MADHYANCHAL VIDYUT VITRAN NIGAM LTD. BUSINESS PLAN FOR FY 2017-18 TO 2019-20

2017

MADHYANCHAL VIDYUT VITRAN NIGAM LIMITED

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1. INTRODUCTION

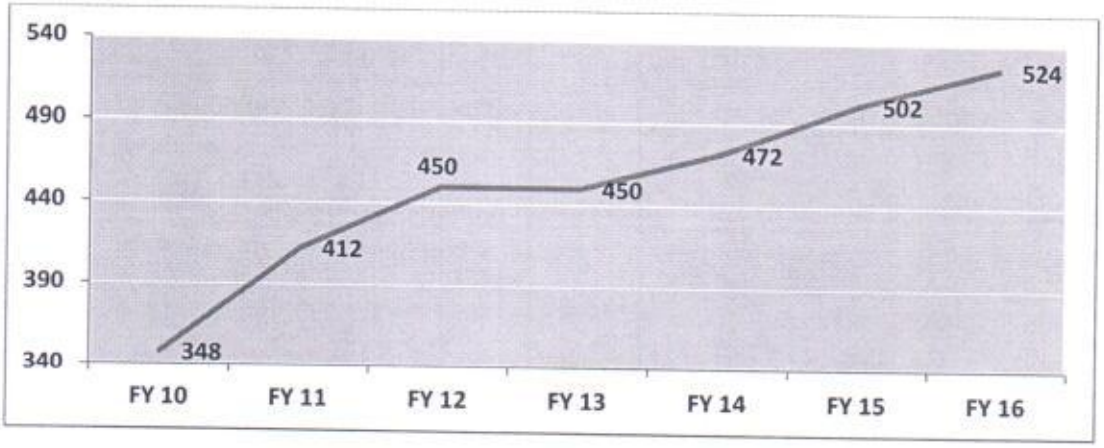
1.1. BACKGROUND

Uttar Pradesh being one of the largest states of India is also the most populous state of the country with is administrative capital at Lucknow. Ghaziabad, Kanpur, Moradabad, Aligarh, Meerut, Bareilly, Gorakhpur, Noida, Allahabad, Jhansiand Varanasi are known for their industrial importance in the state as well as at the national level. On 9thNovember, 2000, a new state, Uttarakhand was carved out from the Himalayan hill region of Uttar Pradesh.

With levels of literacy rate of around 70%, the state has abundant availability of quality human resources. Uttar Pradesh is a significant destination for investments in manufacturing industry, tourism and infrastructure.

Power sector is a critical infrastructure element required for the smooth functioning of the economy. An efficient, resilient and financially sustainable power sector is essential to stimulate growth and prosperity in the state. The availability of reliable, quality and affordable power can ensure growth of all sectors of economy including agricultural, industrial and others.

The Power Consumption in Uttar Pradesh has grown from 348 kWh per capita consumption in FY 10 to 524 kWh per capita consumption in FY 16, the electricity consumption in the State has grown at a CAGR of 7.06%, as depicted in the chart below:



Uttar Pradesh was one of the first states to embark upon a comprehensive programme of economic and structural reforms in the power sector. GoUP had demonstrated its willingness to take difficult decisions and implement power sector reform through a number of actions:

i. a regulatory commission was established in September 1998;

ii. in January 1999, GoUP issued a power sector policy statement with the objective of providing cost efficient and good quality supply and to make the energy sector self-sufficient;

iii. the UP Electricity Reform Bill was enacted by GoUP in July 1999; and

The U.P. State Electricity Board (UPSEB) was unbundled in pursuance of a reform and restructuring exercise under the first reforms transfer scheme dated 14th January 2000, into three separate entities:

- Uttar Pradesh Power Corporation Limited (UPPCL) assigned with the function of Transmission and Distribution of power within the State.

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- Uttar Pradesh Rajya Vidyut Utpadan Nigam Limited (UPRVUNL) assigned with the function of Thermal Generation within the State.
- Uttar Pradesh Jal Vidyut Nigam Limited (UPJVNL) assigned with the function of Hydro Generation within the State.

Through another Transfer Scheme dated 15th January, 2000, assets, liabilities and personnel of Kanpur Electricity Supply Authority (KESA) under UPSEB were transferred to Kanpur Electricity Supply Company (KESCO), a company registered under the Companies Act, 1956.

Further unbundling of UPPCL (responsible for both Transmission and Distribution functions) was again felt after the enactment of the Electricity Act 2003 and four new distribution companies (hereinafter collectively referred to as "DisComs") were created vide Uttar Pradesh Transfer of Distribution Undertaking Scheme, 2003 viz.

- Dakshinanchal Vidyut Vitaran Nigam Limited (AGRA DisCom)
- Madhyanchal Vidyut Vitaran Nigam Limited (LUCKNOW DisCom)
- Paschimanchal Vidyut Vitaran Nigam Limited (MEERUT DisCom)
- Purvanchal Vidyut Vitaran Nigam Limited (VARANASI DisCom)

Madhyanchal Vidyut Vitaran Nigam Limited (hereinafter referred as 'LUCKNOW DisCom' or 'MVVNL') came in to existence in 2003 as a subsidiary company of UPPCL and is responsible for power distribution in DisCom covering its jurisdiction area of districts Badaun, Bareilly, Pilibhit, Shahjahanpur, Lakhimpur, Hardoi, Sitapur, Unnao, Bahraich, Shrawasti, Balrampur, Gonda, Barabanki, Rae Bareli, Faizabad, Sultanpur, Ambedkarnagar, Lucknow and Chhatrapati Sahuji Maharaj Nagar.

The GoUP has thereafter issued the Final Transfer Scheme via notification dated 03rd November,. 2015. The copy of the same is hereby attached marked as Annexure-1.

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1.2. KEY INITIATIVES TAKEN

In an initiative to revive the financially distressed Distribution Companies the Union Cabinet chaired by the Hon'ble Prime Minister Shri Narendra Modi, approved a new scheme moved by the Ministry of Power - Ujwal DISCOM Assurance Yojna (UDAY). UDAY provides for the financial turnaround and revival of Power Distribution companies (DISCOMs), and thereby ensuring a sustainable permanent solution to the problem.

The scheme comprised of four initiatives - improving operational efficiencies of Discoms, reduction of cost of power, reduction in interest cost of Discoms and enforcing financial discipline on Discoms through alignment with state finances. It allowed state Government, which own the Discoms, to take over 75 percent of their debt as of September 30, 2015, and pay back lenders by selling bonds. Discoms were expected to issue bonds for the remaining 25 percent of their debt.

Consequently, on January 30, 2016, the UPPCL on behalf of U.P. Discoms has entered into a tripartite MOU with Government of India and Government of Uttar Pradesh, in order to improve the operational and financial efficiency of the U.P. Discoms and to enable financial turnaround of the Discoms.

At the time of initiation of the above scheme, the U.P. Discoms were reeling under severe financial stress. The accumulated losses have reached to the level of Rs.70,738 Crore (approx.) up to March 31, 2015. The outstanding debt level of the U.P. Discoms had reached Rs.53,211 Crore at the end of September 2015. Also, the interest cost burden was nearly Rs. 0.88 per unit of sales during FY 15, which was significantly higher than the national average of Rs 0.44 per unit only. The Annual Revenue Requirement (ARR) was insufficient to meet the Average Cost of Supply (ACOS), with a cost recovery of only 65.97 %.

Under the Uday Scheme the UP Discoms has to took the following measures:

a) For the 50% of the debt remaining with it as on 31 st March, 2016, DISCOM to fully/ partially issue state government guaranteed bonds or get them converted by Banks/FIs into loans or bonds with interest not more than the Bank base rate plus 0.1%. DISCOMs and the Government of UP to ensure timely payment of lender's dues towards principal/interest for the balance debt remaining with DISCOM.

b) The DISCOMs shall pay interest to the Government of Uttar Pradesh on the outstanding Government of Uttar Pradesh loan in a financial year at the rate at not exceeding the coupon rate at which GoUP issued Non-SLR Bonds.

c) As per the UDAY scheme, all DISCOMs have to reduce AT&C losses to 14.86% by FY 2019-20 as per the following trajectory:

Table 1-1: AT&C Losses as per UDAY MOU

Year	FY 2015-16	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20
AT&C loss	32.36	28.27	23.63	19.36	14.86

However, the State will make efforts to ensure that DISCOMs reduce AT&C losses to 15% by FY 2018-19 if the target in a particular year is not met, then the DISCOMs shall strive

to achieve the targets in the subsequent years so as to achieve the desired target of 14.86 % AT&C losses positively by FY 2019-20.

d) The DISCOMs shall increase hours of power supply in areas showing reduction in AT&C losses.

e) As per the UDAY scheme, all DISCOMs have to eliminate gap between ACS & ARR by FY 2018-19. Considering the current level of the gap. UP has proposed to eliminate it by FY 2019-20. However, the State will make efforts to ensure that DISCOMs eliminate the Gap by 2018-19 and if not achieved, positively by FY 2019-20. Detailed computation of year wise ACS-ARR gap along with financial projections have been attached as Annexure B.

f) In compliance with the Renewable Purchase Obligations (RPO) outstanding since 1.4.2012 till 31.3.2015, DISCOMs of UP shall fulfil RPO obligation 3 years after the Discoms reaches break even i.e. the Financial year 2019-20.

g) DISCOMs shall submit the detailed action plan by 31.03.2016 to achieve the projected trajectory for AT&C loss and ACS-ARR gap.

h) The DISCOMs shall achieve operational milestones related to loss reduction and enhancement of revenue, as specified in DDUGJY & IPDS.

i) The DISCOMs would also take the following measures for Loss Reduction:

(i) Undertaking name and shame campaign to control power theft from time to time;

(ii) Preparing loss reduction targets at subdivision/ division/ circle/ zonal level and making concerned officers responsible for achieving the loss reduction targets;

(iii) Implementing performance monitoring and management system MIS for tracking the meter replacement, loss reduction and day to day progress for reporting to top management;

(iv) Achieving 100% Distribution Transformer (DT) metering by 30 September 2017;

(v) Achieving 100% feeder metering by 30 September 2016;

(vi) Undertaking energy audit up-to 11kV level in rural areas by 30 September, 2019;

(vii) Undertaking Feeder Improvement Program for network strengthening and optimization, to be completed by 31March 2017, in accordance with sanction of funds under the relevant scheme..

(viii) Undertaking Physical Feeder Segregation by March 2018, in accordance with sanction of funds under the relevant scheme.

(ix) Installation of Smart Meters for all consumers other than agricultural consumers consuming above 500 units / month by 30thJune 2018 and consumers consuming above 200 units / month by 31stMarch 2020. Consumption per month has also been linked with the contracted load for the purpose of this agreement.

(x) Providing metered electricity access to unconnected households as per trajectory in the 24x7 in accordance with sanction of funds under the relevant scheme by FY 19.

(xi) Implementing ERP systems for better and effective inventory management, personnel management, accounts management etc. to reduce costs and increase efficiencies by March 2018,in accordance with sanction of funds under the relevant scheme.

j) The DISCOMs shall undertake the following measures for Demand Side Management and Energy Efficiency:

(i) Providing LED for domestic and other category consumers;

(ii) Undertaking consumer awareness programs for optimum utilization of resources and to foster long term behavioural changes;

(iii) Replacement of street lights with LEDs in phase manner in the municipal towns through Nagar Nigam/ Municipal Corporations in accordance with the policy framework;

(iv) Replacing at least 10% of existing agriculture pumps with energy efficient pumps, in accordance with the policy framework;

(v) Shall Promote PAT scheme of BEE for improving energy efficiency in Industries in accordance with the policy framework.

k) The DISCOMs shall undertake the following tariff measures:

(i) Quarterly tariff revision particularly to offset fuel price increase;

(ii) Timely filing of ARR/Tariff Petition before the UPERC so that Tariff Order may be issued for the year as early as possible.

(iii) Timely preparation of annual accounts of the DISCOMs, which shall also enable timely filing of the Tariff Petition;

l) The DISCOMs shall undertake the following measures to increase employee engagement:

(i) Initiating capacity building of employees to enhance technical, managerial and professional capabilities at induction level and in subsequent refresher trainings;

(ii) Devising Key Performance Indicators (KPIs) for each officer in-charge on areas of AT&C loss reduction and improvement in meter/billing/ collection efficiency. The performance of officer in-charge shall be linked to KPIs achieved and will attract incentive/ penalty;

m) The DISCOMs shall implement the following Customer Service Strategy:

(i) Setting up of Centralized Customer Call Centre for timely resolution of complaints related to no current and other technical complaints, harassment by official, reporting of theft and safety related complaints;

(ii) Introducing more avenues to consumers for bill payment, which could be in terms of e-payment through net banking, credit/ debit card, kiosks at banks and post offices, village panchayats, mobile collection vans, etc;

n) The DISCOMs shall procure power through the transparent process of competitive bidding as per the policy framework.

o) Every DISCOM shall identify the key personnel for implementing the scheme (UDAY)

p) DISCOMs shall devise the mechanism to motivate and encourage the staff.

q) CMD / MD of DISCOMs shall monitor the performance of DISCOMs on monthly basis

r) Monthly monitoring formats along with the quarterly targets shall be provided by the DISCOMs by 31st March 2016.

