Response to Hon'ble BERC Queries for NBPDCL Business Plan for FY 2019-20 to FY 2021-22

Reference:

1. NBPDCL Letter No. 842 dated 08.11.2018
2. BERC Letter No.-BERC Case No. 40/2018- 424 dated 05.12.2018

1. Projections for number of consumers, connected load and sales for MYT control period

   a. Regulation 16.1 i.e. Forecasting Methodology, specify that the sales forecast of metered category shall be based on past trends in each of the slabs of consumer categories, whereas in the business plan submitted, NBPDCL has furnished total number of consumers in a particular category (without slab wise details) for years FY13-14 to FY17-18 and for the current year FY18-19.

   Reply: It is submitted that the slab wise data of no. of consumers could not be derived for the past periods i.e. FY13-14 to FY17-18 using the existing billing software, since the data is continuously being updated. The consumption of a particular consumer for a month may change in every billing cycle in view of variation in its usage. Therefore, the consumption of a consumer does not fall in same slab every month, which keeps on changing and is not a static value. Considering the above issue if it is prepared it would be a voluminous task and compilation would require ample time. However, based on our best assumptions we have projected slab wise data for future years.

   b. Historical actual connected load details (category wise, slab wise) for the year FY13-14 to FY 17-18 are not furnished. It is said that average connected load per consumer has been taken as per the actual data for the past few years whereas this data is missing and has not been taken from FY 2013-14. Details may be furnished.

   Reply: It is submitted that the slab wise data for connected load could not be derived for the past periods i.e. FY13-14 to FY17-18 using the existing billing software, since the data is continuously being updated. The consumption of a particular consumer for a month may change in every billing cycle in view of variation in its usage. Therefore, the consumption of a consumer does not fall in same slab every month, which keeps on changing and is not a static value. Considering the above issue if it is prepared it would be a voluminous task and compilation would require ample time. However, based on our best assumptions we have projected slab wise data for future years.Historical actual category wise connected load for FY 2013-14 to FY 2017-18 is provided in the table below:

Historical Connected Load (kW) for NBPDCL

Consumer Category	FY 2013-14	FY 2014-15	FY 2015-16	FY 2016-17	FY 2017-18
Domestic	**2,197,909**	**2,887,654**	**3,820,216**	**3,708,170**	**4,588,669**
Kutir Jyoti- BPL Consumers	839,282	891,501	1,156,172	353,591	319,890
Domestic - I	634,266	1,074,457	1,527,880	1,975,877	2,184,659
Domestic - II	723,949	921,340	1,135,781	1,378,615	2,084,120
Commercial	**240,489**	**327,815**	**450,432**	**631,729**	**658,628**
Non-Domestic - I	13,736	34,338	55,533	85,122	100,843

Consumer Category	FY 2013-14	FY 2014-15	FY 2015-16	FY 2016-17	FY 2017-18
Non-Domestic - II	225,963	292,875	394,174	546,352	557,785
Public Lighting	**3,352**	**3,992**	**9,422**	**3,302**	**10,089**
Street Light - I	1,623	3,218	4,031	965	4,386
Street Light - II	1,729	774	5,391	2,337	5,703
Irrigation	**35,986**	**36,282**	**42,619**	**83,039**	**87,243**
IAS - I	7,528	8,333	11,105	29,627	31,406
IAS - II	28,458	27,949	31,514	53,412	55,837
Public Service Connections	**8,217**	**10,003**	**12,975**	**4,666**	**18,074**
Public Water Works	8,217	10,003	12,975	4,666	18,074
Industrial LT	**50,189**	**62,130**	**106,662**	**56,277**	**242,594**
LTIS - I	36,588	45,813	73,276	22,880	199,993
LTIS - II	13,600	16,317	33,385	33,397	42,601
Industrial HT	**132,439**	**180,451**	**201,521**	**223,790**	**252,724**
HTS - I	68,722	104,163	119,295	137,247	157,336
HTS - II	26,360	38,131	39,269	41,636	42,481
HTS - III	24,003	34,170	34,170	34,170	42,170
HTSS	13,353	3,987	8,787	10,737	10,737
Railway	19,440	140,400	43,200	54,900	69,900
Total	**2,688,020**	**3,648,726**	**5,107,837**	**5,221,029**	**6,405,836**

c. For FY 18-19, the category wise, slab wise consumers, connected load & energy sales actual for first half year and projections for second half year shall be provided separately.

Reply: The category wise provisional number of consumers, connected load and energy sales for first 6 months of FY 2018-19 and for FY 2018-19 is provided in the table below

Consumer Category	Consumers	Connected Load (kW)	Sales (MU)
Domestic	**7890371**	**6,448,029**	**2,899**
Kutir Jyoti- BPL Consumers	3682352	483,760	805
Domestic - I	3,031,737	3,754,296	1,169
Domestic - II	1176283	2,209,973	925
Commercial	**356643**	**789,839**	**469**
Non-Domestic - I	109811	130,238	107
Non-Domestic - II	246832	659,601	362
Public Lighting	**727**	**12,307**	**4**
Street Light - I (Metered)	320	6,504	3
Street Light - II (Unmetered)	407	5,803	1
Irrigation	**17505**	**143,555**	**66**
IAS - I	12107	83,406	23
IAS - II	5398	60,149	42
Public Service Connections	**1038**	**21,210**	**14**
Public Water Works	1038	21,210	14

Consumer Category	Consumers	Connected Load (kW)	Sales (MU)
Har Ghar Nal			**99**
Industrial LT	**24300**	**305,436**	81
LTIS - I	23650	260,288	19
LTIS - II	650	45,148	**274**
Industrial HT	**945**	**325,752**	188
HTS - I	897	201,614	46
HTS - II	39	54,362	23
HTS - III	4	59,038	17
HTSS	5	10,737	59
Railway	8	83,880	730
Nepal	1		**4,614**
Total	**8,291,538**	**8,130,007**	**2,899**

The slab wise data for consumers, connected loadand sales could not be derived for the past period i.e. first 6 months of FY 2018-19 using the existing billing software, since the data is continuously being updated. The consumption of a particular consumer for a month may change in every billing cycle in view of variation in its usage. Therefore, the consumption of a consumer does not fall in same slab every month, which keeps on changing and is not a static value. Considering the above issue if it is prepared it would be a voluminous task and compilation would require ample time. However, based on our best assumptions we have projected slab wise data for future years.

d. Average consumption per consumer per month based on historical sales & number of consumers category wise, slab wise not furnished, which will be the basis for sales projections for MYT period FY19-20 to FY20-21. Details may be furnished.

Reply: Category wise number of consumers, sales for FY 2013-14 to FY 2018-19 has already been provided in the Business Plan and its additional submissions. Average consumption per consumer per month can be obtained by dividing the sales per month of the respective categories with the number of consumers.

e. Highlights of the approach and assumptions used for projecting the specific category wise, slab wise number of consumers connected and energy sales for the ensuring years, said to have been furnished is not available. Please forward the said details.

Reply: The general approach followed for projection of all categories include the following:-

i. The consumer numbers for FY 2018-19 are projected considering the provisional figures as available for September, 2018 and thereafter a total growth of 17% by the end of FY 2018-19 over September, 2018. Then, the overall growth rate has been assumed to be around 8% for the subsequent years in the next control period.
ii. For projecting the connected load, an average connected load per consumer has been taken as per the actual data of the past few years. This has then been then multiplied by projected number of consumers to arrive at the connected Load.

iii. The energy sales has been projected by considering the average consumption per consumer per month and then multiplying the same to the projected number of consumers.

iv. The number of years taken for estimating the CAGR however varies since the trend in certain categories is impacted by multiple other factors, and taking a uniform period for calculating the CAGR skews the outcome.

v. In addition to the CAGR, it has also been ensured that other factors impacting demand, such as growth in the no. of consumers (due to schemes including 24X7 Power For All, Chief Minister scheme and Saubhagya scheme), enhanced power procurement, strengthening of distribution network for enhancing quality of supply, energy efficiency and DSM measures etc., have been adequately incorporated to reflect a realistic demand scenario.

f. For MYT control period, the CAGRs adopted for projecting no. of consumers, connected load and energy sales shall be provided for each year. Wherever CAGR not considered the basis for the projections shall be clearly explained.

Reply: The detailed methodology for projecting the number of consumers, connected load and energy sales for each of the control period is provided below:

a. **Kutir Jyoti**: The projections in Kutir Jyoti category are done considering the following assumptions:-

i. **Consumers**: A major drive to enhance access to electricity in the State, and the majority of the new potential consumers under Kutir Jyoti, DS-I and IAS-I categories has been undertaken in recent years. It is expected that the programme of addition of new consumers will achieve saturation in the near future. Therefore, the Petitioner In line with all schemes, has estimated a growth rate of 21% over the consumers as on September, 2018 for FY 2018-19. Subsequently a growth rate of 5%, 5% and 4% has been assumed for each year of the 3rd control period in view of saturation in addition of consumers in this category and finalization of the ongoing schemes.

ii. **Connected Load:** The connected load for this category is projected considering average load per consumer at 110 W and multiplying it by numberof consumers to arrive at the connected Load.

iii. **Units sold:** An increase of 12% in the consumption patternfor KJY category over the consumption for FY 2017-18 has been assumed**.** The Petitioner has considered an average monthly consumption of 50 kWh per consumer per month and multiplying with total number of consumers projected in this category for FY 2018-19 to arrive at an estimated sales figure. For the control period also same average monthly consumption per consumer has been considered.

b. **Domestic Service I**: The projections in DS I category are done considering the following assumptions:-

i. **Consumers:** The CAGR for FY 2017-18 over FY 2016-17 was found to be 17%. Then the provisional figures for September, 2018 was considered which showed an increase of 40% over the number of consumers as on FY 2017-18. Keeping the same in view another 17% increase in number of consumers of this category has been projected for FY 2018-19. Thereafter, an increase of 10% over previous year in the number of consumers of this category has been considered for the control period.

ii. **Connected Load:** The overall connected load for this category has been projected considering no escalation on the average connected load per consumer for FY 2017-18 and multiplying it by the projected number of consumers fur FY 2018-19. Similarly, no escalation has been considered for projection of connected load for the control period.

