRS/VSS pension liability for the Control Period. The Commission has provisionally approved the SVRS pension at the same level as was paid by the Petitioner during FY 2011-12, as per the audited accounts for FY 2011-12 submitted by the Petitioner.

**Table 88: Approved SVRS Pension Expenses (Rs. Cr)**

Particulars	FY 2012-13	FY 2013-14	FY 2014-15
SVRS Pension	7.39	7.39	7.39

- 4.189 The Commission provisionally allows the monthly pension provisionally subject to the outcome of the Tribunal Order with the condition that any refund/relief provided on this account to the Petitioner by the Trust will be available for adjustment in the future employee expenses.

**Allocation into Wheeling and Retail Supply**

- 4.190 For the purpose of allocating the net employee expenses approved in wheeling and retail supply business, the Commission has followed the same approach as followed in the previous MYT Order:
- (a) The Commission first allocated the net employee expenses approved for the FY 2012-13 - FY 2014-15 into the different employee functions in the proportion of the number of employees in the respective function to the total number of employees as submitted by the Petitioner, as shown below:

**Table 89: Number of employees**

Particulars	FY 2012-13	FY 2013-14	FY 2014-15
O&M	3057	3297	3555
Technical Services	227	244	264
MRBD	233	251	270
Business	2139	2307	2487
Shared	1070	1153	1244
<b>Total</b>	<b>6725</b>	<b>7252</b>	<b>7820</b>



- (b) Thereafter, the Commission has allocated the approved employee expenses apportioned to different employee functions between Wheeling Business and Retail Supply Business based on the allocation statement submitted by the Petitioner in its MYT Petition (for the Previous Control Period), as shown in table below:

**Table 90: Statement of Allocation of Employee Cost between Wheeling and Retail Supply**

Functions	Wheeling	Retail Supply
O&M	90%	10%
Technical Services	90%	10%
MRBD	0%	100%
Business	0%	100%
Shared	50%	50%

- 4.191 The Commission has also allocated the pension liabilities approved for the Control Period in the proportion of net employee cost allocated to the respective businesses.
- 4.192 The summary of employee cost approved by the Commission for Wheeling and Retail Supply business is shown below.

**Table 91: Approved Allocation of Employee Cost (Rs. Cr)**

Particulars	FY 2012-13	FY 2013-14	FY 2014-15
Net Employee Cost (Wheeling)	137.43	148.48	160.43
Pension liability (Wheeling)	3.84	3.84	3.84
Total – Wheeling	141.26	152.31	164.27
Net Employee Cost (Retail Supply)	127.36	137.60	148.68
Pension liability (Retail Supply)	3.55	3.55	3.55
Total – Retail Supply	130.91	141.15	152.23

## Administrative and General Expenses

### Petitioner's Submission

- 4.193 BRPL has submitted that the methodology adopted by the Commission in MYT Tariff Regulations, 2011 does not address other factors which are not in control of BRPL. Some of the examples of uncontrollable factors are statutory implications arising such as increase in minimum wage rate under the Minimum Wages Act, inflation
- 4.194 BRPL has projected the A&G expenses for the second control period by estimating the base A&G expenses for FY 2011-12 at Rs 107.1 Cr and escalating the same by the projected inflation rate and impact of increase in consumer base.
- 4.195 The total A&G expenses for the second control period as projected by BRPL is shown in the table below.

Table 92: A&amp;G expenses (Rs. Cr) submitted by the Petitioner

Particulars	FY 2011-12 Revised Estimates as per petition	FY 2012-13 Projections as per petition	FY 2013-14 Projections as per petition	FY 2014-15 Projections as per petition
Estimated base	107.1			
Inflation Index	8.41%	8.41%	8.41%	8.41%
Number of	1777864	1916920	2067077	2229135
% increase		7.82%	7.83%	7.84%
Total Employee		125.2	146.4	171.1

4.196 The Petitioner has not submitted the details of the allocation of A&G expenses in wheeling and retail supply business.

### Commission's Analysis

4.197 The Commission has determined A&G expenses of the Petitioner for the Control Period in line with the formula specified in the MYT Regulations 2011 –

$$EMP_n + A\&G_n = (EMP_{n-1} + A\&G_{n-1}) * (INDX);$$

Where,

$$INDX = 0.55 * CPI + 0.45 * WPI;$$

$EMP_n$  – Employee Costs of the Licensee for the  $n^{th}$  year;

*INDX - Inflation Factor to be used for indexing. Value of INDX shall be a combination of the Consumer Price Index (CPI) and the Wholesale Price Index (WPI) for immediately preceding five years before the base year."*

4.198 In line with the approach followed by it for employee expenses, the Commission has considered the A&G expenses for FY 2006-07 to FY 2010-11 for estimation of base year expenses of the DISCOMs. The Commission has examined the detailed head wise break-up of A&G expenses for FY 2006-07 to FY 2010-11 and reasons for variation in the A&G sub-heads given by the Petitioner in the additional submissions made by it vide letters dated May 23, 2012 and May 20, 2012 for determination of the base A&G expenses.

4.199 The Commission has removed abnormal expenses such as provision for retirement of fixed assets, Loss on Sale/Discarding of Assets, Provision for Doubtful debts, Inventory of stores and spares written off, bad debts written off, transfer from opening provision of doubtful debts and has added lease rentals transferred from R&M expenses to the total A&G expenses as per submission of the Petitioner.

Table 93: Revised A&amp;G expenses (Rs. Cr) calculated by the Commission

Particulars	2006-07	2007-08	2008-09	2009-10	2010-11
A&G expenses as per audited accounts	136.82	157.58	108.28	144.94	109.62
Less: Provision for retirement of fixed assets	-	-	-	14.48	12.29

Particulars	2006-07	2007-08	2008-09	2009-10	2010-11
Less: Loss on Sale/Discarding of Assets	1.18	2.25	2.23	0.22	2.88
Less: Provision for Doubtful Debts	76.05	91.99	41.14	-	20.24
Less: Bad Debts Written off	0.00	-	-	-	199.59
Less: Inventory of Stores & Spares Written Off	-	-	-	-	-
Less: Transfer from opening provision for doubtful debts	-	-	-	78.24	(199.59)
Less: Fines and Penalties inc under Sundry Expenses				1.68	
Add: Lease Rentals transferred from R&M cost	1.57	1.55	2.42	1.54	1.55
Net A&G Cost	61.16	64.89	67.33	51.86	75.76

4.200 The Commission also calculated the A&G cost per unit of sales and A&G cost per consumer served for FY 2006-07 to FY 2010-11 for the Petitioner to take into account the impact of sales and number of consumers on the A&G cost of the Petitioner. The Commission also compared the same with the A&G cost per unit of sales and A&G cost per consumer served for other DISCOMs. The results of the comparison are shown in the table below.

**Table 94: A&G Cost per unit of sales as calculated by Commission**

	FY 2006-07	FY 2007- 08	FY 2008-09	FY 2009-10	FY 2010-11	% Inc
TPDDL	0.07	0.07	0.07	0.08	0.07	7%
BYPL	0.13	0.13	0.11	0.09	0.10	-26%
BRPL	0.10	0.10	0.10	0.07	0.09	-15%
<i>Average Increase</i>						<b>-11%</b>

**Table 95: A&G Cost per consumer as calculated by Commission**

	FY 2006-07	FY 2007- 08	FY 2008-09	FY 2009-10	FY 2010-11	% Inc
TPDDL	339	356	343	388	388	14%
BYPL	439	467	435	334	380	-13%
BRPL	561	554	483	339	459	-18%
<i>Average Increase</i>						<b>-6%</b>

4.201 As can be seen from the above tables, the increase (negative) in A&G cost of the Petitioner between FY 2006-07 and FY 2010-11, measured in terms of A&G cost per unit of sales and A&G cost per consumer served, was -15% and -18% respectively as compared to the average increase, across the three Discoms, of -11% in A&G cost measured in terms of A&G cost per unit of sales and -6% A&G cost per consumer served.

4.202 The Commission has benchmarked the A&G cost of the Petitioner with other licensees in Delhi to arrive at the A&G cost of the Base Year using the following methodology.

4.203 In case the increase in A&G cost per unit of sales for a licensee is greater than the average increase in A&G cost per unit of sales across the three DISCOMs, the A&G cost per unit of sales for FY 2010-11 is worked out by applying the average increase

in A&G cost per unit of sales on the A&G cost per unit of sales of FY 2006-07. The same is multiplied with sales for FY 2010-11 to estimate the A&G expenses for FY 2010-11. In case the increase in A&G cost per unit of sales for a licensee is less than the average increase in A&G cost per unit of sales across the three DISCOMs, the actual A&G expenses for FY 2010-11 is used to estimate the A&G expenses for FY 2010-11. (A)

- 4.204 In case the increase in A&G cost per consumer for a licensee is greater than the average increase in A&G cost per consumer across the three DISCOMs, the A&G cost per consumer for FY 2010-11 is worked out by applying the average increase in A&G cost per consumer on the A&G cost per consumer of FY 2006-07. The same is multiplied with the number of consumer for FY 2010-11 to estimate the A&G expenses for FY 2010-11. In case the increase in A&G cost per consumer for a licensee is less than the average increase in A&G cost per unit of sales across the three DISCOMs, the actual A&G expenses for FY 2010-11 is used to estimate the A&G expenses for FY 2010-11. (B)
- 4.205 The A&G expenses for the FY 2010-11 are calculated by taking a weighted average (using 50% weights) of the A&G expenses estimated in step (A) and (B).
- 4.206 The A&G expenses for the Base Year i.e. FY 2011-12 are calculated by escalating A&G expenses for FY 2010-11 by the inflation factor mentioned in Table 80.

**Table 96: Estimation of Base A&G Expenses**

Particulars	UoM	
A&G Expenses per unit sales - Actual in FY 2006-07	Rs/unit sales	0.10
A&G Expenses per consumer - Actual in FY 2006-07	Rs/consumer	560.75
Increase considered in A&G Expenses per unit sales	%	-15%
Increase considered in A&G Expenses per consumer	%	-18%
A&G Expenses per unit sales (A) - Estimated	Rs/unit sales	0.09
A&G Expenses per consumer (B) - Estimated	Rs/consumer	459
A&G Expenses (calculated on basis of A) (C)	Rs Cr	75.76
A&G Expenses (calculated on basis of B) (D)	Rs Cr	75.76
Estimated A&G Expenses for FY 2010-11 (weighted average of C and D)	Rs Cr	75.76
Inflation Factor		1.08
<b>A&amp;G Expenses for FY 2011-12</b>	<b>Rs Cr</b>	<b>81.83</b>

- 4.207 The Commission has calculated A&G expenses for each year of the Second Control Period by considering the revised A&G Expenses of the base year (FY 2011-12) as arrived above and has escalated the same as per the escalation factor mentioned in Table 80.
- 4.208 The capitalisation of A&G expenses has been discussed later in this Tariff Order in the section “Capitalisation of Expenses and Interest charges”.

4.209 The Gross A&G Expenses as approved by the Commission is given in the table below.

**Table 97: A&G expenses (Rs. Cr) approved by the Commission**

Particulars	FY 2012-13	FY 2013-14	FY 2014-15
Gross A&G Expenses	88.40	95.51	103.20

### Allocation into Wheeling and Retail Supply

4.210 For the purpose of allocating the A&G expenses approved in wheeling and retail supply business, the Commission has followed the same approach as followed in the previous MYT Order:

- The Commission has first allocated the net A&G expenses approved for each year of the Control Period into different components of A&G expenses considering the ratio of the value approved for the respective component in FY 2006-07 with respect to total A&G expenses approved in FY 2006-07 after truing-up.
- Thereafter, the Commission has allocated the approved employee expenses apportioned to different employee functions between Wheeling Business and Retail Supply Business based on the allocation statement submitted by the Petitioner in its MYT Petition (for the previous Control Period).
- Thereafter, the Commission has allocated the expenses of each component into Wheeling and Retail Supply business based on the allocation statement submitted by the Petitioner in its MYT Petition (for the previous Control Period), as shown below:

**Table 98: Allocation of A&G Expenses between Wheeling & Retail Supply Business**

Particulars	Wheeling	Retail Supply
<b>Administrative Expenses</b>		
Rent rates and taxes	50%	50%
Insurance	80%	20%
Revenue Stamp Expenses Account	50%	50%
Consultancy Charges	10%	90%
Technical Fees and Other Professional Charges	50%	50%
Conveyance And Travel	64%	36%
DERC License fee	50%	50%
Vehicle related expenses	64%	36%
<b>Other Expenses</b>		
Fee And Subscriptions Books And Periodicals	50%	50%
Printing And Stationery	30%	70%
Advertisement Expenses	30%	70%

Particulars	Wheeling	Retail Supply
Contributions/Donations To Outside Institute/Association	10%	90%
Electricity Charges To Offices & Establishments	50%	50%
Water Charges	50%	50%
Entertainment Charges	50%	50%
Miscellaneous Expenses	50%	50%
Legal Charges	10%	90%
Auditor's Fee	50%	50%
Material Related Expenses	90%	10%

4.211 The Summary of the A&G cost approved by the Commission for Wheeling and Retail Supply business is shown below.

**Table 99: Approved Allocation of A&G Cost (Rs. Cr)**

Particulars	FY 2012-13	FY 2013-14	FY 2014-15
Wheeling	37.67	40.70	43.98
Retail Supply	50.73	54.80	59.22
<b>Total</b>	<b>88.40</b>	<b>95.51</b>	<b>103.20</b>

## Repairs and Maintenance Expenses

### Petitioner's Submission

- 4.212 BRPL has submitted the methodology adopted by the Commission does not address other factors which are not in control of BRPL – for example statutory implications arising such as increase in minimum wage rate under the Minimum Wages Act, inflation etc.
- 4.213 For projecting the R&M expenses for the Control Period, BRPL has considered the 'K' factor as 3.55% as specified in the MYT Order for the first Control Period (FY 2007-08 to FY 2011-12). Accordingly, the R&M Expenses for the Control Period as tabulated below:

**Table 100: R&M expenses for Second Control Period (Rs. Cr)**

Particulars	FY 2012-13 Projections as per petition	FY 2013-14 Projections as per petition	FY 2014-15 Projections as per petition
Opening GFA	5,151.1	5,938.9	6,735.6
K Factor	3.55%	3.55%	3.55%
<b>R&amp;M Expenses</b>	<b>182.9</b>	<b>210.8</b>	<b>239.1</b>

- 4.214 The Petitioner has not submitted the details of the allocation of A&G expenses in wheeling and retail supply business and only allocated O&M Expenses.

**Commission's Analysis**

- 4.215 As per the MYT Regulations 2011, the Repairs and Maintenance (R&M) Expenses of the Petitioner for the Control Period are to be determined based on the following formula:

$$R\&M_n = K * GFA_{n-1}$$

Where,

*R&M<sub>n</sub> is Repair and Maintenance Costs of the Licensee for the nth year;  
'K' is a constant (could be expressed in %).*

*Value of K for each year of the Control Period shall be determined by the Commission in the MYT Tariff order based on Applicant's filing, benchmarking, approved cost by the Commission in past and any other factor considered appropriate by the Commission.*

- 4.216 The Petitioner was directed to submit the head wise break-up of the R&M expenses for FY 2006-07 to FY 2011-12 and provide reasons for increase or decrease in various R&M sub-heads. The Commission examined the additional information submitted by the Petitioner for determination of the R&M expenses for the base year.
- 4.217 In the additional information dated June 08, 2012 the Petitioner submitted that the rise in R&M-Machinery expenses from Rs 29.06 Cr in FY 2009-10 to 47.74 Cr in FY 2010-11 was mainly due to repair work in view of the Commonwealth Games. The rise in Consumption (Stores & Spares) from Rs. 29.21 Cr in FY 2009-10 to Rs. 42.85 Cr in FY 2010-11 was due to increased faults as a result of digging works undertaken by civic agencies for the preparation of Commonwealth games. The total amount of the expenditure incurred on these repairs in FY 2010-11 is at Rs. 6.40 Cr. The Commission has reduced the same from R&M expenses of 2010-11 to calculate the 'K-factor. Further, the Commission has removed lease rentals from R&M expenses and added it to the A&G expenses for the projection of base year R&M expenses.

**Table 101: R&M Expenses for FY 2007-08 to FY 2011-12**

Particulars	FY 2007 08	FY 2008 09	FY 2009-10	FY 2010-11	FY 2011-12
R&M expenses as per audited accounts	70.9	74.2	65.0	98.5	114.75
Less: Additional expenses incurred on account of CWG				6.40	
Less: Lease Rentals transferred to A&G	1.6	2.4	1.5	1.6	1.35
<b>Net R&amp;M Expenses</b>	<b>69.4</b>	<b>71.8</b>	<b>63.4</b>	<b>90.5</b>	<b>113.4</b>

- 4.218 The Commission has calculated the actual 'K' factor observed for the Petitioner for each year from FY 2007-08 to FY 2011-12 considering the R&M expenses and the opening GFA for the year as approved by the Commission in its previous Tariff Orders. The R&M expenses and 'K' factor for each year from FY 2007-08 to FY 2011-12 is shown in the table below.



**Table 102: 'K' factor as approved by Commission for FY 2007-08 to FY 2011-12**

Particulars	FY 2007-08	FY 2008-09	FY 2009-10	FY 2010-11	FY 2011-12
Opening GFA (as approved by the Commission) (Rs Cr)	2030	2558	3099	3649	4099
Total R&M Expenses (Rs Cr)	69.4	71.8	63.4	90.5	113.4
<b>K Factor (on approved GFA)</b>	<b>3.42%</b>	<b>2.80%</b>	<b>2.05%</b>	<b>2.48%</b>	<b>2.77%</b>

- 4.219 The Commission observed that the 'K'-factor for FY 2007-08 has been much higher compared to 'K'-factor from FY 2008-09 onwards. The 'K'-factor for FY 2007-08 was out of trend and found to be even higher than the average 'K' from FY 2008-09 to FY 2011-12. Therefore, the Commission has determined the value of 'K' factor for the Second Control Period on the basis of the average K factor observed for the Petitioner during FY 2008-09 to FY 2011-12 which display an even trend. The Commission has thus decided to restrict the value of 'K' factor at 2.53% for each year of the Second Control Period.
- 4.220 The Commission has determined the R&M Expenses for each year of the Control Period, considering the opening level of GFA as approved by the Commission for each year of the Control Period and the 'K' factor of 2.53% as shown in Table 103 below.
- 4.221 The summary of R&M Expenses approved by the Commission for the Second Control Period is as shown below.