24x7 Power for ALL (Uttar Pradesh)

On 26th March, 2017, the Govt. of Uttar Pradesh entered into agreement with Govt of India committing round the clock power to all the households of Uttar Pradesh by FY 19. The 24x7 Power for All programme is a joint initiative of the Government of India (GoI) and State Governments, with the objective to provide 24x7 power to households, industry, commercial, and other consuming entity, and adequate power to the agricultural sector by FY19. This roadmap document aims to identify the requirements to meet the above objectives for Uttar Pradesh.

'24x7 Power for All' (PFA) programme will be implemented by Government of Uttar Pradesh (GoUP) with active support from the Government of India with the objective to connect the unconnected in a phased manner by March 2019 and to ensure 24x7 quality, reliable and affordable power supply to all Domestic, Commercial and Industrial consumers within a pragmatic but fixed timeframe. Agriculture consumers will also be given supply as per requirement in a cost effective manner. Power Sector development being the most crucial prime-mover for the overall development of the State, Government of Uttar Pradesh is committed to accord highest priority to power sector and accordingly, is committed to provide full support to all the associated utilities for ensuring quality power supply. Government of Uttar Pradesh, in synergy with Government of India, would try to ensure that all the necessary steps outlined in the PFA document are taken up in terms of village electrification, capacity addition, power purchase planning, strengthening the required transmission and distribution network, encouraging renewable energy, undertaking customer centric initiatives, reduction of AT&C losses, bridging the gap between ACS and ARR, and following good governance practices in the implementation of all electricity related Central and State Government Schemes.

The Government of India would synergize and supplement the efforts of the Government of Uttar Pradesh through a fast-track resolution of key issues pertaining to Generation & Transmission and ensuring enhanced allocation in various Distribution schemes. Envisioning 24x7 reliable and affordable electricity in the State of Uttar Pradesh is a joint dream and hence Government of India will support the efforts of Government of Uttar Pradesh in every possible manner to make it a reality provided Government of Uttar Pradesh puts its best foot forward for achieving this dream so that equitable development across all regions of the State of Uttar Pradesh is ensured. The Central and State Governments would meet regularly to review the progress of programme over the next two years and would strive to achieve the objectives by taking necessary steps as envisaged in this Power for All document.

The brief summary of the major targets under the 24x7 Power For All initiative are detailed-below:

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a. Ensure reliable 24x7 supply to consumers by September 2018. The hours of supply for agriculture consumers will be decided by the State Government as per requirement.
b. Ensure that all unconnected households are provided access to electricity in a time bound manner in the next two years i.e. by FY 19.
c. Ensure adequate capacity addition planning and tie ups for power from various sources at affordable price to meet the projected power demand in future.
d. Strengthen the transmission and distribution networks to cater to the expected growth in demand of existing as well as future consumers.
e. Assess financial measures including optimization of investments and undertaking necessary balance sheet restructuring measures to ensure liquidity in the finances of the utility.
f. Put in place a strategy to ensure reduction of AT&C losses as per agreed loss reduction trajectory and methodology and chalk out measures required at every level of distribution.
g. Identify steps for implementation and adoption of modern technologies to monitor reliability of supply. Identify steps for monitoring and timely commissioning of various generating plants and transmission and distribution infrastructure to meet the expected growth in demand.
h. To take measures for meeting the performance standards as laid down by UPSERC.

1.3. OBJECTIVES OF MVVNL

The key objectives of this business plan are:

- Ensure reliable supply to consumers to commensurate the committed supply hours to rural and urban areas.
- The state has already increased the power supply to rural areas to 18 hours and 24 hours to urban and further plans increase supply hours to rural areas with increasing distrubtion infrastructure. However, the demand in domestic category is presently still suppressed owing to localized capacity constraints, which are targeted to be addressed through various system strengthening schemes.
- Ensure that all unconnected households are provided access to electricity in a time bound manner i.e. by FY 19.
- Ensure adequate capacity addition planning and tie ups for power from various sources at affordable price to meet the projected power demand for future.
- Strengthen the distribution network to cater the expected growth in demand of existing as well as future consumers.
- Assess the financial measures including optimizing investments and undertaking necessary balance sheet restructuring measures to ensure liquidity in the finances of the utility.
- Put in place a clear strategy to ensure reduction of AT&C losses as per the agreed loss reduction trajectory and steps required to be taken at every level of the distribution network.

- Identify steps for implementation and adoption of modern technologies to monitor reliable supply.
- Identify steps for monitoring timely commissioning of various distribution infrastructure to meet the expected growth in demand.
- To take measures for meeting the performance standards as laid down by UPERC.
- Bridging the gap between the demand and supply for the already identified / registered consumers and other consuming entities
- Conduct sensitivity analysis for cost of service and resulting financial gap under multiple scenarios on various parameters namely, tariff hike, reduction in power procurement cost, and increase in interest and moratorium period, AT&C loss reduction, etc.

1.4. CORPORATE MISSION AND VISION

MVVNL will be professionally managed utility supplying reliable and cost efficient electricity to every citizen of the discom through highly motivated employees and state of art technologies, providing an economic return to our owners and maintaining leadership in the country.

MVVNL endeavours to be among the best of Power Distribution utilities in India in operating efficiency, system reliability standards and commercially viable operations.

MVVNL shall achieve this being a dynamic, forward looking, reliable, safe and trustworthy organization, sensitive to our customer's interests, profitable and sustainable in the long run, providing uninterrupted supply of quality power, with transparency and integrity in operation.

High productivity reflected in a fair, equitable and cost based tariff across consumer categories, accurate and timely billing on a rational, comprehensible billing basis reflecting actual consumption, and convenient system for payment of dues. Simple and well-advertised procedures, guaranteed connection of requested load within reasonable time, prompt breakdown attendance, and Efficient Complaint handling.

Effective communication of policies and procedures, a reliable supply to essential public services, enforcing adequate safety norms and environmental and social norms, minimizing inconvenience dare to disruptions etc.

Developing with a core function of providing quality, uninterrupted power, commercial focus considering all techno-economic issues of investments, and a high level of consumer service with new connections on demand and low complaint resolution times.

Adopt best practices of Project and Operations & Maintenance Management leading to system efficiency, reliability and commercial viability. Create a work environment which motivates & enhances employee performance, value systems and reward contribution. Develop and train employees towards upgrading their skills at work, enrich work content to make it more substantive and responsive to company goals.

Imbibe transparency and accountability in all operational areas, be it procurement, construction, operations and maintenance. Expand horizons of activities in to contracting and others by leveraging

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the Company's available technical and project expertise. Build, in essence MVVNL to a Company geared to high standards of management capabilities and professional performance.

1.5. KEY OBJECTIVES OF THE BUSINESS PLAN

The key objectives of this business plan have been listed below:

- Providing a tool for strategic planning - The primary objective of the Business Plan is to analyse and anticipate the future requirements in advance and strategically plan for the capital investments, related means of financing and various associated costs and document them which would serve as an effective tool for monitoring and execution of future works. It is important to project the growth in distribution network infrastructure commensurate with the energy demand required for fuelling the economic growth targets of the State.

- Meeting the regulatory compliance of submission of a business plan as mandated by the Uttar Pradesh Electricity Regulatory Commission (Multi Year Distribution Tariff) Regulations, 2014 (hereinafter referred to as 'MYT Distribution Regulations').

- Aid in decision making leading to better Operational Efficiency - The Business Plan is prepared so as to be useful for the Managing Board, associated stakeholders, the Hon'ble Commission and various government bodies. The future projections in the Plan would help the transmission utility in decision making and taking proactive actions, and thus improving the overall operational efficiency of the Distribution network infrastructure.

The business plan of the discom has been prepared considered the impact of changes in the key business drivers, current regulatory practice and the regulatory norms envisaged in the mid-term, policy decisions of GoUP, etc. The main thrust of the business plan is to improve the operating efficiency and tide over the financial crisis by achieving financial turnaround.

Following parameters have been considered in the preparation of the business plan of the discom:

- Energy Sales Forecast
- Transmission and Distribution Loss Reduction Trajectory
- Energy Availability and Power Procurement Plan
- Energy Balance
- Capital Investment Plan and its Financing
- Annual Revenue Requirement for each financial year of the Control Period

The Discom has prepared the Business/Operational Plan taking into consideration all the factors and commitments made under the UDAY and PFA scheme. It is submitted that the Business plan being a dynamic document may need to be updated at periodic intervals taking into account the changes in the internal and external environment and these changes would be intimated to the Hon'ble Commission from time to time. The operational plans include the estimates of each capital expenditure scheme of MVVNL from FY 2017-18 to FY 2019-20.

The most important aspect of any business plan is its implementation and thereby monitoring of key activities is a pre-requisite. In light of the existing situation there is a dire need of assigning certain key performance indicators at the micro level of the distribution companies.

Key Performance Indicators (KPIs) can be defined as the measures that focus on the aspects or areas of organisation's performance that are critical or vital for the ongoing and future success. In order to ensure that the designated objectives are attained, KPIs should be specific, measurable, agreed to, realistic, timely and aligned with the plan targets.

Key Performance indicators like distribution loss trajectories, collection efficiency trajectory, average tariff hikes, etc have to be monitored on a concurrent basis and are crucial for the successful implementation of the Plan.

2. BUSINESS OVERVIEW: OPERATIONAL

A snapshot of the existing distribution system of the utilities serving in Uttar Pradesh is given below:

Table 2-1: Existing Distribution System

Particulars	MVVNL	DVVNL	PuVVNL	PVVNL	KeSCO
Number of 33/11 kV substations / transformers	735	773	698	951	82
Capacity of 33/11 kV substations (MVA)	8312 MVA	7451 MVA	6044 MVA	12452 MVA	1290 MVA
Length of 33 kV lines (ckt kms)	10972 km	14449 km	10640 km	9802 km	428 km
Length of 11 kV lines (ckt kms)	107527 km	109929 km	65011 km	81084 km	1040 km
Length of LT Lines (km)	351210 km	215099 km	379277 km	231134 km	1845 km
Number of 11/0.4 kV Distribution Transformers	266934	216811	230124	210593	4448
Capacity of 11/0.4 kV Distribution Transformers (MVA)	11127 MVA	9388 MVA	7940 MVA	11889 MVA	1008 MVA

2.1. EXISITNG GENERATION AVAILABLITY

The distribution utilities of Uttar Pradesh presently procure power centrally at UPPCL level which buys power for the five State owned discoms i.e. MVVNL, DVVNL, PVVNL, PuVVNL and KESCO. As per the Power Supply Position report of CEA, lately the state of UP has been able to meet 17,183 MW peak demand in Feb, 2017. In terms of Energy the total power purchase quantum for the UP State has grown from 65,375 MU's in FY 2010-11 to 1,07,569 MU's in FY 2016-17, with a CAGR of 8.65%.

The total installed generation capacity for Uttar Pradesh as on date (including its firm share from allocated capacity in State, private, joint and CGS) is 20,666.89 MW is detailed in table below:

Table 2.1-1: Sector wise details of Installed Generation Capacity

Particulars	Installed Capacity (MW)
State Sector	
State Thermal	5933.00
State Hydro	454.90
Central Sector	
CGS Thermal	4088.00
CGS Hydro	1790.67
CGS Nuclear	360.87
IPPs	
Thermal	6722.55
Hydro	842.00
RE	474.90
Total Capacity (MW)	**20666.89**

As discernible from the table above, the Coal based capacity constitutes about 81% of the total followed by hydro 15%, renewable 2% and balance about 2% from nuclear.

2.2. CAPACITY ADDITION PLAN

To cater the growth in Energy demand on account of increase in supply hours in the rural and urban areas, the UPPCL on behalf of UP Discoms has planned generating capacity addition during the MYT control period. A number of generating stations (hydro, coal based, renewable etc.) are planned to be commissioned during the MYT control period. There is about 5,041 MW generating capacity planned to be available for UP power system from different sources including state sector upto the period FY 2019-20. The additional capacity available from various sources (along with the expected year of availability) is summarized in the table below:

Table 2.2-1: Generation Capacity Addition Plan

Particulars	MW Capacity Addition			
	2017-18	2018-19	2019-20	Total
State RE				
Solar / Biomass	250	1100	1250	2600
Central Sector				
CGS Thermal				272
Tanda Stage-II			155	
Uchchahar-IV		117		
CGS Hydro				541
Tapovan Vishnu Gad			101	
Kishanganga HEP	64			
Vishnugarh Pipalkoti			166	

Particulars	MW Capacity Addition			
	2017-18	2018-19	2019-20	Total
Parbati II		155		
Kameng			55	
CGS Nuclear				
RAPP Unit 7 & 8			162	162
IPPs				
Thermal				350
RKM Powergen	350			
Hydro				200
Teesta	200			
Joint Sector				916
NTPC Meja		458	458	
Total Capacity (MW)				**5041**

The commissioning of the generating stations has been considered based on the construction progress for the on-going projects and as per the project monitoring reports published by the Central Electricity Authority (CEA). The Discoms are expected to cater the required demand from FY 2020 onwards. The various parameters impacting the net generation and power purchase cost from these plants like Plant Load Factor, Design Energy, Station Heat Rate, Auxiliary Energy Consumption, etc have been considered on the basis of prevailing regulatory norms. The increase in energy charges (fuel cost) and capacity charges (fixed costs) and other expenses during the projection period have been factored in through an increase of 4% to 5% in per unit power purchase cost depending upon the nature and source of generation and power purchase.

