Introduction

- 1.1. BSES Yamuna Power Limited (BYPL), the Distribution Licensee has filed the Petition for approval of True up for FY 2013-14, Review for FY 2014-15 and Aggregate Revenue Requirement (ARR) & Tariff determination for FY 2015-16.
- 1.2. This Executive Summary contains the summary of the petition filed by BYPL for True up of FY 2013-14 (based on audited accounts), and ARR and tariff of FY 2015-16 (based on projections).
- 1.3. For the purpose of comparison, the Executive Summary includes figures approved in the Tariff Order dated July 31, 2013 for FY 2013-14.
- 1.4. As per the MYT Regulations 2011, the Tariff for FY 2015-16 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. Income tax
 - f. Non-tariff income
- 1.5. The Commission shall True up the ARR FY 2013-14 as per MYT Regulations 2011 after prudence check.
- 1.6. Depreciation and RoCE shall be trued up every year based on actual capital expenditure and actual capitalization vis-a-vis capital investment plan approved by the Commission

Truing Up for FY 2013-14

Energy Sales and Revenue

1.7. In its Petition, BYPL has submitted that its actual energy sales in FY 2013-14 were 5199 MU compared to energy sales of 5545 MU approved by the Commission for FY 2013-14 in the 31st July, 2013 Order. Since energy sales are treated as an uncontrollable factor, BYPL has requested the Commission to approve true up for FY 2013-14 based on its audited accounts, as shown below:

		31 st July, 2013 Order			Actuals		
SI. No.	Category	Sales (MU)	Revenue (Rs. Cr)	Sales (MU)	Revenue billed (Rs. Cr)	Revenue collected (Rs. Cr)	
1	Domestic #	2864	1408	2804	1629	1496	
2	Non Domestic *	1638	1482	1614	1714	1714	
3	Industrial	434	346	288	264	263	
4	Public Lighting	113	82	103	84	100	
5	Irrigation & Agriculture	0	0.12	0	0	0	
6	Railway Traction	0	0	0	0	0	
7	DMRC	192	99	173	109	110	
8	Others @	304	186	232	205	147	
а	DIAL	0		0	0	0	
b	DJB	137		140	124	124	
С	Enforcement			29	33	22	
d	Own Consumption			24	0	0	
е	Temporary			38	48	0	
f	advertisement and Hoardings			1	1	1	
9	Less: Enforcement (on collection basis)			-16			
10	Subsidy disbursed					124	
11	Interest on SD					19	
12	SD Released					0	
13	Less: E Tax				-161	-157	
14	Less: 8% Surcharge				-280	-270	
15	Less: LPSC					-20	
	Total	5545	3603	5199	3563	3526	

Table 1: Sales and Revenue for FY 2013-14

* Excluding DJB

@ including DJB

including 11KV Worship/Hospitals and DVB Staff

Note: Totals may not tally due to rounding off the figures.

1.8. As detailed in the above table, as per audited annual accounts of FY 2013-14 the actual sales during FY 2013-14 are 5199 MU (after adjusting 16 MU sales of enforcement on collection basis), Revenue billed is Rs 3563 Crore (excluding 8% surcharge of Rs 280 Crore and Electricity Tax of Rs. 161 Crore) and Revenue collected is Rs 3526 Crore (excluding 8% surcharge of Rs 270 Crore, Electricity tax of Rs 157 Crore and LPSC of Rs 20 Crore). The Petitioner in the petition projected Revenue billed at Rs 3530 Crore (considering amount collected on account of enforcement instead of amount billed on account of enforcement) as given below:

SI.	Particulars	Amount
No		(Rs. Cr)
1	Amount billed W/o enforcement	3535
2	Amount collected on account of enforcement	18
3	Amount billed	3552
4	Less other adjustment	22
5	Revenue billed for AT&C True-up purpose	3530

Table 2: Revenue Billed

AT&C Loss for FY 2013-14

- 1.9. The Petitioner has submitted that the actual AT&C loss and Distribution loss figures for FY 2013-14 are higher than the loss level target set for FY 2013-14 in the Tariff Order dated 31st July, 2013.
- 1.10. The Petitioner has sought revision in AT&C Loss trajectory from FY 2012-13 to FY 2014-15 based on actual loss achieved at the end of FY 2011-12 which is as tabulated below:

SI.	Particulars	FY 2011-12	FY 2012-13	FY 2013-14	FY 2014-15
No					
1	AT&C Loss approved in MYT	18%			
	Order dated July 13, 2012				
2	Reduction Year-over-Year		1.18%	1.15%	1.16%
3	AT&C Loss approved in TO	22.07%			
	dated July 31, 2013				
4	Revised AT&C Loss		20.91%	19.75%	18.59%
	trajectory sought				

Table 3: Revised AT&C Loss trajectory from FY 2012-13 to FY 2014-15

1.11. The following Table shows the actual AT&C loss as given in the petition, along with Distribution loss and collection efficiency for FY 2013-14 vis-à-vis that approved in the July, 2013 Order.

SI. No.	Particulars	Approved in Tariff Order 31 st July, 2013	Actuals as per Petition
1	AT&C Loss	15.66%	21.04%
2	Collection Efficiency	99.50%	99.90%
3	Distribution Loss	15.24%	20.96%

Table 4: Approved and Actual AT&C Loss for FY 2013-14

Power Purchase Quantum and Cost

- 1.12. The quantum of Power Purchase is decided by the expected sales of energy by the Licensee, as well as the loss levels projected/approved. 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.
- 1.13. The energy sales for the year is grossed up by the loss levels of that year, to arrive at the required quantum of power purchase for that year in the following manner:

Quantum of Power Purchase (MU)= <u>Energy Sales (MU)</u> 1-(Distribution loss(%)/100)

1.14. The Table below shows the actual sales, loss level, and power purchase for FY 2013-14, as submitted by the Petitioner.