**Table 103: R&M Expenses (Rs. Cr) approved by the Commission**

Particulars	FY 2012-13	FY 2013-14	FY 2015-16
Opening GFA (as approved by Commission)	4513.03	4996.53	5296.53
K Factor (%)	2.53%	2.53%	2.53%
R&M Expenses	114.16	126.39	133.98

### Allocation into Wheeling and Retail Supply

- 4.222 For the purpose of allocating the R&M expenses approved above, the Commission has considered the following approach:
- The Commission has first allocated the total R&M expenses approved for each year of the Control Period under different heads of R&M expenses, in the proportion of values of those respective heads in the R&M expenses for FY 2006-07 to the total R&M expenses approved for FY 2006-07 by the Commission, after truing up.
  - Thereafter, the Commission has allocated respective heads into Wheeling and Retail Supply business based on the allocation statement submitted by the Petitioner in its MYT Petition (of the previous Control Period), as shown below:

**Table 104: Allocation of R&M Expenses between Wheeling & Retail Supply Business**

Particulars	Wheeling	Retail Supply
Plant & Machinery	100%	0%
Building	64%	36%
Vehicles	64%	36%
Lines, Cables & Networks	100%	0%
Lease Rental	100%	0%
Labour	90%	10%
Any Other	64%	36%

4.223 The Summary of the R&M expenses approved by the Commission for Wheeling and Retail Supply business is shown below.

**Table 105: Approved Allocation of R&M Expenses (Rs. Cr)**

Particulars	FY 2012-13	FY 2013-14	FY 2014-15
R&M – Wheeling	107.38	118.89	126.02
R&M - Retail Supply	6.78	7.50	7.95
<b>Total</b>	<b>114.16</b>	<b>126.39</b>	<b>133.98</b>

## Efficiency Factor

### Petitioner's Submission

4.224 The Petitioner has not proposed any efficiency factor for the Control Period.

### Commission's analysis

4.225 As per the MYT Regulations 2011 for determination of distribution tariff, O&M expenses for the Control Period are to be determined using the following methodology:

*“The O&M expenses for the nth year of the Control Period shall be approved based on the formula shown below:*

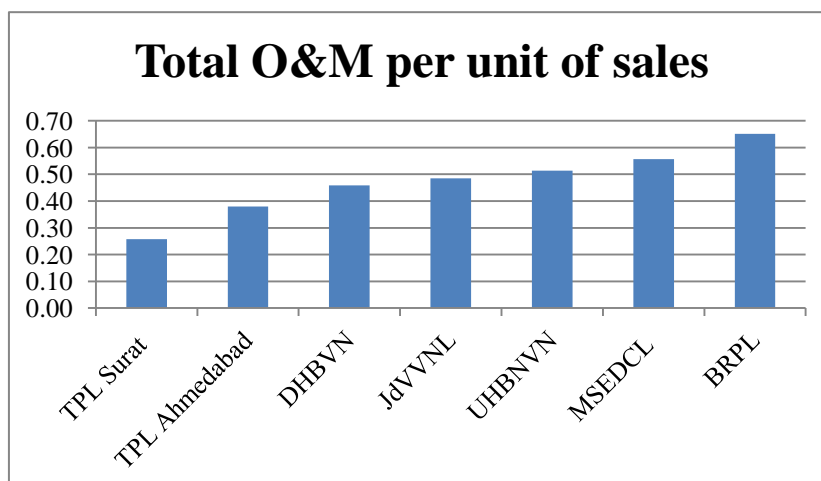
$$(a) O\&M_n = (R\&M_n + EMP_n + A\&G_n) * (1 - X_n)$$

*Where  $X_n$  is an efficiency factor for nth year. Value of  $X_n$  shall be determined by the Commission in the MYT Tariff Order based on Licensee's filing; benchmarking, approved cost by the Commission in past and any other factor the Commission feels appropriate.”*

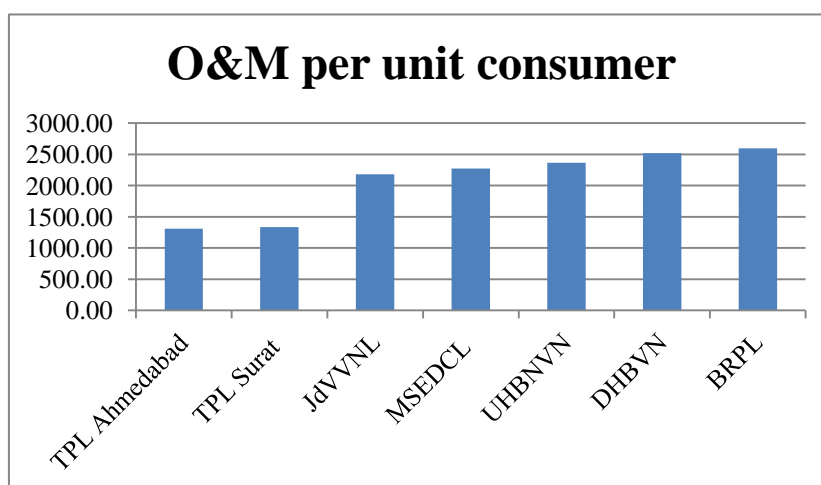
4.226 The Commission is of the view that the O&M trajectory for the Control Period shall be decided considering an expected annual efficiency improvement factor.

4.227 The Commission has benchmarked the O&M expenses of the Petitioner against O&M expenses of the distribution licensees in other States. The Commission has observed that the O&M expenses of the Petitioner are higher than those of other distribution utilities. The summary of the relative comparison of O&M expenses of the Petitioner vis-à-vis the other distribution utilities for FY 2010-11 is shown below:

**Figure 1: Comparative Chart on O&M Expense per unit of sales (Rs/Unit) across various utilities**



**Figure 2: Comparative chart on O&M Expense per unit consumer (Rs/consumer) across various utilities**



4.228 The Commission expects the Petitioner to improve its performance considering the significant investment made during the Control Period. Hence, the Commission has determined the efficiency improvement factor as 2%, 3% and 4% for FY 2012-13, FY 2013-14 and FY 2014-15 respectively.

### Total Operation & Maintenance Expenses

4.229 The summary of total O&M Expenses approved by the Commission for the Control Period is provided in the table below.

Table 106: O&amp;M Expenses (Rs Cr.) approved by the Commission

Particulars	FY2012-13	FY2013-14	FY2014-15
Employee Cost	264.78	286.07	309.11
R&M Expenses	114.16	126.39	133.98
A&G Expenses	88.40	95.51	103.20
Total O&M expenses	467.34	507.97	546.29
Efficiency Improvement	2%	3%	4%
Add SVRS Pension	7.39	7.39	7.39
<b>Net O&amp;M Expenses</b>	<b>465.39</b>	<b>500.12</b>	<b>531.83</b>

\*Efficiency factor not applied on SVRS pension

## Capital Investment

### Petitioner's Submission

4.230 The Petitioner has submitted that it has proposed its capital expenditure plan for FY 2012-13 to FY 2014-15 based on the load growth pattern and other planning criteria. The Petitioner has proposed additional capital expenditure on account of the following reasons:

- Load growth and system improvement
- Capital expenditure required for spill over works
- Bulk load development
- Research & Development works

4.231 In addition to the above, the Petitioner has submitted that the demand for electricity in its area of supply has increased on account of increase floor area ratio by the DDA and regularization of unauthorized colonies by the State Government.

4.232 The capital expenditure plan proposed by the Petitioner for FY 2012-13 to FY 2014-15 is given in the table below:

Table 107: Proposed Capital Investment during the Second Control Period (Rs. Cr)

Sr No	Scheme	FY 2012-13	FY 2013-14	FY 2014-15
1	EHV Schemes	171.00	202.00	212.00
2	Distribution Schemes	357.00	453.00	461.00
3	Capacitor Schemes	30.00	6.00	6.00
4	SCADA & DMS	-	-	-
5	GIS	-	-	-
6	AMR & DT Metering	-	-	-
7	Meters & Accessories	80.00	100.00	88.00
8	IT & Communication	4.00	4.00	4.00
9	Land & Building	10.00	6.00	10.00
10	Vehicles	2.00	2.00	2.00
11	Test Equipments, Tools & Tackles	2.00	1.00	1.00

Sr No	Scheme	FY 2012-13	FY 2013-14	FY 2014-15
12	Automation	8.00	6.00	8.00
13	Pilot Projects on new technologies	5.00	3.00	5.00
14	Net work Studies	2.00	1.00	1.00
	<b>Total</b>	<b>671.00</b>	<b>784.00</b>	<b>798.00</b>

### Commission's Analysis

- 4.233 The Commission provisionally allows Rs 300.00 Cr as the capital expenditure each for FY 2012-13, FY 2013-14 and FY 2014-15, as against the respective amount of Rs 671.00 Cr, Rs 784.00 Cr and Rs 798.00 Cr proposed by the Petitioner.
- 4.234 As per the MYT Regulations, 2011, the Commission would True-Up the capital investment for each year at the end of each year of the Control Period based on the actual capital investment carried out by the Petitioner.
- 4.235 The Commission would like to clarify that capital investment approved above is provisional and is subject to True-Up on the basis of actual capital investment made by the Petitioner. The Petitioner will require to take scheme wise approval for the capital investment.

### Assets Capitalisation

#### Petitioner's Submission

- 4.236 The Petitioner has submitted the Asset Capitalization for FY 2012-13 to FY 2014-15 as tabulated below:

**Table 108 Proposed capitalization and CWIP FY 2012-13 to FY 2014-15**

Particulars	FY 2012-13	FY 2013-14	FY 2014-15
Opening Balance of CWIP	946.6	880.7	876.9
Fresh Investment during the year	671.0	784.0	798.0
Investment capitalised out of opening CWIP	200.1	160.6	158.3
Investment capitalised out of fresh investment	536.8	627.2	638.4
Total Capitalisation during the year	736.9	787.8	796.7
Closing Balance of CWIP	880.7	876.9	878.2

### Commission's Analysis

- 4.237 The Commission has analysed the available details to consider provisional capitalization for FY 2012-13 – FY 2014-15 and the same would be subjected to True-Up at the end of the respective years during the Control Period.
- 4.238 The Commission has determined the following capitalisation schedule for the investments proposed for FY 2012-13 to FY 2014-15. The Commission has capitalised in FY 2012-13 all the investments from years prior to FY 2012-13 that have not been capitalized fully. For fresh capital investment during the Control Period, the Commission has assumed 50% capitalisation in the year on investment and remaining 50% capitalisation in the next year.

Table 109: Approved CWIP for the Control Period (Rs. Cr)

Particular	FY 2012-13	FY 2013-14	FY 2014-15
Opening CWIP	333.50	150.00	150.00
Investment During the Year	300.00	300.00	300.00
Capitalisation during the Year	483.50	300.00	300.00
<i>-Investment capitalised out of opening CWIP for investments from FY 2007-08 onwards</i>	333.50	150.00	150.00
<i>-Investment capitalised out of fresh investment</i>	150.00	150.00	150.00
<b>Closing CWIP</b>	<b>150.00</b>	<b>150.00</b>	<b>150.00</b>

4.239 The Commission would like to clarify that capitalisation approved above is provisional and is subject to True-Up on the basis of actual capital investment made and the schemes Commissioned by the Petitioner.

## Depreciation

### Petitioner's Submission

4.240 The Petitioner has submitted the calculation of depreciation FY 2012-13 to FY 2014-15 using asset-wise details of GFA, and the rates of depreciation as specified in the MYT Regulations, 2011.

4.241 The total depreciation proposed by the Petitioner for the Control Period is tabulated below:

Table 110: Proposed Gross Fixed Assets and Depreciation (Rs. Cr)

Particulars	FY 2012-13	FY 2013-14	FY 2014-15
Opening GFA	3,588.39	4,325.29	5,113.05
Closing GFA	4,325.29	5,113.05	5,909.76
Average Balance	3,956.84	4,719.17	5,511.41
<b>Depreciation</b>	<b>146.96</b>	<b>175.48</b>	<b>205.12</b>

4.242 For FY 2012-13 to FY 2014-15, the Petitioner has proposed the following asset-wise depreciation.

Table 111: Proposed Depreciation for FY 2012-13 to FY 2014-15 (Rs. Cr)

Particulars	Rate	FY 2012-13	FY 2013-14	FY 2014-15
Land & Land rights	0.00%			
Building and Civil Works				
--Office Building	1.80%	3.00	3.05	3.09
--Temporary Structure	1.80%	0.27	0.27	0.27
Other Civil Works	1.80%	0.01	0.01	0.01
Plant & Machinery				
Transformer +100kVa	3.60%	17.70	21.99	26.45
Transformer -100kVa	3.60%	9.13	9.36	9.61
Switchgears, Control gear & Protection	3.60%	22.79	27.82	33.04
Batteries	18.00%	2.68	3.16	3.66

Particulars	Rate	FY 2012-13	FY 2013-14	FY 2014-15
Line Cable Networks etc.				
Overhead lines up to 11kV	3.60%	22.17	23.15	24.18
Underground cables up to 11kV	2.57%	29.37	37.60	46.15
Lightening Arrestors (Station Type)	3.60%	0.75	0.75	0.76
Communication equipment	6.00%	0.19	0.30	0.41
Meters	6.00%	28.84	34.52	40.42
Vehicles	18.00%	2.28	3.06	3.87
Furniture & fixtures	6.00%	0.36	0.43	0.50
Office Equipments	6.00%	0.47	0.59	0.72
Computers	6.00%	4.63	6.75	8.96
Motor and Pump	6.00%	0.15	0.25	0.36
Fault Locating Equipment	18.00%	1.58	1.74	1.90
Any other items	3.60%	0.60	0.68	0.75
<b>Total</b>		<b>146.96</b>	<b>175.48</b>	<b>205.12</b>

### Commission's Analysis

4.243 As per the MYT Regulations, 2011;

#### *“..Depreciation*

*5.16 Depreciation shall be calculated for each year of the Control Period, on the amount of Original Cost of the Fixed Assets considered for calculation of the Regulated Rate Base of the corresponding year:*

*Provided that depreciation shall not be allowed on assets funded by consumer contribution (i.e., any receipts from consumers that are not treated as revenue) and capital subsidies/grants. Provision for replacement of such assets shall be made in the Capital Investment plan;*

*Provided further that the Licensee shall submit yearwise details of assets retired and disposed off, which shall be removed from the Original Cost of Fixed Assets;*

*Provided further that assets shall normally be not retired before completion of the useful life and the Licensee shall take prior approval of the Commission in case of retiring any asset before its useful life;*

*Provided further that the Licensee shall submit year-wise details of the assets which have completed its useful life....”*

4.244 The Commission, while allowing for GFA and depreciation for FY 2012-13 to FY 2014-15 has adopted the methodology as per the MYT Regulations, 2011.

4.245 The Petitioner has projected opening GFA for FY 2012-13 as Rs 3,588.39 Cr, while the Commission had approved the closing GFA for FY 2011-12 (opening GFA for FY 2012-13) in the Tariff Order dated August 26, 2011 as Rs 4513.03 Cr. The



Commission is currently under process of conducting review of the capital expenditure, capitalisation and physical verification of the assets added by the Petitioner during FY 2006-07 – FY 2011-12. The capital expenditure and capitalisation carried out by the Petitioner during FY 2006-07 – FY 2011-12 shall be true up after completion of this review.

- 4.246 The closing GFA proposed by the Petitioner for FY 2011-12 is much lower than the closing GFA approved by the Commission in its Tariff Order dated August 26, 2011. The Commission had approved the capital investment and capitalisation for the Petitioner after approving the business plan of the Petition for each year of the previous MYT Control Period (FY 2007-08 – FY 2010-11). As the capital expenditure is a controllable parameter and Petitioner is required take approval of the Commission for capital expenditure, the Commission in this Tariff Order has considered closing GFA approved by the Commission for FY 2011-12 in the Tariff Order dated August 26, 2011 as opening GFA for FY 2012-13. The Commission shall revise this after truing up of Capital expenditure and capital investment for the previous MYT Control Period (FY 2007-08 – FY 2011-12).
- 4.247 The Commission has approved the additions to the GFA for FY 2012-13 to FY 2014-15 equal to the approved capitalisation of Rs 483.50 Cr, Rs 300.00 Cr and Rs 300.00 Cr respectively.
- 4.248 The summary of opening and closing GFA for the previous Control Period (FY 2007-08 to FY 2011-12) and for the current Control Period (FY 2012-13 to FY 2014-15) are given in the tables below.

