

Staff Paper based on NDMC's Petition for True up for FY 2012-13 and ARR for FY 2014-15

Introduction

- 1.1 The New Delhi Municipal Council (NDMC), the Distribution Licensees, has filed its Petition for approval of True up for FY 2012-13, and Revised Aggregate Revenue Requirement (ARR) and the corresponding determination of tariff for FY 2014-15.
- 1.2 This Staff Paper contains the summary of the Petition filed by NDMC for approval of True up for FY 2012-13 (based on audited accounts), and ARR and tariff of FY 2014-15 (based on projections).
- 1.3 For the purpose of comparison, the Staff Paper includes figures approved in the Multi Year Tariff (MYT) Order dated 13th July, 2012 (referred to as 'MYT Order dated 13th July, 2012' hereafter).
- 1.4 As per the DERC MYT Regulations, 2011, the Tariff for FY 2014-15 shall be based on the ARR approved by the Commission, which broadly has the following components:
 - a) Power Purchase Cost
 - b) Operation and Maintenance (O&M) Expenses
 - Employee Expenses
 - Administrative & General (A&G) Expenses
 - Repair & Maintenance (R&M) Expenses
 - c) Return on Capital Employed (RoCE)
 - d) Depreciation
 - e) Non-tariff Income
- 1.5 The Commission shall true up the ARR FY 2012-13, as per MYT Regulations, 2011, after due prudence check.
- 1.6 Depreciation and RoCE shall be trued up every year, based on the actual capital expenditure and actual capitalisation, vis-à-vis the capital investment plan approved by the Commission.

Truing up for FY 2012-13

- 1.7 In its Petition, NDMC has submitted that its actual energy sales in FY 2012-13 were 1291.25 MU compared to energy sales of 1253.43 MU approved by the Commission for FY 2012-13 in the July, 2012 Tariff Order. Since energy sales are treated as uncontrollable factors, NDMC has requested the Commission to approve the true up for FY 2012-13 based on actuals, as shown below:

Table 1: Sales and Revenue for FY 2012-13

Sl. No.	Category	MYT Order dt. 13 th July, 2012		Actuals		
		Sales (MU)	Revenue (Rs. Cr)	Sales (MU)	Revenue Billed (Rs. Cr)	Revenue Collected (Rs. Cr)
1	Domestic	239.06	86.08	259.01	112.34	
2	Non-Domestic	422.98	277.81	448.37	339.22	
3	Non-Domestic High Tension (NDHT) Supply at 11 KV	536.32	346.32	527.13	383.31	
4	Small Industrial	0.32	0.18	0.26	0.15	
5	Public Lighting	14.81	8.30	8.21	5.50	
6	Others	9.94	5.51	9.53	2.95*	
7	DMRC	30.00	12.88	38.70	22.59	
8	Temporary	0.00	0.00	0.04	0.03	
9	Tax	0.00	0.00	0.00	39.77	
10	Total	1253.43	737.08	1291.25	905.86	884.81

**includes J.J cluster Rs. 0.35 Cr.*

Actual revenue collected contains fixed charges, variable charges, fuel surcharges and tax collected from consumers.

NDMC has not provided details of the category –wise revenue collection.

AT&C Losses for FY 2012-13

- 1.8 NDMC has submitted, in its Petition, that the actual AT&C loss figures for FY 2012-13 are at 9.46%, as against the approved loss level of 10.35% for FY 2012-13 in the July, 2012 Order.
- 1.9 The following table shows the actual AT&C losses, along with distribution losses and collection efficiency for FY 2012-13, vis-à-vis those approved in the July, 2012 Order.

