

# **Draft Business Plan**

North Bihar Power Distribution Company Ltd  
(NBPDCL)

# Contents

Introduction .....	3
24X7 Power For All (PFA) plan	6
Number of Consumers .....	8
Sales projection.....	11
Distribution loss trajectory ...	14
Power Purchase .....	15
Energy Availability .....	20
Energy Balance .....	22
Capital Expenditure plan .....	24
Capitalisation schedule .....	26
Financial Structuring Plan.....	28
Projection of Cost.....	28
Annexure - I .....	33

## **Introduction**

The Bihar State Electricity Board (BSEB), a vertically integrated utility, was responsible for supply of electricity to its consumers along with its subsidiary Patna Electricity Supply Undertaking (PESU) up to 2012. On 1st November 2012, with the implementation of provisions of Bihar State Electricity Reforms Transfer Scheme 2012 and Electricity Act 2003, BSEB was restructured into five functionally independent state-owned companies viz. Bihar State Power Holding Company (BSPHCL), South Bihar Power Distribution Company Ltd (SBPDCL), North Bihar Power Distribution Company Ltd (NBPDCCL), Bihar State Power transmission Company Ltd (BSPTCL) and Bihar State Power Generation Company Ltd (BSPGCL)

Presently NBPDCCL is providing power to 21 districts of the state. For the ease of operation NBPDCCL has converted its supply area in 7 circles and 28 divisions. NBPDCCL operates & maintains 302 nos. of substations of 33/11 kV with a total capacity of 3650.85 MVA, 55800 nos. of distribution substations of 11/0.4 kV of 3426.31 MVA capacity, distribution system network of 5026.7 Km of 33 KV lines, 39780 km of 11 kV lines and 63000 km of LT lines spread across the NBPDCCL periphery. The table below provides some details about the current status of the power sector in NBPDCCL area of operations.

**Table 1: NBPDCCL at a glance**

S No	Particular	Unit	As of March 2015
1	Electricity Consumers	No	35,52,200
2	Connected Load	MW	39,25,758
3	33 KV Line	km	5026.7
4	11 KV Line	km	39,780
5	LT Line	km	63,000
6	Electrified Villages	No	19,294
7	KutirJyoti (KJ)/ BPL Consumers	No	15,15,885
8	Power Sub Station	No	302
9	Distribution Sub Station	No	55,800

## **Need for a multi-year business plan for power Discoms**

As per clause 5 (1) of BERC (Multi Year Distribution Tariff) Regulations, 2015, the distribution licensee has to submit a business plan containing detailed category-wise sales and demand projections, power procurement plan, capital investment plan, financing plan and physical targets for the entire Control Period. The Commission through its letter no BERC-Case No. 41/15-1122 dated 16<sup>th</sup> October, 2015 approved the new control period of three years starting FY 2016-17. The control period shall end as on 31<sup>st</sup> March 2019. The relevant extract of the regulation is reproduced under:

*Section 4.2 (ii) ... A detailed Business Plan based on the Operational Norms and trajectories of performance parameters specified in the MYT Regulations, for each year of the Control Period, shall be submitted by the applicant for the Commission's approval, subject to provisions under regulations 8,12,13,and 14 of these Regulations*

### *5. Business Plan*

- 5.1 *The Distribution Licensee shall file a Business Plan, for the Control Period which shall comprise but not be limited to detailed category-wise sales and demand projections, power procurement plan, capital investment plan, financing plan and physical targets.*

*Provided that in case the Commission issues guidelines and formats, from time to time, the same shall be adhered to by the Distribution Licensee.*

- 5.2 (a) *The capital investment plan shall show separately, on-going projects that will spill into the year(s) under review and new projects (along with justification) that will commence but may be completed within or beyond the tariff period. The Commission shall consider and approve the capital investment plan for which the Distribution Licensee shall provide relevant technical and commercial details.*

*Provided that for schemes involving capital expenditure greater than INR 5 Crore, the Distribution Licensee shall seek prior approval of the Commission*

- (b) *The Distribution Licensee shall submit detailed supporting documents while seeking approval from the Commission.*

*Provided that supporting documents shall include but not be limited to purpose of investment, capital structure, capitalization schedule, financing plan and cost-benefit analysis:*

- (c) *The approval of the capital expenditure by the Commission for the ensuing year shall be in accordance with load growth, system extension, rural electrification, distribution loss reduction or quality improvement as proposed in the Distribution Licensee's supporting documents.*

*(d) The Commission may also undertake a detailed review of the actual works compared with the works approved in the previous Tariff Order while approving the capital expenditure for the ensuing year.*

*(e) In case the capital expenditure is required for emergency work, the licensee shall submit an application, containing all relevant information along with reasons justifying the emergent nature of the proposed work, seeking post facto approval by the Commission.*

*(f) The Distribution Licensee shall take up the work prior to receiving the approval from the Commission provided that the emergent nature of the scheme has been certified by its Board of Directors.*

*(g) If the scheme involves capital expenditure of less than INR 5 Crore, and included in the capital investment plan referred in regulation 5.2, the Distribution Licensee shall undertake the execution of the scheme with simultaneous notification to the Commission with all of the relevant supporting documents.*

5.3 As has been mandated in the BERC (MYDT) Regulation 2015, the present Business plan has been prepared keeping in view various aspects of distribution business like power demand, category wise sales capital expenditure etc.

5.4 Moreover, it is pertinent to mention that having an upfront multi-year business plan helps in better long term decision making and overall business performance.

### **Key objectives of the business plan**

This business plan intends to comply with the Hon'ble Commission's directive on submission of a multi-year business plan petition as part of the MYT tariff petition submission process for the control period of FY 2016-17 to FY 2018-19. The key objectives of the business plan for the MYT control period include the following:

1. Undertake a detailed assessment of the energy sales requirement for SBPDCL;
2. Identify the overall power procurement requirement for the distribution utility based on the sales assessment and the planned loss trajectory;
3. Details of the capital expenditure plan proposed during the period.

The subsequent sections detail out the aforementioned key components of the business plan in the same sequence.