With considerable capacity addition planned from FY 18 onwards along with efficiency improvement in terms of reduced distribution loss targets the situation in the State is likely to improve. Analysing the situation of power availability from sources within and outside the State, there is enough power available to cater energy requirement till FY 20.

Further, the list of generating stations which are at the planning stage/under construction whose evacuation is proposed through State Transmission (UPPTCL) system is provided in the table below:

Table 2.2-2: List of Generating Stations whose evacuation is proposed through UPPTCL system

S. No.	Name of the Project	Name of the Developer	Capacity In MW
1.	Obra C TPS	UPRVUNL	1320
2.	Ghatampur TPS	UPRVUNL & NLC	1980
3.	Harduagnaj Ext. TPS	UPRVUNL	660
4.	Panki Extension	UPRVUNL	660
5.	Karchana TPS	UPRVUNL	1320
6.	Jawaharpur TPS	UPRVUNL	1320

2.3. SCHEMES UNDER IMPLEMENTATION

2.3.1. INTEGRATED POWER DEVELOPMENT SCHEME (IPDS)

The UP Discoms are presently receiving capital expenditure funds under Central Government scheme "Integrated Power Development Scheme" (IPDS) covering urban areas for:

a) Strengthening of sub-transmission and distribution networks in the urban areas.
b) Metering of distribution transformer/feeders/consumers in the urban areas.
c) IT enablement of distribution sector and strengthening of distribution network for completion of the targets laid down under R-APDRP for 12th and 13th Plans by carrying forward the approved outlay for R-APDRP to IPDS.

The R-APDRP scheme, as approved by CCEA for continuation in 12thand 13th Plans, has been subsumed in this scheme as a separate component relating to IT enablement of distribution sector and strengthening of distribution network. This outlay will be carried forward to the new scheme of IPDS in addition to the outlay indicated above. PFC is the nodal agency for the implementation of IPDS in the country.

The new IPDS proposal aims to cover 637 towns including towns covered under R-APDRP. The distribution utilities of the State have proposed works amounting to Rs. 4889.37 crores to be undertaken under the new IPDS scheme

For implementation of these works, 60% of project cost is available as grant from GOI under IPDS and the state has to arrange the balance amount- 30 % as loan and 10% as equity. On meeting certain conditions laid down in IPDS such as timely completion, AT&C loss reduction etc. the grant component may go up to 75% of project cost.

Under the Integrated Power Development Scheme (IPDS), GoUP has submitted proposals for works in urban areas such as i) Strengthening of sub-transmission and distribution networks and for ii) Metering of DT / feeders / consumer.

Table 2.3.1-1: New IPDS scheme

Item	Unit	Total for State	
		Quantity	Cost (Rs Cr)
33/11 kV SS : New	Nos.	240	498.18
33/11 kV SS : Additional Transformer	Nos.	87	81.08
33/11 kV SS : Transformer capacity enhancement	Nos.	172	180.05
Renovation and Modernisation of 33/11 kV S/S	Nos.	466	88.66
New 33 kV new feeders / Bifurcation of feeders	Km	2295	283.13
33 kV feeder reconductoring / augmentation	Km	431	96.51
33 kV Line Bay Extension of EHV station	Nos.	344	78.94
11 kV line: New feeder / feeder bifurcation	Km	4004	547.10
11 kV line: Augmentation / Reconductoring	Km	806	103.46

Item	Unit	Total for State	
		Quantity	Cost (Rs Cr)
Aerial Bunched Cables	Km	7171	614.69
Under-ground cables	Km	469	337.84
11 kV Line Bay Extension	Km	0	0.00
Installation of Distribution Transformer	Nos.	6336	549.17
Capacity enhancement of LT sub-station	Nos.	2648	246.55
LT line: New feeder / feeder bifurcation	Km	3249	320.44
LT line: Augmentation / Reconductoring	Km	568	192.71
Capacitor Bank	Nos.	429	154.55
High Voltage Distribution System (HVDS)	Nos.	0	0.00
Metering	Nos.	344252	115.02
Provisioning of solar panels	Lot	527	9.31
Ring Main Unit (RMU), Sectionaliser, Auto Reclosures, Fault Passage Indicators (FPI) etc.	Lot	1362	163.32
Others	LS	2649	228.65
Grand Total			**4889.37**

There are 168 towns covered in RAPDRP Part–A and 167 towns under R-APDRP Part-B for system strengthening and loss reduction. Out of 167 towns, 155 towns are Non-SCADA and 12 are to be SCADA compatible towns. Noida is not covered under R-APDRP Part-B works. Projects with estimated capital expenditure totaling Rs. 4721 Crore (including PMA cost) for 82 circles have been sanctioned for Uttar Pradesh by GOI. An amount of Rs. 680.78 crore has already been released to utilities. Work has been awarded partially in 81 circles out of 82 for an amount of Rs. 4034.84 crore. Discom wise status of IPDS, as in March, 2017 is summarized in the following table:

Table 2.3.1-2: Project expenditure and sanctioned cost for Non-SCADA towns

Utility	No. of circles/ zones	No. of towns	Approved cost (Rs. Crore)	Amount Disbursed (Rs. Crore)
MVVNL	12	181	724	81.90
DVVNL	17	176	768	113.07
PVVNL	21	137	1486	243.54
PuVVNL	16	142	1280	187.21
KESCO	1	1	463	55.06
Total	**67**	**637**	**4721**	**680.78**

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2.3.2. DEENDAYAL UPADHYAYA GRAM JYOTI YOJANA (DDUGJY)

The UP Disocms are doing certain capital expenditure works under the "Deendayal Upadhyaya Gram Jyoti Yojna" (DDUGJY) scheme launched by Government of India on 3rd December, 2014. This scheme included:

(a) Separation of agriculture and non-agriculture feeders facilitating different hours of supply to agricultural & non-agriculture consumers in the rural areas.
(b) Strengthening and augmentation of sub-transmission & distribution infrastructure in rural areas, including metering of distribution transformers /feeders/consumers.
(c) Rural electrification for completion of the targets laid down under RGGVY for 12thand 13thPlans by carrying forward the approved outlay for RGGVY to DDUGJY.

The scheme of RGGVY as approved by CCEA for continuation in 12th and 13th Plans has been subsumed in this scheme as a separate rural electrification component. The State has proposed work amounting to Rs. 18,774 crores to be undertaken under the new scheme. Under this scheme projects amounting to Rs. 6946.40 crore (including PMA cost) for the State have been sanctioned by GOI which is summarized in table below:

Table 2.3.2-1: New Scheme (DDUGJY)

Discom	Nos. of Districts	Electrification of UE Villages	Feeder Separation	Connecting/ Unconnected Hhs	Metering	System Strengthening	Sansad Adarsh Gram Yojna	PMA	Grand Total
DVVNL	21	0.00	966.60	397.02	59.69	522.83	23.92	9.84	1979.90
PVVNL	14	2.70	1218.92	198.20	59.67	652.74	17.08	10.75	2160.06
MVVNL	19	6.78	427.90	287.74	59.75	442.25	6.82	6.15	1237.39
PuVVNL	21	0.00	644.27	260.19	114.94	529.94	11.93	7.78	1569.05
Total	**75**	**9.48**	**3257.69**	**1143.15**	**294.05**	**2147.76**	**59.75**	**34.52**	**6946.40**

For implementation of these works, 60% of project cost is available as grant from GOI under DDUGJY and the State has to arrange the balance amount- 30% as loan and 10% as equity. On meeting certain conditions laid down in DDUGJY, such as timely completion of schemes, AT&C loss reduction etc., the grant component may go up to 75% of project cost.

Apart from the centrally promoted schemes the State has also taken certain initiatives to improve the electrification status in the State.

2.3.3. DR. RAM MANOHAR LOHIYA SAMAGRA GRAM VIKAS YOJANA

Dr Ram Manohar LohiaSamagra Gram Vikas Yojna was implemented in FY 12 to ensure basic amenities in the most backward revenue villages of Uttar Pradesh. The main objective of this scheme is to bring these most backward revenue villages, which are lagging behind in infrastructure development such as link roads, rural electrification, availability of potable water, sanitary latrines, etc., into mainstream of development by providing these infrastructure facilities.

Under Dr. Ram Manohar Lohia Samagra Gram Vikas Scheme, 10,000 Revenue Villages are targeted for development in five years. The following table depicts the villages selected under the said scheme:

Table 2.3.3-1: No. Of villages selected under the scheme

Discom	Selected Village Under Scheme	Target
		No. of Villages
PVVNL	857	857
DVVNL	1316	1257
MVVNL	1678	1637
PuVVNL	1951	1951
Total	**5802**	**5702**

2.3.4. MAJOR DEVELOPMENTS AND ACTIVITIES UNDER DEMAND SIDE MANAGEMENT MEASURES:

The discom has ordered various measures on energy efficiency, such measures include the following:

a) Demo projects of LED street lights shall be undertaken in the area of Lucknow Development Authority, Ghaziabad Development Authority and Noida Development Authority with the help of EESL.
b) LED Pilot projects shall be undertake at KrishiMandi at Kanpur and Gorakhpur area.
c) A pilot project shall be undertaken in Varanasi to replace 3 bulbs / tube light with LED bulbs.
d) The works under the Energy Conservation Building Code shall be aggressively undertaken.
e) The Uttar Pradesh secretariat shall be developed as energy conservation model.
f) In phase – 1 all the Government buildings and private building with load more than 60 kVA shall be installed with automatic power factor correctors.
g) In phase – 2 buildings having load 10 kVA to 60 kVA shall be required to install automatic power factor correctors.

The Hon'ble Commission has recently passed an Order to implement DELP (DSM based Efficient Lighting Program) of Energy Efficiency Services Limited in 22 districts of the State. The first phase of implementation shall be undertaken by EESL for six districts of Purvanchal Vidyut Vitran Nigam Limited. The discom wise details of the district covered under first phase is as follows:

S No.	Distribution Utility	Districts to be covered
1.	PuVVNL	a. Varanasi b. Allahabad c. Gorakhpur d. Mirzapur e. Azamgarh

S No.	Distribution Utility	Districts to be covered
		f. Basti
2.	MVVNL	g. Lucknow h. Faizabad i. Bareilly j. Raebareli
3.	KESCO	k. Kanpur
4.	DVVNL	l. Agra m. Jhansi n. Aligarh o. Orai p. Etawah q. Kannauj
5.	PVVNL	r. Ghazibad s. Moradabad t. Meerut u. Noida

The energy audit of 20 State Government buildings, have been done and annual energy saving potential has been estimated to be Rs. 5.27 crores with required investment of Rs. 9.61 crores. By partial implementation of recommendations of energy audit reports in only nine buildings around 0.22 MU per month is being saved with monthly cost savings of around Rs. 12.77 Lakh.

2.4. OPERATIONAL PERFORMANCE

Operational parameters and performance provide a basis for determining the financial viability and strategies for the company. Some of the operational performance parameters have been analysed in this section.

The Energy input for the discom has increased from 12,537 MU's in FY 2011-12 to 18972 MU's in FY 2016-17, vis-a-vis the sales have increased from 9,233 MU's in FY 2011-12 to 14,759 MU's in FY 2016-17, thus resulting in distribution losses in the supply area of Madhyanchal Vidyut Vitrun Nigam Limited, from 26.36% in FY 2011-12 to 22.21% in FY 2016-17.