Table 2: Approved and Actual AT&C Losses for FY 2012-13

Sl. No.	Particulars	Approved in MYT Order dt. 13 th July, 2012	Actuals as per Petition
1	AT&C Losses	10.35%	9.46%
2	Collection Efficiency	100%	97.68%
3	Distribution Losses	10.35%	7.31%

Power purchase Requirement

- 1.10 The quantum of power purchase is based on the sales of energy by the licensee, as well as the loss levels. Higher 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 sales (in MU), after accounting for various losses in the process of supplying electricity.
- 1.11 The energy sale for that year is grossed up by the loss levels for the year, to arrive at the required quantum of power purchase for that year in the following manner:

$$\text{Quantum of Power Purchase (MU)} = \frac{\text{Energy Sales (MU)}}{1 - (\text{Distribution loss}(\%)/100)}$$

- 1.12 The Table below shows the actual sales, loss level and power purchase for FY 2012-13, as submitted by NDMC.

Table 3: Power Purchase Requirement for FY 2012-13

Sl. No.	Particulars	Approved in MYT Order dt. 13 th July, 2012	Actuals as per the Petition
1	Sales (MU)	1253.43	1291.25
2	Distribution Losses (%)	10.35%	7.31%
3	Energy Requirement at DISCOM Periphery (MU)	1398.14	1393.08

Power Purchase Cost

- 1.13 NDMC, in its petition, has submitted that the NDMC has allocation of power from Dadri TPS, BTPS and Pragati Stations. The actual power purchased during FY 2012-13 was 2148.90 MU, as against the approved purchase of 2427.33 MU and the actual power purchase cost is also lower than what was approved by the Commission.
- 1.14 The Power purchase approved in July, 2012 Tariff Order and actual in FY 2012-13 are given in the Table below:

Table 4: Power Purchase Details for FY 2012-13

Sl. No.	Stations	As per MYT Order dt. 13 th July, 2012			Actuals as per the Petition		
		Quantum (MU)	Cost (Rs. Cr)	Average Rate (Rs/kwh)	Quantum (MU)	Cost (Rs. Cr)	Average Rate (Rs/kwh)
1	NTPC – BTPS	675.23	316.98	4.69	649.35	295.97	4.56
2	NTPC-Dadri	798.45	307.77	3.85	755.10	290.95	3.85
3	Rajgat Power house	2.11	1.05	4.98	1.71	0.81	4.74
4	Gas Turbine Power Station	4.99	2.05	4.11	3.39	1.65	4.87
5	PPCL-I	620.41	202.30	3.26	635.47	224.54	3.53
6	PPCL-III	326.13	146.76	4.50	103.89	72.27	6.96
7	Total	2427.33	976.92	4.02	2148.90	886.19	4.12
8	Bilateral Purchase	-	-	-	-	-	-
9	Bilateral Sale	(960.55)	(384.22)	4.00	(120.13)	(50.08)	4.17
10	Exchange Purchase	-	-	-	16.55	5.26	3.18
11	Exchange Sale	-	-	-	(495.27)	(119.49)	2.41
12	Inter DISCOM Purchase	-	-	-	9.19	3.94	4.29
13	Inter DISCOM Sale	-	-	-	(53.61)	(23.19)	4.33
14	UI	-	-	-	(71.70)	(33.56)	4.68
15	Transmission Charges	-	103.00	-	-	58.66	-
16	Total	1466.78	695.70	4.74	1433.93	727.73	5.08

NDMC has requested that the net power purchase cost of Rs. 727.73 Cr for FY 2012-13 be allowed, after adjustment of revenue from sale of surplus power.

O&M Expenses

1.15 NDMC has submitted that Operation and Maintenance Expenses for the year FY 2012-13 are considered at the same level as approved by the Commission in the July, 2012 Tariff Order.

NDMC has further submitted that NDMC Expenses shared by its Civil Engineering Department for Electricity Distribution Business is Rs. 10.00 Cr. NDMC has also submitted that NDMC has considered an allocation of 19% of the Administrative Department expenses towards the electricity distribution business for FY 2012-13 as in

the previous years. The expenditure under the head comes out to Rs. 82.44 Cr. The total allocation towards Civil Energy Department and Administrative Department is Rs. 92.44 Cr.