## **24X7 Power For All (PFA) plan**

Recently, the Central Government has introduced 24x7 Power for all (PFA) initiative in conjunction to the various states. The initiative aims for the overall development of the power sector in the state. The objective of the PFA initiative is to make 24x7 power available to all households, industry, commercial businesses, public needs, any other electricity consuming entity and adequate power to agriculture farm holdings by FY 2018- 19. The Central Government had appointed consultants to develop a plan to achieve PFA in the states, including Bihar, to understand the specific needs of the generation, transmission and distribution and accordingly prepare the capacity additions and associated capital expenditure. The outcomes of the PFA plan, wherever relevant, have been used for the business plan and the subsequent MYT petition. The major highlights of 24X7 PFA document has been indicated below

- 1) As per the census held in 2011 there are approximately 1,58,42,204 households waiting to be electrified in the state.
- 2) An assessment of the existing un-electrified households in the rural & urban areas and projection of growth in household in rural & urban areas area has been made. It has been envisaged that by FY 2018-19 all the households of the state shall be electrified. It has been projected at between FY 2015-16 and FY 2018-19 the state will electrify approximately 1,43,06,177 household .
- 3) The electrification of all existing un-electrified BPL household has been envisaged.
- 4) It is envisaged that approximately 14,10,000 agriculture connection shall be issued during the period.
- 5) Addition of approximately 14,00,000 agriculture consumers with the utility.
- 6) To increase the per capita consumption of power in Bihar which stood at approximately 134 units during FY 2013-14 against national per capita consumption of 917 units
- 7) To increase the per capita consumption of electricity the plan has adopted both vertical and horizontal load growth strategy.
  - a. To increase the duration of availability of power from the present level of supply in both urban and rural areas and for all categories of consumers.
  - b. Electrification of all rural and urban household. There shall be an exponential increase in annual number of consumer being added to the utility under agriculture and domestic categories.

Utility has been suggested by the state and the Central Government to follow the plan document and to plan their resources to meet the aims laid in the document. The PFA plan document shares the year-on-year number of consumers and energy sales projections from FY 2015-16 to FY 2018-19 for the state. However, the

projections made were for the state as a whole and not for the specific distribution utilities of the state. Further, the plan provides the sales projection for three broad consumer categories, domestic sale, agriculture and rest of the consumers.

## **Number of Consumers**

The 24x7 Plan documents aim to undertake rapid energisation of agriculture connections and for electrification of approximately 1,40,00,000 un-electrified rural households and 3,06,177 un-electrified urban households of the state between FY 2015-16 and FY 2018-19. This includes 54,00,947 un-electrified KJY households of the state. The details of the number of households and agriculture consumers envisaged to be connected with the grid during the control period has been provided in table below

**Table 2: Targets for electrification of domestic and agriculture consumers during the control period (in Nos)**

State level cumulative	2016-17	2017-18	2018-19
Cumulative number of agri pump sets to be added as per 24*7	5,10,000	9,10,000	14,10,000
Electrification of un-electrified household (Rural)	70,00,000	1,05,00,000	1,40,00,000
Electrification of un-electrified household (Urban)	3,06,177		
Total cumulative household to be electrified	73,06,177	1,05,00,000	1,40,00,000

The number of consumers to be added to the DS-I (rural domestic), and DS- II (urban domestic) categories of the utilities were obtained from the state level figure in the ratio of number of existing consumers of these categories between NBPDCCL and SBPDCL. The plan document provides the number of consumers of the KJY category to be added to the NBPDCCL and SBPDCL separately. The same was used as the new KJY consumers to be added upto the end of the control period. However, as initiation of work under distribution system augmentation/extension projects are under progress, it is envisaged that the number of connections to be issued will remain less during the FY 2015-16 compare to other years of the control period. The year wise number of connections to be issued to KJY consumers during the control period has been provided in Table - below.

**Table 3: Year wise connection to be issued (in Nos)**

Sl. No	Category	FY 2016-17	FY 2017-18	FY 2018-19
1	KJY	4,00,000	17,15,822	17,15,822

The number of rural domestic and urban domestic connections envisaged to be added during various years of control period in the state was divided between NBPDCCL and SBPDCL based on the ratio of existing number of DS- I and DS - II categories of consumers respectively to obtain number of rural and urban domestic consumers to be added during the control period by the respective utility. The year wise number of KJY consumers envisaged to be electrified by



NBPDCL and SBPDCL during the ensuing years were subtracted from the year wise rural households to be added to obtain the number of DS-I consumers to be added on yearly basis by NBPDCL and SBPDCL respectively. Similarly, the DS-II consumer to be electrified during the ensuing years were added with the existing number of consumers of DS- II category to obtain year wise number of DS-II consumers for the utility.

The number of consumer to be electrified in agriculture category were obtained for all the years of the control period based on the growth rate of the respective category recorded between FY 2013-14 and FY 2014-15.

The number of agriculture, KJY and domestic connections thus projected to be electrified by NBPDCL during the control period has been provided below

**Table 4: Number of consumers of KJY, agriculture and DS- I and DS - II category to be added during various years of the control period (in Nos)**

Category	FY 2016-17	FY 2017-18	FY 2018-19
Agricultural consumers	1,122	1,424	1,815
KJY consumers	4,00,000	17,15,822	17,15,822
Domestic consumers (DS- I)	22,03,109	11,20,002	11,30,782
Domestic consumers (DS- II)	1,24,691	54,544	56,885

The other categories of consumers were extrapolated to obtain the number of consumers for FY 2016-17 to FY 2018-19 based on their respective growth for FY 2013-14 and FY 2014-15 taking FY 2014-15 as the base year for projection. The projection of category wise consumer base of the utility between FY 2016-17 and FY 2018-19 has been provided in the table below

**Table 5: Category wise consumer base during the control period (in Nos.)**

Sr. No	Category	FY 2016-17	FY 2017-18	FY 2018-19
1	KJY	18,73,212	35,89,034	53,04,856
2	DSI	56,13,915	67,33,917	78,64,699
3	DSII	10,88,549	11,43,093	11,99,978
4	DS III	42	45	47
5	NDS I Commercial	52,986	66,232	82,791
6	NDS II Commercial	1,69,101	2,11,376	2,64,221
7	NDS III Commercial	178	181	183
8	SS I	289	396	541
9	SS II	39	41	43
10	Irrigation and Agriculture I	2,793	2,932	3,079
11	Irrigation and Agriculture II	4,306	5,590	7,258
12	PWW	670	691	711
13	LTIS I	7,665	8,048	8,450
14	LTIS II	520	546	574

Sr. No	Category	FY 2016-17	FY 2017-18	FY 2018-19
15	HT IS I	507	533	559
16	HT IS II	26	28	29
17	HT IS III	2	2	2
18	HT IS IV	3	3	4
19	RT	4	5	5
20	DF	3,60,810	4,96,272	6,82,591
21	Total	91,75,619	1,22,58,964	1,54,20,621