**Table 112: GFA Approved by the Commission for previous Control Period (Rs. Cr)**

Particulars	FY2007-08	FY2008-09	FY2009-10	FY2010-11	FY 2011-12
Opening Balance of GFA	2030.14	2558.38	3099.23	3649.23	4099.23
Asset Additions	528.24	540.85	550.00	450.00	413.80
Reduction	0.00	0.00	0.00	0.00	0.00
Closing Balance of GFA	2558.38	3099.23	3649.23	4099.23	4513.03
<b>Average GFA</b>	<b>2294.26</b>	<b>2828.81</b>	<b>3374.23</b>	<b>3874.23</b>	<b>4306.13</b>

**Table 113: GFA Approved by the Commission for current Control Period (Rs. Cr)**

Particulars	FY2012-13	FY2013-14	FY2014-15
Opening Balance of GFA	4513.03	4996.53	5296.53
Asset Additions	483.50	300.00	300.00
Reduction	0.00	0.00	0.00
Closing Balance of GFA	4996.53	5296.53	5596.53
<b>Average GFA</b>	<b>4754.78</b>	<b>5146.53</b>	<b>5446.53</b>

- 4.249 For capitalisation of consumer contribution during FY 2012-13 to FY 2014-15, the Commission has assumed that consumer contribution of any year is getting capitalised in proportion of the investment capitalisation for that year. The consumer contribution capitalised during the previous Control Period (FY 2007-08 – FY 2011-12) and current Control Period (FY 2012-13 to FY 2013-14) is shown in the table below:

**Table 114: Consumer contribution and grants for previous Control Period (Rs. Cr)**

Particulars	FY2007-08	FY2008-09	FY2009-10	FY2010-11	FY 2011-12
Opening Balance of consumer contribution and grants	149.25	198.95	252.27	303.14	365.49
Additions	49.70	53.32	50.86	62.35	38.92
Closing Balance of consumer contribution and grants	198.95	252.27	303.14	365.49	404.41
<b>Average consumer contribution and grants</b>	<b>174.10</b>	<b>225.61</b>	<b>277.71</b>	<b>334.31</b>	<b>384.95</b>

**Table 115: Approved Consumer contribution and grants for current Control Period (Rs. Cr)**

Particulars	FY2012-13	FY2013-14	FY2014-15
Opening Balance of consumer contribution and grants	404.41	447.55	476.12
Additions	43.15	28.56	28.56
Closing Balance of consumer contribution and grants	447.55	476.12	504.68
<b>Average consumer contribution and grants</b>	<b>425.98</b>	<b>461.84</b>	<b>490.40</b>

4.250 Based on the average of opening and closing value of assets approved, net of Consumer Contribution Grants (average of Opening and Closing balance) during the current Control Period and the rates of depreciation, specified in the MYT Regulations, 2011, the Commission has approved the depreciation for each year of the Control Period. Summary of depreciation approved for the Control Period is given in the following table:

**Table 116: Approved Depreciation for the Control Period (Rs. Cr)**

Particulars	FY 2012-13			FY 2013-14		FY 2014-15	
	Rate	Avg. GFA Considered*	Depreciation	Avg. GFA Considered*	Depreciation	Avg. GFA Considered*	Depreciation
Land & Land rights	0.00%	0.00	0.00	0.00	0.00	0.00	0.00
Building and Civil Works							
--Office Building	1.80%	203.26	3.66	204.36	3.68	205.17	3.69
--Temporary Structure	1.80%	1.62	0.29	1.62	0.29	1.62	0.29
Other Civil Works	1.80%	0.56	0.01	0.56	0.01	0.56	0.01
Plant & Machinery							
Transformer +100kVa	3.60%	630.56	22.70	686.26	24.71	728.75	26.23
Transformer - 100kVa	3.60%	337.40	12.15	340.37	12.25	342.57	12.33

Particulars	FY 2012-13			FY 2013-14		FY 2014-15	
	Rate	Avg. GFA Considered*	Depreciation	Avg. GFA Considered*	Depreciation	Avg. GFA Considered*	Depreciation
Switchgears, Control gear & Protection	3.60%	717.88	25.84	783.10	28.19	832.86	29.98
Batteries	18.00	12.22	2.20	13.47	2.42	14.42	2.60
Line Cable Networks etc.							
Overhead lines up to 11kV	3.60%	790.30	28.45	802.96	28.91	812.49	29.25
Underground cables up to 11kV	2.57%	1015.06	26.09	1164.70	29.93	1279.00	32.87
Lightening Arrestors (Station Type)	3.60%	17.47	0.63	17.53	0.63	17.57	0.63
Communication equipment	6.00%	32.49	1.95	33.34	2.00	33.97	2.04
Meters	6.00%	490.62	29.44	534.84	32.09	568.57	34.11
Vehicles	18.00	13.35	2.40	15.37	2.77	16.91	3.04
Furniture & fixtures	6.00%	6.13	0.37	6.67	0.40	7.09	0.43
Office	6.00%	7.67	0.46	8.60	0.52	9.31	0.56
Computers	6.00%	31.51	1.89	48.07	2.88	60.73	3.64
Motor and Pump	6.00%	0.48	0.03	1.27	0.08	1.87	0.11
Fault Locating Equipment	18.00 %	6.96	1.25	7.37	1.33	7.69	1.38
Any other items	3.60%	13.27	0.48	14.24	0.51	14.97	0.54
<b>Total</b>		<b>4328.80</b>	<b>160.28</b>	<b>4684.69</b>	<b>173.60</b>	<b>4956.13</b>	<b>183.75</b>

\*Average GFA considers is Average GFA available for depreciation (Average GFA – Average Consumer contribution and grants)

### Allocation into Wheeling and Retail Supply

4.251 The petitioner has not submitted any allocation statement for allocating GFA and Depreciation between Wheeling and Retails Supply Business. Hence, for the purpose of allocating the GFA and depreciation approved above, the Commission has considered the allocation statement submitted by the Petitioner in its MYT Petition (for FY 2007-08 to FY 2010-11), as shown below:

**Table 117: Statement of Allocation of GFA between Wheeling & Retail Supply Business**

Particulars	FY 2012-13	FY 2013-14	FY 2014-15	FY 2012-13 to FY 2014-15	
	Average GFA Considered (Rs Cr)	Average GFA Considered (Rs Cr)	Average GFA Considered (Rs Cr)	Wheeling	Retail Supply
Building and Civil Works					
Offices & Showrooms	203.26	204.36	205.17	64%	36%
Temporary Structures	1.62	1.62	1.62	100%	0%

Particulars	FY 2012-13	FY 2013-14	FY 2014-15	FY 2012-13 to FY 2014-15	
	Average GFA Considered (Rs Cr)	Average GFA Considered (Rs Cr)	Average GFA Considered (Rs Cr)	Wheeling	Retail Supply
Other Civil Works	0.56	0.56	0.56	100%	0%
Plant & Machinery					
Transformer +100kVa	630.56	686.26	728.75	100%	0%
Transformer -100kVa	337.40	340.37	342.57	100%	0%
Switchgear, Control gear & Protection	717.88	783.10	832.86	100%	0%
Batteries	12.22	13.47	14.42	100%	0%
Line Cable Networks etc.					
Overhead lines up to 11 kV	790.30	802.96	812.49	100%	0%
Underground cables up to 11 kV	1015.06	1164.70	1279.00	100%	0%
Lightening Arrestors	17.47	17.53	17.57	100%	0%
Communication Equipment	32.49	33.34	33.97	50%	50%
Meters	490.62	534.84	568.57	0%	100%
Vehicles	13.35	15.37	16.91	64%	36%
Furniture & Fixtures	6.13	6.67	7.09	64%	36%
Other Equipment	7.67	8.60	9.31	64%	36%
Computers	31.51	48.07	60.73	50%	50%
Motor & Pump	0.48	1.27	1.87	64%	36%
Fault Locating Equipment	6.96	7.37	7.69	100%	0%
Any Other Item	13.27	14.24	14.97	100%	0%
<b>Total</b>	<b>4328.80</b>	<b>4684.69</b>	<b>4956.13</b>		

4.252 The summary of the GFA and Depreciation expenses approved by the Commission for Wheeling and Retail Supply business for FY 2012-13 to FY 2014-15 is shown below.

**Table 118: Approved Allocation of GFA & Depreciation Expenses (Rs. Cr)**

Particulars	FY 2012-13	FY 2013-14	FY 2014-15
Total GFA (Opening)	4513.03	4996.53	5296.53
GFA – Wheeling	3884.94	4293.92	4547.69
GFA - Retail Supply	628.09	702.61	748.84
<b>Total Depreciation</b>	<b>160.28</b>	<b>173.60</b>	<b>183.75</b>
Depreciation – Wheeling*	126.44	136.39	143.98
Depreciation – Retail Supply*	33.85	37.21	39.78

\* Excluding AAD

4.253 As per the MYT Regulation, 2011

*“5.19 The residual value of assets shall be considered as 10% and depreciation shall be allowed to a maximum of 90% of the original cost of the asset. Land is not a depreciable asset and its cost shall be excluded while computing 90% of the original cost of the asset”*

4.254 As asset-wise details are not available with the Commission, the Commission has decided to divide assets in year-wise asset blocks. The Commission has further, analysed the depreciation approved on the asset block since FY 2002-03 and checked if depreciation approved by the Commission on any of these annual block is reaching 90% till FY 2014-15. The analysis is shown in the table below:

Table 119: Depreciation allowed up to FY 2014-15 (Rs. Cr)

Particulars	GFA (including CC)	Consumer Contribution Capitalised	GFA on which Depreciation is available	Total Depreciation to be allowed*	Total Depreciation allowed on the asset blocks till FY 2014-15
Opening GFA	1533.00	0.00	1533.00	1379.70	1321.00
Assets added in FY03	18.72	5.62	13.10	11.79	8.86
Assets added in FY04	106.29	31.91	74.38	66.94	43.21
Assets added in FY05	93.38	28.03	65.35	58.81	31.71
Assets added in FY06	131.54	39.49	92.05	82.84	35.87
Assets added in FY07	147.21	44.19	103.02	92.71	30.30
Assets added in FY08	528.24	49.70	478.54	430.69	132.09
Assets added in FY09	540.85	53.32	487.53	438.77	116.87
Assets added in FY10	550.00	50.86	499.14	449.22	101.37
Assets added in FY11	450.00	62.35	387.65	348.89	64.50
Assets added in FY12	413.80	38.92	374.88	337.39	48.58
Assets added in FY13	483.50	43.15	440.35	396.32	40.80
Assets added in FY14	300.00	28.56	271.44	244.29	15.09
Assets added in FY15	300.00	28.56	271.44	244.29	5.03

\*90% of GFA net of Consumer Contribution

Truing up of Depreciation for the Control Period (FY 2012-13 to FY 2014-15)

- 4.255 As per Regulation 4.21 (b) (ii) of MYT Regulations, 2011, Depreciation shall be trued up every year based on the actual capital expenditure and actual capitalisation vis-à-vis capital investment plan (capital expenditure and capitalisation) approved by the Commission.

**Accumulated Depreciation****Petitioner's Submission**

- 4.256 The Petitioner has submitted not proposed any AAD for the Control Period. The schedule of accumulated depreciation, as proposed, for FY 2012-13 to FY 2014-15 is shown in the table below:

Table 120: Accumulated Depreciation proposed for FY 2012-13 to FY 2014-15 (Rs. Cr)

Particulars (Rs. Cr)	FY 2012-13	FY 2013-14	FY 2014-15
Opening Balance	1535.80	1682.76	1858.24
Depreciation for the year	146.96	175.48	205.12
<b>Closing Balance</b>	<b>1682.76</b>	<b>1858.24</b>	<b>2063.36</b>

**Commission's Analysis**

- 4.257 For calculating the accumulated depreciation for the previous Control Period (FY 2007-08 to FY 2011-12), the Commission has considered the accumulated depreciation at the end of FY 2006-07, which includes the depreciation of Rs. 383 Cr, contained in the opening balance sheet of BRPL according to the Transfer Scheme. For approving accumulated depreciation for the current Control Period (FY 2012-13

to FY 2014-15), the Commission has considered the accumulated depreciation at the end of FY 2011-12 that was approved in the Tariff Order dated August 26, 2011.

- 4.258 The accumulated depreciation for FY 2012-13 to FY 2014-15 is based on depreciation value approved by the Commission for this period (as mentioned in the above section) is as shown below.

**Table 121: Approved Accumulated Depreciation for FY 2012-13 to FY 2014-15 (Rs. Cr)**

Particulars	FY 2012-13	FY 2013-14	FY 2014-15
Opening Balance	1477.66	1637.94	1811.54
Depreciation for the Year	160.28	173.60	183.75
<b>Accumulated</b>	<b>1637.94</b>	<b>1811.54</b>	<b>1995.30</b>

### Allocation into Wheeling and Retail Supply

- 4.259 For the purpose of allocating the value of Accumulated Depreciation approved above, the Commission has considered the allocation statement for GFA (Table 118).
- 4.260 The summary of the GFA and Depreciation expenses approved by the Commission for Wheeling and Retail Supply business for FY 2012-13 to FY 2014-15 is shown below.

**Table 122: Allocation of Accumulated Depreciation (Rs. Cr)**

Particulars	FY 2012-13	FY 2013-14	FY 2014-15
Wheeling			
Opening Balance	1261.84	1388.28	1524.66
Depreciation for the Year	126.44	136.39	143.98
Closing Balance	1388.28	1524.66	1668.64
Retail Supply			
Opening Balance	215.82	249.67	286.88
Depreciation for the Year	33.85	37.21	39.78
<b>Closing Balance</b>	<b>249.67</b>	<b>286.88</b>	<b>326.65</b>

### Advance Against Depreciation

#### Petitioner's Submission

- 4.261 The Petitioner has not proposed any advance against depreciation (AAD) for the period of FY 2012-13 to FY 2014-15.

#### Commission's Analysis

- 4.262 The Commission has calculated the advance against depreciation for each year of the Control Period, using the principles specified in the MYT Regulations, 2011 and considering the details of actual cumulative debt repayment and accumulated depreciation claimed by the Petitioner.

- 4.263 While calculating the AAD for the Control Period the Commission has considered the value of accumulated depreciation as net of the depreciation used for capital investment and working capital in the previous years (Rs. 499.30 Cr).
- 4.264 The Commission has approved AAD for the Control Period (FY 2012-13 to FY 2014-15) as shown below:

**Table 123: AAD approved by Commission (Rs. Cr)**

Particulars	FY 2012-13	FY 2013-14	FY 2014-15
1/10th of the Loan(s)	247.57	266.57	285.45
Repayment of the Loan(s) as considered for working out Interest on Loan	224.41	255.11	274.11
Minimum of the Above	224.41	255.11	274.11
Less: Depreciation during the year	160.28	173.60	183.75
<b>A</b>	<b>64.13</b>	<b>81.51</b>	<b>90.36</b>
Cumulative Repayment of the Loan(s) as considered for working out Interest on Loan	1021.96	1277.07	1551.18
Cumulative Depreciation	1637.94	1811.54	1995.30
Depreciation Considered for Capex & WC in Previous years	499.30	499.30	499.30
Less: Cumulative Depreciation Considered for AAD	1138.65	1312.25	1496.00
<b>B</b>	<b>(116.69)</b>	<b>(35.18)</b>	<b>55.18</b>
<b>AAD = min (A, B)/ zero if negative</b>	<b>0.00</b>	<b>0.00</b>	<b>55.18</b>

### Allocation into Wheeling and Retail Supply

- 4.265 For the purpose of allocating the value of AAD approved above, the Commission has considered the allocation statement for GFA as approved by the Commission. The summary of AAD approved by the Commission for Wheeling and Retail Supply business for FY 2012-13 to FY 2014-15 is shown below:

**Table 124: AAD approved by Commission for Wheeling and Retail Supply Business for FY 2012-13 to FY 2014-15 (Rs. Cr)**

Particulars	FY 2012-13	FY 2013-14	FY 2014-15
Wheeling	0.00	0.00	47.34
Retail Supply	0.00	0.00	7.84
<b>Total</b>	<b>0.00</b>	<b>0.00</b>	<b>55.18</b>

### Truing up of AAD for the Control Period

- 4.266 The Commission is of the opinion that AAD determined above is dependent on the loans and depreciation approved by the Commission and since both these parameters are subject to True-Up at the end of the respective year of the Control Period, the Commission would True-Up the AAD as well at the end of the respective year of the Control Period.



## Return on Capital Employed

- 4.267 The Return on Capital Employed (RoCE) for the Petitioner shall be determined as specified in the MYT Regulations, 2011. The RoCE can be determined only after determination of the Regulated Rate Base (RRB) for any particular year, and the Weighted Average Cost of Capital (WACC) for the year.

## Regulated Rate Base

### Petitioner's Submission

- 4.268 The Petitioner has estimated its Regulated Rate Base (RRB) for each year of the Control Period based on the formula specified in the MYT Regulations, 2011. The detailed working of the proposed RRB for FY 2012-13 to FY 2014-15, as submitted by the Petitioner, is tabulated below:

**Table 125: Proposed RRB for FY 2012-13 to FY 2014-15 (Rs. Cr)**

Particulars (Rs. Cr)	FY 2012-13	FY 2013-14	FY 2014-15
Investment during the year	671.00	784.00	798.00
Depreciation during the year (including AAD)	146.96	175.48	205.12
Consumer Contribution			
Change in WC	64.08	69.38	85.45
<b>RRB for the Year</b>	<b>3,300.46</b>	<b>3,936.12</b>	<b>4,622.28</b>

### Commission's Analysis

- 4.269 For the Control Period, the return allowed to the Petitioner is as per the methodology specified in the MYT Regulations, 2011. As per Regulation, the return for the year shall be determined by multiplying the weighted average cost of capital employed to the average of "Net Fixed Asset" for each year. Thus, the return allowed each year is determined based on the values of assets capitalised (net of depreciation and consumer contribution) in the respective year and not on the capital investment for that year. The addition in equity/ free reserves and debt during each year of the Control Period is also to the extent of assets capitalised in that year.
- 4.270 The Commission has determined the amount of consumer contribution to be capitalised based on the average proportion of consumer contribution in the new investments for the last three years approved by the Commission (FY 2009-10 to FY 2011-12) and the asset capitalisation approved by the Commission. The summary of the same is given below.