2.4.1. ENERGY INPUT AND ENERGY SALES

The details of energy input at the Discom periphery and the sales made by the Discoms, along with the Distribution Losses achieved by the Discom, over th past 5 years is shown in the chart below:

Chart 2.4.1-1: Energy Input and Energy Sales (MU's)

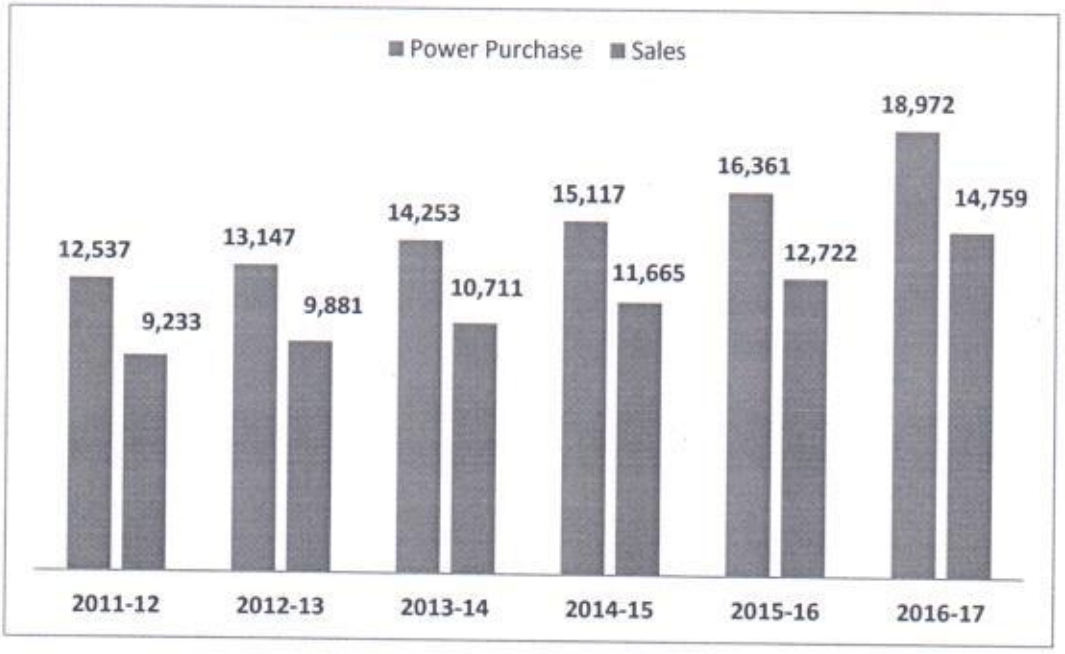
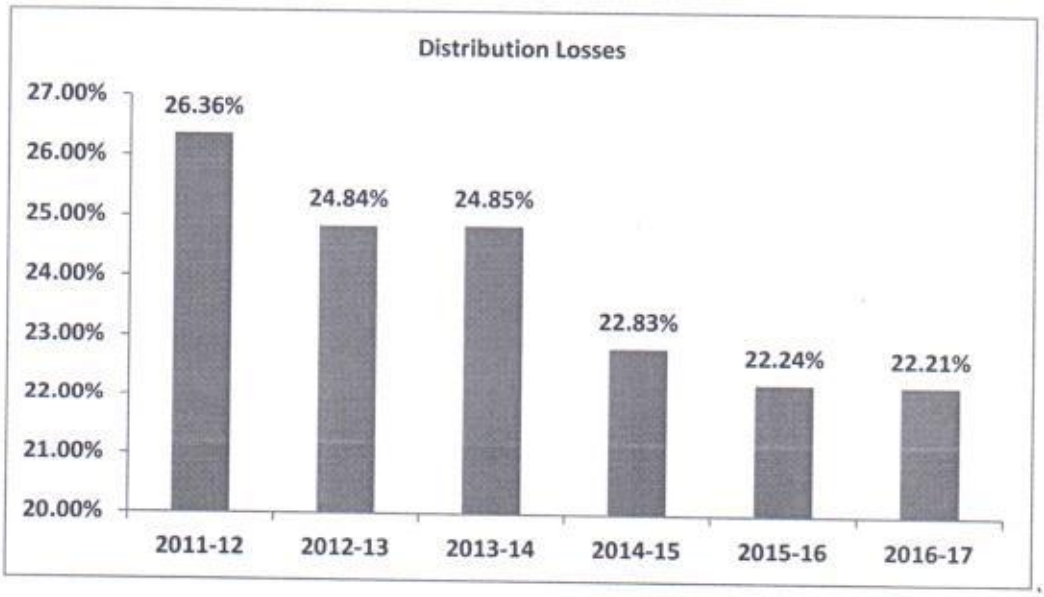


Chart 2.4.1-2: Distribution Losses (%)



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3. REGULATORY FRAMEWORK

3.1. BACKGROUND

As per the Constitution, the power sector in India was the combined responsibility of Central and State Government. Over the years, reforms in Indian power sector have been driven by the Union Government in an endeavour to achieve sustainable growth & improvement in operational efficiencies. One of the hallmarks of this reform Agenda is the Electricity Act, 2003 (hereinafter referred as EA, 2003 or simply the "Act" unless specified otherwise).

The Electricity Act 2003 attempts to induce competition in electricity sector for creating an environment conducive to supply of good quality of electricity to all categories of consumers at affordable/reasonable prices. The access to electricity markets for captive generators, open access participants and parallel licensees has led to evolution of multi buyer market mechanism. Adequate investment in Intra-state and Inter-state transmission infrastructure would also be required for supporting power generation. This vibrant power market would facilitate competitive merchant power plants to be set up pursuant to the promotional policies like mega power plants etc, and incentives offered by the Government such as availability of state specific resources like land, water, rebate in local taxes, etc.

3.2. ENABLING PROVISIONS IN ELECTRICITY ACT, 2003

The Government of India has notified the Electricity Act, 2003 with effect from 10th June 2003 which requires the State Governments to initiate major changes in the Industry Structure and Operations of the state power sector. The broad objectives of the Electricity Act, 2003 as incorporated in its preamble is to consolidate the laws relating to generation, transmission, distribution, trading and use of electricity and for taking measures conducive to development of electricity industry through way of reforms and restructuring, promoting competition therein, protecting interest of consumers and supply of electricity to all areas, rationalisation of electricity tariff, ensuring transparent policies regarding subsidies, promotion of efficient and environmentally benign policies, constitution of Central Electricity Authority, Regulatory Commissions and establishment of Appellate Tribunal and for matters connected therewith or incidental thereto.

It has introduced a number of innovative concepts like de-licensing of generation, power trading, Open Access, Appellate Tribunal, etc., and special provisions for the rural areas. The Act has made it mandatory for all the States to restructure their SEBs.

The major provisions of the Electricity Act 2003 related to Distribution are:

- As per Section 3 of the Electricity Act 2003, the CEA has been entrusted with the responsibility of preparing the National Electricity Plan in accordance with the National Electricity Policy and notify such plans once in five years.
- Preparation, publication and notification of National Electricity Plan by the Central Electricity Authority. (Section 4)

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- Duty to supply on request: This provision very clearly indicates that it shall be the duty of the licensee to supply electricity to the premises of the applicant within 30 days from the date of application. (Section 43)
- Power to recover charges for supply of electricity in accordance with the methods and principles laid down by the State Commission.(Section 45)
- Electricity Supply Code- This section empowers the State Commission to specify the ES code for effective operation of supply, billing , disconnection, restoration of supply etc. (Section 50)
- Provisions relating to safety and electricity supply (Section 53)
- Provisions relating to Disconnection of supply (Section 56)
- Use of meters – this provision makes it very clear that no licensee shall supply electricity except through installation of a correct meter (Section 55)
- Specific provision for disconnection of supply in default of payment. However, the sections clearly says such disconnection can be made only after giving a 15 days clear notice to the consumer. Subsection (2) under this section also specifies a limitation of two years for recovery of dues (Section 56)
- Consumer protection - Provisions under this section says that appropriate standards of performance shall be determined by the Commission. Failure to adhere to the standards, the licensee becomes liable for penalty or prosecution besides providing compensation to the consumer. (Section 57)
- Provides for establishment of consumer grievance redressal forum by the licensee as per the guidelines issued by the Commission. (Section 42 (5))
- Provides for establishment of Ombudsman for redressal of grievances not properly addressed by consumer grievance redressal forums (Section 42(6))
- Provides for assessing unauthorized use of electricity by the assessing officer. Under the explanation, Assessing officers are defined as " An Officer of State Government , Board or licensee as the case may be, designated as such by the State Government" (Section 126)
- Provides for constitution of appellate authority to hear appeals on the assessment by the assessing officers (Section 127)

The Act has created a conducive environment for investments in all segments of the industry, both for public sector and private sector, by removing barrier to entry in different segments.

Functions as specified in the Act are:

- Distribution;
- Planning & co-ordination of distribution system;
- Development of efficient and economical distribution lines and sub-station for efficient transmitting of power to the consumers;

  Providing non-discriminatory open access to the system

3.3. NATIONAL ELECTRICITY POLICY

The National Electricity Policy was notified by GoI as per provisions of the Act on February 12, 2005. This Policy aims at accelerated development of the power sector, providing supply of electricity to all

areas and protecting interests of consumers and other stakeholders keeping in view availability of energy resources, technology available to exploit these resources, economics of generation using different resources and energy security issues.

The main objectives of the Policy were:

7. Access to Electricity Available for all households.
8. Supply of Reliable and Quality Power of specified standards in an efficient manner and at reasonable rates.
9. Financial Turnaround and Commercial Viability of Electricity Sector.
10. Protection of consumer interests.

The National Electricity Policy lays down the approach for developing Rural Electrification distribution backbone and village electrification to achieve the target of completing household electrification. The policy also envisages financial support in terms of capital subsidy to States for rural electrification and special preference weaker sections for rural electrification.

The Policy notes that in view of the required magnitude of the expansion of the sector, a sizeable part of the investment requirement will need to be brought in from the private sector. In keeping with this, it specifies that special mechanisms would be created to encourage private investment in the distribution sector so that sufficient investments are made for achieving the objective of demand to be fully met by 2012.

The National Electricity Policy notified on 12th February, 2005 inter-alia states that –

"5.4.1 Distribution is the most critical segment of the electricity business chain. The real challenge of reforms in the power sector lies in efficient management of the distribution sector.

5.4.2 The Act provides for a robust regulatory framework for distribution licensees to safeguard consumer interests.

5.4.3 For achieving efficiency gains proper restructuring of distribution utilities is essential. Adequate transition financing support would also be necessary for these utilities.

5.4.4 Conducive business environment in terms of adequate returns and suitable transitional model with predetermined improvements in efficiency parameters in distribution business would be necessary for facilitating funding and attracting investments in distribution. Multi-Year Tariff (MYT) framework is an important structural incentive to minimize risks for utilities and consumers, promote efficiency and rapid reduction of system losses. It would serve public interest through economic efficiency and improved service quality.

5.4.6 A time-bound programme should be drawn up by the State Electricity Regulatory Commissions (SERC) for segregation of technical and commercial losses through energy audits.

5.4.10 Modern information technology systems may be implemented by the utilities on a priority basis, after considering cost and benefits, to facilitate creation of network information and customer data base which will help in management of load, improvement in quality, detection of theft and tampering, customer information and prompt and correct billing and collection .

5.4.12 SCADA and data management systems are useful for efficient working of Distribution Systems. A time bound programme for implementation of SCADA and data management system

should be obtained from Distribution Licensees and approved by the SERCs keeping in view the techno economic considerations. Efforts should be made to install substation automation equipment in a phased manner."

The policy also emphasises on higher efficiency levels of generating plants through renovation and modernization, transmission capacity to have redundancy level and margins as per international standards, adequate transitional financial support for reforming power utilities, encouragement for private sector participation in distribution, putting in place independent third party meter testing arrangement, adoption of IT system for ensuring correct billing, speedy implementation of stringent measures against theft of electricity, emphasis on augmentation of R&D base, energy conservation measures, appropriate tariff structure for managing the peak load, development of training infrastructure in regulation, trading and power market, providing boost to renewable and non-conventional energy sources, and necessary regulations and early appointment of Ombudsman for redressal of consumers grievances.

3.4. NATIONAL TARIFF POLICY

Some of Distribution related provisions of National Tariff Policy which have implication with regard to the National Electricity Plan are:

- Supply of reliable and quality power of specified standards in an efficient manner and at reasonable rates is one of the main objectives of the National Electricity Policy.
- The State Commission should determine and notify the standards of performance of licensees with respect to quality, continuity and reliability of service for all consumers. It is desirable that the Forum of Regulators determines the basic framework on service standards.
- A suitable transition framework could be provided for the licensees to reach the desired levels of service as quickly as possible. Penalties may be imposed on licensees in accordance with section 57 of the Act for failure to meet the standards.
- Making the distribution segment of the industry efficient and solvent is the key to success of power sector reforms and provision of services of specified standards. Therefore, the Regulatory Commissions need to strike the right balance between the requirements of the commercial viability of distribution licensees and consumer interests.
- Loss making utilities need to be transformed into profitable ventures which can raise necessary resources from the capital markets to provide services of international standards to enable India to achieve its full growth potential.
- Efficiency in operations should be encouraged. Gains of efficient operations with reference to normative parameters should be appropriately shared between consumers and licensees.
- Appropriate Commission should mandate Distribution Licensee to undertake load forecasting every year and to publish and submit to the Commission their short, medium and long-term power procurement plans to meet the load.
- The State Regulatory Commission will devise a specific trajectory so that 24 hours supply of adequate and uninterrupted power can be ensured to all categories of consumers by 2021-22 or earlier depending upon the prevailing situation in the State.

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- Micro-grids supplying renewable energy are being set up in such areas where the grid has not reached or where adequate power is not available in the grid. Investment involved in setting up of such micro grids is substantial.
- Implementation of Multi-Year Tariff (MYT) framework
- All power purchase costs need to be considered legitimate unless it is established that the merit order principle has been violated or power has been purchased at unreasonable rates.
- The reduction of Aggregate Technical & Commercial (AT&C) losses needs to be brought about but not by denying revenues required for power purchase for 24 hours supply and necessary and reasonable O&M and investment for system up gradation.
- Consumers, particularly those who are ready to pay a tariff which reflects efficient costs have the right to get uninterrupted 24 hours supply of quality power.

3.5. SERC REGULATIONS

Regulations were enacted by the Regulatory Commission in compliance with the provisions of the EA 2003 and as guided by the National Tariff Policy and National Electricity Policy. Some of the key regulations which were enacted by the Uttar Pradesh Electricity Regulatory Commission in regard to the Distribution Utilities are outlined below:

Table 3.1: Regulations

S.No.	Name of the Regulation
1.	Uttar Pradesh Electricity Supply Code – 2005
2.	Uttar Pradesh Electricity Regulatory Commission (Multi Year Distribution Tariff) Regulations, 2014
3.	U.P. Electricity Regulatory Commission (Terms and Conditions for Determination of Distribution Tariff) Regulation-2006
4.	Uttar Pradesh Electricity Regulatory Commission (Terms and Conditions for Open Access) Regulations, 2004
5.	Uttar Pradesh Electricity Regulatory Commission (Fees and Fines) Regulations, 2010
6.	Uttar Pradesh Electricity Regulatory Commission (Procedure, Terms & Conditions for payment of Fee and Charges to State Load Dispatch Centre and other related provisions) Regulations, 2004

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4. OPERATIONAL PLAN

MVVNL has prepared the Business/Operational Plan taking into consideration all the factors which would affect the operations of the company. It is submitted that the Business plan being a dynamic document may need to be updated at periodic intervals taking into account the changes in the internal and external environment and these changes would be intimated to the State Commission from time to time. The operational plans include the estimates of each capital expenditure scheme of MVVNL from FY 2017-18 to FY 2019-20.