## **Sales projection**

After its formation in the year 2012 NBPDCCL has been focusing on making available quality service and reliable energy to the consumers. With the efforts of the utility availability of energy has increased both in rural and urban areas. This is reflecting in the increase in overall sales of NBPDCCL by approximately 39% between FY 2013-14 and FY 2014-15 as has been indicated in table below

**Table 6: Sales during the FY 2013-14 and 2014-15** (in MU)

S No.	Category	FY 2013-14	FY 2014-15
1	KJY	366.02	506.37
2	DSI	491.92	668.04
3	DSII	749.19	999.87
4	DS III	0.76	0.63
5	NDS I Commercial	17.60	27.94
6	NDS II Commercial	279.82	387.30
7	NDS III Commercial	0.98	0.84
8	SS I	10.79	6.66
9	SS II	15.27	4.33
10	Irrigation and Agriculture I	12.19	10.68
11	Irrigation and Agriculture II	92.64	92.51
12	PWW	24.26	28.33
14	LTIS I	56.22	78.25
15	LTIS II	34.14	43.13
16	HT IS I	193.96	201.73
17	HT IS II	74.17	79.03
18	HT IS III	25.67	49.64
19	HT IS IV	57.65	41.49
20	RT	12.05	18.29
21	Sales to Nepal	751.18	1,010.07
22	UI	76.58	170.28
23	DF	261.75	578.10
	Total	3,604.82	5,003.52

Note: The Distribution franchisee (DF) started operation from 1.11.2013 in Muzaffarpur and thus the energy sales to DF during the FY 2013-14 reflect sales only for duration of 5 months.

With the increase in duration of availability of electricity to the consumers in rural and urban areas, it is expected that per capita consumption of domestic household shall increase. The 24X7 plan document envisages that with increase availability there shall be an increase in per household per day consumption in the state. The year wise per household per day consumption of rural domestic consumers as provided in 24X7 plan has been reproduced in the table below.

**Table 7: Year wise per household per day consumption of rural and urban domestic consumers of the state (per kWh per day)**

	FY 2016-17	FY 2017-18	FY 2018-19
Rural domestic	1.8	2.1	2.4
Urban domestic	6.00	6.50	7.00

With increase in hours of supply in urban and rural areas, there has been an increase in per household consumption in both urban and rural areas. Thus, for the preparation of business plan for the control period the year on year consumption per household for rural and urban domestic consumer has been assumed at the same level as provided in 24X7 document. By multiplying the consumption per household per day for the rural and urban domestic category with the total number of consumer of the category consumption per day was obtained. This was extrapolated to obtain the sales for the rural and urban domestic category for the year. Further by capping sales of KJY consumers to 1 unit per day per household, the cumulative consumption of DS - I category of consumer during an year has been obtained.

The sales to agriculture category were obtained based on the rate of growth of agriculture category recorded between FY 2013-14 and 2014-15. The sales to agriculture category during the control period was obtained taking the sales recorded during the FY 2014-15 as the base and the growth rate obtained.

For the other category of consumer it is expected that the year wise consumption shall follow the trend provided in the 24X7 document. The year wise sales provided in the 24X7 plan for other category of consumers (other than KJY, DS- I, DS-II, and irrigation and agriculture supply) were allocated to various categories based on their share of sales in the overall sales during the FY 2014-15.

Based on above assumptions projections of sales for various consumer categories of NBPDCCL for the three years of the control period have been obtained. The category wise projection thus arrived has been provided in table 8.

**Table 8: Sale projection for the FY 2016-17 to FY 2018-19 (in MU)**

Sl. No	Category	FY 2016-17	FY 2017-18	FY 2018-19
1	KJY	683.72	1310.00	1936.27

Sl. No	Category	FY 2016-17	FY 2017-18	FY 2018-19
2	DSI	4254.59	6659.06	9681.97
3	DSII	2908.39	3302.10	3733.13
4	DS III	0.84	1.00	1.20
5	NDS I	13.01	15.61	18.73
6	NDS II	180.59	216.71	260.06
7	NDS III	0.41	0.50	0.59
8	SS I	3.33	4.00	4.80
9	SS II	2.18	2.62	3.14
10	Irrigation and Agriculture I	18.05	23.46	30.50
11	Irrigation and Agriculture II	156.34	203.24	264.21
12	PWW	14.26	17.12	20.54
13	LTIS I	38.60	46.32	55.59
14	LTIS II	21.20	25.44	30.53
15	HT IS I	99.98	119.97	143.98
16	HT IS II	45.42	54.50	65.41
17	HT IS III	29.62	35.54	42.65
18	HT IS IV	23.25	27.90	33.48
19	RT	47.97	57.56	69.08
21	Sales to Nepal	1940.91	2329.09	2795.06
22	DF	306.02	367.23	440.70
<b>23</b>	<b>Total</b>	<b>10788.7</b>	<b>14819.0</b>	<b>19631.65</b>

## **Distribution loss trajectory**

Since its formation in 2012, NBPDCCL has been making efforts to decrease its losses. The losses level of the utility for the FY 2014-15 stood at 29.54%. Reversing the loss level in rural areas has been a challenge for the utility even though utility has been taking various steps to decrease its AT&C losses from rural areas. It is thus expected that due to increased supply to the rural areas, the losses of the utility shall increase in short run. The utility is thus undertaking all necessary measures to decrease its losses.

Under RAPDRP area covering 67 towns system metering has been installed and analysis of feeder wise line loss has been initiated. The work of system metering in non RAPDRP area (rural areas) is in progress. For reduction in T&D loss large scale system strengthening work has been taken up under both Discoms which are under execution and will be completed by FY 2018-19 which will result in improvement of HT/ LT ratio and substantial reduction in T&D loss. Further, utility is undertaking electrification of all households in its area of operation. This will help to bring the consumers in the billing ledger of the utility there by decreasing the losses. Construction of new 33/11 KV substations, associated 33 KV lines, interconnecting 33 KV lines and up gradation of existing sub stations is also being undertaken to reduce the losses. System strengthening by augmentation, renovation, modernization and strengthening of 11 KV level substations and lines has been planned under various schemes funded by the Central and State Government.