**Table 126: Capitalised Consumer Contribution for FY 2012-13 to FY 2014-15 (Rs. Cr)**

Particulars	FY 2012-13	FY 2013-14	FY 2014-15
Opening Consumer Contribution (Not Capitalised)	28.87	14.28	14.28
Investment Approved	300.00	300.00	300.00
Consumer Contribution in the Investment	28.56	28.56	28.56
Asset Capitalisation	483.50	300.00	300.00
<i>Asset Capitalised from Investment till last Year</i>	333.50	150.00	150.00
<i>Asset Capitalised from Investment in Current Year</i>	150.00	150.00	150.00

Particulars	FY 2012-13	FY 2013-14	FY 2014-15
Consumer Contribution capitalised	43.15	28.56	28.56
Closing Consumer Contribution (Not Capitalised)	14.28	14.28	14.28
<b>Total Consumer Contribution capitalised during the Year</b>	<b>43.15</b>	<b>28.56</b>	<b>28.56</b>

4.271 The summary of RRB approved by the Commission for the previous Control Period (FY 2007-08 to FY 2011-12) and current Control Period (FY 2012-13 to FY 2014-15) are provided in the tables below.

**Table 127: Approved RRB for the previous Control Period (Rs. Cr)**

Particulars	FY 2007-08	FY 2008-09	FY 2009-10	FY 2010-11	FY 2011-12
E RRB (opening)	1034.95	1673.38	2094.48	2502.99	2814.09
F = G-H-I-J $\Delta$ AB	401.95	392.44	385.48	257.72	229.11
G Investments capitalized	528.24	540.85	550.00	450.00	413.80
H Depreciation	76.59	95.08	113.66	129.93	145.77
I AAD	0.00	0.00	0.00	0.00	0.00
J Consumer Contribution	49.70	53.32	50.86	62.35	38.92
K Change in WC	236.47	28.66	23.03	53.37	143.71
<b>L = E+F+K RRB (Closing)</b>	<b>1673.38</b>	<b>2094.48</b>	<b>2502.99</b>	<b>2814.09</b>	<b>3186.91</b>
<b>M = E+F/2+K RRB(i)</b>	<b>1472.40</b>	<b>1898.26</b>	<b>2310.25</b>	<b>2685.23</b>	<b>3072.36</b>

**Table 128: Approved RRB for the current Control Period (Rs. Cr)**

Particulars	FY 2012-13	FY 2013-14	FY 2014-15
E RRB (opening)	3186.91	3471.27	3634.76
F = G-H-I-J $\Delta$ AB	280.07	97.84	32.50
G Investments capitalized	483.50	300.00	300.00
H Depreciation	160.28	173.60	183.75
I AAD	0.00	0.00	55.18
J Consumer Contribution	43.15	28.56	28.56
K Change in WC	4.29	65.65	66.10
<b>L = E+F+K RRB (Closing)</b>	<b>3471.27</b>	<b>3634.76</b>	<b>3733.36</b>
<b>M = E+F/2+K RRB(i)</b>	<b>3333.23</b>	<b>3585.84</b>	<b>3717.11</b>

### Allocation into Wheeling and Retail Supply

4.272 The Petitioner has not submitted any allocation for RRB or RoCE into Wheeling and Retail Supply business. The Commission has allocated the RRB(i) approved for the Control Period considering the following:

- OCFA allocated as per GFA allocation approved by the Commission (Table 118)
- Depreciation allocated as per GFA allocation approved by the Commission (Table 118)

- (c) Investment capitalised as per GFA allocation approved by the Commission (Table 118)
- (d) Consumer Contribution has been considered fully for Wheeling business
- (e) Allocation of working capital is discussed in the subsequent section

4.273 The summary of RRB approved for Wheeling and Retail supply business for the Second Control Period is given below.

**Table 129: Allocation of RRB for the Control Period (Rs. Cr)**

Particulars	FY 2012-13	FY 2013-14	FY 2014-15
RRB(i) – Wheeling	2453.98	2627.79	2727.69
RRB(i) – Retail Supply	877.26	958.05	989.42

## Working Capital Requirement

### Petitioner's Submission

4.274 The Petitioner has submitted the details of working capital requirement FY 2012-13 to FY 2014-15 in the formats submitted along with its Petition. As per the submission, the Petitioner has considered the following components for calculating its working capital requirements:

- (a) Receivables for two months towards tariffs & charges; and
- (b) Less Power Purchase Expenses for one month
- (c) Less: Transmission Expense for one month
- (d) Less: Wheeling Expense for two months

4.275 The working capital requirements of the Petitioner FY 2012-13 to FY 2014-15 are as provided in the table below.

**Table 130: Proposed Working Capital for the Second Control Period (Rs. Cr)**

Particulars	FY 2012-13	FY 2013-14	FY 2014-15
Receivables			
Annual Revenue for Wheeling and Retail supply Charges	5,761.25	6,419.01	7,158.96
Receivables equivalent to 2 months average billing	960.21	1,069.83	1,193.16
Power Purchase expenses	4,678.57	5,129.51	5,547.69
1/12th of power purchase expenses	389.88	427.46	462.31
Transmission Charges (Inter State and Intra State)	998.79	1,030.85	1,067.13
1/12th of Transmission Expenses	83.23	85.90	88.93
<b>Total Working capital</b>	<b>487.10</b>	<b>556.47</b>	<b>641.93</b>

**Commission's Analysis**

4.276 As per MYT Regulations, 2011

***“Working Capital****5.14 Working capital for wheeling business of electricity shall consist of**(i) Receivables for two months of Wheeling Charges.**5.15 Working capital for retail supply of electricity shall consist of**(ii) Receivables for two months of revenue from sale of electricity;**(iii) Less: Power purchase costs for one month;**(iv) Less: Transmission charges for one month.”*

4.277 Based on the principles of the MYT Regulations, 2011, the Commission approves the working capital requirement for the Second Control Period (FY 2012-13 to FY 2014-15) for Wheeling and Retail Supply Business as shown in the tables below.

**Table 131: Approved Working Capital for Wheeling Business for Second Control Period (Rs. Cr)**

Particulars	FY 2012-13	FY 2013-14	FY 2014-15
Wheeling Expense for the whole year	698.99	757.25	846.53
Wheeling expense for 2 months	116.50	126.21	141.09
<b>Total Working Capital-Wheeling</b>	<b>116.50</b>	<b>126.21</b>	<b>141.09</b>

**Table 132: Approved Working Capital for Retail Supply Business for Second Control Period (Rs. Cr)**

Particulars	FY 2012-13	FY 2013-14	FY 2014-15
Receivables			
Annual revenues from Tariffs and Charges	5813.98	6515.65	7190.65
Receivables equivalent to 2 months average billing	969.00	1085.94	1198.44
Power Purchase expenses	4339.30	4987.49	5493.51
Less: 1/12 <sup>th</sup> of power purchase expenses	361.61	415.62	457.79
Transmission Expense	552.03	519.35	570.17
Less: 1/12 <sup>th</sup> of transmission expense	46.00	43.28	47.51
Wheeling Expense	698.99	757.25	846.53
Less: wheeling expense for 2 months	116.50	126.21	141.09

Particulars	FY 2012-13	FY 2013-14	FY 2014-15
<b>Total Working Capital- Retail Supply</b>	<b>444.89</b>	<b>500.83</b>	<b>552.05</b>

4.278 Total working capital for FY 2012-13 to FY 2014-15 has been approved as shown in the table below:

**Table 133: Allocation of Working Capital for the Control Period (Rs. Cr)**

Particulars	FY 2012-13	FY 2013-14	FY 2014-15
Working Capital Requirement – Wheeling	116.50	126.21	141.09
Working Capital Requirement – Retail Supply	444.89	500.83	552.05
<b>Total Working Capital Requirement</b>	<b>561.38</b>	<b>627.04</b>	<b>693.13</b>

## Means of Finance

### Petitioner's Submission

4.279 The Petitioner has considered funding of assets capitalised in the normative debt: equity ratio of 70:30 after utilizing the consumer contribution for funding capital investments as per the provisions of MYT Regulations, 2007.

4.280 The table below provides the means of finance proposed by the Petitioner for the capitalisation envisaged for FY 2012-13 to FY 2014-15.

**Table 134: Proposed means of finance FY 2012-13 to FY 2014-15 (Rs. Cr)**

Means of Finance	FY 2012-13	FY 2013-14	FY 2014-15
Consumer Contribution	0.00	0.00	0.00
Equity/Internal Accruals	221.07	236.33	239.01
Commercial Borrowing	515.83	551.43	557.69
<b>Total</b>	<b>736.90</b>	<b>787.76</b>	<b>796.70</b>

### Commission's Analysis

4.281 For the purpose of projecting future funding requirement, the Commission has considered normative debt-equity ratio of 70:30 on the asset capitalised each year after utilizing the consumer contribution. Since the funding for assets capitalised out of closing CWIP for FY 2006-07 has already been provided, to avoid any double counting the Commission has considered the asset capitalised out of new investments from FY 2007-08 onwards for determining the funding requirement. The summary of funding requirement for the Control Period based on the asset capitalisation approved by the Commission is provided in the table below.

**Table 135: Approved Means of Finance for FY 2012-13 to FY 2014-15 (Rs. Cr)**

Means of finance	FY 2012-13	FY 2013-14	FY 2014-15
Consumer Contribution	43.15	28.56	28.56
Equity/Internal Accruals	132.10	81.43	81.43
Commercial Borrowing	308.24	190.01	190.01
<b>Total</b>	<b>483.50</b>	<b>300.00</b>	<b>300.00</b>

4.282 As per MYT Regulations, 2011;

*5.11 The WACC for each year of the Control Period shall be computed at the start of the Control Period in the following manner:*

$$WACC = \left[ \frac{D/E}{1 + D/E} \right] * r_d + \left[ \frac{1}{1 + D/E} \right] * r_e$$

Where,

.....

*r<sub>d</sub> is the Cost of Debt and shall be determined at the beginning of the Control Period after considering Licensee's proposals, present cost of debt already contracted by the Licensee, credit rating, **benchmarking** and other relevant factors (risk free returns, risk premium, prime lending rate etc.); ....*

4.283 The Commission has analysed the submissions made by all the Discoms on new loans taken by them during FY 2011-12 and has compared the average interest rates applicable for FY 2011-12 across all Discoms, in order to benchmark the same. The Commission observed that the interest rate (average) applicable to TPDDL, submitted by TPDDL vide letter dated June 13, 2012, for funding of capex and working capital requirement is the lowest and hence has been considered for approving the interest liabilities on the normative loans approved for the Control Period for all Discoms.

4.284 The details of new loans approved by the Commission for the FY 2012-13 to FY 2014-15 are mentioned below.

**Table 136: Approved New Loan Details for Second Control Period**

Year	Type	Amount	Interest Rate	Loan Details
				Repayment Details
FY 2012-13	Capex*	308.24	11.21%	Repayment in 10 yrs (equal annual installments)
	WC <sup>#</sup>	4.29	11.62%	Rolling Basis
FY 2013-14	Capex*	190.01	11.21%	Repayment in 10 yrs (equal annual installments)
	WC <sup>#</sup>	65.65	11.62%	Rolling Basis
FY 2014-15	Capex*	190.01	11.21%	Repayment in 10 yrs (equal annual installments)
	WC <sup>#</sup>	66.10	11.62%	Rolling Basis

\* Capital Expenditure <sup>#</sup> Working Capital

4.285 For determining the closing values of equity and free reserves the Commission has considered the closing value for FY 2011-12 approved in the Order dated August 26, 2011 and approved addition in free reserves as mentioned in Table 135. The summary of addition in equity and free reserves approved by the Commission for the Control Period is given below.

**Table 137: Approved addition in Equity and Free Reserves (Rs. Cr)**

Particulars	FY 2012-13	FY 2013-14	FY 2014-15
Equity			
Opening	460.00	460.00	460.00
Addition	0.00	0.00	0.00
Closing	460.00	460.00	460.00
Free Reserves			
Opening	637.21	769.31	850.74
Addition	132.10	81.43	81.43
Closing	769.31	850.74	932.17
<b>Total</b>	<b>1229.31</b>	<b>1310.74</b>	<b>1392.17</b>

4.286 Debt approved by the Commission for funding of capital expenditure is shown below:

**Table 138: Approved Debt (Rs. Cr)**

Particulars	FY 2012-13	FY 2013-14	FY 2014-15
<b>Capex Loan</b>			
Opening	2195.44	2503.69	2693.69
Addition	308.24	190.01	190.01
<b>Closing</b>	<b>2503.69</b>	<b>2693.69</b>	<b>2883.70</b>
<b>Working Capital Loan</b>			
Opening	485.24	489.53	555.19
Addition	4.29	65.65	66.10
Repayment	0.00	0.00	0.00
<b>Closing</b>	<b>489.53</b>	<b>555.19</b>	<b>621.28</b>

## Determination of WACC and RoCE

### Petitioner's Submission

4.287 The Petitioner has determined the weighted average cost of capital (WACC) FY 2012-13 to FY 2014-15 considering the proposed debt-equity ratio, cost of equity at 16% and weighted average cost of debt. The weighted average cost of debt has been calculated by dividing total interest cost by average debt FY 2012-13 to FY 2014-15.

4.288 The Petitioner has calculated the return on capital employed considering the Regulated Rate Base (RRB) and the WACC for FY 2012-13 to FY 2014-15. The summary of the RoCE calculations, submitted by the Petitioner is provided in the table below.

**Table 139: Proposed RoCE for FY 2012-13 to FY 2014-15 (Rs. Cr)**

Particulars	FY 2012-13	FY 2013-14	FY 2014-15
Closing RRB for the year	3,300.46	3,935.70	4,626.00
Gross Interest			
Average Debt	2,170.07	2,615.40	3,045.47
Op. Bal of Debt	1,727.82	2,170.07	2,615.40
Cl. Balance of Debt	2,170.07	2,615.40	3,045.47



Particulars	FY 2012-13	FY 2013-14	FY 2014-15
Rd – Percentage of Cost of Debt	14.67%	14.61%	14.59%
Average Equity	1,207.74	1,436.44	1,674.11
Re- Percentage of Return on Equity	16.00%	16.00%	16.00%
<b>WACC</b>	<b>15.14%</b>	<b>15.10%</b>	<b>15.10%</b>
<b>RoCE</b>	<b>499.84</b>	<b>594.30</b>	<b>698.30</b>

### Commission's Analysis

- 4.289 For determining the WACC, the Commission has followed the methodology specified in MYT Regulations, 2011. Debt to equity ratio has been considered on the average values of debt and equity (including free reserves) approved by the Commission for funding of the asset capitalised. The cost of equity has been considered at 16% and the cost of debt has been determined by dividing total interest cost (on approved loans) by average debt approved for the respective years of the Control Period, FY 2012-13 to FY 2014-15.
- 4.290 Based on the RRB approved and the WACC calculated using the above methodology the Commission approves the RoCE for the Control Period given in table below.

**Table 140: Approved RoCE for FY 2012-13 to FY 2014-15 (Rs. Cr)**

Particulars	FY 2012-13	FY 2013-14	FY 2014-15
RRBi	3331.23	3585.84	3717.11
Equity (Average)	1163.26	1270.03	1351.46
Debt (Average)	2836.95	3121.05	3376.93
Rate of Return on Equity	16.00%	16.00%	16.00%
Rate of Return on Debt	9.99%	10.24%	10.44%
WACC	11.74%	11.91%	12.03%
<b>RoCE</b>	<b>390.99</b>	<b>426.92</b>	<b>447.22</b>

### Allocation into Wheeling and Retail Supply

- 4.291 The Commission has allocated the RoCE approved above into Wheeling and Retail Supply considering the following:
- RRB allocated to the respective business
  - Debt and Equity in the proportion of allocation of total GFA into Wheeling and Retail supply for each year
- 4.292 The summary of RoCE approved for Wheeling and Retail supply business is given below.

**Table 141: Allocation of RoCE for FY 2012-13 to FY 2014-15 (Rs. Cr)**

Particulars	FY 2012-13	FY 2013-14	FY 2014-15
RoCE – Wheeling	288.02	312.85	328.18
RoCE – Retail Supply	102.96	114.06	119.04

Truing up of RoCE for the Control Period

- 4.293 Since all elements of RoCE are subjected to True-Up, the Commission would also True-Up the RoCE for each year of the Control Period, FY 2012-13 to FY 2014-15 approved above at the end of the respective years of the Control Period.

**Capitalisation of Expenses****Petitioner's Submission**

- 4.294 The Petitioner has not proposed any capitalisation of Employee and A&G Expense for the Control Period.

**Commission's Analysis**

- 4.295 TPDDL had appealed against the MYT Order of the Commission in Hon'ble ATE on interest capitalisation by the Commission for FY 2007-08 to FY 2010-11 of the earlier Control Period (FY 2007-08 to FY 2011-12).

- 4.296 In its written submission to the Hon'ble ATE, the Commission submitted that

*For the MYT Period DERC is following the principle of Return on Capital Employed in which it allows Return on Equity and Interest on Loan under RoCE only for the assets capitalized. Any interest cost incurred before capitalization is considered as IDC (Interest During Construction) and would be included in Asset base only after capitalization. DERC would correct this error based on this principle in the True up Order.*

- 4.297 The Commission has, therefore, not approved any capitalization of interests for the current Control Period (FY 2012-13 to FY 2014-15).

- 4.298 For capitalizing the employee expense for the Control Period, the Commission has considered that 10% of the Employee expense will be capitalised during each year of the Control Period, in line with the industry practice, as shown in the table below.

**Table 142: Approved Expense Capitalization for FY 2012-13 to FY 2014-15 (Rs. Cr)**

Particulars	FY 2012-13	FY 2013-14	FY 2014-15
Interest & Finance Charges Capitalised	00.00	00.00	00.00
Employee Expenses Capitalised	29.42	31.79	34.35
A&G Expenses Capitalised	00.00	00.00	00.00
<b>Total Capitalisation</b>	<b>29.42</b>	<b>31.79</b>	<b>34.35</b>

**Allocation into Wheeling and Retail Supply**

- 4.299 The Commission has allocated expense capitalization into Wheeling and Retail Supply business in the same proportion as the allocation of approved employee expenses into Wheeling and Retail Supply, as shown below:

Table 143 Allocation of Approved Expense Capitalization (Rs. Cr)

Particulars	FY 2012-13	FY 2013-14	FY 2014-15
Expenses Capitalised – Wheeling	15.27	16.50	17.83
<b>Expenses Capitalised – Retail</b>	<b>14.15</b>	<b>15.29</b>	<b>16.52</b>

## Tax Expenses

### Petitioner's Submission

- 4.300 The Petitioner has submitted the details about taxes on income and provision kept for Fringe Benefit Tax (FBT) FY 2012-13 to FY 2014-15. The summary of taxes submitted by the Petitioner is given in the table below.