iii. **Units sold:** No increase in the average consumption per month per consumer for DS-I category over the consumption for FY 2017-18 has been assumed for FY 2018-19**.** The Petitioner has considered an average monthly consumption of 86 kWh per consumer per month and multiplying with total number of consumers projected in this category for FY 2018-19 to arrive at an estimated sales figure. For the control period, 10% over FY 2018-19 has been assumed for FY 2019-20 thereafter same average monthly consumption per consumer has been considered for rest of years of the control period.

c. **Domestic Service II**: The projections in DS II category are done considering the following assumptions:-

i. **Consumers:** The CAGR for FY 2017-18 over FY 2016-17 was found to be 7%. Then the provisional figures for September, 2018 was considered which showed a decrease of around 6% over the number of consumers as on FY 2017-18. Keeping the abnormality in view another 8% increase in number of consumers of this category has been projected for FY 2018-19 considering the fact that majority of the new consumers has already been added. Thereafter, an increase of 7% over previous year in the number of consumers of this category has been considered for the control period.

ii. **Connected Load:** The overall connected load for this category has been projected considering no escalation on the average connected load per consumer for FY 2017-18 and multiplying it by the projected number of consumers fur FY 2018-19. Similarly, no escalation has been considered for projection of connected load per consumer for the control period.

iii. **Units sold:** No increase in the average consumption per month per consumerfor DS-II category over the consumption for FY 2016-17 has been assumed for FY

2018-19**.** The Petitioner has considered an average monthly consumption of 85 kWh per consumer per month and multiplying with total number of consumers projected in this category for FY 2018-19 to arrive at an estimated sales figure. For rest of the years of control period also, same average monthly consumption per consumer has been considered.

d. **Non-Domestic Service I:** The projections in NDS-I category are done considering the following assumptions:-

   i. **Consumers:** The CAGR for FY 2017-18 over FY 2016-17 was found to be 18%. Then the provisional figures for September, 2018 was considered which showed an increase of 16% over the number of consumers as on FY 2017-18. Keeping the same in view another 6% increase in number of consumers of this category has been projected for FY 2018-19 considering the fact that majority of the new consumers has already been added. Thereafter, an increase of 18% over previous year in the number of consumers of this category has been considered for the control period.

   ii. **Connected Load:** The overall connected load for this category has been projected considering no escalation on the average connected load per consumer for September, 2018 and multiplying it by the projected number of consumers fur FY 2018-19. Similarly, no escalation has been considered for projection of connected load per consumer for the control period.

   iii. **Units sold:** No increase in the average consumption per month per consumerfor NDS-I category over the consumption for FY 2017-18 has been assumed**.** The Petitioner has considered an average monthly consumption of 99 kWh per consumer per month and multiplying with total number of consumers projected in this category for FY 2018-19 to arrive at an estimated sales figure. For the control period, also same average monthly consumption per consumer has been considered.

e. **Non-Domestic Service II:** The projections in NDS-II category are done considering the following assumptions:-

   i. **Consumers:** The CAGR for FY 2017-18 over FY 2016-17 was found to be 3%. Then the provisional figures for September, 2018 was considered which showed an increase of 11% over the number of consumers as on FY 2017-18. Keeping the same in view another 4% increase in number of consumers of this category has been projected for FY 2018-19 considering the fact that majority of the new consumers has already been added. Thereafter, an increase of 3% over previous year in the number of consumers of this category has been considered for the control period.

   ii. **Connected Load:** The overall connected load for this category has been projected

considering 2% escalation on the average connected load per consumer for maximum of FY 2017-18 and September, 2018 and multiplying it by the projected number of consumers fur FY 2018-19. Same average connected load per consumer as considered for FY 2018-19 has been considered for projection of connected load for the control period.

iii. **Units sold:** An increase of 5% in the average consumption per month per consumerfor NDS-II category over the consumption for FY 2017-18 has been assumed**.** The Petitioner has considered an average monthly consumption of 228 kWh per consumer per month and multiplying with total number of consumers projected in this category for FY 2018-19 to arrive at an estimated sales figure. For the control period, also same average monthly consumption per consumer has been considered.

f. **SS-I:** The projections in SS-I category are done considering the following assumptions:-

i. **Consumers:**The CAGR for FY 2017-18 over FY 2016-17 was found to be 115%. Then the provisional figures for September, 2018 was considered which showed an increase of 5% over the number of consumers as on FY 2017-18. Keeping the same in view as well as considering the conversion of unmetered consumers into metered another 42% increase in number of consumers of this category has been projected for FY 2018-19 considering the fact that majority of the new consumers has already been added. Thereafter, an increase of 81%, 63%, 56% over previous year in the number of consumers of this category has been considered for the control period.

ii. **Connected Load:** The Petitioner has made efforts towards Demand Side Management (DSM) by replacement of 150W lamps with 40-50W sodium vapour lamps which has reduced the average connected load per consumer drastically. Therefore, Petitioner has considered average connected load per consumer for FY 2018-19 same as for FY 2017-18. Same average connected load per consumer as considered for FY 2018-19 has been considered for projection of connected load for the control period.

iii. **Units sold:** No increase in the average consumption per month per consumerfor SS-I category over the consumption for FY 2017-18 has been assumed**.** The Petitioner has considered an average monthly consumption of 2217 kWh per consumer per month and multiplying with total number of consumers projected in this category for FY 2018-19 to arrive at an estimated sales figure. For the control period, also same average monthly consumption per consumer has been considered.

g. **SS-II:** The projections in SS-II category are done considering the following assumptions:

i. **Consumers:** The CAGR for FY 2017-18 over FY 2016-17 was found to be 201%.

Then the provisional figures for September, 2018 was considered which showed an increase of 20% over the number of consumers as on FY 2017-18. Keeping the same in view as well as considering conversion of unmetred consumers into metered 15% decrease in number of consumers of this category has been projected for FY 2018-19. Thereafter, a decrease of 10% over previous year in the number of consumers of this category has been considered for the control period.

ii. **Connected Load:** Theaverage Load in this category is calculated by considering 0% growth rate on average Load per consumer for FY 2017-18 over FY 2016-17 and multiplying by number of consumers projected in this category.

iii. **Units sold:** No increase in the average consumption per month per consumerfor SS-II category over the consumption for FY 2017-18 has been assumed**.** The Petitioner has considered an average monthly consumption of 2946 kWh per consumer per month and multiplying with total number of consumers projected in this category for FY 2018-19 to arrive at an estimated sales figure. For the control period, also same average monthly consumption per consumer has been considered. In the Street Lights category the process is going on for replacement of 150W lamps with 40-50W Sodium vapour lamps which shall possibly reduce the units consumed in Street Lights category.

h. **IAS-I:** The projections in IAS-I category are done considering the following assumptions:-

i. **Consumers:** The CAGR for FY 2017-18 over FY 2016-17 was found to be 14%. Then the provisional figures for September, 2018 was considered which showed an increase of 16% in the number of consumers as on FY 2017-18. Keeping the same in view 124% increase in number of consumers of this category has been projected for FY 2018-19 over number of consumers as on September, 2018. Thereafter, 76,800 consumers over previous year for this category has been considered for the control period in view of growing demand of the agricultural consumers.

ii. **Connected Load:** The overall connected load for this category has been projected considering 2% escalation on the average connected load per consumer for maximum of FY 2017-18 and September, 2018 and multiplying it by the projected number of consumers fur FY 2018-19. An increase of 2% over average connected load per consumer as considered for FY 2018-19 has been considered for projection of connected load for the control period.

iii. **Units sold:** A 40% increase in the average consumption per month per consumerfor IAS-I category over the consumption for FY 2017-18 has been assumed**.** The Petitioner has considered an average monthly consumption of 162 kWh

per consumer per month and multiplying with total number of consumers projected in this category for FY 2018-19 to arrive at an estimated sales figure. For FY 2019-20, also 40% increase in average monthly consumption per consumer has been considered and thereafter an increase of 17% in sales over previous year has been considered during the control period. Agriculture feeder separation is under process, once it is done separate transformers will be issued connecting to pump sets. Promotion of Solar Pump sets will be done to reduce demand.

i. **IAS- II:** The projections in IAS-II category are done considering the following assumptions:-

   i. **Consumers:**The CAGR for FY 2017-18 over FY 2016-17 was found to be 4%. Then the provisional figures for September 2018 was considered which showed very marginal increase over the number of consumers as on FY 2017-18. Keeping the same in view, only 3% increase in number of consumers of this category has been projected for FY 2018-19. Thereafter, an increase of 4% over previous year in the number of consumers of this category has been considered for the control period.

   ii. **Connected Load:** The overall connected load for this category has been projected considering no escalation on the average connected load per consumer for maximum of FY 2017-18 and September, 2018 and multiplying it by the projected number of consumers fur FY 2018-19. Same average connected load per consumer as considered for FY 2018-19 has been considered for projection of connected load for the control period.

   iii. **Units sold:** A 5% increase in the average consumption per month per consumerfor IAS-II category over the consumption for FY 2017-18 has been assumed**.** The Petitioner has considered an average monthly consumption of 2482 kWh per consumer per month and multiplying with total number of consumers projected in this category for FY 2018-19 to arrive at an estimated sales figure. For the control period, also same average monthly consumption per consumer has been considered.

j. **Public waterworks:** The projections in PWW category are done considering the following assumptions:-

   i. **Consumers:** The CAGR for FY 2017-18 over FY 2016-17 was found to have increased by three times. Then the provisional figures for September 2018 was considered which showed an increase of 7% over the number of consumers as on FY 2017-18. Keeping the same in view, another 10% increase in number of consumers of this category has been projected for FY 2018-19. Thereafter, an increase of 20% over previous year in the number of consumers of this category

has been considered for the control period.

ii. **Connected Load:** The overall connected load for this category has been projected considering no escalation on the average connected load per consumer for maximum of FY 2017-18 and September, 2018 and multiplying it by the projected number of consumers fur FY 2018-19. Same average connected load per consumer as considered for FY 2018-19 has been considered for projection of connected load for the control period.

iii. **Units sold:** No increase in the average consumption per month per consumerfor PWW category over the consumption for FY 2017-18 has been assumed**.** The Petitioner has considered an average monthly consumption of 2033 kWh per consumer per month and multiplying with total number of consumers projected in this category for FY 2018-19 to arrive at an estimated sales figure. For the control period, also same average monthly consumption per consumer has been considered.