With the effort put forward by the utility it is expected that during FY 2015-16 and subsequently during the three years of the control period, the efforts of the utility shall help SBPDCL to decrease its loss by 1.50% every year. The proposed loss trajectory of the utility has been provided below

**Table 9: Loss trajectory during the control period (in %)**

Year	FY 2016-17	FY 2017-18	FY 2018-19
Loss	26.54%	25.04%	23.54%

## **Power Purchase**

The quantum of power purchased by the utility is decided by the expected energy sale of energy, as well as the targeted loss levels. 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 at the Discom periphery in the following manner

Quantum of power purchase (MU) = Energy Sales (MU)/ (1 - Distribution Loss (%))

NBPDCL is also supplying electricity to the distribution franchisee operating in Muzaffarpur district. Since the electricity is sold to the DF at its periphery, only 33 kV losses have been added to the DF sales to estimate the corresponding electricity requirement at Discom periphery. The total electricity requirement, at NBPDCL's periphery, to meet the project sales has been provided in the table below:

**Table 10: Power requirement by the utility at its periphery**

S No.	Particular	Unit	FY 2016-17	FY 2017-18	FY 2018-19
1	Energy, Sales within the area (Net of sale to Nepal, DF and UI)	MU	10,483	14,452	19,191
2	Distribution loss	%	26.54%	25.04%	23.54%
3	Losses at 33kV system	%	6%	6%	6%
4	State Transmission loss	%	3.87%	3.82%	3.77%
5	Energy required at utility transmission periphery	MU	15,183	20,451	26,570

BSPHCL is the nodal agency for procuring power to meet the demand of the two distribution utilities of the state. Presently, the state is primarily dependent on importing power from outside the state. During FY 2014-15 approximately 66% of power was sourced from the interstate generating stations. The major interstate generating stations from which BSHPCCL is procuring power are listed below:

**Table 11: Major inter state stations providing power to Bihar**

S No.	Inter State Stations
1	Talchar - I ( 2 x 500 MW)
2	Farakka - I & II (1600 MW)
3	Farakka - III (500 MW)
4	Kahalgaon - I (840 MW)
5	Kahalgaon - II (1500 MW)
6	Dadri - I
7	Teesta V HEP

S No.	Inter State Stations
8	Rangit - HEP
9	Chukka HEP
10	Tala HEP
11	Aruna -III
12	Barh Stage-I (3 X 660 MW)
13	Barh Stage-II (2 X 660 MW)

The contribution of the state generating station has been limited to approximately 10.5% of total availability. The state generation has been from Barauni and BSHPCL stations only. Approximately 11% contribution has been from MTSP JV projects of the state with NTPC.

Bihar has firm allocated share in Central Sector Generating Stations (CSGS) of National Thermal Power Corporation (NTPC), and National Hydroelectric Power Corporation (NHPC). Further, 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.

24x7 PFA plan also aims to increase the generation of JV projects where state is having a share. With the full scale operation of all the three proposed JV projects at Nabinagar i.e. Nabinagar Railway (4 X 250 Mw), Nabinagar Stage-I (3X 660) and Nabinagar JV (3X660 MW) Stage-II during the control period it is expected that the contribution of JV project shall increase to 28% while that of Inter state project shall come down to 50%. BSHPCL has also signed Power purchase agreement (PPA) with Punatsangchhu & Mangdechhu, HEP, North Karanpura (3 X 660MW) Jharkhand and Darlipalli STPS (4X800 MW) for supply of electricity to the state.

Supply of electricity from IPP is also expected by continue during the control period. Besides, with the Commissioning of Dagmara (120 MW) HEP in FY 2018-19 the state generation is poised to increase. The overall capacity available from various stations for the state, during the control period, has been provided below

The overall capacity available from various stations for the state has been provided below

Table 12: Year wise capacity allocation for Bihar (in MW)

	Generation Station	FY 16-17	FY 17-18	FY 18-19
A	Inter-State Generation			
1	Talchar - I (2 x 500 MW)	416.5	416.5	416.5
2	Farakka - I & II (1600 MW)	508.8	508.8	508.8
3	Farakka - III (500 MW)	107.6	107.6	107.6
4	Kahalgaon - I (840 MW)	354.9	354.9	354.9
5	Kahalgaon - II (1500 MW)	74.7	74.7	74.7
6	Dadri - I			
7	Teesta V HEP	108.43	108.43	108.43
8	Rangit - HEP	21	21	21



	Generation Station	FY 16-17	FY 17-18	FY 18-19
8	Chukka HEP	80	80	80
10	Tala HEP	260.1	260.1	260.1
11	Aruna -III		125	125
12	Punatsangchhu & Mangdechhu, HEP,		750	750
13	Barh Stage-I (3 X 660 MW)	1025	1025	1025
14	Barh Stage-II (2 X 660 MW)	859	859	859
15	North Karanpura, Jharkhand (3 X 660MW)		214.7	214.7
16	Darlipalli STPS (4 X 800			161.2
B	State Generating Stations			
1	Barauni Stage-I (2 X 110	220	220	220
2	Barauni Stage-II (2 X 250	500	500	500
3	Small Hydro (BSHPCL)	88	88	88
4	Dagmara HEP			120
C	IPP			
1	GMR Kamalanga Energy	260	260	260
2	Adani Enterprises Limited	200	200	200
3	Power purchase through long term contract under Case-1			500
D	JV projects			
1	MTPS Stage-I (2 X 110 MW)	220	220	220
2	MTPS Stage-II (2 X 195	264	264	264
3	Nabinagar Railway (4 X 250 Mw)	100	100	100
4	Nabinagar Stage-I (3 X 660		916	1373
5	Nabinagar JV (3 X 660 MW) Stage-II			916
E	Renewable Generation			
1	Solar PV	138	288	288
2	Solar PV under JNNSM	10	10	10
3	Bagasse based Cogeneration Project	94	94	94
4	Biomass based Generation	3	3	3
5	Biomass - Solar PV Hybrid	3	3	3
	Total	5916.03	8071.73	10225.93

BSPCL has fixed the allocation of power between SBPDCL and NBDPCL as 58% and 42% respectively i.e. 42% of the availability from various stations for the state is marked for NBDPCL. Thus the power capacity allocation arrived for NBDPCL has been provided in the table below