Table 144: Proposed Tax Expenses FY 2012-13 to FY 2014-15 (Rs. Cr)

Particulars	FY 2012-13	FY 2013-14	FY 2014-15
Return on Capital Employed	499.84	594.30	698.30
RoE component of capital employed	188.81	223.27	262.34
Income including Tax	279.50	330.50	388.40
Tax Rate	32.45%	32.45%	32.45%
<b>Income Tax (Grossed up)</b>	<b>90.70</b>	<b>107.25</b>	<b>126.02</b>

### Commission's Analysis

- 4.301 As per MYT Regulations 2011,

*“5.32 Tax on income, if any, liable to be paid on the Licensed business of the Distributio Licensee shall be limited to tax on return on the equity component of capital employed. Any additional tax other than this shall not be a pass through, and it shall be payable by the Distribution Licensee itself.*

*5.33 The actual assessment of income tax should take into account benefits of tax holiday, and the credit for carry forward losses applicable as per the provisions of the Income Tax Act 1961 shall be passed on to the consumers..”*

- 4.302 The Commission has approved the Income Tax liability for FY 2012-13 to FY 2014-15 as shown in the table below:

Table 145 Approved Tax Expenses for FY 2012-13 to FY 2014-15

	Particulars	FY 2012-13	FY 2013-14	FY 2014-15
A	RRB (Average)	3331.23	3585.84	3717.11
B	Equity	1163.26	1270.03	1351.46
C	Debt	2836.95	3121.05	3376.93
D=B/(B+C)	% Equity	29%	29%	29%
E=D*A	Equity considered for Income tax	968.72	1037.13	1062.41
F	Rate of Return	16%	16%	16%
G=F*E	Return on Equity	155.00	165.94	169.99

Particulars		FY 2012-13	FY 2013-14	FY 2014-15
H	MAT rate	20.01%	20.01%	20.01%
I=H*G	Income Tax	31.01	33.20	34.01

4.303 The Commission would, however, True-Up the tax expenses based on the actual tax liability (limiting it to income tax paid only on return to equity) at the end of each year of the Control Period, as per the MYT Regulations, 2011:

4.304 Further, the Commission has allocated the tax expenses into Wheeling and Retail Supply in the ratio of RoCE approved for Wheeling Business to that approved for Retail Supply Business for the respective years of the Control Period.

**Table 146: Allocation of Income Tax into Wheeling and Retail Supply Business (Rs. Cr)**

Particulars	FY 2012-13	FY 2013-14	FY 2014-15
Income Tax-Wheeling Business	22.85	24.33	24.96
Income Tax- Retail Supply	8.17	8.87	9.05

## Non Tariff Income

### Petitioner's Submission

4.305 The Petitioner has considered Non Tariff Income (NTI) FY 2012-13 to FY 2014-15 at the same level as approved for FY 2011-12 in the Order dated August 26, 2011, i.e. Rs 54.63 Cr.

**Table 147: Proposed Non-Tariff Income FY 2012-13 to FY 2014-15 (Rs. Cr)**

Particulars	FY 2012-13	FY 2013-14	FY 2014-15
<b>Total</b>	<b>54.63</b>	<b>54.63</b>	<b>54.63</b>

4.306 The Petitioner has not submitted any basis for allocation of Non tariff Income in wheeling and retail supply business.

### Commission's Analysis

4.307 The Commission has approved the NTI for FY 2012-13 to FY 2014-15 at the same level as approved for FY 2010-11 in Chapter 3 of this Order net of rebate earned by the Petitioner for early payment of power purchase bills during FY 2010-11 (as per the audited accounts), as shown in the table below.

**Table 148: Approved Non-Tariff Income for FY 2012-13 to FY 2014-15 (Rs. Cr)**

Particulars	FY 2010-11	FY 2012-13	FY 2013-14	FY 2014-15
Total NTI approved for FY 2010-11	152.11			
Less: Total Rebate earned on early payment of power purchase bills (as per audited accounts of FY 2010-11)	27.08			
<b>Non Tariff Income</b>		<b>125.03</b>	<b>125.03</b>	<b>125.03</b>

**Allocation into Wheeling and Retail Supply**

4.308 The Commission has considered the allocation statement submitted by the Petitioner in MYT Petition (for the previous Control Period) to allocate the NTI into Wheeling and Retail Supply business to allocated Non Tariff Income in wheeling and retail supply businesses, as shown below:

**Table 149: Allocation of NTI between Wheeling & Retail Supply Business**

Particulars	Wheeling	Retail Supply
Interest Income from Investments other than Contingency Reserve	50%	50%
Interest on fixed deposits including interest on consumer security deposit	20%	80%
Interest from Banks other than Fixed Deposits	50%	50%
Interest on Govt. of India Securities - Non Trade Investment/ Others	50%	50%
Interest on loans and Advances to staff	64%	36%
Misc. charges from consumers	0%	100%
Commission on collection of Electricity Duty for MCD	0%	100%
Write back of miscellaneous provisions	0%	100%
Penalties from Contractors	0%	100%
Sale of Scrap	0%	100%
Sale of Material	0%	100%
Miscellaneous income	100%	0%

4.309 Approved allocation of Non tariff Income is shown in the table below:

**Table 150: Approved Allocation of NTI for FY 2012-13 to FY 2014-15 (Rs. Cr)**

Particulars	FY 2012-13	FY 2013-14	FY 2014-15
NTI – Wheeling	18.99	18.99	18.99
NTI – Retail Supply	106.04	106.04	106.04

**Truing up of NTI for the Control Period**

4.310 The Commission shall True-Up the NTI based on the actual values while truing up for each year of the Control Period as per MYT Regulations, 2011.

**Aggregate Revenue Requirement****Petitioner's Submission**

4.311 The table given below provides a summary of the Aggregate Revenue Requirement (ARR) as proposed by the Petitioner for FY 2012-13 to FY 2014-15.

**Table 151: Proposed ARR for FY 2012-13 to FY 2014-15 (Rs. Cr)**

Expenditure	FY 2012-13	FY 2013-14	FY 2014-15
Power Purchase Cost	4,678.57	5,129.51	5,547.69
Inter-State Transmission charges	314.45	346.51	382.79

Expenditure	FY 2012-13	FY 2013-14	FY 2014-15
Intra-state Transmission (Delhi Transco) charges	475.04	475.04	475.04
O&M Expenses	645.48	751.63	871.35
Depreciation including Advance Against Depreciation	146.96	175.48	205.12
RoCE including Supply margin	499.84	594.39	697.65
Income Tax	90.70	107.25	126.02
Less: Non Tariff Income	54.63	54.63	54.63
<b>Aggregate Revenue Requirement</b>	<b>6,796.41</b>	<b>7,525.18</b>	<b>8,251.02</b>

4.312 The Petitioner, in the MYT Petition has also submitted the ARR for Wheeling and Retail Supply business. The summary of the same is given below.

**Table 152: Proposed ARR for Wheeling Business for FY 2012-13 to FY 2014-15 (Rs. Cr)**

Particulars	FY 2012-13	FY 2013-14	FY 2014-15
O&M Expenses	445.08	517.44	597.75
Depreciation	97.20	16.06	135.66
Return on Capital Employed	484.53	576.18	676.28
Less: Non Tariff Income	18.05	18.05	18.05
<b>Annual Revenue Requirement</b>	<b>1,008.76</b>	<b>1,191.63</b>	<b>1,391.64</b>

**Table 153: ARR for Retail Supply Business for FY 2012-13 to FY 2014-15 (Rs. Cr)**

Particulars	FY 2012-13	FY 2013-14	FY 2014-15
Cost of power purchase, including T&D losses	4,678.57	5,129.51	5,547.69
Inter-State Transmission charges	314.45	346.51	382.79
Intra-state Transmission charges	475.04	475.04	475.04
SLDC fees and charges			
O&M Expenses	200.40	234.19	273.60
Depreciation	49.76	59.42	69.45
RoCE	15.31	18.21	21.37
Income Tax	90.70	107.25	126.02
Any Other Expense			
Less: Non-Tariff Income	36.58	36.58	36.58
<b>Annual Revenue Requirement</b>	<b>5,787.65</b>	<b>6,333.55</b>	<b>6,859.38</b>

### Commission's Analysis

4.313 The table given below provides a summary of the Aggregate Revenue Requirement as approved by the Commission for FY 2012-13 to FY 2014-15. Detailed analysis of each expense head has already been provided in the above sections.

**Table 154: Approved ARR for FY 2012-13 to FY 2014-15 (Rs. Cr)**

Particulars	FY 2012-13	FY 2013-14	FY 2014-15
Cost of power purchase, including T&D losses	4339.30	4987.49	5493.51
Inter-State Transmission charges	252.59	265.22	278.48
Intra-state Transmission charges	296.12	250.64	288.02

Particulars	FY 2012-13	FY 2013-14	FY 2014-15
SLDC fees and charges	3.33	3.49	3.67
O&M Expenses (Net of expenses capitalized)	465.39	500.12	531.83
Depreciation (including AAD)	160.28	173.60	238.93
Return on Capital Employed	390.99	426.92	447.22
Income Tax	31.01	33.20	34.01
Less			
Non Tariff Income	125.03	125.03	125.03
<b>Annual Revenue Requirement</b>	<b>5813.98</b>	<b>6515.65</b>	<b>7190.65</b>

4.314 Based on the allocation of different expenses as already discussed above the approved ARR for Wheeling and Retail Supply business is given below.

**Table 155: Approved ARR for Wheeling Business for FY 2012-13 to FY 2014-15 (Rs. Cr)**

Particulars	FY 2012-13	FY 2013-14	FY 2014-15
Operation & Maintenance Costs	280.67	302.66	321.06
Depreciation (including AAD)	126.44	136.39	191.32
Return on Capital Employed	288.02	312.85	328.18
Income Tax Provision	22.85	24.33	24.96
Less:			
Non Tariff Income	18.99	18.99	18.99
<b>Aggregate Revenue Requirement</b>	<b>698.99</b>	<b>757.25</b>	<b>846.53</b>

**Table 156: Approved ARR for Retail Supply Business for FY 2012-13 to FY 2014-15 (Rs. Cr)**

Particulars	FY 2012-13	FY 2013-14	FY 2014-15
Cost of Power Purchase	4339.30	4987.49	5493.51
Inter-State Transmission charges	252.59	265.22	278.48
Intra-state Transmission charges	296.12	250.64	288.02
SLDC fees and charges	3.33	3.49	3.67
Operation & Maintenance Costs	184.72	197.46	210.77
Depreciation (including AAD)	33.85	37.21	47.61
Return on Capital Employed	102.96	114.06	119.04
Income Tax Provision	8.17	8.87	9.05
Less:			
Non Tariff Income	106.04	106.04	106.04
<b>Annual Revenue Requirement</b>	<b>5114.99</b>	<b>5758.40</b>	<b>6344.11</b>



**A5: TARIFF DESIGN****Components of Tariff Design**

5.1 The Commission has considered the following components for tariff designing of the Distribution Licensees.

- (a) Consolidated Sector Revenue Gap/(Surplus)
- (b) Cost of service
- (c) Cross-subsidization in tariff structure

**Consolidated Revenue (Gap)/ Surplus for the Sector****Revenue (Gap)/ Surplus till FY 2010-11**

5.2 The Commission has approved the revenue (gap)/surplus for the Petitioner for the past period, FY 2007-08 to FY 2010-11 (as discussed in details in Chapter A3 of this Order) as summarised in the table below:

**Table 157: Revenue (Gap)/ Surplus of BRPL for till FY 2010-11 (Rs. Cr)**

Particulars	FY 2007-08	FY 2008-09	FY 2009-10	FY 2010-11
Opening level of Gap	(404.47)	(586.94)	(611.50)	(1679.57)
Contingency Reserve Adjusted towards Meeting Revenue Gap				28.91
Revenue (Gap)/Surplus approved in the True-up Order for FY 2007-08	(128.95)			
Revenue Requirement for the year		3069.39	4351.69	5,235.64
Revenue at existing tariffs		3109.13	3408.33	3,929.66
Surplus/ (Gap) for the year		39.74	(943.36)	(1305.98)
Additional Surplus/ (Gap) for the year on account of Hon'ble ATE Orders	4.78			
Closing level of (Gap)/Surplus	(538.20)	(547.20)	(1555.10)	(2956.64)
Carrying Cost for the year @	10.34%	11.34%	11.49%	11.66%
Carrying Cost	(48.74)	(64.31)	(124.47)	(268.61)
Closing Balance of Net (Gap)/ Surplus	(586.94)	(611.50)	(1679.57)	(3225.29)

5.3 The summary of revenue (gap)/ surplus approved for TPDDL and BYPL for till FY 2010-11 is shown below:

**Table 158: Revenue (Gap)/ Surplus of TPDDL till FY 2010-11 (Rs. Cr)**

Particulars	FY 2010-11
Opening level of Gap	(1102.56)
Contingency Reserve Adjusted towards Meeting Revenue Gap	45.51
Revenue (Gap)/Surplus approved in the True-up Order for FY 2007-08	
Revenue Requirement for the year	3678.42
Revenue at existing tariffs	2801.93

Particulars	FY 2010-11
Surplus/ (Gap) for the year	(876.49)
Closing level of (Gap)/Surplus	(1933.54)
Carrying Cost for the year @	8.87%
Carrying Cost	(132.63)
<b>Closing Balance of Net (Gap)/ Surplus</b>	<b>(2066.17)</b>

**Table 159: Net Revenue (Gap)/ Surplus of BYPL till FY 2010-11 (Rs. Cr)**

Particulars	FY 2010-11
Opening level of Gap as approved in Tariff Order dated August 26, 2011	(506.65)
Contingency Reserve Adjusted towards Meeting Revenue Gap	7.43
Revenue (Gap)/Surplus approved in the True-up Order for FY 2007-08	
Revenue Requirement for the year	3,076.12
Revenue at existing tariffs	2,064.73
Surplus/ (Gap) for the year	(1011.39)
Closing level of (Gap)/Surplus	(1510.61)
Carrying Cost for the year @	11.64%
Carrying Cost	(116.97)
<b>Closing Balance of Net (Gap)/ Surplus</b>	<b>(1627.58)</b>

**Table 160: Revenue (Gap)/ Surplus for all DISCOMs at the end of FY 2010-11 (Rs. Cr)**

Particulars	Up to FY 2010-11
BRPL	(3225.29)
BYPL	(1627.58)
TPDDL	(2066.17)
<b>Total</b>	<b>(6919.00)</b>

- 5.4 It can be seen from the above that the accumulated Revenue Gap till FY 2010-11 for all the DISCOMs are Rs 6919 Cr.

### Revenue (Gap)/ Surplus for FY 2012-13 at Existing Tariffs

- 5.5 The Summary of net revenue (gap)/ surplus approved for BRPL at existing tariffs for the current year, FY 2012-13 is shown below:

**Table 161: Revenue (Gap)/ Surplus of BRPL at Existing Tariffs for FY 2012-13 (Rs. Cr)**

Particulars	FY 2012-13
Revenue Requirement for the year	5813.98
Revenue at existing tariffs	5230.94
<b>Surplus/ (Gap) for the year</b>	<b>(583.03)</b>

- 5.6 The Summary of net revenue (gap)/ surplus for TPDDL and BYPL at existing tariffs for the current year, FY 2012-13 is shown below:

**Table 162: Revenue (Gap)/ Surplus of TPDDL at Existing Tariffs for FY 2012-13 (Rs. Cr)**

Particulars	FY 2012-13
Revenue Requirement for the year	4282.20
Revenue at existing tariffs	3986.08
<b>Surplus/ (Gap) for the year</b>	<b>(296.12)</b>

**Table 163: Revenue (Gap)/ Surplus of BYPL at Existing Tariffs for FY 2012-13 (Rs. Cr)**

Particulars	FY 2012-13
Revenue Requirement for the year	3387.99
Revenue at existing tariffs	2864.81
<b>Surplus/ (Gap) for the year</b>	<b>(523.17)</b>

**Table 164 Revenue (Gap)/ Surplus for all DISCOMs for FY 2012-13 (Rs. Cr)**

Particulars	FY 2012-13
BRPL	(583.03)
BYPL	(523.17)
TPDDL	(296.12)
<b>Total</b>	<b>(1402.32)</b>

## Treatment of Revenue (Gap)/Surplus

### Petitioner's Submission

- 5.7 The Petitioner has proposed aggregate revenue requirement (ARR) of Rs 6796.40 Cr for FY 2012-13 (without past revenue gaps and carrying cost) against a projected revenue collection of Rs 5674.80 Cr at existing tariff. Thus, the revenue deficit at existing tariff proposed by the Petitioner for FY 2012-13 is Rs 1121.60 Cr.
- 5.8 The Petitioner has requested the Commission for a 19.8% hike in tariff in order to recover the entire current year revenue gap.

### Commission's Analysis

- 5.9 The revenue deficit for FY 2012-13 of the three DISCOMs is Rs 1402.32 Cr. While, the accumulated revenue deficit till FY 2010-11 (along with carrying cost) is Rs 6919 Cr. Keeping in view the significant deficit with all three DISCOMs and in an attempt to make tariffs cost reflective, the Commission has decided to revise the tariff for all consumer categories in order to enable the DISCOMs to at least recover the approved revenue requirement for FY 2012-13.
- 5.10 For meeting carrying cost of the revenue gap till FY 2010-11 and liquidation of revenue gap, the Commission has decided to introduce a surcharge of 8% over the revised tariff.