SI. No.	Particulars	Approved in Tariff Order dated 31 st July, 2013	Actuals as per Petition
1	Sales (MU)	5545	5199
2	Distribution Loss (%)	15.24%	20.96%
3	Energy required at DISCOM	6542	6577
	Periphery (MU)		

- 1.15. In its Petition, BYPL has submitted that the BYPL purchases almost 90% of the power from Government owned companies by virtue of long term PPAs which have been inherited from DTL (initially signed by M/s. DTL). The quantum of power purchased from various generators are accounted / metered by Government bodies like NRLDC / SLDC. The price at which the power is to be purchased are determined by independent Commissions like CERC / DERC.
- 1.16. The following Table shows the actual Power Purchase Cost submitted by the Petitioner for FY 2013-14 along with the cost approved by the Commission for FY 2013-14 in Tariff Order dated 31st July, 2013.

SI.No.	Particulars	Quantum (MU)		Cost (Rs. Crore)	
		Approved in Tariff Order	Submission in the	Approved in Tariff Order	Submission in the
		dated July 31,	Petition	dated July 31,	Petition
		2013	i cution	2013	i cution
Α	Power Purchase				
i	Gross Power Purchase	9334	8421	3766	3910
ii	Power sold to other sources	2465	1573	986	364
	Net power purchase	6869	6848	2780	3547
В	Transmission Loss				
	Inter-state Transmission	247		210	260
	Loss	247	270	210	200
	Intra-state Transmission	80	270	130	122
	Loss			150	122
	Other Transmission charges				40
	Total Transmission Loss	327	270	341	421
С	Rebate				
	Power Purchase Rebate			74	19
	Rebate on Transmission			7	
	charges			/	
	Total Rebate			81	19
	Net power available after Transmission Loss	6542	6577	3039	3949

O&M Expenses

1.17. The Petitioner has submitted that the O&M expenses approved by the Commission in Tariff Order dated 31st July, 2013 and now claimed in the petition are as given in Table below:

			(Rs. Crore)		
SI.	Particulars	FY 2013-14			
No.		Approved in Tariff Submission in th			
		Order dated July 31,	Petition		
		2013			
1	Employee Expenses	230.37	235.87		
2	A&G Expenses	56.61	60.89		
3	R&M Expenses	82.51	82.51		
4	Total O&M Expenses	369.49	379.27		
5	Efficiency factor %	3%	0%		
6	Less: Efficiency improvement	11.08	0.00		
7	Add: SVRS Pension	4.92	4.92		
8	Net O&M Expenses	363.33	384.19		

Other Expenses

1.18. The Petitioner has discussed the item wise claims on account of miscellaneous expenses which were not entirely covered under the expenses in Tariff order dated 13th July, 2012 as detailed below.

SI. No	Particulars	Amount
1	Incremental License fees paid to DERC	0.5
2	Fees for geo-spatial access	0.3
3	Syndication fees / borrowing Costs / Documentation	31.2
4	Total	32.0

Table 8: Miscellaneous Ex	penses claimed during	FY 2013-14 [@]	(Rs. Crore)
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@ for details refer to the Tariff Petition

1.19. The Petitioner has requested the Commission to allow the aforesaid expenses incurred during FY 2013-14 in the ARR during FY 2013-14.

Non Tariff Income

1.20. The Non Tariff Income claimed by the Petitioner in the True up for FY 2013-14 is as detailed in the Table below:

SI. No.	Particulars	Amount
А	NTI as per Audited Accounts	157
В	Income from Normative Interest on CSD	32
IV	Total NTI	189
1	Less: Income from other business	21
А	Income from REAP	8
В	Street Light Maintenance Business	13
2	Net NTI	168
А	Less: interest on Contingency Reserve	0
В	Less: Interest on loans and Advances to staff	0
С	Less: LPSC	20
D	Less: Rebate on Power Purchase and Transmission Charges	19
Е	Less: write-back of Miscellaneous provisions	6
F	Less: Short term gain	5
G	Less: Recoveries from employees	0
Н	less: connection / reconnection charges	0
Ι	Less: Commission on ED	0
J	Less: Bad Debts recovered	3
К	Less: UI Interest	21
L	Less: Sale of Scrap	5
3	Non Tariff Income	89

Table 9: Non-Tariff Income during FY 2013-14[@] (Rs. Crore)

@ for details refer to the Tariff Petition

Income from Other Business

1.21. The Petitioner has submitted that the summary of total income received from other business and proposed to be retained by the Petitioner is as tabulated below:

Table 10: Other Business Income for FY 2013-14

(Rs. Crore)

		FY 2013-14					
SI. No.	Particulars	Total income (Rs. Crore)	Petitioners Share: ARR	Amount Retained	Amount passed on to consumers		
1	REAP benefits			0.41	0.81		
	Street Light Maintenance						
2	charges			4.46	8.92		

		FY 2013-14					
SI. No.	Particulars	Total income (Rs. Crore)	Petitioners Share: ARR	Amount Retained	Amount passed on to consumers		
3	Total			4.87	9.73		

Depreciation

1.22. The Petitioner has submitted that the Depreciation has been calculated after excluding consumer contribution from the Gross Fixed Assets in accordance with DERC Tariff Regulations 2011. The Petitioner has submitted the total depreciation from FY 2007-08 to FY 2013-14 after implementation of ATE Judgments is as under:

Table 11: Amount of Depreciation from FY 2007-08 to FY 2012-13

(Rs. Crore)

						(,
Particulars	FY 08	FY 09	FY 10	FY 11	FY 12	FY 13	FY 14
Average GFA	1410	1673	1906	2104	2257	2340	2449
Average consumer contribution and grants	29	41	60	100	134	144	162
Average assets net of consumer contribution	1381	1632	1846	2004	2123	2196	2287
Average deprecation as above	3.89%	3.87%	3.84%	3.82%	3.82%	3.84%	3.86%
Depreciation	54	63	71	77	81	84	88