- 1.16 The approved and proposed O&M Expenses for FY 2012-13 are given in the Table below:

Table 5: Approved and Proposed O&M Expenses for FY 2012-13 (Rs. Crore)

Sl. No.	Particulars	As per MYT Order dt. 13 th July, 2012	Actuals as per the Petition
1	O&M Expenses	144.86	144.85
2	Allocation of Administrative and Civil Engineering Department Related Expenses to Electricity Distribution Business	45.37	92.44

Depreciation

- 1.17 NDMC has submitted that depreciation has been calculated by applying the depreciation rate approved by the Commission in the MYT Order. The depreciation has been computed at 3.6% of the average GFA during the year.

- 1.18 The depreciation is computed as under:

Table 6: Depreciation (Rs. Crore)

Sl. No.	Particulars	Approved in MYT Order dt. 13 th July, 2012	Actuals in the Petition
1	Opening Balance of Fixed Assets	1018.23	1039.97
2	Addition during the Year	68.71	71.09
3	Retirement During the Year	0.00	0.00
4	Closing Balance of Fixed Assets	1086.94	1111.06
5	Average Fixed Assets	1052.59	1075.51
6	Rate of Depreciation	3.6%	3.6%
7	Depreciation	37.89	38.72

Return on Capital Employed (RoCE)

- 1.19 NDMC has submitted that the capital expenditure incurred by it for creation of assets has been entirely incurred through its budgetary support and internal accruals. NDMC has computed RoCE as per the methodology approved by the Commission in its previous Tariff Orders, as tabulated below:

Table 7: Return on Capital Employed (RoCE)**(Rs. Crore)**

Particulars		FY 2012-13 (Approved in MYT Order dt. 13 th July, 2012)	FY 2012-13 (Actuals)
CBFA	A		
Opening WC	B		
Accumulated Depreciation	C		
RB (Opening)	D	738.14	761.13
Δ AB	E = F-G-H	30.82	32.37
Investments in the Year	F	68.71	71.09
Depreciation	G	37.89	38.72
Consumer Contribution	H	0.00	0.00
Change in WC	I	26.66	14.08
RB (Closing)	J = D+E+I	795.62	807.58
Regulated Rate Base (RRBI)	K = D+(E/2)+I	780.21	791.39
Debt	70%	650.72	754.35
Equity	30%	278.88	323.29
Rate of return on Equity		16.00%	16.00%
Rate of Return on Debt		11.50%	11.50%
WaCC		11.50%	12.9%
Return on Capital Employed		89.72	101.69

Non-Tariff Income

1.20 The NDMC has submitted that Non-Tariff Income is as per actuals for FY 2012-13. The Non-Tariff Income for FY 2012-13, as per actuals, is Rs. 18.17 crore, as against Rs. 20.39 crore approved in the July, 2012 Tariff Order, as shown in the Table below:

Table 8: Non-Tariff Income**(Rs. Crore)**

Other Income/Non-Tariff Income (Rs crore)	FY 2012-13 (Approved in MYT Order dt. 13 th July, 2012)	FY 2012-13 (Actuals)
Late Payment Surcharge	1.37	0.00
Other Penalties & Fines		
MDI	6.72	11.21
Misuse	3.59	4.93
New Connection/Re-Connection Charges	0.27	
Meter Testing Charges	0.01	
Meter Rent	0.41	0.01
Service Administrative Charges	0.70	
Sale & Hire charges	0.02	
Burnt Meter	0.04	0.06
Recovery on Deposit Work	2.10	
Other Income From Lapsed Deposit and Other Receipts	3.79	0.00

Other Receipts (Petty Items Commercial)	1.38	1.97
Total	20.39	18.17

Annual Revenue Requirement (ARR)

1.21 On the basis of costs incurred during FY 2012-13 and after deducting the Non- Tariff Income, the Annual Revenue Requirement claimed during FY 2012-13, vis-à-vis that approved in Tariff Order dated 13th July, 2012, is tabulated below:

Table 9: Annual Revenue Requirement for FY 2012-13

(Rs. crore)