**Revenue (Gap)/Surplus at Approved Tariffs**

- 5.11 The summary of revenue billed at existing tariffs for BRPL for FY 2012-13 is shown below:

**Table 165: Revenue at existing tariffs (Rs. Cr)**

Summary of Revenue	Fixed Charge	Energy Charge	Total Revenue Billed
Domestic	109.02	2116.56	2225.57
Non-Domestic	253.75	1857.65	2111.40
Industrial	34.19	303.04	337.24
Public Lighting	0.00	76.50	76.50
Irrigation & Agriculture	0.34	2.75	3.09
Railway Traction	2.45	11.91	14.37
DMRC	6.00	106.40	112.40
Others (DIAL,DJB, Temporary, Misuse, Enforcement etc.)	24.41	352.24	376.65
<b>Total</b>	<b>430.17</b>	<b>4827.06</b>	<b>5257.23</b>
<b>Total Revenue Collected @ 99.50% Collection Efficiency</b>			<b>5230.94</b>

- 5.12 Taking the collection efficiency at 99.50% as approved for FY 2012-13, the revenue realized in FY 2012-13 projected by the Commission at existing tariff is Rs 5230.94 Cr.
- 5.13 After revision of the tariff, the summary of revenue at the tariff approved now is shown below:

**Table 166: Revenue at revised tariffs for FY 2012-13 (Rs. Cr)**

Summary of Revenue	Fixed Charge	Energy Charge	Total Revenue Billed
Domestic	136.12	2556.86	2692.98
Non-Domestic	288.81	2109.54	2398.35
Industrial	39.30	347.47	386.77
Public Lighting	0.00	93.21	93.21
Irrigation & Agriculture	0.43	3.64	4.07
Railway Traction	2.45	14.68	17.13
DMRC	7.13	134.47	141.59
Others	22.57	378.53	401.10
<b>Total</b>	<b>496.81</b>	<b>5638.40</b>	<b>6135.21</b>
<b>Total Revenue Collected @ 99.50% Collection Efficiency</b>			<b>6104.53</b>

- 5.14 Taking the collection efficiency at 99.50% as approved for each year of the MYT Control Period, the revenue realized in FY 2012-13 projected by the Commission is Rs 6104.53Cr.
- 5.15 After revision of the tariff, the net revenue (gap)/ surplus for BRPL along with adjustment at approved tariffs is shown below:

Table 167: Net Revenue (Gap)/ Surplus of BRPL at Revised Tariffs for FY 2012-13(Rs. Cr)

Particulars	FY 2012-13
Revenue Requirement for the year	5813.98
Revenue available at revised tariffs	6104.53
<b>(Gap)/ Surplus for the year</b>	<b>290.55</b>

- 5.16 The Commission observes that the revenue gap for the Petitioner till FY 2010-11 is Rs 3225.25 Cr, while revenue gap for FY 2012-13 at existing tariff is Rs 583.03 Cr. The tariff increase approved by the Commission in this Order will enable the Petitioner to generate additional revenue of Rs 873.59 Cr in the remaining period of the year, leaving revenue surplus for FY 2012-13 on standalone basis at Rs 290.55 Cr. The surcharge by the Commission in this Order will enable the Petitioner to generate additional revenue of Rs 375.25 Cr in the remaining period of the year.

### Cost of Service Model

- 5.17 While determining the revenue requirement, various sectors of services, viz. generation, transmission and the distribution cost contributes to the total cost of service. The relative burden of constituent consumer categories is assessed and on the basis of the cost imposed on the system, it is decided as to how much share is due to which category of consumers. Although, it shall be equitable to have the embedded cost in designing the tariff for different consumer categories, it calls for a detailed database of allocated costs. Such allocations in the determination of embedded cost are done on the basis of following factors:
- Voltage of supply;
  - Power factor;
  - Load factor;
  - Time of use of electricity;
  - Quantity of electricity consumed,
  - AT&C Loss etc.
- 5.18 As the detailed information regarding all the above factors except AT&C loss is not available, it would be difficult to assess the cost of service with reference to all the above factors except AT&C loss.
- 5.19 The Commission has carried out a study for calculating the voltage wise cost of supply (CoS) for all the three DISCOMs for FY 2012-13 to FY 2014-15. The approach adopted by the Commission for determining the CoS for different voltage levels has been described in the following paragraphs.
- 5.20 The approved ARR of the Wheeling and Retail Supply business is allocated to different voltage levels and the same has been considered along with the energy sales

to the respective voltage level to arrive at the Paisa per unit Wheeling charge and Retail Supply Charge for that voltage level (detailed methodology discussed ahead).

### Allocation of Wheeling ARR

- 5.21 The Commission has considered the gross energy sales (MU) approved for DISCOM for the year and has allocated the same to different voltage levels in the proportion of energy sales (MU) to these voltages to total sales in that year as submitted by the respective DISCOM. Both BRPL and BYPL has submitted that there is no energy sales above 66 kV level in their distribution area and therefore, no energy sales has been considered above 66 kV level while computing the CoS. TPDDL has shown 73.31% of the sales to DMRC as sales above 66 kV and same has been considered by the Commission

**Table 168: Approved Energy Sales (MU)**

Particulars	FY 2012-13			FY 2013-14			FY 2014-15		
	BRPL	BYPL	TPDDL	BRPL	BYPL	TPDDL	BRPL	BYPL	TPDDL
Sales above 66 kV level	0.00	0.00	139.29	0.00	0.00	146.62	0.00	0.00	161.28
Sales at 33/66 kV level	304.77	150.00	118.57	354.77	180.00	125.64	364.77	200.00	135.68
Sales at 11 kV level	1449.88	477.30	867.86	1555.32	518.07	928.36	1670.60	562.76	993.56
Sales at LT level	7867.79	4616.84	6143.17	8521.60	4985.44	6660.60	9241.41	5387.65	7227.17
<b>Total</b>	<b>9622.43</b>	<b>5244.14</b>	<b>7268.89</b>	<b>10431.69</b>	<b>5683.51</b>	<b>7861.22</b>	<b>11276.78</b>	<b>6150.41</b>	<b>8517.70</b>

- 5.22 The Commission has, thereafter, grossed up the energy sales (MU) at the specific voltage level with the respective distribution losses (%) at that level to arrive at the Energy Input (MU) for that level. Since the accurate baseline data for the voltage wise distribution losses is not available, the Commission has considered the estimates of the same after considering the submissions made by the DISCOMs, and approved distribution losses. The summary of the voltage wise distribution losses considered by the Commission is as follows.

**Table 169: Distribution Loss (%)**

Particulars	FY 2012-13			FY 2013-14			FY 2014-15		
	BRPL	BYPL	TPDDL	BRPL	BYPL	TPDDL	BRPL	BYPL	TPDDL
Loss above 66 kV level	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Loss at 33/66 kV level	1.41%	0.92%	1.25%	1.39%	0.90%	1.25%	1.37%	0.90%	1.25%
Loss at 11 kV level	2.40%	1.97%	3.96%	2.35%	2.00%	3.96%	2.30%	2.00%	3.96%
Loss at LT level	15.93%	18.07%	15.17%	14.98%	16.84%	14.55%	13.98%	15.57%	14.01%

- 5.23 The Commission would like to re-iterate that the voltage wise distribution losses considered above are estimates and may not reflect the actual picture. The Commission, in this regard directs all the three DISCOMs (BRPL, BYPL and TPDDL) to immediately carry out energy audit of the sales at HT level (33 kV and 11kV) so that the actual data of distribution losses at different voltage levels could be

used to calculate the cost of supply in the next Tariff Order. The summary of Energy Input (MU) for the respective voltage levels are shown below:

Table 170: Approved Energy Input (MU)

Particulars	FY 2012-13			FY 2013-14			FY 2014-15		
	BRPL	BYPL	TPDDL	BRPL	BYPL	TPDDL	BRPL	BYPL	TPDDL
Input for 66 kV level	0.00	0.00	139.29	0.00	0.00	146.62	0.00	0.00	161.28
Input for 33/66 kV level	309.13	151.39	120.07	359.77	181.63	127.23	369.84	201.82	137.40
Input for 11 kV level	1485.53	486.89	903.64	1592.75	528.65	966.64	1709.93	574.25	1034.53
Input for LT level	9359.03	5634.77	7242.05	10023.40	5994.84	7794.66	10743.54	6381.44	8404.47
<b>Total</b>	<b>11153.68</b>	<b>6273.05</b>	<b>8265.76</b>	<b>11975.92</b>	<b>6705.12</b>	<b>8888.54</b>	<b>12823.30</b>	<b>7157.50</b>	<b>9576.39</b>

5.24 Next, the Commission has allocated the approved GFA of the DISCOMs to different voltage levels. For this, the Commission had directed the DISCOMs to submit their estimates of allocation of GFA to different voltage levels. TPDDL vide letter no dated May 8, 2012 has submitted the estimates as per their cost records. BRPL and BYPL have submitted the allocation of GFA to different voltage level in their petition only.

5.25 Based on the voltage wise assets allocation submitted by DISCOMs, the Commission has allocated the Wheeling ARR to the assets at respective voltage levels, which is summarised below:

Table 171: Wheeling Cost allocation asset wise (Rs. Cr)

Particulars	FY 2012-13			FY 2013-14			FY 2014-15		
	BRPL	BYPL	TPDDL	BRPL	BYPL	TPDDL	BRPL	BYPL	TPDDL
Asset at 66 kV level	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Asset at 33/66 kV level	4.78	14.69	122.49	5.15	17.35	130.02	5.74	18.29	138.21
Asset at 11 kV level	107.05	58.06	277.94	115.96	65.83	292.87	129.65	69.79	309.35
Asset at LT level	587.16	385.78	129.18	636.14	431.53	133.12	711.15	457.72	137.87
<b>Total</b>	<b>698.99</b>	<b>458.53</b>	<b>529.61</b>	<b>757.25</b>	<b>514.70</b>	<b>556.01</b>	<b>846.53</b>	<b>545.80</b>	<b>585.43</b>

5.26 The Wheeling cost apportioned above to a particular assets category is thereby reallocated to different voltage levels in proportion of their contribution to the energy input at that level as shown below:

Table 172: Wheeling Cost allocated to different voltages (Rs. Cr)

Particulars	FY 2012-13			FY 2013-14			FY 2014-15		
	BRPL	BYPL	TPDDL	BRPL	BYPL	TPDDL	BRPL	BYPL	TPDDL
Above 66 kV level	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
At 33/66 kV level	0.13	0.35	1.78	0.15	0.47	1.86	0.17	0.52	1.98
At 11 kV level	15.30	5.76	44.22	16.58	6.70	46.45	18.57	7.23	48.84
At LT level	683.56	452.42	483.61	740.51	507.53	507.70	827.80	538.06	534.61
<b>Total</b>	<b>698.99</b>	<b>458.53</b>	<b>529.61</b>	<b>757.25</b>	<b>514.70</b>	<b>556.01</b>	<b>846.53</b>	<b>545.80</b>	<b>585.43</b>



- 5.27 Based on the energy sales at the respective voltage level the Commission has determined Wheeling Charge per unit for different voltages for FY 2012-13, FY 2013-14 and FY 2014-15.

**Table 173: Wheeling Charge (Paisa per unit)**

Particulars	FY 2012-13			FY 2013-14			FY 2014-15		
	BRPL	BYPL	TPDDL	BRPL	BYPL	TPDDL	BRPL	BYPL	TPDDL
Above 66 kV level	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
At 33/66 kV level	0.43	2.36	15.01	0.44	2.61	14.81	0.45	2.58	14.61
At 11 kV level	10.55	12.06	50.96	10.66	12.94	50.04	11.11	12.85	49.15
At LT level	86.88	97.99	78.72	86.90	101.80	76.22	89.58	99.87	73.97
<b>Average</b>	<b>72.64</b>	<b>87.44</b>	<b>72.86</b>	<b>72.59</b>	<b>90.56</b>	<b>70.73</b>	<b>75.07</b>	<b>88.74</b>	<b>68.73</b>

### Allocation of Retail Supply ARR

- 5.28 The Commission has allocated the Retail Supply ARR in the ratio of energy input determined above for different voltage levels. The Commission has thereafter, determined the Retail Supply charge for a particular voltage level by considering energy sales at that voltage level. The summary of the same is shown below.

**Table 174: Retail Supply Charge (Paisa per unit)**

Particulars	FY 2012-13			FY 2013-14			FY 2014-15		
	BRPL	BYPL	TPDDL	BRPL	BYPL	TPDDL	BRPL	BYPL	TPDDL
Above 66 kV level	0.00	0.00	446.47	0.00	0.00	463.10	0.00	0.00	474.04
At 33/66 kV level	465.15	471.33	452.12	487.61	498.80	468.96	501.61	515.17	480.04
At 11 kV level	469.87	476.38	464.88	492.40	504.40	482.20	506.38	520.95	493.59
At LT level	545.51	569.95	526.33	565.57	594.40	541.95	575.15	604.70	551.26
<b>Average</b>	<b>531.57</b>	<b>558.61</b>	<b>516.25</b>	<b>552.01</b>	<b>583.17</b>	<b>532.26</b>	<b>562.58</b>	<b>594.13</b>	<b>541.94</b>

- 5.29 The cost of supply determined by the Commission for the different voltage levels is shown below.

**Table 175: Cost of Supply for TPDDL (Paisa per Unit)**

Particulars	FY 2012-13			FY 2013-14			FY 2014-15		
	Wheeling	RST	Total	Wheeling	RST	Total	Wheeling	RST	Total
Above 66 kV level	0.00	446.47	446.47	0.00	463.10	463.10	0.00	474.04	474.04
At 33/66 kV level	15.01	452.12	467.13	14.81	468.96	483.78	14.61	480.04	494.66
At 11 kV level	50.96	464.88	515.84	50.04	482.20	532.23	49.15	493.59	542.74
At LT level	78.72	526.33	605.05	76.22	541.95	618.17	73.97	551.26	625.23
<b>Average</b>	<b>72.86</b>	<b>516.25</b>	<b>589.11</b>	<b>70.73</b>	<b>532.26</b>	<b>602.99</b>	<b>68.73</b>	<b>541.94</b>	<b>610.67</b>

**Table 176: Cost of Supply for BRPL (Paisa per Unit)**

Particulars	FY 2012-13			FY 2013-14			FY 2014-15		
	Wheeling	RST	Total	Wheeling	RST	Total	Wheeling	RST	Total
Above 66 kV level	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Particulars	FY 2012-13			FY 2013-14			FY 2014-15		
	Wheeling	RST	Total	Wheeling	RST	Total	Wheeling	RST	Total
At 33/66 kV level	0.43	465.15	465.59	0.44	487.61	488.05	0.45	501.61	502.06
At 11 kV level	10.55	469.87	480.42	10.66	492.40	503.07	11.11	506.38	517.49
At LT level	86.88	545.51	632.39	86.90	565.57	652.47	89.58	575.15	664.72
<b>Average</b>	<b>72.64</b>	<b>531.57</b>	<b>604.21</b>	<b>72.59</b>	<b>552.01</b>	<b>624.60</b>	<b>75.07</b>	<b>562.58</b>	<b>637.65</b>

Table 177: Cost of Supply for BYPL (Paisa per Unit)

Particulars	FY 2012-13			FY 2013-14			FY 2014-15		
	Wheeling	RST	Total	Wheeling	RST	Total	Wheeling	RST	Total
Above 66 kV level	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
At 33/66 kV level	2.36	471.33	473.69	2.61	498.80	501.41	2.58	515.17	517.75
At 11 kV level	12.06	476.38	488.44	12.94	504.40	517.34	12.85	520.95	533.80
At LT level	97.99	569.95	667.95	101.80	594.40	696.20	99.87	604.70	704.57
<b>Average</b>	<b>87.44</b>	<b>558.61</b>	<b>646.05</b>	<b>90.56</b>	<b>583.17</b>	<b>673.73</b>	<b>88.74</b>	<b>594.13</b>	<b>682.87</b>

## Cross-subsidisation in Tariff Structure

5.30 The Electricity Act, 2003 provides for reduction of cross subsidies by moving the category wise tariffs towards cost of supply. The Commission also recognises the need for reduction of cross subsidy. However, it is equally incumbent on the Commission to keep in mind the historical perspective for the need to continue with cross-subsidy for some time.

5.31 Regarding Cross subsidy, clause 8.3 of the National Tariff Policy states,

*“....Direct subsidy is a better way to support the poorer categories of consumers than the mechanism of cross subsidizing the tariff across the board. Subsidies should be targeted effectively and in transparent manner. As a substitute of cross subsidies, the State Government has the option of raising resources through mechanism of electricity duty and giving that subsidy to only needy consumers. This is a better way of targeting subsidies effectively.”*

5.32 In line with the above provision of the National Tariff Policy, Clause 9.1 of the MYT Regulations states that any consumer desirous of getting subsidized tariff shall approach the State Government and if the request for subsidy is found justified, the State Government may give subsidy to that class of consumers so that these consumers get electricity at concessional tariff.

5.33 At present, there are a number of consumer classes such as some slabs of domestic consumers, Agriculture & Mushroom Cultivation, Government Schools/Colleges, Hospitals, etc. which are being cross subsidized by other consumers. Several stakeholders have raised serious concern over cross subsidization of some categories and argued that after privatization, electricity distribution is purely commercial operation and there is no justification for making some consumers pay for others. If any class of consumers is to be given concessional tariff on socio-economic ground,

the State government shall bear the cost on this count as supporting weaker sections of society is the responsibility of the government.