Return on Capital Employed

1.23. The Petitioner has submitted the details of Regulated Rate Base (RRB), Weighted Average Cost of Capital (WACC) and the Return on Capital Employed (RoCE) during FY 2013-14 in the Table below:

				(Rs. Crore)				
SI.	Particulars	FY 08	FY 09	FY 10	FY 11	FY 12	FY 13	FY 14
No.								
A	Opening balance of Original Cost of fixed assets	1285	1535	1811	2000	2209	23 05	2375
В	Opening Balance of working capital	42	164	185	283	343	380	264
С	Opening Balance of Accumulated Depreciation	261	314	377	448	557	675	790

Executive Summary of BYPL's Petition for True up of FY 2013-14, APR of FY 2014-15 and ARR of FY 2015-16

SI.	Particulars	FY 08	FY 09	FY 10	FY 11	FY 12	FY 13	FY 14
No.								
D	Opening Balance of Consumers contributions	25	34	49	71	129	139	148
Е	Opening RRB [A+B-C-D]	1042	1351	1571	1764	1866	1871	1700
F	Investments capitalised	249	277	188	209	97	69	149
G	Depreciation	54	63	71	109	118	115	96
Н	Consumer contribution	9	15	22	58	10	9	27
I	Change in working capital	122	21	98	60	36	-115	-7
J	RRB closing	1351	1571	1764	1866	1871	1700	1719
К	\triangle AB change in Regulated base	216	120	146	81	21	-143	6
L	RRB (i) considered for RoCE of FY 2013-14	1257	1471	1716	1845	1886	1728	1706

Table 13: Weighted Average Cost of Capital (WACC)

							(Rs. Crore)
SI.	Particulars	FY 08	FY 09	FY 10	FY 11	FY 12	FY 13	FY 14
No.								
А	Average Debt	879	1017	1107	1163	1163	1053	950
В	Average Equity	325	421	504	575	625	652	679
С	Total	1204	1439	1611	1738	1788	1705	1629
D	Cost of Debt	11.32%	11.52%	11.28%	12.06%	14.12%	14.66%	14.52%
Е	Return on Equity	16%	16%	16%	16%	16%	16%	16%
F	Weighted average cost of capital (WACC)	12.58%	12.83%	12.76%	13.36%	14.78%	15.18%	15.14%

Table 14: Return on Capital Employed (RoCE) from FY 2007-08 to FY 2013-14

							(Rs. C	Crore)
SI.	Particulars	FY 08	FY 09	FY 10	FY 11	FY 12	FY 13	FY 14
No.								
A	Weighted average cost of capital (WACC)	12.58%	12.83%	12.76%	13.36%	14.78%	15.18%	15.14%
В	RRB (i)	1257	1471	1716	1845	1886	1728	1706
С	RoCE	158	189	219	247	279	262	258

Income Tax

1.24. The Petitioner has submitted that the Commission in its Tariff Order dated 23rd July, 2014 has compared the Income Tax entitlement based on the Return on Equity and Actual Income Tax paid during respective financial year and allowed lower of the two as Income Tax during FY 2012-13.

The Petitioner has stated that the Income Tax ought to be allowed on RoE approach and not on comparative approach between RoE and actual Income Tax.

The Petitioner has submitted that the Petitioner is claiming the Income Tax during FY 2013-14 on RoE approach as a part of Truing up requirement during FY 2013-14 as tabulated below:

			(Rs. Crore)
SI. No.	Particulars	Reference	FY 2013-14
1	Average Equity	А	679
2	Average Debt	В	950
3	% Equity	C=A/(A+B)	42%
4	RRB	D	1706
5	Amount of Equity	E=C*D	711
6	Rate of Return	F	16%
7	Return on Equity	G=E*F	114
8	Income-Tax Rate	Н	20.01%
9	Income-Tax	I=G/(1-H)-G	28

 Table 15: Income Tax during FY 2013-14

Revised Annual Revenue Requirement for FY 2013-14

 1.25. Based on the above discussion the Petitioner has submitted that the Annual Revenue Requirement during FY 2013-14 vis-à-vis that approved in the Tariff Order dated July 31, 2013 is as given in the Table below:

Table 16: Annual Revenue Requirement during FY 2013-14

(Rs. Crore)

		FY 2013-14				
SI. No.	Particulars	Tariff Order dated July 31, 2013	Submission			
А	Purchase of power including transmission and SLDC charges	3039	3949			
В	O&M Expenses	363	384			
С	Other expenses / Statutory levies	0	32			
D	RoCE	204	257			
E	Depreciation	81	96			
F	Income Tax	16	28			
G	Sub total	3704	4746			

Executive Summary of BYPL's Petition for True up of FY 2013-14, APR of FY 2014-15 and ARR of FY 2015-16

		FY 20	13-14
SI. No.	Particulars	Tariff Order dated July 31, 2013	Submission
Н	Less: Non tariff income	79	89
Ι	Less: Income from Other business		5
J	Less: Interest on CSD		
Κ	Aggregate revenue Requirement	3625	4653
	DERC/APTEL/High/Supreme Cou	f	
L	judgements		
М	Net Aggregate Revenue Requirement	3625	4653

Revenue (Gap) / Surplus

1.26. The Petitioner has submitted that the Revenue gap during FY 2013-14 is as tabulated under:

(Rs. Crore)

		FY 2.13-14		
SI. No.		Tariff Order dated July 31, 2013	Submission	
А	ARR for FY 2013-14	3625	4653	
В	Revenue available towards ARR	3688	3527	
С	Revenue (Gap) / Surplus	63	(1126)	

Past periods True up

- 1.27. The Petitioner has submitted that the claims pertaining to true up pending with respect to earlier periods have been divided into two parts as under:
 - a) Directions of Hon'ble ATE given in various judgements
 - b) Previous claims where either additional data was sought or there are certain arithmetical errors.