The thrust of the capital investment plan is to achieve aggressive loss reduction through technology intervention, process and efficiency improvement while maintaining reliable distribution system and quality of supply to consumer.

Possible benefits can also include reducing dependency on expensive imports of fuel, reducing energy cost, and reducing harmful emissions to the environment. Finally, DSM has a major role to play in deferring high investments in generation, transmission and distribution networks. Thus DSM applied to electricity systems provides significant economic, reliability and environmental benefits. Opportunities for reducing energy demand are numerous in all sectors and many are low-cost, or even no cost, items that most enterprises or individuals could adopt in the short term.

Large investments have been planned in order to reduce T&D losses and to maintain reliable supply. In past the desired results could not be obtained due to severe fund constraints. To achieve the desired objective an aggressive investment plan has been envisaged. While in most of the schemes the objective is to strengthen/up-grade the distribution system, some scheme will also help in reducing AT&C losses, the full benefit of the capital expenditure incurred in respect to the reduction of AT&C losses will however accrue over a period of next few years. The proposed expenditure plan has been aimed with following objective:

- Strengthening and refurbishment of system to improve the reliability of supply.
- Undertaking system improvement to meet the demand growth.
- For reducing the distribution losses.
- Carry out automation and other improvement work to enhance customer service.
- Undertake investment to cater social need such as electrification in left over area of villages.
- Carry out customer deposit work.

The various schemes under which the capital expenditure programs are envisaged are detailed below:

a) Rural Feeder Separation: The Discoms have undertaken rural feeder separation programme to ensure seamless 14 hour supply to the agriculture sector.

b) R-APDRP –

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Ministry of Power, Govt. of India, has launched the Restructured Accelerated Power Development and Reforms Programme (R-APDRP) in the XI Five year Plan. Power Finance Corporation Limited (PFC) has been designated by GoI as the Nodal Agency for the programme. The programme spans from data acquisition at distribution level till monitoring of results of steps taken to provide an IT backbone and strengthening of the Electricity Distribution system across the Country under the programme.

Part-A of the scheme includes the project for establishment of base line data and IT application for energy accounting /auditing and IT based consumer service centre. Part-B shall include regular distribution strengthening projects. The activities covered under each part are as follows:

Part -A of the scheme essentially covers the application of information technology in distribution utilities across the country. The scheme shall involve implementation of IT modules for data acquisition, new connections/disconnection, energy accounting & audit, Overloading and unbalancing of Distribution Transformer, network analysis management, Maintenance management, Asset management, MIS, metering, billing, collection etc. The programme also encompasses implementation of SCADA/DMS, GIS based Consumer Indexing & Asset mapping etc. This entire exercise is being aimed to establish Base line Data collection system for the distribution utilities through which they would be able to capture AT&C losses in a precise manner without manual intervention and also to plan & implement corrective measures in Part B

Part-B of the scheme covers system strengthening, improvement and augmentation of distribution system. This involves:-

- Identification of high loss areas
- Preparation of investment plans for identified areas
- Implementation of plan
- Monitoring of Losses

c) Laying of Aerial Bunch Conductors – Replacement of the overhead bare conductors by aerial bunch conductors, which are less theft prone. Unauthorized consumption of electricity is the most important area of concern for the petitioner. The major component of losses in distribution is commercial losses, which is primarily due to theft. In order to reduce the same the existing over head lines are envisaged to be replaced by Arial Bunched Conductors (ABC) which is less prone to theft.

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4-A, गोखले मार्ग, लखनऊ

d) Construction of new and enhancement of capacity of existing 33kV/11kV substations to meet the increased load demand and ensuring reliable supply, prevention of frequent failures due to overloading and reduction of technical losses.

e) Addition of Distribution Transformers vi. Replacement of worn-out poles and installation of new poles. vii. Installation of new meters including double metering of big ticket consumers viii. Electrification of balance villages under the RGGVY scheme ix. Energisation of Private Tubewells with power efficient pumps x. Electrification works under Dr. Ambedkar Gram Sabha Vikas Yojana under which the majras of the Gram Sabha are electrified. xi. Distribution Automation: It is envisaged that 33kVand 11kV feeders shall be automated through distribution SCADA system in phases to monitor automatically the operation of feeders for over loading of feeders, tripping etc.

f) Together with the feeder separation program, installation of HVDS systems and upgrading of distribution system would result in energy efficiency improvement, commercial loss reduction and associated revenue increase for the distribution companies.

g) Rural Electrification Program- RGGVY contemplates electrification of villages and strengthening the existing network in the rural areas to achieve universal access to electricity for all households. Under this scheme following work is performed:

- Electrification of un-electrified hamlets
- Strengthening of Distribution system under RGGVY for providing electricity to all BPL household
- Electrification of villages electrified as per CEA
- Conversion of villages/hamlets electrified from LT mains to HVDS
- Providing electricity to all rural households including free connection to BPL households
- Strengthening of Rural electricity Distribution backbone
- Electrification of remote villages (Stand alone)

Under RGGVY, program central government provides a grant of 90% of the project cost for each scheme of village electrification and the balance 10% of the fund is provided by the State Government. However, the GoUP provides entire fund required for schemes under the RGGVY programme in the form of equity to the DisCom.

h) Metering of Consumer: Large number of meters is required for providing new connections as well as for replacement of defective meters for effective energy accounting. At present large section of the consumers are not correctly metered due to defective metering. This needs immediate replacement. Presently the Petitioner is releasing all the new connections with meters. In addition to investment on replacement and installation of meters, investment in

respect of installation of 3-phase meters and investment in respect of double metering of high value consumers is being undertaken in the current year and is also projected in the ensuing year. The Petitioner hereby that it has proposed a comprehensive metering plan for its entire consumer base and targets the same to be executed by FY 2019.

i) A large part of the distribution network is very old and needs major overhauling or replacement. Petitioner has identified some major assets that are in dire need of replacement. Major items covered under the requirement of replacement are poles, overhead conductors, wires, and switchgears. This is important for reducing losses and in reduction of occurrence of accidents

j) Apart from replacement of the old and dilapidated assets there are ongoing requirement of network and infrastructure augmentation to cater to the load growth occurring due to regular increase in load in existing set-up as well as due to large-scale electrification of rural areas. Also, there is a significant requirement of improving the systems and processes of the distribution business of the petitioner to achieve better efficiency of operations, e.g. billing accuracy and procedure, material and financial management etc. Therefore the petitioner has also planned to invest significantly in IT systems for achieving such objectives.

k) With implementation of various Demand Side Management (DSM) and Energy Efficiency measures in various sectors such as agriculture, municipalities, buildings, domestic, industries a considerable quantum of electricity can be saved. The DSM has been traditionally seen as a means of reducing peak electricity demand. In fact, by reducing the overall load on an electricity network, DSM has various beneficial effects, including mitigating electrical system emergencies, reducing the number of blackouts and increasing system reliability. Scope of various activities under different sectors to take DSM measures are summarized as follows:

Area	Activities
Municipal Sector	(i) Lighting (ii) Pumping (iii) PF Correction
Agricultural Sector	(i) Lighting (ii) Pumping
Government Buildings	(i) Air Conditioning (ii) Lighting (iii) PF Correction
Multistory Complexes	(i) Energy Efficient Building Construction
Commercial Buildings	(i) Lighting

Area	Activities
	(ii) PF Correction
Industries	(i) Energy Efficient Appliances (ii) PF Correction
Promotion of Solar Power	(i) For all sectors
Reduction of T&D Losses	(i) On Substations (ii) Distribution Network
Efficiency Improvements in Thermal Power Stations	(i) All State Generating Units

4.1. PROPOSED CAPITAL EXPENDITURE FOR FY 2017-18 TO 2019-20

Regulation 23A of the MYT Distribution Tariff Regulations, 2014 provides for consideration of capital expenditure for the purpose of determination of ARR for the Control period. In line with the regulations, the Petitioner has projected the capital expenditure during the control period on account of each of the schemes to be executed. Further the Petitioner by way of this Petition is seeking Hon'ble Commission approval for the schemes for which the capital expenditure has been proposed for more than Rs. 10 crore. Further the financing plan for each of the capex scheme proposed by the Petitioner for the Control period has been detailed in the succeeding sections. Also the Petitioner has projected the capital expenditure to be done from the deposit works received as consumer contribution towards cost of capital asset. The procedure prescribed by the MYT Distribution Regulations towards claiming the capital investment plan has been strictly complied in the current Petition. The physical and financial progress of the ongoing and new capex schemes has also been provided in the MYT Business Plan.

The Discom is in the process of strengthening its Distribution Network to meet the load growth requirement of Uttar Pradesh. The outlay in the current year is mostly against ongoing works considering physical progress of those schemes. For new schemes pre-project activities are initiated like feasibility study, financial sanction from BOD and ETF. Where tenders are issued and evaluated based on the financial sanction, the work orders are placed for project executions. On commencement of project execution, schemes are shifted from the database of new schemes to ongoing schemes during a quarterly project review. The following table summarises the physical targets during 2017-20 period:

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Table 4.1-1: Physical Targets for the Plan Period FY 2017-18 to 2019-20

S No	Details of Works	Unit	2017-18 Physical Target	2018-19 Physical Target	2019-20 Physical Target
A	**Business Plan**				
1	Construction of 33/11 KV S/S	Nos.	15	15	16
2	Enhancement of 33/11 KV S/S	Nos.	30	35	40
3	Construction of 33 KV Lines	KM	600	600	630
4	Strengthening of 33 KV Line	KM	150	160	150
5	Construction of 11/0.4 KV S/S	Nos.	4000	4000	4000
6	Enhancement of 11/0.4 KV	Nos.	6000	6000	6100
7	Construction and bifurcation of 11 KV Lines	KM	500	500	500
8	Strengthening of 11 KV Line	KM	500	550	600
9	Replacement of Damage 11 KV switch gear	Nos.	80	90	100
10	Construction of LT Lines	KM	315	315	320
11	Replacement of Jar jar Conductor	KM	810	790	805
12	Replacement of Damage Poles	Nos.	2800	2600	2500
13	Works of the fencing/earthing of T/F	Nos.	500	550	600
14	Metering of Distribution Transformer	Nos.	5000	5000	5000
15	ABC works	KM	200	200	200
16	Guarding of 33/11 KV Lines	KM	100	100	100
17	Installation of meters for reducing of commercial losses	Nos.	2000000	2000000	1000000
18	Double metering of consumer	Nos.	400	400	450
19	Construction of workshop	Nos.	1	1	1
20	Strengthening of workshop	Nos.	3	3	4
21	Construction of pole unit	Nos.	0	0	1
22	Other work/Civil Work	Nos.	10	10	10
23	Installation of Capacitor Bank	Nos.	10	10	10
B	**Vyapar Vikash Nidhi**				
1	Construction of 33/11 KV S/S	Nos.	6	6	6
2	Enhancement Capacity of 33/11 KV S/S	Nos.	12	12	12
3	33 KV Underground Cable work	KM	160	180	180
4	Construction of 11/0.4 KV S/S	Nos.	200	250	300
5	Enhancement Capacity of 11/0.4 KV S/S	Nos.	300	325	350
6	11 KV Underground Cable work	KM	100	125	150
7	LT Underground Cable work	KM	27	28	32
8	11 KV switch gear	Nos.	50	50	50
9	ABC works	KM	266	265	275

4.2. ONGOING AND NEW CAPITAL WORKS

Ongoing and New Capital Works record has been consolidated under different head of capital expenditure wherein the capital expenditure funds are sanctioned including Business Plan, Vypar Vikas Nidhi, PTW, Dr. Ram Manohar Lohiya, R-APDRP - Part B Scada, DDUGJY, IPDS, Under Ground Caballing and IPDS. The Ongoing work has been shown in the table given below. The table below provides detailed breakup of each of the scheme along with the Physical Target and Proposed Capital Expenditure.