**Table 13: Capacity allocation for NBPDCCL for the control period (in MW)**

S No	Station	FY2016-17	FY 2017-18	FY 2018-19
A	Inter state Station			
	Talchar - I ( 2 x 500 MW)	174.93	174.93	174.93
	Farakka - I & II (1600 MW)	213.696	213.696	213.696
	Farakka - III (500 MW)	45.192	45.192	45.192
	Kahalgaon - I (840 MW)	149.058	149.058	149.058
	Kahalgaon - II (1500 MW)	31.374	31.374	31.374
	Dadri - I			
	Teesta V HEP	45.5406	45.5406	45.5406
	Rangit - HEP	8.82	8.82	8.82
	Chukka HEP	33.6	33.6	33.6
	Tala HEP	109.242	109.242	109.242
	Aruna -III		52.5	52.5
	Punatsangchhu&Mangdech hhu, HEP,		315	315
	Barh Stage-I (3 X 660 MW)	430.5	430.5	430.5
	Barh Stage-II (2 X 660 MW)	360.78	360.78	360.78
	North Karanpura, Jharkhand (3 X 660 MW)		90.174	90.174
	Darlipalli STPS (4 X 800 MW)			67.704
B	State generating Stations			
	Barauni Stage-I (2 X 110 MW)	92.4	92.4	92.4
	Barauni Stage-II (2 X 250 MW)	210	210	210
	Small Hydro (BSHPCL)	36.96	36.96	36.96
	Dagmara HEP			50.4
C	IPP			
	GMR Kamalanga Energy	109.2	109.2	109.2
	Adani Enterprises Limited	84	84	84
	Power purchase through long term contract under Case-1			210
D	JV projects			
	MTPS Stage-I (2 X 110 MW)	92.4	92.4	92.4
	MTPS Stage-II (2 X 195 MW)	110.88	110.88	110.88
	Nabinagar Railway (4 X 250 Mw)	42	42	42

	Nabinagar Stage-I (3 X 660 MW)		384.72	576.66
	Nabinagar JV (3 X 660 MW) Stage-II			384.72
E	Renewable			
	Solar PV	57.96	120.96	120.96
	Solar PV under JNNSM	4.2	4.2	4.2
	Bagasse based Cogeneration Project	39.48	39.48	39.48
	Biomass based Generation	1.26	1.26	1.26
	Biomass - Solar PV Hybrid	1.26	1.26	1.26
	<b>Total</b>	<b>2484.733</b>	<b>3390.127</b>	<b>4294.891</b>

## Energy Availability

The energy availability from various interstate plants have been computed based on the normative Plant Load Factor (PLF), auxiliary consumptions specified for plants, peaking availability for the existing and future plants for various fuel sources as has been considered under 24X7 document. However, some adjustments were made in the plant availability as per the drawal expected to be observed to arrive at the plant wise energy availability. Based on this the energy available from various plants has been computed for the entire control period of three years. The plant wise energy availability for the utility has been provided in the table below

**Table 14: Plant wise energy available from various generation plants (in MU)**

S No	Station	FY 16-17	FY 17-18	FY 18-19
A	Inter-State generation			
	Talchar - I ( 2 x 500 MW)	1204.84	1204.84	1204.84
	Farakka - I & II (1600 MW)	1465.87	1465.87	1465.87
	Farakka - III (500 MW)	311.26	311.26	311.26
	Kahalgaon - I (840 MW)	1015.55	1015.55	1015.55
	Kahalgaon - II (1500 MW)	216.09	216.09	216.09
	Dadri - I	0.00	0.00	0.00
	Teesta V HEP	49.12	92.10	92.10
	Rangit - HEP	9.21	17.26	17.26
	Chukka HEP	216.87	216.87	216.87
	Tala HEP	376.30	376.30	376.30
	Aruna -III	0.00	205.51	205.51
	Punatsangchhu & Mangdechhu, HEP	0.00	1233.04	1233.04
	Barh Stage-I (3 X 660 MW)	2372.07	2965.09	2965.09
	Barh Stage-II (2 X 660 MW)	1490.93	1490.93	1490.93
	North Karanpura, Jharkhand (3 X 660MW)	0.00	372.65	434.75
	Darlipalli STPS (4 X 800	0.00	0.00	233.16
B	State generating Stations			
	Barauni Stage-I (2 X 110	370.39	370.39	427.38
	Barauni Stage-II (2 X 250	906.09	1001.52	1073.06
	Small Hydro (BSHPCL)	20.09	24.11	24.11
	Dagmara HEP	0.00	0.00	98.64
C	IPP			
	GMR Kamalanga Energy	643.98	643.98	804.97

	Adani Enterprises Limited	371.53	371.53	371.53
	Power purchase through long term contract under Case-1	0.00	0.00	1548.02
D	JV projects			
	MTPS Stage-I (2 X 110 MW)	512.85	512.85	512.85
	MTPS Stage-II (2 X 195	377.72	528.80	679.89
	Nabinagar Railway (4 X 250 Mw)	228.92	228.92	257.53
	Nabinagar Stage-I (3 X 660	0.00	1059.91	1588.71
	Nabinagar JV (3 X 660 MW) Stage-II	0.00	0.00	1059.91
E	Renewable			
	Solar PV	48.35	201.12	201.12
	Solar PV under JNNSM	3.50	6.98	6.98
	Bagasse based Cogeneration Project	164.97	164.97	164.97
	Biomass based Generation	7.95	7.95	7.95
	Biomass - Solar PV Hybrid	5.26	5.26	5.26
	<b>Total</b>	<b>12389.72</b>	<b>16311.67</b>	<b>20311.53</b>

## Energy Balance

The energy required at the utility periphery and the power availability are used to find the energy balance of the utility. The energy available at the utility periphery has been computed taking into consideration the central transmission losses (CTL) approved by the CERC for the FY 2015-16. It has been assumed that the CTL shall remain at rated level for the three years of the control period also. The energy balance thus arrived at has been provided in the table below

**Table 15: Energy balance for the control period**

Particular	Unit	FY 2016-17	FY 2017-18	FY 2018-19
Energy required at utility transmission periphery	MU	15,183	20,451	26,570
Cumulative availability from plants	MU	12389.72	16311.67	20311.53
CTU Transmission losses	%	2.26%	2.26%	2.26%
Net Power Available at utility periphery	MU	12192.46	16058.93	20052.11
Surplus / (Deficit) Energy at Distribution periphery	MU	-2990.56	-4392.27	-6517.74

### **Energy Balance for the State**

As has been indicated in above sections, the power for the utility of the state is handled by the BPHCL. BHPCL provides energy to the utility based on the requirement. Thus, it is important to understand the energy balance at the state level. The energy balance for the state has been provided in the table below.

**Table 14: Energy balance at the state transmission periphery**

	Unit	FY 2016-17	FY 2017-18	FY 2018-19
NBPDCL	MU	15,183.03	20,451.20	26,569.85
SBPDCL	MU	16397.95	20000.40	24058.60
Bihar state total energy requirement at state periphery	MU	31,580.97	40,451.60	50,628.45
Energy available at state transmission periphery	MU	28,997.98	38,203.85	47,658.10
State Surplus/ Deficit	MU	-1,861	-1,673	-2,056
State Surplus/ Deficit	%	-5.89%	-4.14%	-4.06%

During the first three years of the control period the shortfall in the energy requirement at the state level is less than the 15% limit prescribed for the state. It is

clear from this table that during the control period BPHCL shall need to meet the shortfall in supply of energy from other sources including short term purchase of power.