Table 18: Total impact claimed on account of implementation of Hon'ble ATE Judgement@

		(Rs. Crore)
SI.	Particulars	Total
No.		
1	Increase in Employee expenses due to increase in consumer base	97
2	Truing up of capitalisation from FY 08 to FY 13	874
3	Financing cost of LPSC allowed on SBI PLR	26
4	R&M expenses and A&G expenses from FY 05 to FY 07	68
5	Payment towards SVRS Optees	96
6	True up 11 months 12.1	419
7	Re-determination of Distribution Loss	132
8	Efficiency factor on 6 th pay Commission arrears	6
9	Arbitrary determination of efficiency factor FY 12	6
10	Fixation of AT&C Loss reduction target for FY 2011-12	118
11	Truing up of AT&C Loss reduction target for FY 2011-12	234
12	Truing up of AT&C Loss for FY 2008-09	34
13	Wrong verification of sale in kWh Figures for FY 10	1
14	Impact of DVB arrears	7
15	Deduction of CISF expenses from AT&C incentive	0
16	Total	2118

@ for details refer to the Tariff Petition

Tab	le 19: Total Impact claimed on account of previous claims @	(Rs. Crore)
SI.	Particulars	Amount
No.		
1	Amount pertaining to regulation of power	52
2	R&M expenses as per MYT order from FY 08 to FY 13	31
3	Interest on funding of carrying cost	146
4	Income recovered on account of bad debts	15
5	Syndication fees	101
6	Loss on retirement of assets	18
7	Consideration of normative rebate	61
8	Additional UI charges	2
9	Trading margin	2
10	Ombudsman expenses	0
11	Excess provisions written back	290
12	Translation of petition in Hindi	0
13	LPSC during FY 2012-13	12
14	Non Tariff income	41
15	Rebate @ more than 1%	-66
16	Total	705

@ for details refer to the Tariff Petition

1.28. The Petitioner has submitted that the Impact pertaining to previous years (Impact of DERC / APTEL / High / Supreme Court Judgments) is directly carried in the balance of Regulatory Asset.

ARR of FY 2015-16

Energy Sales and Revenue

1.29 The Petitioner has projected the energy sales at 5615 MU for FY 2015-16 and Revenue at Rs. 4128 Crore for FY 2015-16 as given in the Table below:

	Category	FY 20:	FY 2015-16		
SI. No.		Sales	Revenue		
NO.		(MU)	(Rs. Crore)		
1	Domestic	3040	1667		
2	Non Domestic	1803	1861		
3	Industrial	216	198		
4	Public Lighting	105	79		
5	Irrigation & Agriculture	0	0		
6	Railway Traction	0	0		
7	DMRC	210	128		
8	Others	241	194		
а	DIAL	0	0		
b	Worship/Hospitals				
С	DJB	149	128		
d	DVB Staff				
е	Enforcement	29	20		
f	Own Consumption	24			
g	Temporary	38	45		
h	advertisement and Hoardings	1	1		
	Total	5615	4128		

Table 20: Energy Sales and revenue for FY 2015-16

AT&C Losses

1.30 The Petitioner has submitted that they are seeking revision for AT&C loss trajectory from FY 2012-13 to FY 2014-15, therefore has considered a reduction of 1.16% in accordance with the trajectory specified by the Commission vide TO dated July 13, 2012.

The Petitioner has further submitted that further for the computation of AT&C Loss for FY 2015-16, the Petitioner has followed the below tabulated methodology:

SI.No	Particulars	Formula	FY 2015-16
1	Opening AT&C loss approved for FY 2011-12	А	22.07%
2	Closing AT&C Loss for FY 2013-14 (Actuals)	В	21.04%
3	Redn. Trajectory approved in the Tariff Order July 2013	С	1.16%

SI.No	Particulars	Formula	FY 2015-16
4	Closing AT&C loss level	D = B - C	19.88%
5	Redn. Trajectory considered for FY 2015-16	E = (C/A) X D	1.04%
6	AT&C Loss target for FY 2015-16	F= D-E	18.83%

The Petitioner has projected that AT&C loss for FY 2015-16 as shown in the Table below

Table 21:	AT&C Loss during FY	2015-16
		2013 10

SI. No.	Particulars	As per Petition	
1	T&D Loss	17.60%	
2	Collection efficiency	98.50%	
3	AT&C Loss	18.83%	

Power Purchase Requirement

- 1.31 The quantum of Power Purchase is arrived at by the estimated sales of energy and Distribution losses as projected / approved. Higher sales require greater quantum of power. Similarly higher losses result in higher quantum of power purchase to meet the expected sales.
- 1.32 The energy sales for the year are 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.

Quantum of Power Purchase (MU) = Energy Sales (MU) 1-(Distribution loss(%)/100)

1.33 The sales, loss level, energy balance and power purchase for FY 2015-16 as submitted by the licensee is given in Table below:

SI. No	Particulars	UoM	As per the Petition
1	Energy Sales	MU	5615
2	Distribution loss	%	17.60%
3	Distribution Loss	MU	1199
4	Energy at DISCOM periphery	MU	6814

SI.No	Particulars	UoM	FY 2015-16
Α	Energy Availability		
i	Total energy available (excluding BTPS, SGS TOWMCL & Solar)	MU	7449
ii	Inter-State Transmission Losses	%,	3.84%
		MU	286
iii	Energy Available from BTPS, SGS TOWMCL & Solar	MU	2368
iv	Energy Available at State transmission	MU	9531
В	Energy Requirement		
i	Energy Sales	MU	5615
ii	Distribution Loss	%	17.60%
		MU	1199
iii	Energy requirement at distribution periphery	MU	6814
iv	Intra-state transmission los	%	1.29%
V	Energy Requirement at Transmission Periphery	MU	6903
С	Surplus Energy	MU	2628

Table: 23: Energy Balance during FY 2015-16

Power Purchase Cost

1.34 The Petitioner has submitted that they have considered the fixed cost and Energy Charge Rate (ECR) as estimated by the Central Generating Stations in their Petitions submitted before CERC for approval of Tariff for the period FY 2014-15 to FY 2018-19. The energy charges in case of Hydro Power Plants has been calculated in accordance with the formula given in Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2014.