k. **Har Ghar Nal:** The GoB has decided to provide water connections to the households in rural and urban areas. For this purpose a total of 1,10,000 water distribution facility are proposed to be set up for the State. It requires a 2 or 3 HP pump to be installed for pumping of water to the overhead tank from where the water shall be distributed to the households. There are 152 Panchayats in NBPDCL and 91 Panchayats in NBPDCL. Accordingly, for the purpose of projection the total no. of connections are divided in the ratio of no. of panchayats between the Discoms. This new sub-category shall be proposed in the subsequent Tariff Petition to be filed by the Petitioner. The projections under this category are done considering the following assumptions:-

i. **Consumers:** To start with 12,000 consumers are proposed to be added in FY 2019-20 and which shall be added by 32,403, 24,403 number of consumers for the rest of the control period.

ii. **Connected Load:** The connections released under this category shall be mainly used for the purpose of supplying water though pipeline to households for which a 2 HP, 3 HP and 5 HP pump shall be used for pumping the ground water to an overhead tank. Therefore, the connected load has been assumed to be on the basis 3 HP per connection.

iii. **Units sold:** 6 hours consumption per kW per day has been assumed for calculation of average monthly consumption. Thereafter, it is multiplied with number of consumers for calculation of total consumption for the month.

l. **LTIS-I:** The projections in LTIS-I category are done considering the following assumptions:-

i. **Consumers:** The CAGR for FY 2017-18 over FY 2016-17 was found to be 104%. Then the provisional figures for September 2018 was considered which showed a

marginal increase over the number of consumers as on FY 2017-18. Keeping the same in view, another 30% increase in number of consumers of this category has been projected for FY 2018-19. Thereafter, an increase of 32%, 26%, 23% over previous year in the number of consumers of this category has been considered for the control period.

ii. **Connected Load:** The overall connected load for this category has been projected considering no escalation on the average connected load per consumer for maximum of FY 2017-18 and September, 2018 and multiplying it by the projected number of consumers fur FY 2018-19. Same average connected load per consumer as considered for FY 2018-19 has been considered for projection of connected load for the control period.

iii. **Units sold:** An increase of 5% in the average consumption per month per consumerfor this category over the consumption for FY 2016-17 has been assumed**.** The Petitioner has considered an average monthly consumption of 1097 kWh per consumer per month and multiplying with total number of consumers projected in this category for FY 2018-19 to arrive at an estimated sales figure. For the control period, also same average monthly consumption per consumer has been considered.

m. **LTIS-II:** The projections in LTIS-II category are done considering the following assumptions:-

i. **Consumers:** There has been decrease in number of consumers for FY 2017-18 over FY 2016-17. Then the provisional figures for September 2018 was considered which showed a marginal increase over the number of consumers as on FY 2017-18. Keeping the same in view, another 5% increase in number of consumers over the consumers of as on September, 2018 has been projected for FY 2018-19. Thereafter, an increase of 5% over previous year in the number of consumers of this category has been considered for the control period.

ii. **Connected Load:** The overall connected load for this category has been projected considering no escalation on the average connected load per consumer for maximum of FY 2017-18 and September, 2018 and multiplying it by the projected number of consumers fur FY 2018-19. Same average connected load per consumer as considered for FY 2018-19 has been considered for projection of connected load for the control period.

iii. **Units sold:** No increase in the average consumption per month per consumerfor this category over the consumption for FY 2017-18 has been assumed**.** The Petitioner has considered an average monthly consumption of 2547 kWh per consumer per month and multiplying with total number of consumers projected in this category for FY 2018-19 to arrive at an estimated sales figure. For the control period, also same average monthly consumption per consumer has been considered.

n. **HTS-I:** The projections in HTS-I category are done considering the following assumptions:-

i. **Consumers:** Recently the Discoms have seen an increasing trend in the addition of consumers in the HTS-I category, including both conversions from the LTIS categories and addition of new consumers. The CAGR for FY 2017-18 over FY 2016-17 was found to be 14%. Then the provisional figures for September 2018 was considered which showed an increase of 22% over the number of consumers as on FY 2017-18. Keeping the same in view, another 11% increase in number of consumers of this category has been projected for FY 2018-19. Thereafter, an increase of 11% over previous year in the number of consumers of this category has been considered for the control period.

iv. **Connected Load:** The overall connected load for this category has been projected considering no escalation on the average connected load per consumer for maximum of FY 2017-18 and September, 2018 and multiplying it by the projected number of consumers fur FY 2018-19. Same average connected load per consumer as considered for FY 2018-19 has been considered for projection of connected load for the control period.

ii. **Units sold:** An increase of 5% in the average consumption per month per consumerfor this category over the consumption for FY 2017-18 has been assumed**.** The Petitioner has considered an average monthly consumption per consumer per month and multiplying with total number of consumers projected in this category for FY 2018-19 to arrive at an estimated sales figure. For the control period, also same average monthly consumption per consumer has been considered.

o. **HTS-II:** The projections in HTS-II category are done considering the following assumptions:-

i. **Consumers:** Recently the Discoms have seen an increasing trend in the addition of consumers in the HTS-II category, including both conversions from the LTIS categories and addition of new consumers. The CAGR for FY 2017-18 over FY 2016-17 was found to be 28%. Then the provisional figures for September 2018 was considered which showed an increase of 22% over the number of consumers as on FY 2017-18. Keeping the same in view, another 5% increase in number of consumers of this category has been projected for FY 2018-19. Thereafter, a uniform increase of 10% over previous year in the number of consumers of this category has been considered for the control period.

ii. **Connected Load:** The overall connected load for this category has been projected considering no escalation on the average connected load per consumer for maximum of FY 2017-18 and September, 2018 and multiplying it by the projected number of consumers fur FY 2018-19. Same average connected load per consumer as considered for FY 2018-19 has been considered for projection of connected load for the control

period.

iii. **Units sold:** An increase of 5% increase in the average consumption per month per consumerfor this category over the consumption for FY 2017-18 has been assumed for FY 2018-19**.** The Petitioner has considered same average monthly consumption per consumer per month and multiplying with total number of consumers projected in this category for FY 2018-19 to arrive at an estimated sales figure. For the control period, also same average monthly consumption per consumer has been considered.

p. **HTS-III:** The projections in HTS-III category are done considering the following assumptions:-

i. **Consumers:** The CAGR for FY 2017-18 over FY 2016-17 was found to be 50% in comparison to last 2 year's CAGR of 22% and 3 year's CAGR of 14% which seems to be quite abnormal. Then the provisional figures for September 2018 was considered which showed an increase of 33% over the number of consumers as on FY 2017-18. Keeping the same in view, another 5% increase in number of consumers of this category has been projected for FY 2018-19. Thereafter, a uniform increase of 14% over previous year in the number of consumers of this category has been considered for the control period.

ii. **Connected Load:** The overall connected load for this category has been projected considering no escalation on the average connected load per consumer for maximum of FY 2017-18 and September, 2018 and multiplying it by the projected number of consumers fur FY 2018-19. Same average connected load per consumer as considered for FY 2018-19 has been considered for projection of connected load for the control period.

iii. **Units sold:** A 5% increase in the average consumption per month per consumerfor this category over the consumption for FY 2017-18 has been assumed**.** The Petitioner has considered an average monthly consumption per consumer per month and multiplying with total number of consumers projected in this category for FY 2018-19 to arrive at an estimated sales figure. For the control period, also same average monthly consumption per consumer has been considered.

q. **HTSS:** The projections in HTSS category are done considering the following assumptions:-

i. **Consumers:** The number of consumers for FY 2016-17 and FY 2017-18 has been found to be same. Then the provisional figures for September 2018 was considered which also showed no increase in the number of consumers. Keeping the same in view, no increase in number of consumers of this category has been projected for FY 2018-19 and same number of consumers has been considered for the control period.

ii. **Connected Load:** The overall connected load for this category has been projected considering no escalation on the average connected load per consumer for maximum of FY 2017-18 and September, 2018 and multiplying it by the projected number of consumers fur FY 2018-19. Same average connected load per consumer as considered for FY 2018-19 has been considered for projection of connected load for the control period.

iii. **Units sold: 5**% increase in the average consumption per month per consumerfor this category over the consumption for FY 2017-18 has been assumed**.** The Petitioner has considered an average monthly consumption per consumer per month and multiplying with total number of consumers projected in this category for FY 2018-19 to arrive at an estimated sales figure. For the control period, also same average monthly consumption per consumer has been considered.

r. **Railways:** The projections in RTS category are done considering the following assumptions:-

i. **Consumers:** There has been no growth rate assumed in the railways category for projecting number of consumers. The number of consumers is considered as 9 for the control period, which was 8 in last year.

ii. **Connected Load:**The overall connected load for this category has been projected considering no escalation on the average connected load per consumer for maximum of FY 2017-18 and September, 2018 and multiplying it by the projected number of consumers fur FY 2018-19. Same average connected load per consumer as considered for FY 2018-19 has been considered for projection of connected load for the control period.

iii. **Units sold:** 5% increase in the average consumption per month per consumerfor this category over the consumption for FY 2017-18 has been assumed**.** The Petitioner has considered an average monthly consumption per consumer per month and multiplying with total number of consumers projected in this category for FY 2018-19 to arrive at an estimated sales figure. For the control period, also same average monthly consumption per consumer has been considered.

s. **Distribution Franchisee**: Since the Muzaffarpur DF has been terminated during FY 2018-19, the number of consumers, load and sales for the DF area are merged with that of the Discom. Therefore, same has not been projected separately.

g. For the MYT period FY19-20 to FY21-22, projection of no. of consumers, connected load and sales are shown as category wise, which should be subcategory wise and slab wise.