## Capital Expenditure plan

To meet the requirement of 24x7 the distribution utility is undertaking various capital expenditure projects funded by Central and the State Government. A brief of the various projects works under taken and the major activities being performed under it have been detailed below

- ▶ BRGF: backward Region Grant Fund (BRGF) is designed to redress the regional imbalance in development. The fund aims to:
- ▶ Bridge the gap in local infrastructure and other development requirements that are not being adequately meet through existing inflow.
- ▶ Strengthening of rural load by providing dedicated agriculture feeder for improving load management and in ensuring reliable supply to agriculture consumers.
- ▶ Repair and Maintenance of Sub stations in order to improve uptime and reduce technical losses in the substation
- ▶ Introducing IT Application and strengthening/ R&M of distribution network in small towns not covered under R- APDRP scheme.

BRGF is being implemented under geographical jurisdiction of NBPDC in three phases. The first two phases covered the below indicated districts.

**Table 16: List of districts for the implementation of Phase I and Phase II of BRGF**

S No	Phase I	Phase II
1	Purnia	Purnia
2	Katihar	Katihar
3	Kishanganj	Kishanganj
4	Arraria	Arraria
5	Supaul	Supaul
6	Saharsa	Saharsa
7	Darbhanga	Darbhanga
8	Muzaffarpur	Muzaffarpur
9	Siwan	Siwan
10	East Champaran	East Champaran
11	West Champaran	West Champaran
12	Chapara	Chapara
13	Vaishali	Vaishali
14	Samastipur	Samastipur
15	Khagaria	Khagaria
16	Sitamarhi	Sitamarhi
17	Sheohar	Sheohar
18	Gopalganj	Gopalganj
19	Madhubani	Madhubani
20	Begusarai	Begusarai
21	Madhepura	Madhepura



Under the third phase, termed as BGRF phase I and II Part - C, the balance work of the phase I and II have been incorporated. The project is being implemented in the area of operation of utility in three phases namely, BRGF Phase - I, BRGF Phase - II and BRGF phase - II Part C

Beside BRGF the utility has also received fund under the Central and State sponsored projects as indicated below

- 1) State Plan
- 2) R APDRP Part A
- 3) R APDRP part B
- 4) DDUGJY
- 5) IPDS
- 6) RGGVY phase - I
- 7) RGGVY phase - II
- 8) DSM plan

The ongoing projects, the fund received under these projects and the expenditure made during the FY 2014-15, FY 20-15-16 and the projects planned for execution in future have been provided at Annexure - II of this report. It is also incident to mention here that NBPDCCL has submitted its petition for approval of DSM plan to the Commission. The petition for approval also includes the capital expenditure plan. Thus, the capital investment associated with the DSM plan has not been included in this petition.

## **Capitalisation schedule**

Most of the capital works of the distribution business takes 18 to 24 months for execution. However, due to uncontrollable factors the project may spill over to other years. Presently most of the work being envisaged to be undertaken by the utility is to be executed through the fund made available under various Central and State supported projects. The details of the investment plan (scheme wise) and investment plan (year wise) has been provided at annexure - II and Annexure - III of this document

## **Source of funding**

All major ongoing and planned capital works undertaken by the utility is through the capital resources made available under State/ Central schemes. While some of the projects attracts 100% grant from the Government, some of the projects has a basket of both Central and State Grant components along with loan component. The quantum of loan mandated to be arranged for the execution of the project as per the project outline is arranged from the financial institutions. The sources of funding for carrying capital expenditure works of the utility under various schemes have been provided in the table below.

**Table 17: Sources of funding for capital expenditure (in %)**

Projects	Loan	Grant	Equity
RGGVY	10%	90%	
BRGF		100%	
RAPDRP Part A		100%	
RAPDRP Part B	75%	25%	
DDUGJY	10%	60%	30%
IPDS	10%	60%	30%
State Plan			100%

## **Financial Structuring Plan**

For improving the financial health of distribution utilities, with the support from the Government the financial restructuring plan (FRP) for the state distribution utility is also under progress. The present status of FRP is summarized in the table below

**Table 18: FRP for NBDPCL**

S.No.	Particulars	Status
1	Eligible amount for FRP	Rs 640.09 Cr
2	10.20% Bonds issued by Discoms in Canara Bank (Nodal Bank)	Rs. 293.735 Cr
3	Short term loan restructured (floating interest rate @11.20%)	Rs. 293.735 Cr
4	Amount of loan not restructured and swapped by fresh loan	Rs. 52.620 Cr
5	Phasing of bonds for taking over by the state government	Under Process
6	Constitution of state level monitoring committee	Constituted on 08.07.2014
7	Conversion of State Government Loans outstanding as on 31.03.2013 into equity	Converted
8	Funding of Operational losses	Ministry of Power is likely to issue order in this regard

## Projection of Power Purchase Cost

All the stations from which the power is being sourced were characterised into central stations, state and JV stations, IPP and the renewable sources. For the projection of power purchase cost, station wise actual expenses incurred between April to August 2015 were used. The plant wise average cost of electricity purchased by BSPHCL during April 2015 and August 2015 has been used along with the power sourced from these plants during this period to obtain average cost per unit of electricity from the respective generating stations. The unit rate and the overall cost of the power purchased from various plants/ stations along with the projected power purchase from the respective plants in a particular year during the control period has been used to obtain plant/ station wise overall cost. The same has been indicated in the table below

**Table 19: Station wise fixed and energy charges during the control period (Rs Cr)**

S No	Station	Unit rate (Rs/ unit)	Total cost (Rs cr)		
			FY 2016-17	FY 2017 - 18	FY 2018-19
A	Inter-State generation				
	Talchar - I ( 2 x 500 MW)	2.18	262.65	262.65	262.65
	Farakka - I & II (1600 MW)	3.45	505.73	505.73	505.73
	Farakka - III (500 MW)	4.23	131.66	131.66	131.66
	Kahalgaon - I (840 MW)	3.22	327.01	327.01	327.01
	Kahalgaon - II (1500 MW)	3.25	70.23	70.23	70.23
	Dadri - I	0.00	0.00	0.00	0.00
	Teesta V HEP	9.45	46.42	87.04	87.04
	Rangit - HEP	9.96	9.17	17.19	17.19
	Chukka HEP	1.84	39.90	39.90	39.90
	Tala HEP	2.02	76.01	76.01	76.01
	Aruna -III	3.50	0.00	71.93	71.93
	Punatsangchhu & Mangdechhu, HEP,	4.50	0.00	554.87	554.87
	Barh Stage-I (3 X 660 MW)	4.50	1067.43	1334.29	1334.29
	Barh Stage-II (2 X 660 MW)	4.50	670.92	670.92	670.92
	North Karanpura, Jharkhand (3 X 660 MW)	4.50	0.00	167.69	195.64