The Petitioner has submitted that in case of those Central Generating Stations which are yet to submit the Petition for determination of Tariff before CERC, the Petitioner has considered the fixed charges and energy charges as per the bills.

The estimated quantum of power purchase and cost of purchase for FY 2015-16 as submitted by the Petitioner is shown in Table below:

		FY 2015-16		Average Rate (Rs. /kWh)	
SI.	Name of	Quantum Cost			
No.	Generating Station	(MU)	(Rs. Crore)		
Α	NTPC Station				
1	Anta Gas	48	19	4.03	
2	Auraiya Gas	78	36	4.58	
3	Dadri Gas	109	45	4.17	
4	Dadri – I	490	209	4.27	
5	Dadri – II	1275	617	4.84	
6	Farakka	39	15	3.82	
7	Kahalgaon - I	88	35	3.96	
8	Kahalgaon – II	273	109	4.01	
9	Rihand – I	174	40	2.29	
10	Rihand – II	219	50	2.30	
11	Rihand – III	229	67	2.93	
12	Singrauli	508	94	1.86	
13	Unchahar – I	42	16	3.94	
14	Unchahar – II	82	32	3.88	
15	Unchahar – III	50	22	4.36	
	Aravali Power	41	29	7.07	
16	corporation Ltd	41	29	7.07	
	Sub-Total	3744	1437	3.84	
В	NHPC Stations				
1	Bairasul	17	3	1.97	
2	Chamera-I	46	8	1.69	
3	Chamera-II	46	12	2.54	
4	Chamera-III	30	13	4.33	
5	Dhauliganga	10	6	6.55	
6	Dulhasti	68	35	5.11	
7	Salal	94	9	0.97	
8	Tanakpur	10	3	3.15	
9	Uri	68	10	1.50	
10	Sewa-II	16	9	5.38	
11	Prabati –III	55	23	4.27	
12	Uri – II	19	13	6.71	
	Sub-Total	479	144	3.01	
С	THDC				
i	Tehri HEP	105	39	3.68	
ii	Koteshwar	38	12	3.26	
	Sub-Total	143	51	3.57	
D	DVC				
i	Mejia (Unit-6)	154	69	4.44	
li	Mejia (Unit-7)	630	287	4.55	
lii	Chandrapur (Ext-7 and 8)	386	173	4.48	

Table 24: Power Purchase cost proposed for FY 2015-16

cl	Nama af	FY 2015-16		Average Rate (Rs. /kWh)
SI. No.	Name of Generating Station	Quantum (MU)	Cost (Rs. Crore)	
	Sub-Total	1171	528	4.51
Е	Nuclear Stations			
i	NPCIL -NAPS	64	15	2.39
ii	RAPS -5 & 6	111	38	3.41
	Sub-Total	175	53	3.03
F	SJVNL	203	48	2.36
	Sub-Total	203	48	2.36
G	Others			
i	Tala HEP	25	5	2.02
ii	Sasan UMPP	1508	198	1.31
lii	Roof Top solar	0.50	0.32	6.44
	Sub-Total	1534	203	1.33
Н	Delhi Generating Stations			
i	BTPS	807	432	5.35
ii	Rajghat	152	91	7.77
iii	Gas Turbine	273	163	5.15
iv	Pragati-I	349	197	5.22
v	Pragati-III, Bawana	310	365	13.13
	Sub-Total	1890	1249	6.61
I	Total	9340	3714	3.98
J	Power Purchase from other sources	477	172	3.61
<u>,</u> К	Grand Total	0917	2006	
٨		9817	3886	
L	Power Sold to Others	2628	545	2.08

Renewable Power Purchase Obligation

1.35 As per DERC RPO Regulations, 2012, the BYPL is required to purchase 0.30% of total energy sales through solar energy sources during FY 2015-16. BYPL has considered the energy received through Thyagraj Solar for meeting RPO Target and rest through RECs at forbearance price.

The Petitioner has submitted the cost of REC purchase for meeting Solar RPO during FY 2015-16 is as tabulated below:

SI. No	Particulars	UoM	FY 2015-16
1	Energy Sales	MU	5615
2	RPO Target-Solar	%	0.30%
3	RPO Target-Solar	MU	17
4	Availability from Thyagraj	MU	0.5
5	Required to be met through RECs	MU	16

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6	REC Rates	Rs./kWh	13.40
7	Cost for REC Purchase	Rs. Crore	22

1.36 As per DERC RPO Regulations, 2012, the BYPL is required to purchase 7.30% of total energy sales through non solar energy sources during FY 2014-15 and FY 2015-16. BRPL has considered the energy received through TOWMCL for meeting RPO Target and rest through RECs at forbearance price as under:

The Petitioner has submitted the cost of REC purchase for meeting Non-Solar RPO during FY 2015-16 is as tabulated below:

SI. No	Particulars	UoM	FY 2015-16
1	Energy Sales	MU	5615
2	RPO Target-non-Solar	%	7.30%
3	RPO Target-non-Solar	MU	410
4	Availability	MU	0
5	Required to be met through RECs	MU	410
6	REC Rates	Rs./kWh	3.30
7	Cost for REC Purchase	Rs. Crore	135

 Table 26: Cost of REC purchase for meeting non solar RPO during FY 2015-16

Transmission Charges

1.37 The Petitioner has projected the Intra State & Inter State Transmission charges forFY 2015-16 as given in Table below:

SI. No	Particulars	FY 2015-16
Α	Transmission Losses (MU)	
1	Inter-State Transmission	286
2	Intra-State Transmission	89
	Total Transmission Losses (MU)	375
В	Transmission charges (Rs. Crore)	
1	Inter-State Transmission*	252
2	Intra-State Transmission#	172
3	Contribution towards pension fund	110
	Total Transmission charges (Rs. Crore)	533