- 5.34 The Commission is of the view that in an ideal case electricity tariff for all categories of consumers should be fixed on cost to serve basis. In accordance with the Act and the policies prescribed from time to time, the Commission has made an attempt in this Tariff Order to reduce the prevailing cross-subsidy as detailed in the subsequent sections.
- 5.35 With the revision in tariff the Commission has made an attempt towards reducing the cross subsidy in the existing tariff structure by approving a higher tariff hike (percentage) for all subsidized categories, than those approved for subsidizing consumer categories, as can be seen from the table below:

**Table 178: Ratio of ABR to Average CoS and category-wise tariff hike approved for FY 2012-13**

Category	Average Billing Rate at Existing tariff	Average Billing Rate (ABR) at Revised Tariff		Average Cost of Supply	Ratio of average billing rate at Revised Tariff to Average Cost of supply		% hike in average tariff
		9 month ABR	Full Year ABR		9 month ABR	Full Year ABR	
Domestic	4.25	5.15	5.25	6.04	85%	87%	24%
Non-Domestic Low Tension							
Up to 10 kW	7.40	8.50	8.89	6.04	141%	147%	20%
> 10 kW to 100 kW	7.39	8.48	8.87	6.04	140%	147%	20%
>100 kW	8.71	10.00	10.33	6.04	166%	171%	19%
Non Domestic High Tension	7.09	7.95	8.41	6.04	132%	139%	19%
Small Industrial Power (SIP)							
10-100kW	6.68	7.70	8.07	6.04	127%	134%	21%
>100 kW	8.05	9.23	9.67	6.04	153%	160%	20%
Large Industrial Power (LIP)	6.17	6.95	7.21	6.04	115%	119%	17%
Agriculture	2.03	2.67	2.90	6.04	44%	48%	43%
Mushroom Cultivation	4.05	5.55	5.80	6.04	92%	96%	43%
Public Lighting	5.60	6.82	7.25	6.04	113%	120%	29%
Railway Traction (Other than DMRC)	5.80	6.92	7.19	6.04	115%	119%	24%
DMRC	4.01	5.06	5.27	6.04	84%	87%	31%
DIAL	6.15	6.94	7.16	6.04	115%	119%	16%
DJB	7.65	8.09	8.22	6.04	134%	136%	7%

## Time of Day (ToD) Tariff

- 5.36 The Commission believes that Time of Day (ToD) tariff is an important Demand Side management (DSM) measure to give a tariff signal so that peak hour consumption is charged at higher rates which reflect the higher cost of power purchase during peak hours. At the same time, a rebate is being offered on consumption during off-peak hours. This is also meant to incentivise consumers to shift a portion of their loads

from peak time to off-peak time, thereby improving the system load factor and even out the load curve. The ToD tariff is aimed at optimizing the cost of power purchase, which constitutes over 80% of the tariff charged from the consumers. It also assumes importance in the context of propagating and implementing DSM and achieving energy efficiency. This is important in Delhi situation as load varies from 3000 MW to 5000 MW in summer causing problem of surplus during off peak hours.

- 5.37 Introduction of higher peak hour tariff would initially generate additional revenue which would compensate for the reduction in revenue on account of lower tariff during off-peak hours.
- 5.38 In the long run, this would provide signals to the consumers to reduce load during peak hours and, where possible, shift this consumption to off-peak hours. Any loss of revenue to the utility on account of shifting of load from peak to off-peak hours in the long run would be compensated by way of reduction of off-peak surplus to the extent of increase in off-peak demand.
- 5.39 The ToD Tariff would thus have immediate as well as long term benefits for both, consumers as well as the utility and contribute towards controlling the rise in power purchase costs.
- 5.40 The Commission has decided to introduce TOD Tariff on a pilot basis for large industrial and consumers (300 kW and above). This pilot is targeted to the consumer segment which has capacity to bear a higher burden for peak hour consumption and also at least partly (if not fully) offset the impact of this increase through higher off-peak consumption at lower rates.
- 5.41 ToD tariff shall be applicable on all consumers (other than domestic) whose sanctioned load/MDI (whichever is higher) is 300 kVA and as shown below:

Month*	Peak Hour	Surcharge on Energy charges	Off-Peak Hour	Rebate on Energy Charges
April to September	15:00-24:00 Hrs.	10%	24:00-6:00 Hrs.	10%
October to March	17:00-23:00 Hrs.	5%	23:00-6:00 Hrs.	10%

*\*For other than peak and off-peak hours, normal energy charges will be applicable.*

## Tariff Structure

### Domestic Tariff

- 5.42 Domestic tariff is applicable for power consumption of residential consumers, hostels of recognized/aided educational institutions and staircase lighting in residential flats, compound lighting, lifts and water pumps or drinking water supply and fire fighting equipment, etc. in Cooperative Group Housing Societies (CGHS), bonafide domestic use in farm houses, etc.
- 5.43 All the Cattle/ Dairy Farms and Dhobi Ghat across Delhi with a total consumption of not more than 200 units in a month and connected load of up to 2 kW shall be charged domestic tariff. However, in case the consumption in a month exceeds 200 units, the total consumption including the first 200 units shall be charged non-domestic rates as applicable to the consumers falling under the Non Domestic category.
- 5.44 The Commission in its Tariff Order dated June 26, 2003 introduced two part tariff for domestic consumers, i.e., fixed charges and energy charges and abolished minimum charges and meter rent. The fixed charge in two-part tariff represents the fixed component of charges, which is independent of consumption level and depends on the fixed cost incurred by the Utility in supplying electricity.
- 5.45 The Commission has considered the views expressed by the stakeholders and after considering various options, the Commission proposes to continue with the existing methodology of levying fixed charges on slab system, based on the sanctioned load till sanctioned load of 5 kW and for sanctioned load above 5 kW, the fixed charges shall be applicable in Rs/kW terms.

### Domestic single delivery point at 11 kV for CGHS

- 5.46 In respect of tariff for Cooperative Group Housing Societies (CGHS) complexes, the Commission had in tariff schedule of its earlier Orders specified that billing for energy charges would be slab-wise, for the first 44.4% of consumption, next 44.4% of consumption and next 11.2% of consumption as per slabs in the domestic category.
- 5.47 The Commission, in this tariff Order has revised the slab structure of the domestic consumers. Therefore, the Commission has decided to consider first 60% of the consumption at 0-400 slab and remaining 40% consumption in above 400 slab in this Tariff Order.

### Non-Domestic Tariff

- 5.48 Non-domestic category of consumers comprises two sub-categories, viz., Supply on Low Tension and Supply on High Tension (11 kV and above).

**Non-Domestic Low Tension (NDLT)**

- 5.49 This category covers LT non-domestic consumers having contract demand or sanctioned load (whichever is applicable) up to 100kW / 108kVA.
- 5.50 For the consumers with sanctioned load up to 10 kW in this category, the Commission had specified the kWh based tariff only. The Commission has decided to continue with the existing practice.
- 5.51 For Non-domestic consumers having contract demand or sanctioned load more than 10 kW (11 kVA) and up to 100 kW (108 kVA), the Commission has specified kVAh based energy charges.
- 5.52 Non Domestic consumers having contract demand or sanctioned load (whichever is lower) more than 100 kW/108 kVA and up to 200 kW/215 kVA and availing supply on LT will also be charged kVAh tariff which will be higher than tariff for non domestic consumers having contract demand or sanctioned load more than 10 kW and up to 100 kW/(108 kVA). This has been done in view of the fact that the lower the voltage of supply, higher will be the system losses and hence the consumers with connected load more than 100 kW (108 kVA) at LT voltage (400 V) have to be discouraged.
- 5.53 The Commission believes that with gradual movement towards voltage linked tariff, irrespective of load of the consumer, the tariff for consumption at higher voltages will be lower than that for lower voltages, which will discourage consumers to opt for LT connections particularly for loads higher than 100 kW.
- 5.54 For existing consumers having sanctioned load/contract demand, whichever is applicable, in kW, the actual power factor of the consumer in the relevant billing cycle shall be considered for converting kW to kVA for computing the fixed charges. For new consumers, the sanctioned load/contract demand shall be in terms of kVA only

**Non-Domestic High Tension (NDHT)**

- 5.55 Non-domestic consumers with contract demand or sanctioned load more than 100 kW/ 108 kVA shall avail supply on 11 kV.
- 5.56 Non domestic consumers availing supply on 33 kV/66 kV or 220 kV will be entitled for rebate of 2.5% and 4% respectively on the applicable energy charges on 11 kV tariff.
- 5.57 For existing consumers having sanctioned load/contract demand, whichever is applicable, in kW, the actual power factor of the consumer in the relevant billing cycle shall be considered for converting kW to kVA for computing the fixed charges. For new consumers, the sanctioned load/contract demand shall be in terms of kVA only.

**Industrial Tariff**

- 5.58 Industrial category of consumers consists of two sub-categories, viz., Small Industrial Power (SIP) and Large Industrial Power (LIP).

**Small Industrial Power (SIP)**

- 5.59 This category covers industrial consumers having contract demand or sanctioned load, whichever is applicable, up to 200kW / 215kVA.
- 5.60 For the consumers with sanctioned load up to 10 kW in this category, the Commission had specified the kWh based tariff only. The Commission has decided to continue with the existing practice.
- 5.61 For Industrial consumers having contract demand or sanctioned load more than 10 kW/11 kVA and up to 100 kW/108 kVA, the Commission has specified the kVAh based tariff.
- 5.62 Industrial consumers having contract demand or sanctioned load more than 100 kW/108 kVA and up to 200 kW/215 kVA and availing supply on LT will also be charged kVAh tariff which will be higher than the tariff for Industrial consumers having contract demand or sanctioned load more than 11 kVA and up to 108 kVA. This has been done in view of the fact that lower the voltage of supply, higher the system losses and hence consumers with connected load more than 108 kVA at LT voltage (415 V) have to be discouraged.
- 5.63 For existing consumers of 10 kW and above having sanctioned load/contract demand, whichever is applicable, in kW, the actual power factor of the consumer in the relevant billing cycle shall be considered for converting kW to kVA for computing the fixed charges. For new consumers, the sanctioned load/contract demand shall be in terms of kVA only.

**Large Industrial Power (LIP)**

- 5.64 Industrial consumers with contract demand or sanctioned load more than 108 kVA shall avail supply on 11 kV.
- 5.65 The Commission believes that with gradual movement towards voltage linked tariff, irrespective of load of the consumer, the tariff for consumption at higher voltages will be lower than that for lower voltages, which will discourage consumers to opt for LT connections particularly for loads higher than 100 kW.
- 5.66 For supply at 33/66 kV, consumers will get a rebate of 2.5% on the energy charges applicable for supply at 11 kV and a rebate of 4% for supply at 220 kV.



- 5.67 For existing consumers having sanctioned load/contract demand, whichever is applicable, in kW, the actual power factor of the consumer in the relevant billing cycle shall be considered for converting kW to kVA for computing the fixed charges. For new consumers, the sanctioned load/contract demand shall be in terms of kVA only.

### **Agriculture**

- 5.68 Agriculture connections are available for tube wells for irrigation, threshers and kuttu cutting in conjunction with pumping load for irrigation purpose for loads up to 10 kW and lighting load for bonafide use in 'Kothra'.

### **Mushroom Cultivation**

- 5.69 This category is applicable to the consumers who are engaged in mushroom cultivation/processing.

### **Public Lighting**

- 5.70 Tariff for this category is applicable to all street light consumers including MCD, DDA, PWD/CPWD, CGHS, Slums, DSIDC and certain civilian pockets of MES. The share of MCD, however is dominating as most of the street lights in the city are owned by the MCD.
- 5.71 As regard to the maintenance charges for street lighting, the Commission would like to clarify that the maintenance charges and other conditions of maintenance of street lights as approved in the Commission's Order dated September 22, 2009 will continue till such time it is amended.

### **Railway Traction**

- 5.72 This category is applicable to Indian Railways for traction purposes for loads more than 100 kW/108 kVA.

### **DMRC**

- 5.73 This category is available to Delhi Metro Rail Corporation (DMRC) to run its operations (other than construction projects). The Commission has decided to increase the applicable energy charges for DMRC to meet the cost of supply. The commercial load at DMRC stations shall be metered and billed separately as per the relevant tariff category.

### **Temporary Supply**

- 5.74 The Commission does not propose any change in the existing tariff methodology for temporary supply as mentioned in the Tariff Schedule.

**Delhi Jal Board (DJB)**

- 5.75 In the Tariff Order for FY 2009-10, the Commission had decided to depart from the earlier practice of charging DJB consumption at MLHT tariff by creating a special category for DJB which provides an important public utility service. The special category created is being continued in view of the nature of consumption of DJB.
- 5.76 In this Tariff Order, the Commission has added DJB supply under LT also in this category.
- 5.77 For the purpose of conversion of kW to kVA, the actual power factor of the relevant billing cycle shall be considered for the computation of fixed charges.

**Delhi International Airport Limited (DIAL)**

- 5.78 The Commission, in the Tariff Order for FY 2009-10, has already created a separate category to cover the consumption for the infrastructure facilities at the airport. However in view of the fact that DIAL is providing services to consumers belonging to higher strata, it will not be fair to give the tariff at par with DJB, which is providing essential services to all consumers including the lowest strata of the society. Accordingly, the Commission has decided to give DIAL, a tariff, which shall be higher than that of DJB but lower than that of Non Domestic HT consumers.

**Advertisement and Hoardings**

- 5.79 The Commission, in this Tariff Order has created a separate category to cover the consumption for the advertisements and Hoardings. This category will be applicable for supply of electricity for lighting external advertisements, external hoardings and displays at departments stores, malls, multiplexes, theatres, clubs, hotels, bus shelters, Railway/Metro Stations shall be separately metered and charged at the tariff applicable for 'Advertisements and Hoardings' category, except such displays which are for the purpose of indicating/displaying the name and other details of the shop, commercial premises itself. Such use of electricity shall be covered under the prevailing tariff for such shops or commercial premises.

## Tariff Schedule

Category		Fixed Charges <sup>1</sup>	Energy Charges <sup>2</sup>
<b>1</b>	<b>Domestic</b>		
<b>1.1</b>	<b>Domestic</b>		
a.	Up to 2 kW connected load		
	0-200 units <sup>3</sup>	40 Rs/month	370 Paisa/kWh
	0-400 units <sup>4</sup>	40 Rs/month	480 Paisa/kWh
	Above 400 units	40 Rs/month	640 Paisa/kWh
b.	Between 2-5 kW connected load		
	0-200 units <sup>3</sup>	100 Rs/month	370 Paisa/kWh
	0-400 units <sup>4</sup>	100 Rs/month	480 Paisa/kWh
	Above 400 units	100 Rs/month	640 Paisa/kWh
c.	Above 5 kW connected load		
	0-200 units <sup>3</sup>	20 Rs /kW/month	370 Paisa/kWh
	0-400 units <sup>4</sup>	20 Rs /kW/month	480 Paisa/kWh
	Above 400 units	20 Rs /kW/month	640 Paisa/kWh
<b>1.2</b>	<b>Single delivery point on 11 kV for CGHS</b>		
	First 60%	20 Rs /kW/month	480 Paisa/kWh
	Next 40%	20 Rs /kW/month	640 Paisa/kWh
	<i>In case of cooperative group housing societies having independent connection for common facilities through separate meter, energy charges shall be billed at highest slab tariff for domestic category. Rebate of 10% is admissible on energy charges</i>		
<b>2</b>	<b>Non-Domestic</b>		
<b>2.1</b>	<b>Non- Domestic Low Tension (NDLT)</b>		
	Up to 10 kW	100 Rs/kW/month	760 Paisa/kWh
	Between 10 kW(11kVA) -100 kW (108 kVA)	115 Rs/kVA/month	725 Paisa/kVAh
	Greater than 100 kW / 108 kVA (400 volts) (No Supply on LT for load > 215 kVA)	150 Rs/kVA/month	850 Paisa/kVAh
<b>2.2</b>	<b>Non-Domestic High Tension (NDHT)*</b>		
	For supply at 11 KV and above (for load greater than 108 kVA)	125 Rs/kVA/month	715 Paisa/kVAh <sup>5</sup>
	<i>*The Single Point Delivery Supplier shall charge the NDHT tariff to its LT consumers and in addition shall charge an extra 5% of the bill amount at NDHT tariff to cover losses and expenses.</i>		
<b>3</b>	<b>Industrial</b>		
<b>3.1</b>	<b>Small Industrial Power (SIP) [less than 200 kW/215 kVA]</b>		
	Up to 10 kW	80 Rs/kW/month	725 Paisa/kWh
	Between 10 kW(11kVA)-100kW (108 kVA)	90 Rs/kVA/month	660 Paisa/kVAh
	Greater than 100 kW/108 kVA (400 volts) (No Supply on LT for load > 215 kVA)	150 Rs/kVA/month	800 Paisa/kVAh

Category		Fixed Charges <sup>1</sup>	Energy Charges <sup>2</sup>
3.2	Industrial Power on 11 kV Single Point Delivery for Group of SIP Consumers	90 Rs/kVA/month	600 Paisa/kVAh <sup>5</sup>
3.3	Large Industrial Power (LIP) (Supply at 11 kV and above)	125 Rs/kVA/month	630 Paisa/kVAh <sup>5</sup>
4	Agriculture	20 Rs/kW/ month	260 Paisa/kWh
5	Mushroom Cultivation	40 Rs /kW/month	520 Paisa/kWh
6	Public Lighting		
	Street Lighting <sup>6</sup>		725 Paisa/kWh
	Signals and Blinkers		725 Paisa/kWh
7	Delhi Jal Board		
	Supply at LT		
	Up to 10 kW	80 Rs/kW/month	725 Paisa/kWh
	Between 10 kW(11kVA)-100kW (108 kVA)	90 Rs/kVA/month	660 Paisa/kVAh
	Greater than 100 kW/108 kVA (400 volts) (No Supply on LT for load > 215 kVA)	150 Rs/kVA/month	800 Paisa/kVAh
	Supply at 11 kV and above	125 Rs/kVA/month	630 Paisa/kVAh <sup>5</sup>
8	Delhi International Airport Limited	150 Rs/kVA/month	675 Paisa/kVAh <sup>5</sup>
9	Railway Traction <sup>7</sup>	150 Rs/kVA/month	580 Paisa/kVAh <sup>5</sup>
10	DMRC (Supply at 220 kV and 66 kV)	125 Rs/kVA/month	500 Paisa/kVAh
11	Advertisements and Hoardings	500 Rs/month/connection	1000 Paisa/kVAh
12	Temporary Supply		
12.1	For a total period of		
A	Less than 16 days	50% of the relevant category	Higher by 30% (temporary surcharge) of the relevant category of tariff
B	More than or equal to 16 days	Same as that of relevant category	Higher by 30% (temporary surcharge) of the relevant category of tariff

Category		Fixed Charges <sup>1</sup>	Energy Charges <sup>2</sup>
12.2	For residential cooperative group housing connections and other domestic connections	Same as that of relevant category	Domestic tariff without any temporary surcharge
12.3	For religious functions of traditional and established characters and cultural activities	Same as 1.2	Same as 1.2 without temporary surcharge
12.4	For major construction projects	Same as that of relevant category	Same as that of relevant category with temporary surcharge of 30%
12.5	For threshers		
A	During the threshing season for 30 days	Electricity Tax of MCD : Rs 270 per connection	Flat rate of Rs 5,400
B	For extended period		On pro-rata basis for each week or part thereof

**Note: The above tariff rates shall be subject to an additional surcharge of 8% on the fixed and energy charges (excluding LPSC, enforcement amount, Arrears, E-tax etc.) towards recovery of past accumulated deficit.**

### Notes on Superscripts

- For all categories other than Domestic, Fixed/demand charges are to be levied on sanctioned load or MDI reading, whichever is higher, on per kW/kVA or part thereof, basis. Where the MDI reading exceeds sanctioned load, a surcharge of 30% shall be levied on the fixed charges corresponding to excess load in kW/kVA for such billing cycle only. Wherever, sanctioned load/ contract demand is in kW/HP, the kVA shall be calculated on basis of actual power factor of the consumer, for the relevant billing cycle.
- Time of Day (TOD) Tariff<sup>#</sup> -TOD tariff shall be applicable on all consumers (other than domestic) whose sanctioned load/MDI (whichever is higher) is 300 kVA and above as shown below:

Month	Peak hours	Surcharge on Energy Charges	Off-Peak hours	Rebate on Energy Charges
April-September	1500-2400 Hrs	10%	0000-0600 Hrs	10%
October-March	1700-2300 Hrs	5%	2300-0600 Hrs	10%

<sup>#</sup> For other than peak and off-peak hours normal energy charges will be applicable.