	Darlipalli STPS (4 X 800 MW)	4.50	0.00	0.00	104.92
B	State generating Stations				
	Barauni Stage-I (2 X 110 MW)	4.50	166.68	166.68	192.32
	Barauni Stage-II (2 X 250 MW)	4.50	407.74	450.69	482.88
	Small Hydro (BSHPCL)	4.50	9.04	10.85	10.85
	Dagmara HEP	4.50	0.00	0.00	44.39
C	IPP				
	GMR Kamalanga Energy	4.77	307.18	307.18	383.97
	Adani Enterprises Limited	4.40	163.47	163.47	163.47
	Power purchase through long term contract under Case-1	4.20	0.00	0.00	650.17
D	JV projects				
	MTPS Stage-I (2 X 110 MW)	4.50	230.78	230.78	230.78
	MTPS Stage-II (2 X 195 MW)	4.50	169.97	237.96	305.95
	Nabinagar Railway (4 X 250 Mw)	4.50	103.01	103.01	115.89
	Nabinagar Stage-I (3 X 660 MW)	4.50	0.00	476.96	714.92
	Nabinagar JV (3 X 660 MW) Stage-II	4.50	0.00	0.00	476.96
E	Renewable				
	Solar PV	5.50	26.59	110.62	110.62
	Solar PV under JNNSM	5.25	1.84	3.67	3.67
	Bagasse based Cogeneration Project	4.70	77.53	77.53	77.53
	Biomass based Generation	5.35	4.25	4.25	4.25
	Biomass - Solar PV Hybrid	5.50	2.90	2.90	2.90
	Total		4878.13	6663.67	8421.52

## Overall cost

Based on the power purchase cost for the power procured from various sources, transmission charges payable to PGCIL, NRLDC, State transmission utility etc. the year wise cost of the distribution utility for the control period has been provided in the table below

**Table 20: Year wise cost for the control period (Rs cr)**

	FY 2016-17	FY 2017-18	FY 2018-19
Power purchase cost	4,878.13	6,663.67	8,421.52
Interstate Transmission charges	384.08	505.66	629.66
State Transmission charges	198.24	260.99	324.98
Capital investment	6505.99	3089.28	156.51
Total	11,966.44	10,519.60	9,532.67

### Manpower Planning

To carry on the business and to manage the business challenges, utility is making necessary plans to meet the man power challenges. The details of the permanent man power available with the utility has been provided in the table provided below

**Table 21: Manpower planning**

S No	Particulars	FY 2016-17	FY 2017-18	FY 2018-19
1	Number of employees at the beginning of FY	1351	1713	2117
2	Number of employees added during the FY	362	404	450
3	Number of employees at the end of the FY	1713	2117	2568

Manpower planning at the circle level would be done separately as per the requirement



## Annexure - I

### Tasks to be performed under State Plan

1	IT implementation work under Non R-APDRP areas
2	Construction of 2x5 MVA,33/11 PSS
3	R&M of existing HT & LT Lines with same or higher capacity ACSR Conductor/ ABC to provide quality and reliable power supply
4	Augmentation of existing capacity & installation of Add. Power Transformer along with associated works at existing power sub stations to cater the load growth.
5	Augmentation of existing capacity & installation of Add. Distribution Transformer along with associated works at existing power sub stations to cater the load growth.
6	Installation of VCB, CT,CR Panel & L.A in 31 PSS Constructed/Be constructed under ACA/State Plan
7	Construction of 5 nos. Power sub station where initial works were taken up earlier but left incomplete due to resource crunch
8	Replacement of service connections given on Bans Balla & PVC wire on Poles & Conductors.
9	To provide cent percent meters to consumers of all category as well as for new connections.
10	Installation of system meters in 11 KV & 33 KV feeders & Distribution Transformers.
11	To provide Laptop/ Tablets to the officers for efficient working.

### R APDRP phase - II

List of activity/ Material
Design & Supply of New 33/11kV, 2x10MVA PSS with 33 kV outdoor and 11 kV Indoor switchgear PSS with bay equipment for a) 33 kV line bays b) 33 kV bus section bay c) 10MVA Power Transformer bay d) 11 kV Indoor switchgear comprising of 2 IC + 1 BC + 8 OG and e) 11 kV Capacitor bank
Design & Supply of New 33/11kV, 2x5MVA PSS with 33 kV outdoor and 11 kV Indoor switchgear PSS with bay equipment for a) 33 kV line bays b) 33 kV bus section bay c) 10MVA Power Transformer bay d) 11 kV Feeder) 11 kV Capacitor bank
Design & Supply of One 33/11kV, 1X 10 MVA Power Transformer in the existing PSS with bay equipment for a) 33 kV Transformer Bay b) 33 kV bus

List of activity/ Material
section bay c) 11 kV incomer bay d) 4 Nos. of 11kV feeder bays
Augmentation of 33/11kV, 5 MVA Power Transformer by 10 MVA Power Transformer with a) Transformer Augmentation and b) replacement of associated Switchgear
Augmentation of 33/11kV, 3.15 MVA Power Transformer by 5 MVA Power Transformer with a) Transformer Augmentation and b) replacement of associated Switchgear
Renovation & Modernization of existing 33/11kV substations with replacement of switchgear in existing substations
33 KV OCB to 33 KV VCB
Replacement of Defective control 11 KV VCB
Design & Supply of 1.5 MVAR Capacitor Bank at existing 33/11kV PSS having 5 MVA Power Transformer
Design & Supply of 3 MVAR Capacitor Bank at existing 33/11kV PSS having 10 MVA Power Transformer
Design & Supply of 11kV New Bay Extension for New Feeders at existing power substations
33 kV New U/G Line with 3x400SQMM XLPE of 2 legs
33kV New Line on 13m Rail Pole with ACSR wolf conductor
Conversion of Existing 33 kV OH Line in to U/G cable with 3x400SQMM XLPE cable of 2 legs
Reconductoring& rearrangement of 33kV existing lines with ACSR Wolf conductor
11 kV New Line with U/G 3x300SQMM XLPE cable
11KV New Line using HT ABC- 3X185 + 1X 150 SQMM (feeder bifurcation)
11kV New Line with ACSR Dog on 9 m, 400kg PSC Pole
Conversion of Existing 11kV OH Line to U/G Cable with 3X300SQMM XLPE Cable
Conversion of Existing 11kV OH line to HT ABC- 3X185 + 1X150 SQMM
Reconductoring& Rearrangement of Existing 11kV Line with ACSR Dog conductor
11kV 3X95 SQ MM XLPE cable for connectivity from RMU to adjoining DT
11KV RMU With SCADA enabling feature(Extensible and Non Extensible)
11 kV New U/G cable with 3x95 SQMM XLPE (for New DT Connection)
11KV New Line using HT ABC- 3X185+ 1X 150 SQMM (for New DT Connection)
11kV New Lines with ACSR Dog on 9 meter, 400kg PSC Pole (for New DT Connection)
New 11/0.433 kV, Pole mounted 63KVA DSS
New 11/0.433 kV, Pole mounted 100 KVA DSS