*Includes Open access charges

includes SLDC charges

Total Power Purchase Cost

1.38 The total power purchase cost during FY 2015-16 is below:

Table 28: Total Power Purchase cost for FY 2015-16

SI.			FY 2015-16		
SI. No.	Source	Quantum	Cost	Avg	
		(MU)	(Rs. Crore)	Cost	
	Power purchase from CSGS				
	(including short term power	7449	2465	3.31	
А	purchase)				
В	Interstate loss	286	252		
с	Power available at Delhi periphery	7163	2717	3.79	
D	Power purchase from SGS	2368	1421	6.00	
	Intra state loss and charges	2000	1.21	0.00	
E	including SLDC	89	282		
F	Power available to DISCOM	9442	4419	4.68	
G	Sales	5615			
Н	Distribution Loss	1199			
I	Required power for the DISCOM	6814	4419	6.49	
J	Surplus power available at DISCOM boundary	2628	545.42	2.08	
К	Additional Cost on RPO		157.48		
L	Less: Power Purchase Rebate				
	Less: Rebate on Transmission				
М	charges				
	Net Power Purchase expenses				
	including transmission	6814	4031	5.92	
Ν	charges and RPO				

Other Components of ARR

- 1.39 The other components of ARR are:
 - a) O&M Expenses
 - b) Depreciation
 - c) Return on Capital Employed
 - d) Income Tax
 - e) Non-Tariff Income

O&M Expenses

1.40 The Petitioner has arrived at Employee and A&G Expenses for FY 2014-15 by applying an escalation factor of 8% on Employee and A&G Expenses for FY 2013-14. Further the Petitioner has considered the Employee and A&G Expenses of FY 2014-15 as the base and applied the inflation factor of 9.09% to arrive at Employee and A&G Expenses for FY 2015-16. BYPL has computed the inflation factor of 9.09% based on data for CPI and WPI index available from FY 2008-09 to FY 2013-14.

The Petitioner has claimed R&M expenses for FY 2014-15 in accordance with Tariff Order dated July, 2013.

Further, the Petitioner has applied "k" factor of 3.70% (as approved during first control period) on opening GFA for FY 2015-16 to arrive at R&M Expenses during FY 2015-16.

The Petitioner has not considered any efficiency factor during FY 2015-16. Further, considered the SVRS Pension during FY 2015-16 equal to that approved by the Commission during FY 2014-15 in Tariff Order dated July 13, 2012.

The O&M expenses for FY 2015-16 are as tabulated under:

		(Rs. Crore)
SI.	Particulars	FY 2015-16
No.		
1	Employee Expenses	278
2	A&G Expenses	72
3	R&M Expenses	102
4	Total O&M Expenses	452
5	Efficiency Improvement	0
6	Add: SVRS Pension	5
7	Net O&M Expenses	456

Table 29: O&M Expenses during FY 2015-16

(De Crere)

Depreciation

1.41 The Petitioner has projected the Depreciation for FY 2015-16 tabulated below:

Table 30: Depreciation during FY 2015-16 (Rs. Crore)

SI. No.	Particulars	Amount (Rs. Crore)
А	Gross Fixed Assets	
i	Opening balance	2753
ii	Additions during FY	370
iii	Closing balance	3123
В	Consumer contribution	
iv	Opening balance	183
v	Additions during FY	68
vi	Closing balance	251
С	Grants	
vii	Opening balance	16
viii	Additions during FY	0
Ix	Closing balance	16
D	GFA net of consumer contribution	
х	Opening balance	2554
xi	Additions during FY	302
xii	Closing balance	2856
E	Average rate of depreciation	3.89%
F	Depreciation	105

Advance Against Depreciation

1.42 Petitioner has projected Advance Against Depreciation for FY 2015-16 as tabulated below:

SI. No.	Particulars	Amount (Rs. Crore)
А	1/10 opening project / CAPEX loans	104
В	Debt repayment	104
С	Minimum of A&C B	104
D	Depreciation as per ARR routed for	
U	repayment of loans	105
Е	Excess of Min(A,B) over depreciation	0
F	Cumulative Repayment (C)	1084
G	Cumulative Depreciation (D)	1012
	Excess of repayment (C) over	
Н	Depreciation (D)	72

SI. No.	Particulars	Amount (Rs. Crore)
I	Advance Against Depreciation (AAD)	0

Return on Capital Employed (RoCE)

1.43 The Petitioner has projected Return on Capital employed for FY 2015-16 as tabulated under:

SI.	Particulars	FY 2015-16
51. No.		Amount
NO.		(Rs. Crore)
А	Equity	805
В	Debt	1111
С	Total	1916
D	Rate of Return on Equity	16%
Е	Rate of Return on Debt	16.00%
F	RRB (i)	2013
G	WACC	15.14%
н	RoCE	305

Table 32: Return on Capital Employed during FY 2015-16 (Rs. Crore)

Income Tax

1.44 The Petitioner has projected Income Tax for FY 2015-16 as tabulated below:

Table 33: Income Tax during FY 2015-16

			(Rs. Crore)
SI.			
No.	Particulars	Reference	FY 2015-16
1	RRB Average	A	2013
2	Average Equity	В	805
3	Average Debt	С	1111
4	% Equity	D=B/(B+C)	42%
5	Amount of Equity	E=A*D	846
6	Rate of Return	F	16%
7	Return on Equity	G=E*F	135
8	Income-Tax Rate	Н	20.01%
9	Income-Tax	I=G/(1-H)-G	34

Non Tariff Income

1.45 The Non tariff income during FY 2015-16 has been considered equivalent to that estimated by the Commission for FY 2014-15 in Tariff Order dated 13th July, 2012.