Reply: The detailed slab wise projection of number of consumers, connected load and sales for the MYT period FY 2019-20 to FY 2021-22 is provided in the table below:

Category	Projection for FY 2019-20			Projection for FY 2020-21			Projection for FY 2021-22		
	Consumers	Connected Load (KW)	Sales (MU)	Consumers	Connected Load (KW)	Sales (MU)	Consumers	Connected Load (KW)	Sales (MU)
Domestic									
Kutir Jyoti									
Unmetered	11696	1270	50	9778	1062	44	0	0	0
Metered (0-50)	4666732	506679	2747	4879179	529744	2879	5084515	552038	3040
Total - KJ	**4678428**	**507948**	**2797**	**4888957**	**530806**	**2923**	**5084515**	**552038**	**3040**
DS-I (Rural)									
Unmetered	703327	781624	890	645630	753379	885	0	0	0
Metered									
First 50 Units	2728647	3032410	2164	3134890	3658071	2488	4164464	5102443	3724
51 - 100 Units	305227	339206	306	336226	392338	338	370372	453793	373
Above 100 Units	170171	189115	1090	187453	218737	1204	206491	253000	1329
Total	**3907373**	**4342355**	**4450**	**4304200**	**5022526**	**4915**	**4741327**	**5809236**	**5427**
DS-II (Urban-Demand Based)									
1-100 U/Month	1036365	1891551	414	1108066	2123539	443	1184727	2383978	473
101 - 200 U/Month	166466	303831	358	177983	341094	383	190297	382927	410
201 -300 U/Month	76355	139362	278	81638	156454	297	87286	175642	318
above 300 U/Month	79091	146269	330	84562	164208	353	90413	184347	377
Total	**1358277**	**2481013**	**1380**	**1452249**	**2785295**	**1476**	**1552723**	**3126895**	**1578**
Total - Domestic	**9944078**	**7331317**	**8628**	**10645406**	**8338627**	**9314**	**11378566**	**9488169**	**10045**
NDS-I (Rural)									
Unmetered		Abolished			Abolished			Abolished	
Metered									
1-100 U/Month	110748	123511	83	131050	150536	99	155072	183475	117
101 - 200 U/Month	11928	15587	42	14115	18998	49	16702	23154	58
above 200 U/Month	15061	19637	38	17821	23934	45	21088	29171	54
Total	**137737**	**158735**	**163**	**162986**	**193468**	**193**	**192863**	**235801**	**229**
NDS-II (Demand Based)									
Contract Demand < 0.5 kW	8827	12384	11	9109	13036	11	9401	13722	12
Contract Demand > 0.5 kW									
First 100 Units	204183	527862	360	210716	555647	371	217458	584894	383
101 - 200 Units	22942	68179	185	23676	71767	190	24434	75545	197
Above 200 Units	28967	85895	171	29894	90416	176	30850	95175	182

Category	Projection for FY 2019-20			Projection for FY 2020-21			Projection for FY 2021-22		
	Consumers	Connected Load (KW)	Sales (MU)	Consumers	Connected Load (KW)	Sales (MU)	Consumers	Connected Load (KW)	Sales (MU)
Total	**264919**	**694320**	**726**	**273395**	**730866**	**749**	**282143**	**769336**	**773**
Total - NDS	**402656**	**853055**	**889**	**436381**	**924334**	**943**	**475005**	**1005137**	**1002**
Street Light Services									
SS-I (Metered)	821	11761	22	1338	19181	36	2084	29872	55
SS-II (Unmetered)	311	5223	11	280	4701	10	252	4230	9
Total - Street Light	**1132**	**16984**	**33**	**1618**	**23881**	**46**	**2336**	**34102**	**64**
IAS-I (Pvt Tubewell)									
Unmetered	6235	19560	28	0	0	0	0	0	0
Metered	97684	306434	254	180720	578252	575	257520	840470	958
Total	**103920**	**325994**	**282**	**180720**	**578252**	**575**	**257520**	**840470**	**958**
IAS-II (State Tubewell)									
Unmetered		Abolished			Abolished			Abolished	
Metered	5878	62766	175	6134	65497	183	6400	68346	191
Total	**5878**	**62766**	**175**	**6134**	**65497**	**183**	**6400**	**68346**	**191**
Total - IAS	**109798**	**388760**	**457**	**186853**	**643748**	**757**	**263920**	**908816**	**1149**
Public Service Connections									
Public Water Works	1367	25390	33	1636	30393	40	1959	36383	48
Har Ghar Nal	12000	26844	58	44403	99330	215	68807	153920	332
Total PWW	**13367**	**52234**	**91**	**46039**	**129723**	**254**	**70765**	**190303**	**380**
LTIS									
LTIS-I (Contract Demand < 19 kW)	40583	343580	534	51135	432911	673	62896	532480	828
LTIS-II (Contract Demand 19-74 kW))	717	47406	22	752	49776	23	790	52265	24
Total - LTIS	**41300**	**390986**	**556**	**51888**	**482687**	**696**	**63686**	**584745**	**852**
HTS-I (11 kV)	1046	223894	407	1162	248635	452	1290	276110	502
HTS-II (33 kV)	45	59834	141	50	65855	155	55	72483	171
HTS-III (132 kV)	5	67582	97	6	77362	111	6	88557	127
HTSS (33 / 11 kV)	5	10737	44	5	10737	44	5	10737	44
Total - HTS & HTSS	**1101**	**362046**	**689**	**1222**	**402589**	**763**	**1356**	**447888**	**844**
RTS (132 kV)	**9**	**88074**	**127**	**9**	**92478**	**127**	**9**	**97102**	**127**
Nepal	**1**		**1503**	**1**		**1578**	**1**		**1657**

Category	Projection for FY 2019-20			Projection for FY 2020-21			Projection for FY 2021-22		
	Consumers	Connected Load (KW)	Sales (MU)	Consumers	Connected Load (KW)	Sales (MU)	Consumers	Connected Load (KW)	Sales (MU)
Grand Total	**10513441**	**9483455**	**12974**	**11369417**	**11038067**	**14478**	**12255645**	**12756261**	**16120**

2. **Distribution Loss:**The distribution loss target for FY19-20, as agreed in the UDAY MoU is 15%, which is taken as loss level for whole 3rd MYT control period which is without any reduction year on year. Reasons for not considering loss reduction ' may be reported.

Reply: In FY 2017-18 and FY 2018-19, a large number of rural consumers have been added to the Discom's consumer database. Due to this addition in the number of consumers at a Low Tension level in rural areas, where the length of feeders are generally longer, the technical losses are expected to go up. Therefore, for the Discom as a whole, it would not be possible to drastically reduce losses.

It is submitted to the Hon'ble Commission that although the Discoms are making the best possible efforts to reduce the losses with the introduction of feeder separation schemes, spot billing etc. and various other IT initiatives, the reduction in losses would still occur in a phased manner.

Given the fact that the Discoms of Bihar have already entered into a MoU that clearly lays out a loss reduction target agreed by the Government of Bihar and the Government of India, this target may be treated as the base for setting the loss reduction trajectory.

Addition of rural domestic consumers and thereby providing uninterrupted power supply and maintaining same level of distribution loss is a huge challenge for the Discoms. Therefore, it is prayed before the Hon'ble Commission to adopt the trajectory agreed under UDAY scheme and approve a Distribution loss of 15% for NBPDCL for FY 2019-20 and retain the same distribution loss for FY 2020-21 and FY 2021-22 as well.

3. **State Transmission Losses:** In the Tariff order dated 21-03-18, the commission has directed both the DISCOMs, jointly to record the meter readings with concerned transmission licensees, input energy at all their interface points every month and compute the transmission loss and submit reports to the commission. The NBPDCL is requested to furnish actual transmission loss calculation for FY17-18 and first half year of FY18-19.

Reply: The actual STU loss for FY 2017-18 is 238.06 MUs (as per audited accounts). The detailed calculation of state transmission loss for FY 2017-18 and first half of FY 2018-19 for NBPDCL is attached as annexure-I.

4. **Central Transmission Losses:** The CTU loss actual for FY2017-18 and ft half of FY18-19 maybe furnished subject to correction based on the 52 weeks average for the particular year.

Reply: The actual CTU loss for FY 2017-18 is 535.64 MUs (as per audited accounts). The detailed calculation of CTU loss for FY 2017-18 and first half of FY 2018-19 for NBPDCL is attached as annexure-I.

5. **Energy Balance:** Under the table, energy balance for 3rd control period, computation of energy required at state transmission periphery by grossing up with distribution losses and state transmission losses is done. Instead energy balance is to be struck by considering CTU losses and purchase from generating stations outside the Bihar state. Details may be furnished.

Reply: The revised energy balance for 3rd MYT Control Period in reference to our letter dated 05.12.2018 is provided below:

Sl No	Particulars	Unit	FY 19-20	FY 20-21	FY 21-22
A	**Energy Requirement**				
1	Energy sales	MU	12,974.36	14,477.89	16,120.48
2	Less: Inter-state sales & Nepal if any	MU	1,502.56	1,577.69	1,656.58
3	Energy sales excluding Inter-state sales, if any	MU	11,471.80	12,900.19	14,463.91
4	Distribution Loss excluding Nepal and DF	%	15%	15%	15%
5	Add: Distribution Loss	MU	2,024.44	2,276.50	2,552.45
6	**Total energy required at Distribution periphery**	MU	13,496.23	15,176.70	17,016.36
7	Add: Inter-state sales, DF & Nepal if any	MU	1,502.56	1,577.69	1,656.58
8	**Total energy required at Distribution periphery including** Inter-state sales	MU	14,998.80	16,754.39	18,672.94
9	State Transmission Loss	%	3.92%	3.92%	3.92%
10	Add: State Transmission Loss	MU	611.94	683.57	761.84
11	**Total energy required at State Transmission periphery**	MU	15,610.74	17,437.96	19,434.78
B	**Energy Available**				
1	From Central Sector	MU	14,077.35	17,709.74	18,015.51
2	From IPP	MU			
4	From Renewable Sources	MU			
5	UI (Net)	MU			
6	Others(please specify)	MU			
3	From State Generating Stations	MU	1,851.54	128.46	1,826.42
7	CTU losses	%	2.26%	2.26%	2.26%
8	CTU Losses	MU	318.15	400.24	407.15
9	Net power available at State periphery (1+2+3+4+5+6-8)	MU	15,610.74	17,437.96	19,434.78
10	**Energy Surplus/(Deficit) at State Periphery**	MU	0.00	0.00	0.00

Details of the power to be purchased from various sources inside and outside the State is attached as **Annexure-II**.

6. **Power Purchase:**Under this chapter NBPDCL has dealt the power procurement from different sources i.e., CGS, SGS, IPPS, JV's and renewable etc on standalone basis. Summary of power availability, whether surplus or shortfall is to be worked out and in case of shortfall from tied up sources, open market is to be proposed. Details of power purchase from open market and other sources are shown only for the FY 18-19 only (i.e. Current year).

   Regulation 9.2 of BERC (Power Purchase and Procurement process of Licensee) Regulation, 2018, specify, while effecting power purchase, the distribution licensees shall adhere to the principle of least cost plan (least financial cost to the distribution licensees), the ultimate objective

being to make available secure and reliable power supply at economically viable tariff to all consumers while satisfying power supply planning and security standards.