Table 4.2-1: Ongoing Capital Expenditure Works

(in Rs. Crore)

S No	Details of Works	Total
A	**Business Plan**	
1	Construction of 33/11 KV S/S	104.34
2	Enhancement of 33/11 KV S/S	24.26
3	Construction of 33 KV Lines	5.73
4	Strengthening of 33 KV Line	2.63
5	Construction of 11/0.4 KV S/S	10.75
6	Enhancement of 11/0.4 KV	18.03
7	Construction and bifurcation of 11 KV Lines	13.69
8	Strengthening of 11 KV Line	8.16
9	Replacement of Damage 11 KV switch gear	6.14
10	Construction of LT Lines	6.91
11	Replacement of Jarjar Conductor	14.22
12	Replacement of Damage Poles	1.23
13	Works of the fencing/earthing of T/F	0.37
14	Metering of Distribution Transformer	2.19
15	ABC works	4.83
16	Guarding of 33/11 KV Lines	0.20
17	Installation of meters for reducing of commercial losses	4.39
18	Double metering of consumer	0.04
19	Construction of workshop	2.30
20	Strengthening of workshop	1.20
21	Construction of pole unit	0.00
22	Civil works of Residential and non Residential Building	2.19
23	Replacement of damage Capacitor	0.00
24	Other work	1.21
	Total	**235.00**
B	**Vyapar Vikash Nidhi**	
1	Construction of 33/11 KV S/S	62.26
2	Enhancement Capacity of 33/11 KV S/S	11.93
3	33 KV Underground Cable work	1.86
4	Construction of 11/0.4 KV S/S	16.86
5	Enhancement Capacity of 11/0.4 KV S/S	9.06
6	11 KV Underground Cable work	1.18
7	LT Underground Cable work	0.31
8	11 KV switch gear	6.38
9	ABC works	10.17
	Total	**120.00**
C	Dr. Ram Manohar Lohiya	12.45
D	P.T.W.	68.00
E	DDUGJY	492.49
F	IPDS	288.00
G	Others	371.64
	RGGVY	412.55
	Deposit Works	280.02
	Total Capital Expenditure	**2280.15**

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Table 4.2-2: New Capital Expenditure Works Proposed for FY 2017-18

S No	Details of Works	Unit	Physical Target	Total (Rs. Crore)
A	**Business Plan**			
1	Construction of 33/11 KV S/S	Nos.	15.00	75.00
2	Enhancement of 33/11 KV S/S	Nos.	30.00	24.00
3	Construction of 33 KV Lines	KM	600.00	66.00
4	Strengthening of 33 KV Line	KM	150.00	7.50
5	Construction of 11/0.4 KV S/S	Nos.	4,000.00	100.00
6	Enhancement of 11/0.4 KV	Nos.	6,000.00	90.00
7	Construction and bifurcation of 11 KV Lines	KM	500.00	20.00
8	Strengthening of 11 KV Line	KM	500.00	7.50
9	Replacement of Damage 11 KV switch gear	Nos.	80.00	3.20
10	Construction of LT Lines	KM	315.00	6.00
11	Replacement of Jarjar Conductor	KM	810.00	16.00
12	Replacement of Damage Poles	Nos.	2,800.00	2.10
13	Works of the fencing/earthing of T/F	Nos.	500.00	2.50
14	Metering of Distribution Transformer	Nos.	5,000.00	5.00
15	ABC works	KM	200.00	6.00
16	Guarding of 33/11 KV Lines	KM	100.00	3.00
17	Installation of meters for reducing of commercial losses	Nos.	2,000,000.00	500.00
18	Double metering of consumer	Nos.	400.00	1.00
19	Construction of workshop	Nos.	1.00	0.40
20	Strengthening of workshop	Nos.	3.00	1.00
21	Construction of pole unit	Nos.	-	-
22	Other Work	Nos.	10.00	5.00
23	Installation of Capacitor Bank	Nos.	10.00	1.00
Total				**942.20**
B	**Vyapar Vikash Nidhi**			
1	Construction of 33/11 KV S/S	Nos.	6.00	30.00
2	Enhancement Capacity of 33/11 KV S/S	Nos.	12.00	19.60
3	33 KV Underground Cable work	KM	160.00	80.00
4	Construction of 11/0.4 KV S/S	Nos.	200.00	10.00
5	Enhancement Capacity of 11/0.4 KV S/S	Nos.	300.00	9.00
6	11 KV Underground Cable work	KM	100.00	15.00
7	LT Underground Cable work	KM	27.00	0.41
8	11 KV switch gear	Nos.	50.00	2.00
9	ABC works	KM	266.00	13.30
	Total			**179.31**
C	Dr. Ram Manohar Lohiya			9.67
D	P.T.W.			68.00
E	DDUGJY			738.74
F	IPDS			432.00
G	Others			44.43
	RGGVY			-
	Deposit Works			338.01
	Total Capital Expenditure			**2,752.36**

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Table 4.2-3: New Capital Expenditure Works Proposed for FY 2018-19

S No	Details of Works		Physical Target	Total (Rs. Crore)
A	**Business Plan**			
1	Construction of 33/11 KV S/S	Nos.	15	75.00
2	Enhancement of 33/11 KV S/S	Nos.	35	30.00
3	Construction of 33 KV Lines	KM	600	66.00
4	Strengthening of 33 KV Line	KM	160	8.00
5	Construction of 11/0.4 KV S/S	Nos.	4,000	100.00
6	Enhancement of 11/0.4 KV	Nos.	6,000	90.00
7	Construction and bifurcation of 11 KV Lines	KM	500	20.00
8	Strengthening of 11 KV Line	KM	550	8.00
9	Replacement of Damage 11 KV switch gear	Nos.	90	3.60
10	Construction of LT Lines	KM	315	3.30
11	Replacement of Jarjar Conductor	KM	790	15.30
12	Replacement of Damage Poles	Nos.	2,600	2.10
13	Works of the fencing/earthing of T/F	Nos.	550	2.75
14	Metering of Distribution Transformer	Nos.	5,000	5.00
15	ABC works	KM	200	10.00
16	Guarding of 33/11 KV Lines	KM	100	3.00
17	Installation of meters for reducing of commercial losses	Nos.	2,000,000	500.00
18	Double metering of consumer	Nos.	400	1.00
19	Construction of workshop	Nos.	1	0.40
20	Strengthening of workshop	Nos.	3	1.00
21	Construction of pole unit	Nos.	-	-
22	Other work/Civil Works	Nos.	10	5.00
23	Installation of Capacitor Bank	Nos.	10	1.00
Total				**950.45**
B	**Vyapar Vikash Nidhi**		-	
1	Construction of 33/11 KV S/S	Nos.	6	30.00
2	Enhancement Capacity of 33/11 KV S/S	Nos.	12	9.60
3	33 KV Underground Cable work	KM	180	90.00
4	Construction of 11/0.4 KV S/S	Nos.	250	12.50
5	Enhancement Capacity of 11/0.4 KV S/S	Nos.	325	9.75
6	11 KV Underground Cable work	KM	125	18.75
7	LT Underground Cable work	KM	28	0.42
8	11 KV switch gear	Nos.	50	2.00
9	ABC works	KM	265	13.25
	Total			**186.27**
C	Dr. Ram Manohar Lohiya			10.00
D	P.T.W.			68.00
E	DDUGJY			-
F	IPDS			-
G	Others			-
H	RGGVY			-
I	Deposit Works			170.06
	Total Capital Expenditure			**1,384.78**

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Table 4.2-4: New Capital Expenditure Works Proposed for FY 2019-20

S No	Details of Works		Physical Target	Total (Rs. Crore)
A	**Business Plan**			
1	Construction of 33/11 KV S/S	Nos.	16	75.00
2	Enhancement of 33/11 KV S/S	Nos.	40	30.00
3	Construction of 33 KV Lines	KM	630	66.00
4	Strengthening of 33 KV Line	KM	150	8.00
5	Construction of 11/0.4 KV S/S	Nos.	4000	100.00
6	Enhancement of 11/0.4 KV	Nos.	6100	90.00
7	Construction and bifurcation of 11 KV Lines	KM	500	20.00
8	Strengthening of 11 KV Line	KM	600	8.00
9	Replacement of Damage 11 KV switch gear	Nos.	100	3.60
10	Construction of LT Lines	KM	320	3.30
11	Replacement of Jarjar Conductor	KM	805	15.30
12	Replacement of Damage Poles	Nos.	2500	2.10
13	Works of the fencing/earthing of T/F	Nos.	600	2.75
14	Metering of Distribution Transformer	Nos.	5000	5.00
15	ABC works	KM	200	10.00
16	Guarding of 33/11 KV Lines	KM	100	3.00
17	Installation of meters for reducing of commercial losses	Nos.	1000000	500.00
18	Double metering of consumer	Nos.	450	1.00
19	Construction of workshop	Nos.	1	0.40
20	Strengthening of workshop	Nos.	4	1.00
21	Construction of pole unit	Nos.	1	1.00
22	Other work/Civil Work	Nos.	10	5.00
23	Installation of Capacitor Bank	Nos.	10	1.00
	Total		**0**	**951.45**
B	**Vyapar Vikash Nidhi**			
1	Construction of 33/11 KV S/S		6	30.00
2	Enhancement Capacity of 33/11 KV S/S		12	9.60
3	33 KV Underground Cable work		180	90.00
4	Construction of 11/0.4 KV S/S		300	12.50
5	Enhancement Capacity of 11/0.4 KV S/S		350	9.75
6	11 KV Underground Cable work		150	18.75
7	LT Underground Cable work		32	0.42
8	11 KV switch gear		50	2.00
9	ABC works		275	13.25
	Total			**186.27**
C	Dr. Ram Manohar Lohiya			
D	P.T.W.			68.00
E	DDUGJY			-
F	IPDS			-
G	Others			-
	RGGVY			-
	Deposit Works			168.80
	Total Capital Expenditure			**1,374.52**

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5. YEAR WISE CAPITAL INVESTMENT AND FINANCING PLAN

The capital expenditure planned under Business Plan, Vypaar Vikas Nidhi and RML schemes is done through complete funding of State budget, however for the purpose of this Business Plan, the projected capital expenditure is considered to be funded in a debt equity mix of 70:30, being in line with the MYT Distribution Tariff Regulations and established philosophy of the Hon'ble Commission. The Petitioner has considered a normative gearing of 70:30. Considering this approach, 70% of the capital expenditure undertaken in any year has been considered to be financed through loan and balance 30% has been considered to be financed through equity contributions. The portion of capital expenditure financed through consumer contribution, capital subsidies and grants has been separated as the depreciation and interest thereon would not be charged to the beneficiaries. The year wise phasing of the capital investment is provided in the table below.

Table 5-1: Year wise Phasing of the Capital Investment

(Figures in Rs Crore)

FY	Loans	Equity / Internal Accruals	Deposit Works	Total
2016-17	1400.09	600.04	280.02	**2280.15**
2017-18	1,690.05	724.31	338.01	**2,752.36**
2018-19	850.30	364.42	170.06	**1,384.78**
2019-20	844.00	361.72	168.80	**1,374.52**

Note: The figures provided are in respect of capital investment proposed to be undertaken in each financial year. In case of certain schemes, the capital expenditure as well as the capitalisation would spill over beyond the plan period. Similarly at the start of the plan period, there are opening CWIP balance in respect of certain schemes which would get completed in the plan period.

Other assumptions for capitalisation of the aforementioned Capital expenditure plan is detailed as below:

The assumptions used for projecting GFA and CWIP are as follows:

- 40% the opening CWIP and 40% of investment made during the year, expenses capitalized & interest capitalized (40% of total investment) has been assumed to get capitalized during the year.
- Investment through "deposit work" has been taken for capital formation. However depreciation thereon has not been charged to the ARR in line with the policy adopted by Hon'ble Commission in its previous Tariff Orders.
- The capital investment plan (net of deposit works) has been projected to be funded in the ratio of 70:30 (debt to equity).

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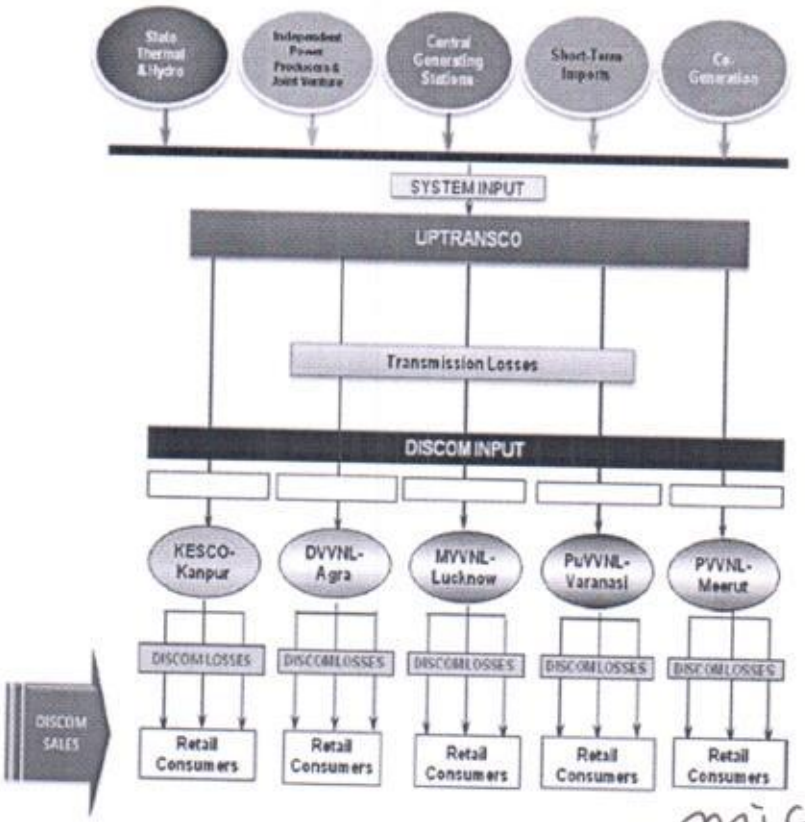
6. LOAD FORECAST AND REVENUE ASSESSMENT

The Petitioner has projected the category-wise load growth based on the CAGR of the last eight years data and considering factors like available population data, expected conversion of unauthorized connections, connected load factor and specific growth factors. While projecting the data for past years, wherever the data was incongruous such incongruity was ignored while projecting the load growth for the ensuing years. The forecast projects the specific consumption level (consumption per customer) appropriate for each customer category. This forecast is based on expected growth relationships to income and price, the effect of Demand Side Management and the impact of hours of service. The specific consumption level along with the number of customers in each category gives the sales figure for that particular sub-category. The final detailed calculations estimate the connected load by tariff category. The division level forecasts are consolidated and losses are added to the sales estimates to determine energy generation requirements.