Table 34: Non Tariff Income during FY 2015-16

(Rs. Crore)

SI. No.	Particulars	FY 2015-16
1	Non Tariff Income	79

Annual Revenue Requirement for FY 2015-16

The Petitioner has projected the Annual Revenue Requirement (ARR) for FY 2015-16 1.46

as shown in the Table below:

Table 35: Annual Revenue Requirement (ARR) during FY 2015-16

		(Rs. Crore)
SI. No	Particulars	FY 2015-16
1	Net Power Purchase Cost including Transmission charges	4031
2	O&M Expenses	456
3	Other Miscellaneous Expenses	0
4	Depreciation	105
5	Advance Against Depreciation	0
6	RoCE	310
7	Income Tax	34
8	Sub total	4937
9	Less: Non-Tariff Income	79
10	Add: PPAC Balance	0
11	Aggregate Revenue Requirement	4858
12	Carrying Cost of regulatory Asset	0
13	ARR with carrying cost	4858

Retail and Wheeling Charges

1.47 The Petitioner has submitted that the total distribution ARR is allocated to wheeling and Retail supply as tabulated as below:

		(Rs. Crore)
SI. No	Particulars	FY 2015-16
1	Wheeling ARR	594
2	Retail ARR	4264
3	Total ARR	4858

Table 36: Retail Supply and Wheeling ARR FY 2015-16

The Petitioner has submitted the wheeling charges and Retail Supply Charges per unit for different voltages as tabulated below:

Table 37: Wheeling Charges and Retail Supply Charges per unit at different voltage levels

		(Rs./ Unit)		
SI. No	Particulars	Wheeling Charges	/heeling Charges Retail Supply Charges	
		FY 2015-16	FY 2015-16	
1	Above 66 kV level	0.00	0.00	
2	At 66 /33 kV level	0.88	6.31	
3	At 11 kV level	0.89	6.38	
4	At LT level	1.10	7.90	
5	Total	1.06	7.60	

Revenue Gap during FY 2015-16.

In its Petition, BYPL has computed the revenue based on category-wise tariffs 1.48 approved by the Commission in Tariff Order dated July 23, 2014. For the purpose of computation of revenue gap for FY 2015-16, BYPL has considered the revenue from existing tariff excluding 8% surcharge and Electricity Tax as under:

Table 38: Revenue Gap for FY 2015-16

(Rs. Crore)

SI. No	Particulars	FY 2015-16 (Projected)
1	Total ARR	4858
2	Revenue from Tariff excl. surcharge and E.Tax	4066
3	Revenue (Gap)/ Surplus	-792

Regulatory Assets

1.49 The Petitioner has projected the closing balance of Regulatory Assets as given in the Table below:

SI.No.	Particulars	FY 2013-14	FY 2014-15	FY 2015-16	
А	Opening balance of RA	-6800	-8761	-10867	
В	Revenue Requirement for the year	4653	4936		
С	Revenue at existing tariffs for the year	3527	3915		
D	Addition during the year	-1126	-1020		
E	Closing Balance	-7926	-9781	-10867	
F	Carrying Cost %	15.01%	15.01%	15.01%	
G	Carrying Cost	-835	-1391	-1631	
Н	Recovery through 8% Surcharge	270	306	326	
I	Closing Balance of RA	-8761	-10867	-12172	

Table 39: Revenue	Gap) /Surplus up to FY 2015-16 (Rs. Crore)

Proposed Tariff Hike

1.50 The Petitioner has proposed following category-wise tariff hike to meet the estimated revenue gap during FY 2015-16:

SI. No	Category	Revenue at current tariff Rs. Cr.	Hike in Tariff %	Revised Revenue proposed Rs. Cr.	Average Billing rate as per revised tariff Rs./ Unit
Α	Domestic	1667		1992	6.55
i	Domestic -other than A (ii)	1656	19.48%	1979	6.54
ii	Single Delivery Point on 11 KV CGHS	11	19.48%	14	7.92
В	Non Domestic	1861	19.48%	2224	12.33
i	Non Domestic Low Tension (NDLT)	1470	19.48%	1756	12.49
ii	Non Domestic High Tension (NDHT)	391	19.48%	467	11.76
С	Industrial	198	19.48%	236	10.96
i	Small Industrial Power (SIP)	174	19.48%	208	11.04
ii	Industrial Power on 11kV SPD for Group of SIP Consumers	0	19.48%	0	0
iii	Large Industrial Power (LIP)	24	19.48%	29	10.39
D	Agriculture	0	19.48%	0	3.73
Е	Mushroom Cultivation	0	19.48%	0	7.14
F	Public Lighting	79	19.48%	95	9.07
i	Metered	31	19.48%	37	8.72
ii	Unmetered	48	19.48%	58	9.32
G	Delhi Jal Board (DJB)	128	19.48%	153	10.33
i	DJB-Supply at LT	12	19.48%	14	12.12
ii	DJB (Supply at 11 KV and above)	117	19.48%	140	10.18

Table 40: Proposed category-wise tariff hike

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SI. No	Category	Revenue at current tariff Rs. Cr.	Hike in Tariff %	Revised Revenue proposed Rs. Cr.	Average Billing rate as per revised tariff Rs./ Unit
н	Delhi International Airport Limited (DIAL)	0	19.48%	0	0
I	Railway Traction	0	19.48%	0	0
J	DMRC	128	19.48%	153	7.29
к	Advertisement and Hoardings	1	19.48%	1	17.70
L	Temporary Supply	45	19.48%	54	14.27
М	Others	20	19.48%	24	4.42
i	Enforcement	20	19.48%	24	8.03
ii	Self-consumption	0	19.48%	0	0.00
Ν	Total	4128	19.48%	4932	8.78

Other Submissions:

- 1.51 In its Petition, BYPL has proposed the following tariff rationalisation proposals:
 - **1** Modification in present PPAC Formula:

BYPL has submitted that the present PPAC formula should be suitably modified to factor in variation in all the following constituents:

- Fixed and Variable cost of the long term generation contracts or of Regulated plants
- Transmission costs
- Change in the quantum and price of short term power (bilateral/power exchange/UI)
- Loss on sale of surplus power on account of wide variation in the load curve during the day & year on account of huge difference in actual sale price and that considered in the tariff order
- Arrears payable to Genco/Transco on account of retrospective adjustment of tariff pursuant to orders of the appropriate Commission.
- Any under/ over recovery of power purchase variations on account of uncontrollable sales in next quarter.