NBPDCL has not provided the energy rate (Rs./kWh), for the generating stations. In the power purchase projection statement, the information as to whether the station is must run or not also to be provided. In the absence of the above energy availability and dispatch from a particular station cannot be established. It is requested to furnish the information in the format given below:

PLF of Generating stations supplying power to both D'scoms of Bihar shall be same, whereas it has been observed that PLF is different for SBPDCL and NBPDCL (Farakka — Ill (500 MW), Kahalgaon — I (840 MW), KBUNL 1, KBUNL 2, Rangit —HEP, Teesta — HEP, Tala etc.) . This may be clarified.

Reply: Please refer to response for the observation no. 5 and Annexure I & II.

7. **Copy of the annual accounts for FY 2017-18 approved by the Board:** Copy of the annual accounts for FY 2017-18 approved by the Board may be provided. Further 1st half year of FY 2018-19 trial balance showing revenue and expenses (account/nature of expenditure head-wise), category-wise sales (slab-wise), no. of consumers and purchase of power (source-wise) may be furnished.

Reply: The copy of the annual accounts for FY 2017-18 approved by the Board of Directors is attached as **Annexure-III**. Further, the trial balance showing revenue and expenses (account / nature of expenditure head wise), category wise sales (slab-wise), no. of consumers and purchase of power (source-wise) is under compilation and shall be made available to Hon'ble Commission after finalization.

8. **Study Report on Load Flow Analysis, Load Growth, Loss Reduction:** Regulation 4.1 of the BERC (Procedure for tiling Capital Investment and Capitalisation Plan) Regulations 2018 specify the procedure and factors to be considered for assessing the infrastructure requirement for capital investment plan to meet the demand and energy requirement to ensure unrestricted 24 hours supply to all categories of consumers. According to the regulation, the distribution licensee shall consider prescribed performance parameters such as voltage regulation, reactive energy flow, power factor, load growth, demand and energy requirement and improvement in operational efficiency and reduction of T&D loss initiatives, etc. for projecting the infrastructure requirement and capital investment plan.

   The Business plans submitted by the NBPDCL do not include the report/study conducted on year on year load flow, load growth, loss reduction, etc. for the control period. The distribution loss levels are retained at 15% constantly year on year during the control period of FY 2019-20 to FY 2021-22 without showing any improvement. The load flow/growth study report may be furnished.

Reply: Based on scheme announced by different agencies of Govt. of India as well as Bihar Govt. scheme specific studies has been carried out and the same was considered in the form of Detailed Project Report (DPR) for that scheme.

Implementation of RE-DDUGJY 11th plan Phase-II, RE-DDUGJY 12th plan, RAPDRP, BRGF, NABARD, ADB, State plan etc. schemes is being carried out. Demand and energy

requirement for these schemes was studies on the parameter/guidelines provided by the Nodal Agency of the respective schemes.

Based on implementation of different schemes, adequate infrastructure is under construction for improvement in voltage and operational efficiency, reduction in T&D losses so as to ensure 24 Hrs quality supply to all categories of consumers.

For reactive energy flow and regulation of power factor, capacitor banks of adequate capacity are being installed in the PSS.

9. **Scheme-wise and work-wise details of Closing CWIP and Assessment of Discom Infrastructure Requirements:** Current Status of project like scheme-wise and work-wise details of Closing CWIP as on 31.03.2018 (as reflected in the audited accounts for FY 2017-18) etc may be furnished as per **Annexure-A**. Further detailed Assessment of Distribution Licensees Infrastructure Requirements, Supporting documents clearly stating purpose of investment, capital structure, DPR, capitalization schedule, financing plan and cost benefit analysis etc as per BERC (Procedure for filing Capital investment and Capitalisation plan) Regulations, 2018 is missing in this business plan petition andInformation with respect to new work is required as per **Annexure-B**.

Reply: The Petitioner has already submitted scheme wise, source wise capitalization plan for the next MYT control period. The Discom is compiling the existing work-wise, scheme wise details such as no. of substations, length of lines, exact geographical location etc. from its field offices and shall submit the same before the Hon'ble Commission along with projection for future years subsequently.

10. **Reconciliation of CAPEX Amount:** The amount shown in annexure seems to be incorrect for example.

    a. The opening CAPEX and Source of funding for FY 2017-18 (Annexure XI (B) SI.No.10) is shown at Rs.7686.16 crore and Rs.8093.69 crore respectively whereas the closing CAPEX and Source of funding of FY 2016-17 (Annexure XI (B) SI. No.14) is shown at Rs.6633.11 crore and Rs.7909.39 crore respectively. The opening capex for succeeding year shall be in accordance with the closing capex of previous year. Reasons for adopting different values (scheme-wise/work-wise) may be reported.

    b. There is variation in amount of Total amount of CAPEX incurred and Total Sourceof funding. Reasons for adopting different values of CAPEX incurred and value of source of funding may be reported.

Reply: a) The capital expenditure under CM Seven Resolution Scheme was not submitted in the capitalization plan for FY 2016-17, which has been considered in the plan for FY 2017-18 under instant Petition. The Hon'ble Commission is requested to consider the same while approving the business plan. Further, the closing balance for FY 2016-17 may be considered as the opening balance for FY 2017-18 and capital expenditure under CM Seven Resolution Scheme may be considered as an addition during the year.

b) The Source of funding in the capex plan submitted to the Commission refers to the amount of fund received under a particular scheme for the year. However, capital expenditure refers to the expense for

the year for a particular scheme. The difference between the source of funding and the capital expenditure incurred refers to the amount received by the Discom and not yet spent. This results in difference between the source of funding and capital expenditure incurred.

11. **IND-AS Adjustment:** Details of Ind AS Adjustment of Rs.572.89 crore made in source of funding and capex during FY 2017-18 may be furnished.

Reply: There is no difference in the source of funding, however the adjustment amounting to Rs. 572.89 Crore pertains to advance to the supplier / contractor under various schemes, which is deducted from the CWIP and considered as advance for capital asset under the head "Other non-current Assets". The details of adjustment.

Sl. No.	Adjustment	Amount (Rs. Crore)
1	Advance to cont. under RGGVY (BSEB)out of REC loan	68.43
2	Advances to contractor under ACA State plan	12.75
3	Advance to NHPC under RGGVY out of REC loan	102.44
4	Advances for supplier / contractor (capital)	245.77
5	Advance to other supplier for metering under APDRP	1.66
6	Advance to PGCIL Under APDRP out of Govt. loan	39.55
7	Advance to PGCIL Under APDRP out of PFC loan	45.6
8	Advance to PGCIL under RGGVY out of REC loan	56.69
	Total	**572.89**

12. **Work-wise Details of the Proposed CAPEX:** It is observed from the scheme-wise details of capital expenditure, NBPDCL has projected at total capital investment of Rs.8144.52 crore and capitalisation of Rs.13672.29 crore during the period from FY 2018-19 to FY 2021-22. However, NBPDCL has not furnished the work-wise details such as no. of substations, length of lines, etc. in the Business Plan. The work-wise details under each scheme along with year-wise capex and capitalisation may be furnished. It is also requested to furnish copies of cost estimates of each upcoming project/work/scheme for vitiation and corroboration of the cost of the scheme.

Reply: The Petitioner has already submitted scheme wise, source wise capitalization plan for the next MYT control period. The Discom is compiling the existing work-wise, scheme wise details such as no. of substations, length of lines, exact geographical location etc. from its field offices and shall submit the same before the Hon'ble Commission along with projection for future years subsequently.

13. **CAPEX under RGGVY Scheme:** During FY 2017-18, funding of Rs.2396.21 crore, capex of Rs.2396.21 crore and capitalisation of Rs.2380.70 crore is depicted under RGGVY scheme, details may be furnished.

In FY 2019-20, capex under RGGVY scheme the following amounts were shown:

Year	Funding received during the year	Capital expenditure during the year
FY 2019-20	325.96	47.00
FY 2020-21	181.78	179.80

FY 2021-22	0.00	0.00
Total	507.74	226.80

It is not clear as to how the balance amount of Rs.280.94 crore (507.74-226.80) is planned to be utilised by the Discom. Necessary information alongwith the work-wise details of capex and source of funding may be furnished. It is pertinent to mention that the RGGVY scheme is subsumed in DDUGJY, hence, the reasons for projecting capex under RGGVY scheme may be furnished.

Reply: The details of the capital expenditure of Rs.2396.21 Crore and Capitalisation of Rs.2380.70 crore depicted under RGGVY scheme is provided below:

Particulars	Capital Expenditure During the year (Rs. Crore)	Capitalisation during the year (Rs. Crore)
PMA -RGGVY	28.83	
RGGVY-Buildings		0.05
RGGVY-Furniture		
RGGVY-Land & Land Rights	1.32	0.08
RGGVY-Lines, Cable Networks, Etc	2612.70	2113.13
RGGVY-Office Equipment		
RGGVY-Other Civil Works	26.75	26.75
RGGVY-Plant & Machinery	249.74	240.69
Grand Total	**2919.34**	**2380.70**

The balance Rs. 280.94 Crore is planned to be capitalized in the subsequent years. As per MoP notification the nomenclature of RGGVY has been changed to DDUGJY. The progress and fund to be received under the erstwhile RGGVY scheme has been shown separately for the sake of clarity whereas the progress under the head DDUGJY is shown under a separate head which came into existence in 2017 for accounting purpose. REC is also disbursing the funds under the two separate schemes i.e. RGGVY-12th Plan and DDUGJY.

14. **Capex Under Own Sources:** Under Own Sources of funding scheme, the capex and capitalisation for FY2016-17, FY 2017-18 and FY 2018-19 the following amounts were shown:

Year	Source of funding				Capital expenditure			Capitalisation
	OB	Addition	Adjustment	CB	Addition	Adjustment	Net capex	
2016-17		295.26	--	295.26	295.26	-	295.26	295.26
2017-18	295.26	10.17	(245.77)	59.66	10.17	(245.77)	(235.60)	8.74
2018-19	59.66	524.00	--	583.66	--	-	-	186.08
2019-20	583.66		--	583.66	--	-	--	74.43
2020-21	583.66	--	-	5'83.66	--	-	-	29.77
2021-22	583.66	36.00	--	619.66	22.00	--	22.00	25.11

Total		865.43	(245.77)	619.66	327.43	(245.77)	81.66	619.39

It can be observed from the table above, during FY 2016-17, capex of Rs.295.26 crore was incurred through own source of funding and schemes/works capitalised. The Commission had approved the capex, capitalisation and funding of schemes in truing up for FY 2016-17 in para 4.14 of the Tariff order dated 21.03.2018. Accordingly, all the dependent ARR parameters and cost thereon were allowed to the Discom (NBPDCL).