The schematic diagram for Energy flow in state of UP is depicted in figure below:

Table 6-1: The schematic diagram for Energy flow in state of UP



6.1 DETAILED METHODOLOGY FOR LOAD FORECAST

6.1.1 OVERVIEW

Sales and Load Forecasting involves firstly, building robust and accurate sales forecast and load forecast models that are able to predict energy sales within reasonable margins of error and secondly, application of the models so prepared to provide long term forecast of energy sales to various consumer sub categories (based on tariffs applied) and the total energy requirement to meet the demand.

6.1.2 METHODOLOGY

The following methodology was followed for Sales and Load Forecasting:

Consumer category wise commercial data of each discom comprising Number of consumers/ Connected load (kW)/ Energy sales (billed energy): kWh, split between rural/urban consumers was tabulated for the past years. Further as the provisional billing determinants were available for FY 2016-17, the same has been considered while computing the multiplying factor for the purpose of projection of demand, connected load and no. of consumers for the MYT period. Also it would be imperative to mention that since all UPPCL discoms have been moving aggressively towards the target of 24x7 Power for All by Oct, 2018 and accordingly in the last financial year the supply hours for rural and domestic consumer have also been increased as a first step. Thus wherever the billing determinants in terms of Connected Load per Consumer, Consumption per connected Load, Consumer per consumer, etc being considered as a CAGR for previous year is low in comparison to the no. so derived for FY 2016-17, the Petitioner for the purpose of MYT Projections has considered the FY 2016-17 as the norms for determining the billing determinants for the MYT period.

3 years' (2013-14 to 2015-16) compounded annual growth rate (CAGR) was determined for the following parameters consumer sub-category wise:

- Number of consumers
- Connected load: kW
- Energy sales (billed energy): kWh

CAGR for each of three major commercial parameters for 3/5/7/10 years was determined consumer category-wise.

Running hour factor: Load shedding affects different consumer categories differently. Its effect was taken into account through a factor of present running hour supply and projected hour supply.

However, no adjustment on account of load shedding was made in case of the following:

a) Following consumer categories:

- Industrial
- Agricultural (assuming that the water output of agricultural pump sets in the limited hours of supply is enough for meeting the irrigation requirements)
- Railway traction

The Energy Billed was calculated by applying the factor to the remaining consumer categories in all areas. This was done step-wise as follows:

b) Projecting the running hours supply;

c) Obtaining the factor of running hours supply between present supply hours and projected hours supply;

d) Sub-category Energy billed in % tabulated by way of Mahanagar, Commissionary, Districts, Bundelkhand and Rural Area according to the prevailing classification of the Areas; and

Table 6-2: Projected Hours of Supply

Description	2017-18	2018-19	2018-19	2019-20
	Apr-Mar	**Apr-Sep**	**Oct-Mar**	**Apr-Mar**
Mahanagar – M	24:00	24:00	24:00	24:00
District – D	24:00	24:00	24:00	24:00
Commissionary - C	24:00	24:00	24:00	24:00
Rural – R	18:00	18:00	24:00	24:00
Bundelkhand - B	20:00	20:00	24:00	24:00

Demand Side Management - Category wise energy Billed was calculated by applying the DSM factor.

Following three ratios were determined for each set of commercial data of a given consumer category/ sub-category for each year:

e) Energy sales per consumer

f) Connected load per consumer

g) Energy sales/Connected load

Sales Forecasting: LV Consumers – Sub-category-wise

a) Number of consumers:

Adopted appropriate value of CAGR in the following manner:

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- Normally 3 years' CAGR of number of consumers (sub-category wise)was adopted
- Wherever calculated value of 3 years' CAGR of number of consumers seemed unreasonably high or low, the most reasonable calculated value between 5/7/10 years' CAGR was adopted. The adopted value of CAGR was applied across all sub-categories within a given consumer category.
- Applied the CAGR so adopted to determine forecasted values of number of consumers, taking 2016-17 as the base year.

b) Connected load:

Multiplied number of consumers by the highest ratio of connected load per consumer calculated for the last three years to determine consumer sub-category wise connected load forecasts corresponding to forecasted values of number of consumers.

c) Energy Sales:

i. LMV 1 & LMV 10 Consumer categories:

Forecasted value of energy sales for each consumer sub-category was determined by multiplying the number of consumers by the highest value of energy sales per consumer for the last three years. Wherever the highest value of energy sales per consumer was found to be unreasonably high, the second highest value of the above ratio was adopted as the multiplier for determining energy sales corresponding to the forecasted value of number of consumers.

ii. LMV Consumer categories (metered)other than LMV1 & LMV10 consumer categories:

Adopted the highest value of energy sales per kW connected load for a given consumer sub-category for the last three years as the multiplier to obtain forecasted value of energy sales corresponding to the forecasted value of connected load.

iii. LMV: Unmetered consumers (except rural state tube wells):

Forecasted value of energy sales for a given consumer sub-category was obtained by multiplying the forecasted value of connected load by the standard value of energy sales per kW connected load laid down in the norms.

iv. Rural state tube wells:

Forecasted value of energy sales was obtained by multiplying the forecasted value of number of consumers by the standard value of energy sales per consumer laid down in the norms as below:

Table 6-3: Consumption Determinant for Un-Metered Consumer

Sr.No	Category of Un-Metered Consumer	Units	Consumption of Energy Per Month
1	Private Tube Well	KWh/KW/Month	183.32
2	Domestic Rural Consumers	KWh/KW/Month	144
3	Rural Commercial Consumers	KWh/KW/ Month	144
4	Rural State Tube Well	KWh/Consumer or Pump/Month	7124.71
5 -A	Street Light - Rural Area	KWh/KW/Month	300
5 -B	Street Light - Urban Area	KWh/KW/Month	360

Sales Forecasting: HV Consumers – Sub-category-wise

a) **Connected Load:**

Forecasted value of connected load for a given sub-category for a given year was determined by applying the 3 years' CAGR of connected load calculated for the particular consumer sub-category, taking 2016-17 as the base year. Wherever the 3 years' CAGR appeared unreasonably high or low, the figure from amongst CAGR of connected load for a given consumer category calculated for 5/7/10 years that seemed most reasonable, was adopted as the CAGR to be used for forecasting. This value of CAGR was applied to all sub-categories comprising a given consumer category.

b) **Number of consumers:**

Forecasted number of consumers corresponding to the forecasted value of connected load for a consumer sub-category in a given year was determined by dividing connected load by the value of connected load per consumer calculated of the preceding year.

c) **Energy sales:**

- Year wise and sub-category wise energy sales forecasts were obtained by multiplying the forecasted value of connected load by the highest ratio of energy sales per kW connected load of the last three years.

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- Year wise and sub-category wise energy sales forecasts were obtained by multiplying the forecasted value of sales MU by the running hour factors.
- Year wise and sub-category wise energy sales forecasts were obtained by multiplying the forecasted value of sales MU by the DSM factors.

6.1.3 CONSUMER ADDITION

Considering the projections as per census, there are 2.89 crore rural households in the state. Out of them, 0.92 crore rural households already exist in UP Discom's records. Further the total no. of consumers for the MVVNL discom as on 31st March, 2017 is 0.44 crore. The State undertook a survey in FY 15 to map habitations having drinking water supply. This survey also captured the status of electrification and accordingly, was considered during finalization of DDUGJY scheme. As per the survey, 0.25 crore households were being served through existing network. Also, under various ongoing rural electrification schemes, about 1.09 crore un-electrified households (or approximately 1,62,000 habitations) were targeted to be served through additional network being created.

Thus there are around 1.12 crore un-electrified rural households in the State. Also around 0.15 crore unelectrified households also exists in urban areas. State also envisages to target the electrification of these remaining 0.15 crore urban households by September 2018 after undertaking appropriate augmentation/ extension of the existing network of urban areas. In addition to the above, Discoms also have a challenging task to regularize and meter around 84 Lakh electricity consumers. Accordingly, the Disocms under the Power for All agreements has formulated a plan for adding the aforementioned consumers in the Distribution Network of Discoms by FY 19. The Year-wise, Quarter-wise Targets for each discom for adding these consumers as considered in the MYT Projections is tabulated below:

Table 6-4: Discom wise Consumer Addition Plan

	FY 18				FY 19				TOTAL
Particulars	**Q1**	**Q2**	**Q3**	**Q4**	**Q1**	**Q2**	**Q3**	**Q4**	
DVVNL									
Connecting the unconnected (Urban)	**15061**	**15061**	**15061**	**15061**	**60245**	**60245**	**60245**	**60245**	**301226**
Connecting the	248146	248146	248146	248146	301393	301393	301393	301393	2198154

	FY 18				FY 19				TOTAL
Particulars	**Q1**	**Q2**	**Q3**	**Q4**	**Q1**	**Q2**	**Q3**	**Q4**	
unconnected (Rural)									
Regularisation on electrified households	312108	312108	312108	312108	78027	78027	78027	78027	1560541
PuVVNl									
Connecting the unconnected (Urban)	**15061**	**15061**	**15061**	**15061**	**60245**	**60245**	**60245**	**60245**	**301226**
Connecting the unconnected (Rural)	147816	147816	147816	147816	67504	67504	67504	67504	861282
Regularisation on electrified households	236505	236505	236505	236505	59126	59126	59126	59126	1182525
PVVNL									
Connecting the unconnected (Urban)	**25102**	**25102**	**25102**	**25102**	**100409**	**100409**	**100409**	**100409**	**502043**
Connecting the unconnected (Rural)	459059	459059	459059	459059	571949	571949	571949	571949	4124033
Regularisation on electrified households	570891	570891	570891	570891	142723	142723	142723	142723	2854454
MVVNL									
Connecting the unconnected (Urban)	**19078**	**19078**	**19078**	**19078**	**76311**	**76311**	**76311**	**76311**	**381553**
Connecting the unconnected (Rural)	455168	455168	455168	455168	551637	551637	551637	551637	4027219
Regularisation on electrified households	573035	573035	573035	573035	143259	143259	143259	143259	2865175

Particulars	FY 18				FY 19				TOTAL
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	
	Total								
Connecting the unconnected (Urban)	**74302**	**74302**	**74302**	**74302**	**297210**	**297210**	**297210**	**297210**	**1486048**
Connecting the unconnected (Rural)	1310189	1310189	1310189	1310189	1492483	1492483	1492483	1492483	11210688
Regularisation on electrified households	1692539	1692539	1692539	1692539	423135	423135	423135	423135	8462695

The above consumer addition plan has, in line with the 24x7 Power for All agreement signed between the Government of India and State Govt. Further, for the purpose of the energy estimation during the control period, the Consumer addition has been considered to be spread over the year and accordingly the addition in connected load and energy sales has been worked out for each individual discom.