- Applicable if consumption is up to 200 units per month for the relevant billing cycle.
- Applicable if consumption is more than 200 units per month for the relevant billing cycle
- Tariff is for supply at 11 kV. Additional rebate of 2.5% on the energy charges on 11 kV rates for availing supply at 33/66 kV and 4% for supply at 220 kV shall be admissible.
- Maintenance Charges on street lights would be additional to the specified tariff @ Rs. 84/light point/month and material cost at the rate Rs 19/point/month as per the Commission's Order dated 22 September 2009 till further amended by the Commission. These charges will be payable to the DISCOM only if maintenance services are provided by the DISCOM.
- Tariffs for Northern Railways Traction are based on the supply being given through a single point delivery and metering point at single voltage. An additional capacity blockage charge is also applicable which is to be calculated as Rs 1260 x (2.97 A +5) where A is contract/maximum demand, whichever is higher, in MVA subject to a minimum of Rs 25000.

## Other Terms and Conditions of the Tariff

	Category	Availability	Character of Service
<b>1. Domestic</b>	1.1 Domestic Lighting/Fan and Power (Single Delivery Point and Separate Delivery Points/Meters)	<p>A) Available to following categories of consumers:</p> <p>Residential consumers</p> <p>Hostels of recognized/aided institutions of Municipal Corporation of Delhi or Government of the NCT of Delhi.</p> <p>Staircase lighting in residential flats separately metered.</p> <p>Compound lighting, lifts and water pumps etc., for drinking water supply and fire fighting equipment in residential complexes, if separately metered.</p> <p>In cooperative group housing societies etc. for bonafide use of lighting/fan and power, subject to the provision that the supply is at single delivery point for combined lighting/fan &amp; power.</p> <p>(B) It is available to following consumers.</p> <p>Dispensary/Hospitals/ Public Libraries / School/ College/Working Women's Hostel / Orphanage / Charitable homes run by the Municipal Corporation of Delhi or the Government of the NCT of Delhi.</p> <p>Small Health Centres approved by the Department of Health, Government of NCT of Delhi for providing Charitable Services only.</p> <p>Recognized Centres for welfare of blind, deaf and dumb, spastic children, physically handicapped persons, mentally retarded persons, as approved by the Government of NCT of Delhi.</p> <p>(C) Bed and Breakfast Establishments (Residential Premises) registered u/s 3 of the National Capital Territory of Delhi (Incredible India) Bed and Breakfast Establishments (Registration &amp; Regulations) Act, 2007.</p> <p>(D) Places of worship.</p> <p>(E) Cheshire homes/orphanage.</p> <p>(F) Shelter Homes (including Night Shelters) approved by Delhi Urban Shelter Improvement Board, GoNCTD</p>	<p>AC 50 Hz, single phase, 230 Volts for load up to 10 kW &amp;</p> <p>AC 50 Hz, three phase, 400 Volts for loads beyond 10 kW</p> <p>AC 50 Hz, 3 phase, 11 kV beyond 100 kW (108 kVA)</p>

Category	Availability	Character of Service
	<p>(G) Electric crematoriums.</p> <p>(H) Professionals i.e. individuals engaged in those activities involving services based on professional skills, viz Doctor, Lawyer, Architect, Chartered Accountant, Company Secretary, Cost &amp; Work Accountant, Engineer, Town Planner, Media Professional and Documentary Film Maker may utilize the domestic connection at their residence for carrying out their professional work in the nature of consultancy without attracting non-domestic tariff for the electricity consumed, provided the area used for professional activity does not exceed the area permitted to be used for such activity in residential area under the Master Plan for Delhi, 2021 (MPD-2021), which as per MPD-2021 is permissible on any one floor only but restricted to less than 50% of the permissible or sanctioned FAR whichever is less on that plot or dwelling unit.</p> <p>(I) Available, for loads up to 21 kW, to farm houses for bonafide domestic self use.</p> <p>(J) The consumers running small commercial establishments from their households in JJ Clusters shall be charged domestic tariff provided that the total consumption of electricity in a month does not exceed 200 units.</p> <p>(K) Cattle / Dairy Farms with a total consumption of not more than 200 units/month and connected load of up to 2kW.</p>	
1.2 Domestic Connection on 11 kV single delivery point	Same as 1.1(A) and for CGHS flats and loads above 100 kW in case of individual	AC 50 Hz, three phase, 11 kV; on single delivery point



	Category	Availability	Character of Service
<b>2. Non-Domestic</b>	2.1.1 Non-Domestic (Low Tension) – NDLT	<p>Available to all consumers having load (other than the industrial load) up to 100 kW/108 kVA for lighting, fan &amp; heating/cooling power appliances in all non-domestic establishments as defined below:</p> <p>Hostels (other than those recognized/aided institutions of Municipal Corporation of Delhi or Government of the NCT of Delhi)</p> <p>Schools/colleges (Other than those run by Municipal Corporation of Delhi or the Government of NCT of Delhi)</p> <p>Auditoriums</p> <p>Hospitals, nursing homes/diagnostic Centres other than those run by Municipal Corporation of Delhi or the Government of NCT of Delhi.</p> <p>Railways (other than traction)</p> <p>Hotels and restaurants</p> <p>Cinemas</p> <p>Banks</p> <p>Petrol pumps</p> <p>All other establishments, i.e., shops, chemists, tailors, washing, dyeing etc. which do not come under the Factories Act.</p> <p>Cattle farms, fisheries, piggeries, poultry farms, floriculture, horticulture, plant nursery</p> <p>Farm houses being used for commercial activity</p> <p>DMRC for its commercial activities other than traction.</p> <p>Ice-cream parlours and</p> <p>Any other category of commercial consumers not specified/covered in any other category in this Schedule</p>	<p>AC 50 Hz, single phase, 230 Volts up to 10 kW load;</p> <p>AC 50 Hz, 3 phase, 400 Volts for loads above 10 kW and up to 100 kW (108 kVA)</p>
	2.1.2 Non-Domestic High Tension (NDHT) Non-Domestic Power on 11 kV Single Delivery Point NDHT for Commercial Complexes	<p>Available to consumers having load (other than industrial load) above 100 kW/108 kVA Non-Domestic establishments including pumping loads of Delhi Jal Board /DDA/MCD and supply to Delhi Metro Rail Corporation (DMRC) Ltd. for their on going construction projects etc and for commercial purposes other than traction.</p> <p>Available to commercial complexes having load more than 100kW for group of consumers for non-domestic use.</p>	<p>AC 50 Hz, 3 phase, 11 kV</p>
<b>3. Industrial</b> (For consumer having valid MCD Licence under	3.1.1 Small Industrial Power (SIP)	<p>Available to Industrial consumers with load up to 100 kW including lighting, heating and cooling load.</p>	<p>AC 50 Hz, single phase, 230 Volts;</p> <p>AC 50 Hz, 3 phase, 400 Volts</p>

Category		Availability	Character of Service
Factories Act)	3.1.2 Industrial Power (SIP) on 11 kV Single Delivery Point for Group of SIP Consumers	On single delivery point for group of SIP consumers provided load of any individual consumer does not exceed 100 kW	AC 50 Hz, 3 Phase, 11 kV
	3.2 Large Industrial Power (LIP) a) Supply on 11 kV b) Supply on LT (400 Volts)	Available as primary power to large industrial consumers having load above 100 kW including lighting load. Supply at extra high voltage (33 kV and more) may also be given	AC 50 Hz, 3 phase, 11 kV; AC 50 Hz, 3 Phase, 400 Volts
<b>4. Agriculture</b>		Available for load up to 10 kW for tube wells for irrigation, threshing, and kutti-cutting in conjunction with pumping load for irrigation purposes and lighting load for bonafide use in Kothra.	AC 50 Hz, Single / Three Phase, 230/400 Volts
<b>5. Mushroom cultivation</b>		Available for mushroom growing/cultivation up to 100 kW.	AC 50 Hz, 3 Phase, 400 Volts up to 100 kW
<b>6. Public Lighting</b>	6.1 Street lighting	Available to all street lighting consumers including MCD, DDA, PWD/CPWD, Slums department/DSIIDC/MES/CGHS etc.	AC 50 Hz, Single /three Phase, 230/400 Volts
	6.2 Signals & Blinkers	Available for traffic signals and blinkers of Traffic Police	AC 50 Hz, Single Phase, 230 Volts
<b>7. Railway Traction (other than DMRC)</b>		Available for railway traction for connected load above 100 kW/108 kVA.	AC 50 Hz, Three phase, 220/66/33 kV
<b>8. Delhi Jal Board</b>	DJB- LT	Available to DJB for pumping load & Water Treatment Plants	AC 50 Hz, 3 Phase, 400 Volts up to 100 kW
	DJB-HT	Available to DJB for pumping load & Water Treatment Plants	AC 50 Hz, 3 phase, 11 kV for loads above 100 kW
<b>9. Delhi International Airport Limited</b>		Available to DIAL	AC 50 Hz, 3 phase, 220/66/33 kV
<b>10. Delhi Metro Rail Corporation</b>		Available to Delhi Metro Rail Corporation (DMRC) (not for construction projects)	AC 50 Hz, 3 phase, 220/66/33 kV
<b>11. Temporary Supply</b>	11.1(a) for less than 16 days	Available as temporary connection under the respective category	AC 50 Hz, single phase, 230 Volts; AC 50 Hz, 3 phase, 400 Volts; AC 50 Hz, three phase, 11 kV
	11.1(b) for more than or equal to 16 days		
	11.2 for residential cooperative group housing connections	Same as that of relevant category	
	11.3 for religious functions of traditional and established characters and cultural activities	Provided for religious functions of traditional and established characters like Ram lila, Dussehra, Janmashtami, Nirankari Sant Smagam, Gurupurb, Durga Puja, Id, Christmas celebrations, Easter, Pageants and cultural	

Category	Availability	Character of Service
	activities like NCC camps, scouts & guides camps etc. (normally for a period less than 10 days).	
	11.4 for major construction projects	With loads more than 10 kW
	11.5 for threshers	During the threshing season
<b>12.Advertisement/Hoardings</b>	Electricity for lighting external advertisements, external hoardings and displays at departments stores, malls , multiplexes, theatres, clubs, hotels, bus shelters, Railway/Metro Stations shall be separately metered and charged at the tariff applicable for 'Advertisements and Hoardings' category, except such displays which are for the purpose of indicating/displaying the name and other details of the shop, commercial premises itself. Such use of electricity shall be covered under the prevailing tariff for such shops or commercial premises.	AC 50 Hz, single phase, 230 Volts for loads up to 10 kW;  AC 50 Hz, 3 phase, 400 Volts for loads more than 10 kW and up to 100 kW (108 kVA)

## Electricity taxes and other levies

- 5.80 The rates stipulated in the Schedule are exclusive of electricity duty and other taxes and charges, as levied from time to time by the Government or any other competent authority, which are payable extra.

## Surcharges

- 5.81 All surcharges shall be levied on the basic tariff applicable to the category of use or category of sanction, whichever has higher tariff.

## Payments

- 5.82 In the event of the electricity bill rendered by the licensee, not being paid in full within the time specified on the bill, a surcharge @ 1.5% on the principal amount of bill which has not been paid shall be levied for each 30 days successive period or part thereof until the payment is made in full without prejudice to the right of the licensee to disconnect the supply after due date in the event of non-payment in accordance with section 56 of Electricity Act, 2003. This will also apply to temporary connections, where payment of final bill amount after adjustment of consumption deposit, is not made by due date.
- 5.83 The Commission directs the Petitioner, that in case the bill for consumption of electricity is more than Rs. 4,000, payment for the bill shall only be accepted by the Petitioner by means of an Account Payee cheque/DD. However, the Commission has considered that the blind consumers shall be allowed to make payment of electricity bills, for any amount, through cash.

### **Interpretation/clarification**

- 5.84 In case of doubt or anomaly, if any, in the applicability of tariff or in any other respect, the matter will be referred to the Commission and Commission's decision thereon shall be final and binding.

**A6: DIRECTIVES**

- 6.1 Distribution licensee is directed to post the monthly distribution transformer losses and zone/district wise AT&C loss data giving break-up of energy input, energy billed and revenue realization on its website within 3 weeks from the end of the month.
- 6.2 Distribution licensee is directed to reduce AT&C losses by at least 10% in respect of those zones/districts which are currently having losses in excess of 30% within one year i.e. by August, 2013. These targets shall have to be met by distribution licensee irrespective of the overall AT&C loss achievement targets specified in this Order. Failure to do so will invite penalties.
- 6.3 All data required for True-up (including kWh & kVAh for the consumers billed on kVAh basis) shall be maintained & shall not be deleted from the data base prior to issuance of Order for True-up for that period by the Commission.
- 6.4 The Commission directs the distribution licensee to get the Form 2.1(a) audited by the Statutory auditors on a quarterly basis. The auditor certificate in this regard shall be filed in the Commission within 30 days from the end of the quarter.
- 6.5 The Commission directs the distribution licensee to show power station wise power purchase quantum and cost along with break up under various heads in its audited accounts.
- 6.6 Distribution licensee shall be responsible for making timely payment of bills/dues to central & state generating stations and transmission utilities. The Commission shall not allow surcharge as a pass through in the ARR, if paid by the distribution licensee, on account of delayed payments.
- 6.7 The Commission directs the distribution licensee to conduct a safety audit and carry out preventive maintenance as per schedule.
- 6.8 With respect to AT&C losses, the Commission directs the Petitioner for the following:
- (a) Submit Form 2.1(a) on monthly basis along with billing database to the Commission within 3 weeks of the following month.
  - (b) Submit category wise revenue collection on monthly basis along with the supporting documents within 3 weeks of the following month.
  - (c) In respect of the directive to include Form 2.1(a) in the quarterly and annual balance sheet, the Commission has decided to accept Auditor's Certificate in respect of quarterly information. Further, the information may be included as a part of Regulatory accounts annually.

- (d) Include the category wise / slab wise consumer details i.e. no of consumer, connected load, sales, power factor, revenue from fixed charges, revenue from demand charges in the quarterly and annual balance sheet.
  - (e) Include source wise power purchase and sale details i.e. quantum in MU and Rs Cr in the quarterly and annual balance sheet.
  - (f) Submit monthly report to the Commission giving details of category wise consumer addition and their detail within 3 weeks of the following month.
  - (g) Submit monthly report to the Commission giving details of no. of connection disconnected / reconnected and their detail within 3 weeks of the following month.
  - (h) Submit monthly report to the Commission on change of consumer category for consumer within 3 weeks of the following month.
- 6.9 The Commission directs that whenever journal entries are to be made for bill correction, they shall indicate both the amount reversed as well as the units reversed. The Petitioner shall submit monthly report to the Commission on bill correction / JE entries within 3 weeks of the following month.
- 6.10 The Commission directs that 100% metering shall be done for street lighting. Energy consumption on account of ballast etc shall be accounted through metered consumption.
- 6.11 It has been noticed that some of the DISCOMs are showing energy consumption at zero rate in their billing database. The Commission directs that the DISCOMs shall not make any entry related to energy consumption at zero rate.
- 6.12 The Commission directs DISCOMs to meter self consumption in their own premises. The bills shall be raised at the appropriate tariff for actual consumption recorded based on meter reading every month. The licensee may avail credit at zero tariff to the extent of the normative self consumption approved by the Commission at the end of the financial year.
- 6.13 All effort shall be made for prudence in short term sale and purchase so as optimize power purchase cost for which detailed directions will be issued by the Commission separately.
- 6.14 The Commission directs that provisions made on account of power sale and purchase at the end of year i.e. in March shall be adjusted within one month, i.e. in the month of April. Remaining provisions if any shall be considered by the Commission for next year True-up.