NBPDCL now has proposed (in business plan) withdrawal of funding of Rs.245.77 crore along with capex under scheme however retained the capitalisation. No details/information is furnished in the business plan. Further, during FY 2018-19 source of funding under the scheme was shown but no capex is projected, but has projected capitalisation of Rs.186.08 crore. Further, the closing capex for FY 2016-17 is shown at Rs.295.26 crore, whereas the opening capex for FY 2017-18 is shown at Rs.849.73 crore in the annexures.

Similarly, in case of various other schemes also, the scheme-wise opening capex adopted for FY 2017-18 is not in agreement with the scheme-wise closing capex of FY 2016-17.

The details furnished in the annexures are full of inconsistencies which may be reconciled and funding, capex and capitalisation details shall be furnished.

Reply: Ind-AS adjustment shown in the source of funding is due to change in treatment of advance to supplier / contractor from CWIP to advance for capital asset under the head "Other non-current Assets". The details of adjustment has been provided in the previous section. Therefore, there is no actual deduction made in the fund received under various schemes. Rather, it is the change of methodology of booking of the advance amount under a different head which shall again be considered under CWIP in future adjustments.

Revised capitalization plan for FY 2017-18 has been attached as annexure XI (B) to this submission.

15. The scheme State plan-ACA the capex to end of FY 2017-18 is shown as (-) Rs.11.46 crore, reasons not reported.

Reply: Please refer to the revised capitalization plan for FY 2017-18 as provided as response to the above observation of the Hon'ble Commission.

16. Under BRGF schemes, no capex and funding is shown from FY 2019-20, however capitalisation is shown year on year for FY 2019-20 to FY 2021-22 and beyond. Similar is the case in respect of RAPDRP scheme.

Reply: The total fund under BRGF and RAPDRP scheme is expected to be received in FY 2018-19 which shall be capitalized in subsequent years. The Petitioner shall submit the rolling capex plan with its updated figures in the next tariff Petition.

17. Regulation 5 of the BERC (Procedure for filing capital investment and capitalisation plan) Regulations 2018 specify "on the basis of infrastructure requirement assessed the distribution licensee shall prepare a rolling plan of ten years for capital investment plan and capitalisation…".

NBPDCL has not submitted the ten year capex and capitalisation rolling plan with the business plan, which may be submitted.

Reply: The capitalization plan for the 3rd MYT control period has been submitted as a part of the Business Plan. It can be observed from the detailed capitalization plan for the control period that most of the schemes shall expire by end of FY 2021-22. Further, the future schemes are also not clear and therefore the Discom is unable to project for rest seven years and requests the Hon'ble Commission to accept the same.

18. Regulation 5.2 of BERC (Multi Year Distribution Tariff) Regulations 2018 specify "business plan shall comprise but not limited to ". The business plan shall contain all the cost parameters of the ARR for the control period. Reasons for not projecting other ARR components in the business plan may be furnished.

Reply: The Regulation 5.2 does not explicitly specify that the business plan shall contain all the cost parameters of the ARR for the control period. However, the Petitioner has already filed the Tariff Petition for MYT control period on 30.11.2018 with all required details which may be considered by the Hon'ble Commission for all the cost parameters of the ARR.

19. Regulation 22 of BERC (Multi Year Distribution Tariff) Regulations 2018 specify norms shall be fixed for O&M expenses. Reasons for not proposing norms may be communicated.

Reply: The actual O&M expense incurred by the Petitioner is reflected in the audited accounts and is also certified by the Auditor. The consumer base of both the Discoms are under expansion and is expected to get saturated in subsequent years. The consumers are mainly expected to be added to the domestic category and distribution network is also expected to expand to match the growing demand. Therefore, setting norms based on the historical data where the system was not stabilized shall not be a reasonable proposition. In view of the same the Hon'ble Commission is requested to allow the O&M expense as per actual in line with the audited accounts for the 3rd control period.

Annexure-I

Table 87: Detailed power purchase costs for FY 2019-20 (in INR Crore)

Name of The Source	Share allocated (MW)	Units purchased (MU)	PLF (%)	Fixed Cost (Rs/kWh)	Fixed charge (Rs Crs)	Energy Cost (Rs/kWh)	Energy cost (Rs Crs)	Misc Cost (Rs. Cr.)	Total Cost (Rs Crs)	Average Cost
Central Sector Stations	2,036.45	11,163.70	63%	1.339	1,494.44	2.614	2,918.63	-	4,413.07	3.95
Talcher – I (2 x 500 MW)	189.73	1,312.60	79%	1.04	136.64	1.86	244.04		380.68	2.90
Farakka – I & II (1600 MW)	231.09	1,481.48	73%	0.96	142.94	2.49	369.58		512.53	3.46
Farakka – III (500 MW)	60.99	346.98	65%	1.67	58.10	2.50	86.61		144.70	4.17
Kahalgaon – I (840 MW)	161.74	1,138.27	80%	1.32	150.34	2.48	281.74		432.09	3.80
Kahalgaon – II (1500 MW)	34.36	243.44	81%	1.10	26.69	2.37	57.72		84.40	3.47
Barh-II	461.76	3,181.36	78%	2.00	637.23	2.47	787.26		1,424.48	4.48
Korba	11.50	82.67	82%	1.35	11.20	1.34	11.08		22.27	2.69
Rangit – HEP	9.66	83.96	99%	2.01	16.85	2.09	17.55		34.40	4.10
Teesta - HEP	49.88	260.62	59%	1.03	27.92	1.25	32.53		60.44	2.32
Chukha	36.80	249.54	77%	-	-	2.57	64.19		64.19	2.57
Tala	119.65	261.90	25%	-	-	2.25	58.83		58.83	2.25
Barh Stage-I (3 X 660 MW)	-	-	0%	-	-	-	-		-	-
KBUNL 1	50.60	263.17	59%	1.44	37.79	3.74	98.48		136.27	5.18
KBUNL 2	121.44	766.09	72%	2.72	208.52	2.94	225.05		433.57	5.66
Barauni Stage I	101.20	557.41	85%		-	4.10	228.54		228.54	4.10
Barauni Stage II	115.00	193.72	85%		-	3.97	76.91		76.91	3.97
PFC_ Medium Term	92.00	112.94	14%	-	-	4.24	47.89		47.89	4.24
Talcher-II (2x500)	-	-	0%					-	-	-
Arun –III	-	-						-	-	-

Name of The Source	Share allocated (MW)	Units purchased (MU)	PLF (%)	Fixed Cost (Rs/kWh)	Fixed charge (Rs Crs)	Energy Cost (Rs/kWh)	Energy cost (Rs Crs)	Misc Cost (Rs. Cr.)	Total Cost (Rs Crs)	Average Cost
Mangdechhu, HEP,	115.00	369.72	40%	-	-	4.00	147.89	-	147.89	4.00
Punatsangchhu &	-							-	-	-
North Karanpura, Jharkhand (3 X 660MW)	-							-	-	-
Darlipalli STPS (4 X 800 MW)	74.06	257.83	85%	1.56	40.22	3.21	82.76	-	122.98	4.77
TAWANG-I	-							-	-	-
TAWANAG-II	-							-	-	-
TEESTA-IV	-							-	-	-
State Generating Stations	4.60	3.35	8%	-	-	2.59	0.87	-	0.87	2.59
Small Hydro (BSHPCL)	4.60	3.35	8%	-	-	2.59	0.87	-	0.87	2.59
IPP	246.84	1,330.14	8%	2.458	326.93	1.26	167.19	72.59	566.70	4.26
GMR Kamalanga Energy	108.84	790.57	83%	2.03	160.27	1.33	105.46	72.39	338.12	4.28
JITPL	138.00	539.56	45%	3.09	166.66	1.14	61.73	0.20	228.58	4.24
JV projects	262.70	1,583.51	8%	2.01	318.13	1.70	269.70	-	587.83	3.71
Nabinagar Railway (4 X 250 Mw)	46.00	103.12	26%	2.71	27.97	0.46	4.71		32.68	3.17
Nabinagar Stage-I (3 X 660	216.70	1,480.40	85%	1.96	290.16	1.79	264.99	-	555.15	3.75
Nabinagar JV (3 X 660 MW) Stage-II	-	-	0%	-	-	-	-	-	-	-
Renewable	289.34	596.17	70%	-	-	3.54	210.97	0.14	211.11	3.54
SECI Solar	4.60	7.75	19%	-	-	5.50	4.26	0.14	4.41	5.68
SECI-Wind-300	92.00	190.52	24%	-		2.52	48.01	-	48.01	2.52
PTC-Wind	92.00	190.52	24%	-		2.52	48.01	-	48.01	2.52
SECI-Solar -500	-							-		-

Name of The Source	Share allocated (MW)	Units purchased (MU)	PLF (%)	Fixed Cost (Rs/kWh)	Fixed charge (Rs Crs)	Energy Cost (Rs/kWh)	Energy cost (Rs Crs)	Misc Cost (Rs. Cr.)	Total Cost (Rs Crs)	Average Cost
NTPC-Nokh - 500	-							-		-
NTPC-Solar -500	-	-								-
ACME Magadh	4.60	5.02	12%	-	-	8.73	1.13	-	1.13	2.25
ACME Nalanda	6.90	6.51	11%	-	-	8.73	5.68	-	5.68	8.73
Sunmark	4.60	7.34	18%	-	-	5.67	4.16	-	4.16	5.67
Avantika	2.30	2.62	13%	-	-	7.69	2.01	-	2.01	7.69
AZURE	4.60	5.93	15%	-	-	8.39	4.98	-	4.98	8.39
Udipta Energy & Equipment Pvt ltd	2.30	2.17	11%	-	-	7.98	1.73	-	1.73	7.98
Glatt	1.38	2.33	19%	-	-	6.11	1.42	-	1.42	6.11
Welspun 2	6.90	10.13	17%	-	-	8.64	8.75	-	8.75	8.64
Welspun 1	4.60	6.75	17%	-	-	8.70	5.87	-	5.87	8.70
Welspun 3	6.90	10.29	17%	-	-	8.65	8.90	-	8.90	8.65
Response Renewable Energy	4.60	6.91	17%	-	-	5.67	3.92	-	3.92	5.67
ALFA INFRAPOP	6.90	11.62	19%	-	-	4.76	5.53	-	5.53	4.76
TIRUPATI SUGAR	4.60	10.90	27%	-	-	3.61	3.94	-	3.94	3.61
New Swadeshi Sugar Mill,Narkatiaganj	3.22	8.63	30%	-	-	3.71	3.20	-	3.20	3.71
Harinagar Sugar Mills,Harinagar	5.06	24.99	56%	-	-	4.44	11.09	-	11.09	4.44
Bharat SugarMills,SidhiwaliaGopalganj	5.06	22.78	51%	-	-	4.91	11.18	-	11.18	4.91
Lauriya Sugar Mill	9.20	22.70	28%	-	-	3.67	8.33	-	8.33	3.67
Sugauli Sugar Mill	9.20	21.48	27%	-	-	5.34	11.47	-	11.47	5.34
Hasanpur Sugar Mills,Samastipur	4.60	11.94	30%	-	-	3.79	4.53	-	4.53	3.79
Riga Sugar Company Ltd,Sitamarhi	1.38	3.27	27%	-	-	3.62	1.18	-	1.18	3.62
Siddhashram Rice Mill Cluster Pvt Ltd	0.46	0.82	20%	-	-	5.60	0.46	-	0.46	5.60