Particulars	FY2012-13 (Approved in MYT Order dt. 13 th July, 2012)	FY2012-13 (Actuals)	Deviation
Cost of Power Purchase	573.16	669.07	95.91
Inter-State Transmission Charges	21.04	58.66	37.62
Intra-state Transmission (Delhi Transco) charges	74.03	0.00	-74.03
SLDC Fees and Charges	5.87	0.00	-5.87
Wheeling Charges Payable to Other Distribution Licensees		0.00	
O&M Expenses	141.96	144.79	2.83
Depreciation	37.89	38.72	0.83
Allocated Administrative and Civil Engineering Dept Exp	45.37	92.44	47.07
RoCE	89.72	101.69	11.97
Income Tax			
DTL Claim			
Less			
Other Income (Including Income From Wheeling Charges)	20.39	18.17	-2.22
Income from Other Business Allocated to the Licensed Business	-	-	-
Aggregate Revenue Requirement (A-B)	968.65	1,087.20	118.55

Revenue Surplus/Gap for FY 2012-13

1.22 NDMC has submitted that the Annual Revenue Requirement for FY 2012-13 was Rs. 1087.20 crore and NDMC actual revenue from sale of power amounted to Rs. 884.81 crore, leaving a gap of Rs. 202.39 crore, as shown below:

Table 10: Revenue Surplus/Gap for FY 2012-13**(Rs. crore)**

Sl. No.	Particulars	FY 2012-13	
		Approved in MYT Order dt. 13 th July, 2012	Actuals in the Petition
1	Aggregate Revenue Requirement	968.65	1087.20
2	Revenue from Sale of Power	737.08	884.81
3	Revenue (Gap)	(231.57)	(202.39)

ARR for FY 2014-15**Energy Sales and Revenue**

1.23 NDMC has projected the energy sales at 1524.02 MU for FY 2014-15 and has requested the Commission to approve the same.

Table 11: Energy Sales for FY 2014-15

Sl. No.	Particulars	FY 2014-15			
		Approved in MYT Order dt. 13 th July, 2012 Sales (MU)	Sales as per the Petition (MU)	Revenue as per MYT Order dated 13.07.2012 (Rs. Cr)	Expected Revenue as per the Petition (Rs. Cr)
1	Domestic	275.26	289.55	Not provided in MYT Order dt. 13 th July, 2012	134.36
2	Non Domestic	429.17	507.77		388.82
3	Non Domestic High Tension (NDHT) Supply at 11 KV	599.90	635.03		426.50
4	Small Industrial	0.35	0.28		0.19
5	Public Lighting	15.77	8.18		5.73
6	Others	14.86	11.29		4.85*
7	DMRC	50.00	62.38		37.30
8	Temporary	0.00	9.53		6.98
9	FCA	0.00	0.00		22.60
10	Total	1385.31	1524.02		1027.33

* including JJ clusters Rs. 0.38 Cr

AT&C Losses

1.24 NDMC has projected the collection efficiency at 100%, as approved in the MYT Order for the second control period. The AT&C losses projected for FY 2014-15 are given in the Table below:

Table 12: AT&C Losses for FY 2014-15**(Rs. Crore)**

Sl. No.	Particulars	FY 2014-15	
		Approved in MYT Order dt. 13 th July, 2012	As per the Petition
1	T&D Losses	9.85%	9.36%
2	Collection Efficiency	100%	100%
3	AT&C Target	9.85%	9.36%

Power Purchase Requirement

1.25 The quantum of power purchase has been arrived at by the estimated sales of energy and Distribution losses as projected/approved. Higher sales require greater quantum of power. Similarly, high losses result in higher quantum of power purchase to meet the expected sales.