PPA is proposed to be calculated on a quarterly basis and passed on the cost credit/debit in consumer bills of the subsequent month.

The formula for calculation of the FAC Component of Z-factor charge given under:

Z_{FAC} (Rs. Crore)= F+C+B,

Where,

Z_{FAC}= *Z*-factor charge- component of FAC for the nth month

- F= Change in fuel cost of own generation and cost of power purchase
- C= Carrying cost for any under recovery/ over recovery on account of change in fuel cost of own generation and cost of power purchase, computed at State Bank of India Advance Rate prevailing at the beginning of nth month;

B= Adjustment factor for under-recovery/ over-recovery;

The calculation of FAC to be charged for the month n shall be as follows:

FACn (Rs. Crore) = $F_{n-2} + C_{n-2} + B_{n-2}$

Explanation-I: For the purpose of this formulae, the term "F" shall be computed based on the norms and directives of the Commission, including heat rate, auxiliary consumption etc.

F= AFC pp

AFC_{pp}: Change in net power purchase cost of other sources

Explanation-II: For the purpose of formulae, the term "C" shall mean carrying cost on account of change in cost of power purchase

Explanation-III: for the purpose of this formulae, the term "B" shall be computed in accordance with following formula:

 B_{n-2} (Rs. Crore) = ZFAC n – 4

Where,

 B_{n-2} Adjustment factor for under-recovery/ over-recovery for the month n-2

ZFAC n-4 = ZFAC for the month "n -4"

 R_{n-2} = ZFAC for the month "n-4" actually recovered in the month "n-2"

Provided that monthly FAC Charge shall not exceed 15% of the variable component of tariff

Provided further that any excess in the PPAC Charge over and above 15% shall be carried forward by the Distribution Licensee and shall be recovered over such period as may be directed by the Commission.

The total FAC Component of Z-factor charge recoverable as per the formulae specified above shall be recovered from the actual sales in Rs. per kWh terms:

Provided further that where the actual distribution loss of the Distribution Licensee exceed the level approved by the Commission, the amount of FAC component of Z factor charge corresponding to the excess distribution loss (in kWh terms) shall be deducted from total FAC component of Z-factor charge recoverable.

Calculation of Z_{FAC} per kWh for a particular tariff category/ sub-category/ consumption slab shall be as per following formulae:

Z_{FAC Cat} Rs./ kWh= [Z / (Sales+ Excess distribution loss)] X K X 10

Where:

Z_{FAC Cat} = FAC Component for a particular tariff category/ sub-category/ consumption slab in Rs./ kWh terms of Z-factor charge "k" = Average Billing rate/ Average Cost of Supply

BYPL has further submitted that the aforesaid formula is already being implemented effectively in State of Maharashtra and the consumers of Maharashtra are enjoying the benefit of lesser tariff hike as the variations on account of power purchase cost are immediately recovered. Further the Utilities are allowed to recover entire variation on account of power purchase cost including short term transactions.

The Petitioner has proposed that domestic consumers who would be opting for net metering should have a single slab for energy consumption upto 800 units, which should be charged at rates applicable for 401-800 units slab of normal domestic consumers. This will ensure that the consumers opting for net metering do not avail the benefit of both the slab rate as well as net – metering.

2 Slab rationalisation for Domestic Consumers opting for net metering:

The Petitioner has proposed that domestic consumers who would be opting for net metering should have a single slab for energy consumption upto 800 units, which should be charged at rates applicable for 401 – 800 units slab of normal domestic

consumers. This will ensure that the consumers opting for net meting do not avail the benefit of both the slab rate as well as net – metering.

3 Increase in cash limit for payment of electricity bills.

The Petitioner has requested the Commission to increase the amount of payment of Electricity bills from Rs. 4000/- to 20, 000/-.

The Petitioner has quoted the practice adopted by nine other State Electricity Regulatory Commission where there is no limit on cash payment.

4 Extension Time of Day Tariff for loads upto 10 KW for all consumers:

The Petitioner has submitted that the current applicability of ToD is for all consumers (Other than Residential) whose sanctioned load/MDI (whichever is higher) is 100 KW/ 108 KVA and above. Although this has some impact on the peak load but much required to be done by implementing ToD even for the lower loads.

The Petitioner has proposed to introduce ToD Tariff to all consumers having load more than 10 KW. This will result in chapping the peak load. It is submitted that presently, for all loads more than 10 KW, three phase meters are installed have capacity to record energy consumption in pre defined time slots.

5 Adjustment of Consumer Security Deposit:

The Petitioner has submitted that presently charging consumers security deposit as per Section 29 of the "Delhi Electricity Supply Code and Performance Standards Regulations, 2007" where for all new consumers are to be charged a fixed rates based on their load. The current methodology of collecting security deposit is discriminatory. Ideally, Consumer Security Deposit has to be linked with the consumption of individual consumer, the prevailing tariff as well as billing cycle.

It is therefore, proposed that the security deposit collected from consumer to be linked to the consumption profile and applicable Tariff of individual consumer i.e., to the bill amount and bill amount equivalent to billing cycle. The proposed mechanism will also benefit low end consumers as they will have to pay lower deposits.

The Petitioner has also quoted seven other SERCs where Security Deposit is linked with the consumption/billing amount.

6 Open Access to 1 MW and above consumers:

The Petitioner has submitted that while promoting the Open Access, the issue of Regulatory Assets which is nothing but the past accumulated revenue gap, is required to be addressed as the consumers moving out on open access were also the part of the system during that period and Regulatory Assets need to be recovered from them so as to avoid any burden on remaining consumers of the DISCOMs.

The Petitioner has proposed to include recovery of Regulatory Assets either by considering its effect in tariff and fixing CSS (i.e. "T" should be considered as "Tariff and Regulatory Asset" or by way of a separate charge.