Name of The Source	Share allocated (MW)	Units purchased (MU)	PLF (%)	Fixed Cost (Rs/kWh)	Fixed charge (Rs Crs)	Energy Cost (Rs/kWh)	Energy cost (Rs Crs)	Misc Cost (Rs. Cr.)	Total Cost (Rs Crs)	Average Cost
BDBPL	1.38	2.26	19%	-	-	5.35	1.21	-	1.21	5.35
Open Market Purchase		1,252.02		-	-	-		-	615.70	4.92
IEX/PXIL	-	1,252.02	0%		-	4.29	537.15		537.15	4.29
DB Power	-		0%	-		-			-	-
JAYPEE NIGRIE	-									-
GMR ETL	-									-
TATA ETL	-									-
Manikaran Power	-									-
NEA	-									-
NVVNL	-									-
PVVNL	-									-
KSEB Short Term	-									-
Tata Power Short Term	-									-
PTC(ST)	-									-
OSTRO										-
Solar REC to meet RPO	-					**1.00**			46.00	-
Non-solar REC to meet RPO	-					**1.25**			32.55	-
Sub Total Power Purchase	**2,839.93**	**15,928.89**		**1.34**	**2,139.49**	**2.52**	4,019.37	**72.73**	**6,395.28**	4.01

Table 87: Detailed power purchase costs for FY 2020-21 (in INR Crore)

Name of The Source	Share allocated (MW)	Units purchased (MU)	PLF (%)	Fixed Cost (Rs/kWh)	Fixed charge (Rs Crs)	Energy Cost (Rs/kWh)	Energy cost (Rs Crs)	Misc. Cost (Rs. Cr.)	Total Cost (Rs Crs)	Average Cost
Central Sector Stations	2,151.45	14,369.61	77%	1.377	1,978.04	2.76	3,964.80	-	5,942.84	4.14
Talcher – I (2 x 500 MW)	189.73	1,491.10	89%	1.09	162.39	1.93	288.16		450.55	3.02
Farakka – I & II (1600 MW)	231.09	1,670.42	82%	1.00	167.37	2.59	432.79		600.16	3.59
Farakka – III (500 MW)	60.99	422.61	79%	1.74	73.57	2.59	109.54		183.12	4.33
Kahalgaon – I (840 MW)	161.74	1,171.68	82%	1.37	160.59	2.58	302.12		462.71	3.95
Kahalgaon – II (1500 MW)	34.36	275.80	91%	1.14	31.56	2.51	69.17		100.73	3.65
Barh-II	461.76	3,851.74	95%	2.09	803.15	2.59	999.50		1,802.64	4.68
Korba	11.50		0%							
Rangit – HEP	9.66	95.65	113%	2.09	20.01	2.16	20.67		40.68	4.25
Teesta - HEP	49.88	321.40	73%	1.12	35.87	1.25	40.16		76.03	2.37
Chukha	36.80	272.10	84%	-	-	2.47	67.14		67.14	2.47
Tala	119.65	374.09	36%	-	-	2.25	84.04		84.04	2.25
Barh Stage-I (3 X 660 MW)	-		0%						-	-
KBUNL 1	50.60	317.02	71%	1.49	47.38	3.89	123.48		170.86	5.39
KBUNL 2	121.44	1,161.57	109%	2.83	329.08	3.06	355.09		684.17	5.89
Barauni Stage I	101.20	625.07	85%	-	-	4.10	256.00		256.00	4.10
Barauni Stage II	230.00	1,548.36	85%	-	-	3.97	614.70		614.70	3.97
PFC_ Medium Term	92.00	-	0%	-	-	4.24	-		-	-
Talcher-II (2x500)	-									-
Arun –III	-									-

Name of The Source	Share allocated (MW)	Units purchased (MU)	PLF (%)	Fixed Cost (Rs/kWh)	Fixed charge (Rs Crs)	Energy Cost (Rs/kWh)	Energy cost (Rs Crs)	Misc. Cost (Rs. Cr.)	Total Cost (Rs Crs)	Average Cost
Mangdechhu, HEP,	115.00	468.31	40%	2.09	97.97	2.16	101.20		199.17	4.25
Punatsangchhu &	-	-							-	-
North Karanpura, Jharkhand (3 X 660MW)	-		85%		-		-	-	-	-
Darlipalli STPS (4 X 800 MW)	74.06	302.67	85%	1.62	49.11	3.34	101.04	-	150.15	4.96
TAWANG-I	-	-						-	-	-
TAWANAG-II	-	-						-	-	-
TEESTA-IV	-	-						-	-	-
State Generating Stations	4.60	3.35	8%	-	-	2.69	0.90	-	0.90	2.69
Small Hydro (BSHPCL)	4.60	3.35	8%	-	-	2.69	0.90	-	0.90	2.69
IPP	246.84	1,718.62	8%	2.616	449.62	1.15	197.62	75.49	722.73	4.21
GMR Kamalanga Energy	108.84	928.06	97%	2.11	195.66	1.12	103.56	75.28	374.51	4.04
JITPL	138.00	790.55	65%	3.21	253.95	1.19	94.06	0.20	348.22	4.40
JV projects	262.70	1,621.51	8%	2.03	329.96	1.67	270.74	-	600.71	3.70
Nabinagar Railway (4 X 250 Mw)	46.00	141.11	35%	2.82	39.80	0.41	5.75	-	45.56	3.23
Nabinagar Stage-I (3 X 660	216.7	1480.398	85%	1.96	290.16	1.79	264.99	-	555.15	3.75
Nabinagar JV (3 X 660 MW) Stage-II	-	-	0%	-	-	-	-	-	-	-
Renewable	289.34	650.01	71%	-	-	3.80	246.87	0.15	247.02	3.80
SECI Solar	4.60	9.10	19%	-	-	5.50	5.01	0.15	5.15	5.66
SECI-Wind-300	92.00	190.52	24%			2.520	48.01	-	48.01	2.52
PTC-Wind	92.00	190.52	24%			2.520	48.01	-	48.01	2.52

Name of The Source	Share allocated (MW)	Units purchased (MU)	PLF (%)	Fixed Cost (Rs/kWh)	Fixed charge (Rs Crs)	Energy Cost (Rs/kWh)	Energy cost (Rs Crs)	Misc. Cost (Rs. Cr.)	Total Cost (Rs Crs)	Average Cost
SECI-Solar -500	-		0%			2.750	-	-	-	-
NTPC-Nokh - 500	-		0%			2.800	-	-	-	-
NTPC-Solar -500	-		0%							-
ACME Magadh	4.60	8.68	12%	-	-	8.73	7.58	-	7.58	8.73
ACME Nalanda	6.90	12.68	11%	-	-	8.73	11.07	-	11.07	8.73
Sunmark	4.60	8.62	18%	-	-	5.67	4.89	-	4.89	5.67
Avantika	2.30	3.08	13%	-	-	7.69	2.37	-	2.37	7.69
AZURE	4.60	7.00	15%	-	-	8.39	5.88	-	5.88	8.39
Udipta Energy & Equipment Pvt ltd	2.30	3.90	11%	-	-	7.98	3.11	-	3.11	7.98
Glatt	1.38	2.67	19%	-	-	6.11	1.63	-	1.63	6.11
Welspun 2	6.90	12.62	17%	-	-	8.64	10.90	-	10.90	8.64
Welspun 1	4.60	8.39	17%	-	-	8.70	7.30	-	7.30	8.70
Welspun 3	6.90	12.81	17%	-	-	8.65	11.08	-	11.08	8.65
Response Renewable Energy	4.60	8.68	17%	-	-	5.67	4.92	-	4.92	5.67
ALFA INFRAPOP	6.90	14.68	19%	-	-	4.76	6.99	-	6.99	4.76
TIRUPATI SUGAR	4.60	12.80	27%	-	-	3.61	4.62	-	4.62	3.61
New Swadeshi Sugar Mill,Narkatiaganj	3.22	10.13	30%	-	-	3.71	3.76	-	3.76	3.71
Harinagar Sugar Mills,Harinagar	5.06	32.63	56%	-	-	4.44	14.49	-	14.49	4.44
Bharat SugarMills,SidhiwaliaGopalganj	5.06	26.74	51%	-	-	4.91	13.13	-	13.13	4.91
Lauriya Sugar Mill	9.20	26.64	28%	-	-	3.67	9.78	-	9.78	3.67
Sugauli Sugar Mill	9.20	25.47	27%	-	-	5.34	13.60	-	13.60	5.34