The energy sales for the year is grossed up by the loss level for the year, to arrive at the required quantum of power purchase for that year in the following manner:

$$\text{Quantum of Power Purchase (MU)} = \frac{\text{Energy Sales (MU)}}{1 - (\text{Distribution loss}(\%)/100)}$$

1.26 The sales, loss level, energy balance and power purchase for FY 2014-15, as submitted by the Petitioner, is given in the Table below:

Table 13: Approved Energy Requirement**(MU)**

Sl. No.	Particulars	As per MYT Order dated 13 th July, 2012	As per the Petition
1	Sales	1385.31	1524.02
2	Distribution Losses	9.85%	9.36%
3	Energy Requirement in MU at DISCOM periphery	1536.67	1681.37

Table 14: Energy Balance Projected During FY 2014-15

Sl. No.	Particulars	UoM	FY 2014-15
1	Energy Sales	MU	1524.02
2	Distribution Losses	MU	157.35
3	Distribution Losses	%	9.36%
4	Energy at DISCOM Periphery	MU	1681.37
5	Intra State Transmission Losses	MU	14.86
6	Intra State Transmission Losses	%	1.17%
7	Energy at DTL Periphery	MU	1696.24
8	Inter State Transmission Losses	MU	24.12
9	Inter State Transmission Losses	%	3.33%
10	Energy Requirement	MU	1720.36

Power Purchase Cost

1.27 NDMC has submitted that NDMC has allocations from Dadri TPS, BTPS and Pragathi Stations. NDMC has further submitted that the power purchase cost from different sources for FY 2013-14 has been computed, based on the 9 months' actuals, which has been prorated for the remaining 3 months, to get the total cost for FY 2013-14. Similarly, for fixed costs and variable charges for FY 2014-15, NDMC has taken a nominal increase of 5% on fixed and variable charges of FY 2013-14. The revised estimate of power purchase cost for FY 2014-15, as submitted by NDMC, is shown in Table below:

Table 15: Power Purchase Details for FY 2014-15

Sl. No.	Name of Generating Station	Approved in MYT Order dt. 13 th July, 2012		As per the Petition	
		Quantum (MU)	Cost (Rs. Cr)	Quantum (MU)	Cost (Rs. Cr)
1	NTPC - BTPS	675.23	343.40	637.37	320.02
2	PPCL - I	620.41	217.57	526.83	234.42
3	RPW	2.11	1.14	0.00	0.00
4	NTPC- Dadri	798.45	335.72	723.88	322.41
5	PPCL-III (Bawana)	722.97	325.34	103.89	73.49
6	GT	4.99	2.23	3.39	1.95
7	Total	2824.17	1225.41	1995.36	952.29
8	Bilateral Purchase	-	-	-	-
9	Bilateral Sale	(1200.16)	(480.06)	-	-
10	Exchange Purchase	-	-	-	-
11	Exchange Sale	-	-	(275.00)	(58.84)
12	Inter-DISCOM Purchase	-	-	-	-
13	Inter-DISCOM sale	-	-	-	-
14	UI	-	-	-	-
15	Transmission Charges	-	103.75	-	64.67

Sl. No.	Name of Generating Station	Approved in MYT Order dt. 13 th July, 2012		As per the Petition	
		Quantum (MU)	Cost (Rs. Cr)	Quantum (MU)	Cost (Rs. Cr)
16	Total	1624.01	849.10	1720.36	958.12

NDMC has accordingly requested to allow power purchase cost (including transmission charges) of Rs.958.12 Cr FY 2014-15.

O&M Expenses

1.28 NDMC has submitted that NDMC has projected the Operation and Maintenance Expenses for the FY 2014-15 at the same level as approved by the Commission in the July 2012 Tariff Order. NDMC has requested the Commission to approve O&M Expenses of NDMC as per actuals at the time of True-up of these expense. Regarding allocation of Civil Engineering Department expenses to electricity supply business, the same has been considered at Rs. 10.00 crore, as approved by the Commission earlier. NDMC has further submitted the allocation for Administrative and Civil Engineering Department Expenses has been considered at Rs. 45.37 crore, as approved by the Commission in the July 2012 Tariff Order.