List of activity/ Material
New 11/0.433 kV, Pole mounted 200KVA DSS
New 11/0.433 kV, Pole mounted 315KVA DSS
New 11/0.433 kV, Pole Mounted 500 KVA DSS
New 11/0.433 kV, Plinth Mounted 500 KVA DSS
Replacement of 11/0.433KV, 63KVA DT by 11/0.433KV, 200 KVA DT, where no change in DP Structure is required
Replacement of 11/0.433KV, 63 KVA DT by 11/0.433KV, 100 KVA DT, where no change in DP Structure is required
Replacement of 11/0.433KV, 200KVA DT by 11/0.433KV, 315KVA DT, where no change in DP Structure is required
Replacement of 11/0.433KV, 200KVA DT by 11/0.433KV, 315KVA DT, where replacement of existing DP structure is required
Replacement of 11/0.433KV, 100KVA DT by 11/0.433KV, 200KVA DT
New LT line with LT ABC 3X120+1X16+1X70 SQMM (All conductor including messenger are insulated) on 9 m, 400kg PSC poles
New LT Line with ACSR Dog on 9 m, 400kg PSC poles
New LT Line with ACSR Rabbit on 9 m, 400kg PSC poles
Conversion of existing LT OH Line to LT ABC 3X120+1X16+1X70 SQMM (All conductor including messenger are insulated)
Conversion of existing LT OH Line to LT ABC 3X185+1X16+1X120 SQMM (All conductor including messenger are insulated)
Reconductoring and Rearrangement of existing LT Lines with ACSR Rabbit
Reconductoring and Rearrangement of existing Netrural LT Lines with ACSR Weasel
Conversion one phase to three of existing LT Lines with ACSR Rabbit
Replacement of Service line of 3-Phase whole current metered Consumer by 3.5C, 25 Sq.mm Service Cable
Replacement of Service line of 1-phase Consumer by 2 Core, 10 Sq.mm Service Cable
1-Ph EM / Defective Meter Replacement by electronic energy meters
3-Ph EM / Defective Meter Replacement by 3P-4W whole current meters
3-Ph EM / Defective Meter Replacement by 3P LTCT Meter with CTR 50/5 Amps and 100/5Amps .
Supply and installation of 33KV Fault Passage Indicator
Supply and installation of 11KV Fault Passage Indicator
Supply & Installation of Numerical Relay
Supply of New Mobile service Centre (200 KVA)
Supply of New Mobile service Centre (315 KVA)
Supply of New Mobile service Centre(500 KVA)
R& M of Distribution Substations

List of activity/ Material
Supply & Installation of miscellaneous Items



## Annexure - II

Format - 11

Tariff Petition for Financial Year: FY 2016-17

Name of the Distribution Licensee: NBPDCCL

Investment plan (Scheme wise)

(in Rs Cr)

S No.	Name of Scheme/ Project	Approved Outlay	Previous year (FY 2014-15)	Current year (FY 2015-16)	Ensuing year (projections)			Progressive Expenditure upto ensuing year(s)
			Actual	RE	2016-17	2017-18	2018-19	
1	RGGVY XIth Plan phase - I	456.5	171.08	0	236.24	0	0	390.82
2	RGGVY XIth Plan phase – II	1306.69	363.97	301.2	301.2	0	0	778.7
3	RGGVY XIIth Plan	4322	165.12	827.76	1931.45	0	0	992.88
4	BRGF Phase – I	293	269.13	45	485.02	121.25	0	388.54
5	BRGF Phase – II	445.12	66.55	445.12	727.28	207.79	103.9	511.67
6	BRGF Phase II, Balance work of Ph - I and Ph - II (Part -C)	887.75	0	40.41	138.65	69.32	23.11	40.41
7	RAPDRP Part A	26.01	0	15.08	15.09	0	0	20.95
8	RAPDRP Part B	86.15	110.55	86.15	86.16	0	0	226.65
9	DDUGY	3394.1	0	0	1357.64	2036.46	0	0
10	IPDS	1057.99	0	0	423.19	634.8	0	0
11	A- State Plan	0	150.6	243.59	250.24	0	0	614.95
	B- Replacement of burnt transformers	217.35	0	217.35	50.09	0	0	217.35

12	Total	2221.66	1297	2221.66*	6505.99	3089.28	156.51	4182.92
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Note: The figure for the FY 2014-15 is the actual expenditure incurred during the year  
The figure for the FY 2015-16 is the planned expenditure for the year  
For the ensuing years the corresponding figures indicates the targets/ planned expenditure  
\* The figures indicated is provisional

## Annexure - III

Format - 12

Tariff Petition for Financial Year: FY 2016-17

Name of the Distribution Licensee: NBPDCCL

Investment Plan (Year-wise)

(in Rs Cr)

S No.	Year	Originally proposed by the Discom	Approved by the Commission	Revised by the Discom	Revised Approval by the Commission In Review	Actual expenditure
1	FY 2018-19	156.51	No	Under revision	To be submitted	To achieve
2	FY 2017-18	3089.28	No	Under revision	To be submitted	To achieve
3	FY 2016-17	6505.99	No	Under revision	To be submitted	To achieve
4	FY 2015-16	5248	No	No	No	2221.66 *
5	FY 2014-15	7597	No	No	No	1297
6	FY 2013-14	5585	No	No	No	408.28
7	FY 2012-13	1598	No	No	No	255.98

Note: 1) During FY 2012 the Business plan was submitted for approval for BSEB as a whole.

2) Due to 24X7 the capital expenditure for the utility is under revision and is pending with the state Government for approval

3) \* The figures are provisional