Name of The Source	Share allocated (MW)	Units purchased (MU)	PLF (%)	Fixed Cost (Rs/kWh)	Fixed charge (Rs Crs)	Energy Cost (Rs/kWh)	Energy cost (Rs Crs)	Misc. Cost (Rs. Cr.)	Total Cost (Rs Crs)	Average Cost
Hasanpur Sugar Mills,Samastipur	4.60	14.02	30%	-	-	3.79	5.31	-	5.31	3.79
Riga Sugar Company Ltd,Sitamarhi	1.38	3.84	27%	-	-	3.62	1.39	-	1.39	3.62
Siddhashram Rice Mill Cluster Pvt Ltd	0.46	1.13	20%	-	-	5.60	0.64	-	0.64	5.60
BDBPL	1.38	2.66	19%	-	-	5.35	1.42	-	1.42	5.35
Open Market Purchase		(524.90)		-	-	4.29	(225.19)	-	(95.91)	1.83
IEX/PXIL		(524.90)	0%	-		4.29	(225.19)		(225.19)	4.29
DB Power			0%	-						-
JAYPEE NIGRIE										-
GMR ETL										-
TATA ETL										-
Manikaran Power										-
NEA										-
NVVNL										-
PVVNL										-
KSEB Short Term										-
Tata Power Short Term										-
PTC(ST)										-
OSTRO										-
Solar REC to meet RPO						1.00			75.86	-
Non-solar REC to meet RPO						1.25			53.43	-
Sub Total Power Purchase	**2,954.93**	**17,838.20**		**1.55**	**2,757.62**	**2.25**	4,019.37	**75.64**	**7,418.29**	4.16

Table 87: Detailed power purchase costs for FY 2021-22 (in INR Crore)

Name of The Source	Share Allocation to NBPDCL	Units purchased (MU)	PLF (%)	Fixed Cost (Rs/kWh)	Fixed charge (Rs Crs)	Energy Cost (Rs/kWh)	Energy cost (Rs Crs)	Misc. Cost (Rs. Cr.)	Total Cost (Rs Crs)	Average Cost
Central Sector Stations	2,151.45	14,675.38	79%	1.407	2,064.75	2.853	4,186.37	-	6,251.11	4.26
Talcher – I (2 x 500 MW)	189.73	1,491.10	89%	1.13	168.88	2.01	299.69	-	468.57	3.14
Farakka – I & II (1600 MW)	231.09	1,670.42	82%	1.04	174.07	2.69	450.10	-	624.17	3.74
Farakka – III (500 MW)	60.99	422.61	79%	1.81	76.52	2.70	113.93	-	190.44	4.51
Kahalgaon – I (840 MW)	161.74	1,171.68	82%	1.43	167.01	2.68	314.20	-	481.22	4.11
Kahalgaon – II (1500 MW)	34.36	275.80	91%	1.19	32.82	2.61	71.94	-	104.76	3.80
Barh-II	461.76	3,851.74	95%	2.17	835.27	2.70	1,039.48	-	1,874.75	4.87
Korba	11.50		0%		-	-	-	-	-	-
Rangit – HEP	9.66	95.65	113%	2.18	20.81	2.25	21.49	-	42.30	4.42
Teesta - HEP	49.88	321.40	73%	1.16	37.30	1.30	41.77	-	79.07	2.46
Chukha	36.80	272.10	84%	-	-	2.47	67.14	-	67.14	2.47
Tala	119.65	374.09	36%	-	-	2.25	84.04	-	84.04	2.25
Barh Stage-I (3 X 660 MW)	-	-	0%		-		-	-	-	-
KBUNL 1	50.60	317.02	71%	1.79	56.85	4.67	148.18	-	205.03	6.47
KBUNL 2	121.44	1,161.57	109%	2.95	342.25	3.18	369.29	-	711.54	6.13
Barauni Stage I	101.20	733.78	85%	-	-	3.63	266.24	-	266.24	3.63
Barauni Stage II	230.00	1745.424	85%	-	-	3.94	688.55	-	688.55	3.94
PFC_ Medium Term	92.00	-	0%							-
Talcher-II (2x500)	-	-			-		-	-	-	-
Arun –III	-	-			-		-	-	-	-

Name of The Source	Share Allocation to NBPDCL	Units purchased (MU)	PLF (%)	Fixed Cost (Rs/kWh)	Fixed charge (Rs Crs)	Energy Cost (Rs/kWh)	Energy cost (Rs Crs)	Misc. Cost (Rs. Cr.)	Total Cost (Rs Crs)	Average Cost
Mangdechhu, HEP,	115.00	468.31	40%	2.18	101.89	2.25	105.24	-	207.13	4.42
Punatsangchhu &	-	-			-		-	-	-	-
North Karanpura, Jharkhand (3 X 660MW)	-						-	-	-	-
Darlipalli STPS (4 X 800 MW)	74.06	302.67	85%	1.69	51.07	3.47	105.08	-	156.15	5.16
TAWANG-I	-	-			-		-	-	-	-
TAWANAG-II	-	-			-		-	-	-	-
TEESTA-IV	-	-			-		-	-	-	-
State Generating Stations	4.60	3.35	8%	-	-	2.80	0.94	-	0.94	2.80
Small Hydro (BSHPCL)	4.60	3.35	8%	-	-	2.80	0.94	-	0.94	2.80
IPP	246.84	1,718.62	8%	5.53	467.60	2.40	205.53	78.51	751.64	4.37
GMR Kamalanga Energy	108.84	928.06	97%	2.19	203.49	1.16	107.71	78.30	389.49	4.20
JITPL	138.00	790.55	65%	3.34	264.11	1.24	97.82	0.21	362.14	4.58
JV projects	262.70	1,621.51	8%	2.44	395.64	2.03	329.50	-	725.14	4.47
Nabinagar Railway (4 X 250 Mw)	46.00	141.11	35%	2.93	41.40	0.42	5.98	-	47.38	3.36
Nabinagar Stage-I (3 X 660	216.70	1480.398	85%	2.39	354.25	2.19	323.52	-	677.76	4.58
Nabinagar JV (3 X 660 MW) Stage-II	-	-	0%	-	-	-	-	-	-	-
Renewable	1,071.34	2,021.95	71%	-	-	3.04	615.23	0.15	615.38	3.04
SECI Solar	4.6	9.10	19%	-	-	5.50	5.01	0.15	5.16	5.67
SECI-Wind-300	184.0	388.347	24%			2.52	97.86	-	97.86	2.52

Name of The Source	Share Allocation to NBPDCL	Units purchased (MU)	PLF (%)	Fixed Cost (Rs/kWh)	Fixed charge (Rs Crs)	Energy Cost (Rs/kWh)	Energy cost (Rs Crs)	Misc. Cost (Rs. Cr.)	Total Cost (Rs Crs)	Average Cost
PTC-Wind	92.0	194.173	24%			2.52	48.93	-	48.93	2.52
SECI-Solar -500	230.0	390.154	19%			2.75	107.29	-	107.29	2.75
NTPC-Nokh - 500	230.0	390.154	19%			2.80	109.24	-	109.24	2.80
NTPC-Solar -500	230.0	390.154	19%			2.59	101.05	-	101.05	2.59
ACME Magadh	4.6	8.68	12%	-	-	8.73	7.58	-	7.58	8.73
ACME Nalanda	6.9	12.68	11%	-	-	8.73	11.07	-	11.07	8.73
Sunmark	4.6	8.62	18%	-	-	5.67	4.89	-	4.89	5.67
Avantika	2.30	3.08	13%	-	-	7.69	2.37	-	2.37	7.69
AZURE	4.60	7.00	15%	-	-	8.39	5.88	-	5.88	8.39
Udipta Energy & Equipment Pvt ltd	2.30	3.90	11%	-	-	7.98	3.11	-	3.11	7.98
Glatt	1.38	2.67	19%	-	-	6.11	1.63	-	1.63	6.11
Welspun 2	6.90	12.62	17%	-	-	8.64	10.90	-	10.90	8.64
Welspun 1	4.60	8.39	17%	-	-	8.70	7.30	-	7.30	8.70
Welspun 3	6.90	12.81	17%	-	-	8.65	11.08	-	11.08	8.65
Response Renewable Energy	4.60	8.68	17%	-	-	5.67	4.92	-	4.92	5.67
ALFA INFRAPOP	6.90	14.68	19%	-	-	4.76	6.99	-	6.99	4.76
TIRUPATI SUGAR	4.60	12.80	27%	-	-	3.61	4.62	-	4.62	3.61
New Swadeshi Sugar Mill,Narkatiaganj	3.22	10.13	30%	-	-	3.71	3.76	-	3.76	3.71
Harinagar Sugar Mills,Harinagar	5.06	32.63	56%	-	-	4.44	14.49	-	14.49	4.44
Bharat SugarMills,SidhiwaliaGopalganj	5.06	26.74	51%	-	-	4.91	13.13	-	13.13	4.91

Name of The Source	Share Allocation to NBPDCL	Units purchased (MU)	PLF (%)	Fixed Cost (Rs/kWh)	Fixed charge (Rs Crs)	Energy Cost (Rs/kWh)	Energy cost (Rs Crs)	Misc. Cost (Rs. Cr.)	Total Cost (Rs Crs)	Average Cost
Lauriya Sugar Mill	9.20	26.64	28%	-	-	3.67	9.78	-	9.78	3.67
Sugauli Sugar Mill	9.20	25.47	27%	-	-	5.34	13.60	-	13.60	5.34
Hasanpur Sugar Mills,Samastipur	4.60	14.02	30%	-	-	3.79	5.31	-	5.31	3.79
Riga Sugar Company Ltd,Sitamarhi	1.38	3.84	27%	-	-	3.62	1.39	-	1.39	3.62
Siddhashram Rice Mill Cluster Pvt Ltd	0.46	1.13	20%	-	-	5.60	0.64	-	0.64	5.60
BDBPL	1.38	2.66	19%	-	-	5.35	1.42	-	1.42	5.35
Open Market Purchase		(198.88)		-	-	4.62	(91.88)	-	(21.85)	1.10
IEX/PXIL		(198.88)	0%	-		4.62	(91.88)		(91.88)	4.62
DB Power										-
JAYPEE NIGRIE										-
GMR ETL										-
TATA ETL										-
Manikaran Power										-
NEA										-
NVVNL										-
PVVNL										-
KSEB Short Term										-
Tata Power Short Term										-
PTC(ST)										-
OSTRO										-

Name of The Source	Share Allocation to NBPDCL	Units purchased (MU)	PLF (%)	Fixed Cost (Rs/kWh)	Fixed charge (Rs Crs)	Energy Cost (Rs/kWh)	Energy cost (Rs Crs)	Misc. Cost (Rs. Cr.)	Total Cost (Rs Crs)	Average Cost
Solar REC to meet RPO						1.00			-	-
Non-Solar REC to meet RPO						1.25			70.03	-
Sub Total Power Purchase	**3,736.93**	**19,841.93**		**1.48**	**2,927.99**	**1.95**	3,864.78	**78.66**	**8,322.37**	4.19