The O&M Expenses, as submitted by NDMC, for FY 2014-15 and Administrative & Civil Engineering Expenses are shown below:

Table 16: O&M Expenses for FY 2014-15 (MU)

Sl. No.	Particulars	As per MYT Order dated 13 th July, 2012	As per the Petition
1	O&M Expenses	165.61	165.61
2	Administrative and Civil Engineering Department Expenses	45.37	45.37

Depreciation

1.29 NDMC has submitted that it has computed depreciation at 3.60% of the average GFA during the year. The Table below summarises the depreciation claimed by NDMC for FY 2014-15.

The Depreciation vis-à-vis the Gross Fixed Assets for FY 2014-25 is given in the Table below:

Table 17: Depreciation for FY 2014-15

Particulars	As per MYT Order dated 13 th July, 2012	As per the Petition
Opening Balance of Fixed Assets	1118.58	1142.70
Addition During the Year	14.56	14.56
Retirement During the Year		
Closing Balance of Fixed Assets	1133.14	1157.26
Average Fixed Assets	1125.86	1149.98
Rate of Depreciation	3.60%	3.60%
Depreciation	40.53	41.40

Return on Capital Employed

1.30 The NDMC has claimed Return on Capital Employed, as detailed below:

Table 18: Return on Capital Employed for FY 2014-15

Particulars	FY 2014-15
RB (Opening)	823.70
Δ AB	-26.84
<i>Investments in the Year</i>	14.56
<i>Depreciation</i>	41.40
<i>Consumer Contribution</i>	0.00
Change in WC	6.75
RB (Closing)	803.61
Regulated Rate Base (RRBi)	817.03
Rate of return on Equity	16.00%
Rate of Return on Debt	11.50%
WACC	12.9%
Return on Capital Employed	104.99

Non-Tariff Income

1.31 NDMC has submitted that it has projected the Non-tariff income for FY 2014-15, as approved in Tariff Order of July 2012. NDMC has projected the Non-Tariff income of Rs. 22.48 crore for FY 2014-15.

Annual Revenue Requirement

1.32 The NDMC has projected the Annual Revenue Requirement (ARR) for FY 2014-15, as shown in the Table below:

Table 19: Annual Revenue Requirement**(Rs. crore)**

Particulars	FY2014-15	
	(Approved in MYT Order dt. 13 th July, 2012)	(Projected)
Cost of Power Purchase	720.83	893.45
Inter-State Transmission Charges	23.2	64.67
Intra-state Transmission (Delhi Transco) Charges	72.01	0.00
SLDC Fees and Charges	6.47	0.00
Wheeling Charges Payable to Other Distribution Licensees		0.00
O&M Expenses*	158.99	268.78
Depreciation	40.53	41.40
Allocated Administrative and Civil Engineering Dept Exp	45.37	45.37
RoCE	90.86	104.99
Income Tax		
DTL Claim		
Less		
Other Income (Including Income From Wheeling Charges)	22.48	22.48
Income From Other Business Allocated to licensed Business		
Aggregate Revenue Requirement (A-B)	1135.78	1,396.18

*Figures as submitted by the petitioner which is not as per the break-up provided in the petition

Revenue Gap and Proposed Tariff

- 1.33 NDMC has projected the Revenue of Rs.1027.33 Cr for FY 2014-15 from sale of power amounted and submitted that the Revenue Gap, based on projected expenses and Revenue during FY 2014-15, would be Rs. 368.85 crore, as shown in the Table below:

Table 20: Revenue Gap**(Rs. crore)**

Sl. No.	Particulars	FY 2014-15	
		Approved in MYT Order dt. 13 th July, 2012	Projected
1	Aggregate Revenue Requirement	1135.78	1396.18
2	Revenue from Sale of Power	-	1027.33
3	Revenue Gap	-	(368.85)
4	Net Gap as % of Revenue*	-	35.90%

Including FCA and excluding Tax

* Computed by Commission

NDMC has proposed Tariff revision to bridge the revenue gap for FY 2014-15 to some extent.

Disclaimer:

All the figures have been taken from the tariff petition submitted by the DISCOMs. In case of any discrepancy in the staff paper, the same may be referred from the original petition uploaded on the DERC website.