6.1.4 100% METERING OF CONSUMERS

There is a large proportion of electrified domestic registered consumers who haven't installed meters. As per FY 17 data, unmetered domestic consumers account for around 40% (70 Lakh) of the total domestic registered consumers. The unmetered consumption is one of the reason behind the high loss levels in the state and hence it is of utmost importance. Though the Discoms have already submitted a 100% metering plan before the Hon'ble Commission, however since now the category and sub-category wise provisional no. of consumers till March, 2017 is available, the Discoms is under process of submitting a revised 100% metering plan to the Hon'ble Commission. It is planned to achieve 100% metering at all levels (consumers/DTs/feeders) to facilitate energy audit and extensive use of technology to improve efficiency and facilitate near real time monitoring and interventions to reduce AT&C losses. The Discoms have planned to get all the consumers metered by FY 2019. Accordingly, the Year-wise, Discom wise 100% metering plan is tabulated below:

Table 6-5: Discom wise Metering Plan

Particulars	FY 2017-18	FY 2018-19	Total
DVVNL	7,48,366	2161	7,50,527
PuVVNL	27,70,830	2,09,877	29,80,707

Particulars	FY 2017-18	FY 2018-19	Total
PVVNL	8,85,108	10,59,077	19,44,185
MVVNL	7,66,155	5,87,313	13,53,468
Total	**51,70,459**	**18,58,427**	**70,28,886**

6.1.5 PROJECTED GROWTH IN NO. OF CONSUMER

The table below represents the % growth in no. of consumer for the Discom considering the consumer addition plan provided in sections above:

Table 6-6: % Growth in No. Of Consumers

Consumer Category	MVVNL -% Growth of Consumers		
	FY 2018	FY 2019	FY 2020
LMV-1: Domestic Light, Fan & Power	**57%**	**62%**	**17%**
Dom: Rural Schedule	*209%*	*46%*	*0%*
Dom: Supply at Single Point for Bulk Load	*10%*	*10%*	*10%*
Other Metered Domestic Consumers	*3%*	*11%*	*0%*
Life Line Consumers/BPL	*23%*	*42%*	*14%*
LMV-2:Non Domestic Light,Fan & Power	**9%**	**9%**	**10%**
Non Dom: Rural Schedule	*5%*	*6%*	*7%*
Non Dom: Private Advertising/SignPost/SignBoard/GlowSign	*0%*	*0%*	*0%*
Non Dom: Other Metered Non-Domestic Supply	*10%*	*10%*	*10%*
LMV-3: Public Lamps	**4%**	**4%**	**1%**
LMV-4: Light, fan & Power for Institutions	**8%**	**8%**	**8%**
Public Institution	*8%*	*8%*	*8%*
Private Institution	*5%*	*5%*	*5%*
LMV-5: Private Tube Wells/ Pumping Sets	**1%**	**9%**	**23%**
Rural	*1%*	*9%*	*24%*
Urban	*5%*	*5%*	*5%*
LMV 6: Small and Medium Power upto 100 HP	**9%**	**9%**	**10%**
LMV-7: Public Water Works	**5%**	**5%**	**5%**
LMV-8: State Tube Wells & Pump Canals upto 100 HP	**1%**	**4%**	**10%**
LMV-9: Temporary Supply	**0%**	**0%**	**0%**
LMV-10: Departmental Employees	**6%**	**6%**	**7%**
HV-1: Non-Industrial Bulk Loads	**7%**	**7%**	**7%**
HV-2: Large and Heavy Power above 100 BHP	**5%**	**5%**	**5%**
HV-3: Railway Traction	**14%**	**14%**	**14%**
HV-4: Lift Irrigation & P. Canals above 100 BHP	**12%**	**12%**	**12%**
GRAND TOTAL	**50%**	**57%**	**17%**

6.1.6 PROJECTIONS FOR INPUT ENERGY

a. % Distribution Losses:

Approximate distribution losses figures in % for the MYT period are provided in the following table:

Table 6-7: Distribution Losses Trajectory

Discom	2015-16	2016-17	2017-18	2018-19	2019-20
Meerut	18.66%	18.55%	18.18%	15.20%	11.80%
Agra	27.79%	28.44%	20.07%	16.25%	12.10%
Lucknow	22.24%	22.21%	19.16%	16.09%	11.80%
Varanasi	23.02%	21.63%	19.73%	16.43%	12.20%
KESCO	20.13%	15.60%	15.20%	15.05%	11.74%

b. Transmission Losses:

Intra-state and inter-state transmission losses, to be added to the power delivered at the discoms at their input points to arrive at the energy required at the power plant bus bars, have been taken as 5.41% for FY 2017-18, 5.14% for FY 2018-19 and 4.89% for FY 2019-20.

c. Allocation of Additional Energy:

The difference of Energy Requirement and available at discom level was allocated to all categories except HT, Agriculture and Railway on the basis of existing share in sales.

6.1.7 INPUT ENERGY REQUIREMENT

Input energy requirement was determined from Energy Billed using the following relationship:

Input Energy = Energy Billed ÷ (1-% Technical & Distribution Loss)

Table 6-8: Input Energy Requirement At DisCom Level

Discom	2015-16	2016-17	2017-18	2018-19	2019-20
Meerut	26,926	31,113	36,702	42,735	47,684
Agra	20,418	22,732	25,323	30,268	33,777
Lucknow	16,361	18,972	24,667	31,763	37,652
Varanasi	20,638	23,339	30,793	35,969	40,094
KESCO	3,584	3,686	4,468	4,967	5,321
Total	**87,927**	**99,843**	**121,953**	**145,702**	**164,528**

6.1.8 SALES FORECASTS FOR 2017-18 & 2019-20

The billed energy was required to be worked out on the basis of the availability of energy for the current year and the next year, which are as follows:

Table 6-9: Input Energy Requirement At DisCom Level

Discom	2015-16	2016-17	2017-18	2018-19	2019-20
Meerut	21,903	25,343	30,030	36,240	42,057
Agra	14,743	16,267	20,241	25,350	29,690
Lucknow	12,722	14,759	19,942	26,652	33,209
Varanasi	15,888	18,291	24,717	30,058	35,202
KESCO	2,863	3,111	3,789	4,219	4,696
Total	**68,118**	**77,771**	**98,719**	**122,519**	**144,855**

Table 6-10: Energy Balance

Energy Balance	FY 2015-16	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20
Input Energy Requirement	93,601	107,569	128,908	153,577	172,955
Transmission losses%	6.07%	7.30%	5.41%	5.14%	4.89%
Input Energy Requirement At DisCom Level	**87,927**	**99,843**	**121,928**	**145,677**	**164,503**
Meerut	26,926	31,113	36,702	42,735	47,684
Agra	20,418	22,732	25,323	30,268	33,777
Lucknow	16,361	18,972	24,667	31,763	37,652
Varanasi	20,638	23,339	30,793	35,969	40,094
KESCO	3,584	3,686	4,443	4,942	5,296
Consumer Sales (MU)	**68,118**	**77,771**	**98,694**	**122,494**	**144,830**
Meerut	21,903	25,343	30,030	36,240	42,057
Agra	14,743	16,267	20,241	25,350	29,690
Lucknow	12,722	14,759	19,942	26,652	33,209
Varanasi	15,888	18,291	24,717	30,058	35,202
KESCO	2,863	3,111	3,764	4,194	4,671
Distribution Losses (% of Energy Received)	**22.53%**	**22.11%**	**19.06%**	**15.91%**	**11.96%**
Meerut	18.66%	18.55%	18.18%	15.20%	11.80%
Agra	27.79%	28.44%	20.07%	16.25%	12.10%
Lucknow	22.24%	22.21%	19.16%	16.09%	11.80%

Energy Balance	FY 2015-16	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20
Varanasi	23.02%	21.63%	19.73%	16.43%	12.20%
KESCO	20.13%	15.60%	15.28%	15.13%	11.80%

6.2 SALES FORECAST

The year 2017-18 is expected to see a substantial jump in the total availability of energy at the source power plant bus bars at around 1,28,935 MU when compared to around 1,07,569 MU in 2016-17 for Uttar Pradesh as a whole. The demand of most consumer categories and discoms is presently constrained by availability which falls substantially short of demand. Hence, with increased availability of energy, the projected sales are expected to rise not only on account of natural load growth but also because of easing of supply constraints.

Total availability of energy for 2018-19 is around 1,53,603 MU and for 2019-20 is around 171,858 MU . The projected sales will be impacted by normal load growth and increased hours of supply.

a) LMV Consumers – Sub-category-wise

Adopted appropriate value of CAGR and 3/5/7/10 year's CAGR are as below:

Table 6-11: LMV Consumers Growth Rate

CONSUMER NUMBER – CAGR								
SUPPLY TYPE		CATEGORY		Last 3 Year	Last 5 Years	Last 7 Years	Last 10 Years	Assumed
LMV--1		Rural						
		Urban						
	(A)	Consumer getting supply as per "Rural Schedule"						
		(i)	Un-metered	15%	9%	6%	0%	0%
		(ii)	Metered	35%	19%	25%	0%	0%
	(B)	Supply at Single Point for Bulk Load		29%	20%	-40%	0%	10%
	(C1)	Other Metered Domestic Consumers		-1%	1%	2%	0%	0%
	(C2)	Life Line Consumers/BPL		22%	26%	44%	0%	15%
SUB TOTAL	**DOMESTIC LIGHT FAN & POWER (LMV-1)**			**12%**	**9%**	**8%**	**7%**	**0%**
LMV--2		Rural						
		Urban						
	(A)	Consumer getting supply as per "Rural Schedule"						
		(i)	Un-metered	-3%	-2%	3%	0%	0%
		(ii)	Metered	-3%	14%	0%	0%	8%
	(B)	Private Advertising/Sign Post/Sign Board/Glow Sign/Flex		0%	-100%	-100%	0%	0%
	(C)	Other Metered Non-Domestic Supply		6%	2%	4%	0%	10%
SUB TOTAL	**NON DOMESTIC LIGHT FAN & POWER (LMV-2)**			**4%**	**2%**	**3%**	**3%**	**0%**
LMV--3	A	Rural						
		Urban						
	(A)	Un-metered Supply						
		(i)	Gram Panchyat	-66%	-28%	5%	0%	1%
		(ii)	Nagar Palika & Nagar Panchyat	316%	-12%	-8%	0%	4%

CONSUMER NUMBER – CAGR								
SUPPLY TYPE	CATEGORY			Last 3 Year	Last 5 Years	Last 7 Years	Last 10 Years	Assumed
		(iii)	Nagar Nigam	0%	2%	-32%	0%	1%
	(B)	Metered Supply						
		(i)	Gram Panchyat	0%	-12%	7%	0%	25%
		(ii)	Nagar Palika & Nagar Panchyat	-1%	4%	0%	0%	9%
		(iii)	Nagar Nigam	7%	1%	5%	0%	5%
SUB TOTAL	**PUBLIC LAMPS (LMV-3)**			**-11%**	**-15%**	**-8%**	**-1%**	**0%**
LMV--4	A	Rural						
		Urban						
	B	Rural						
		Urban						
	(A)	Public Institution(4 A)		7%	8%	17%	0%	8%
	(B)	Private Institution(4 B)		6%	-4%	-2%	0%	5%
SUB TOTAL	**LIGHT, FAN & POWER FOR PUBLIC/PRIVATE INSTITUTION (LMV-4)**			**7%**	**6%**	**13%**	**10%**	**0%**
LMV--5		Rural						
		Urban						
	(A)	Rural Schedule						
		(i)	Un metered Supply	5%	5%	4%	0%	4%
		(ii)	Metered Supply	61%	74%	-12%	0%	30%
	(B)	Urban Schedule						
		(i)	Metered Supply	4%	0%	0%	0%	5%
SUB TOTAL	**PRIVATE TUBE WELL/PUMPING SETS (LMV-5)**			**6%**	**5%**	**3%**	**4%**	**0%**
LMV--6		Rural						
		Urban						
	(A)	Small & Medium Power (Power Loom)						
		(i)	Rural Schedule	3%	60%	23%	0%	20%
		(ii)	Urban Schedule	11%	-36%	-17%	0%	5%
	(B)	Small & Medium Power						
		(i)	Rural Schedule	5%	2%	9%	0%	2%
		(ii)	Urban Schedule	-5%	0%	1%	0%	6%
SUB TOTAL	**SMALL & MEDIUM POWER UPTO 100 HP (75) (LMV-6)**			**1%**	**1%**	**5%**	**3%**	**15%**
LMV--7		Rural						
		Urban						
	(A)	Rural Schedule						
		(i)	Jal Nigam	-10%	-11%	-5%	0%	1%
		(ii)	Jal Sansthan	33%	32%	27%	0%	10%
		(iii)	Others (Water Works)	11%	18%	20%	0%	10%
	(B)	Urban Schedule						
		(i)	Jal Nigam	3%	17%	9%	0%	8%
		(ii)	Jal Sansthan	8%	6%	5%	0%	4%
		(iii)	Others (Water Works)	33%	9%	11%	0%	5%
SUB TOTAL	**PUBLIC WATER WORKS(LMV-7)**			**11%**	**7%**	**7%**	**6%**	**0%**
LMV--8		Rural						
		Urban						
	(A)	Metered Supply		12%	-15%	6%	0%	12%
	(B)	Un-metered Supply						
		(i)	STW, Panchayat Raj, WB, I.Duch, P.Canals, LI upto 100 BHP	4%	4%	2%	0%	2%
		(ii)	Laghu Dal Nahar above 100 BHP	-67%	0%	-26%	0%	28%
SUB TOTAL	**STATE TUBE WELLS & PUMPS CANAL UPTO 100 HP(LMV-8)**			**4%**	**2%**	**2%**	**1%**	**0%**
LMV--9		Rural						
		Urban						
	(A)	Metered Supply						
		(i)	Individual Residential Consumers	357%	12%	67%	0%	5%

CONSUMER NUMBER – CAGR								
SUPPLY TYPE	CATEGORY			Last 3 Year	Last 5 Years	Last 7 Years	Last 10 Years	Assumed
		(ii)	Others	0%	0%	-100%	0%	0%
	(B)	Un-metered Supply						
		(i)	Ceremonies	0%	1%	25%	0%	1%
		(ii)	Temporary Shops	0%	0%	-100%	0%	1%
SUB TOTAL	**TEMPORARY SUPPLY (LMV-9)**			**359%**	**11%**	**15%**	**66%**	**0%**
LMV--10	(A)	Serving						
		(i)	Class IV Employees	1%	-6%	-3%	0%	5%
		(ii)	Class III Employees	0%	1%	-7%	0%	2%
		(iii)	Junior Engineers & Equivalent	4%	-39%	-20%	0%	4%
		(iv)	Assistant Engineers & Equivalent	6%	6%	-27%	0%	4%
		(v)	Executive Engineers & Equivalent	1%	-47%	-32%	0%	2%
		(vi)	Deputy General Manager & Equivalent	15%	0%	-17%	0%	2%
		(vii)	CGM/GM & Equivalent posts and above	0%	0%	-61%	0%	0%
	(B)	Total Pensioner & Family Pensioner		3%	12%	16%	0%	8%
SUB TOTAL	**DEPARTMENTAL EMPLOYEES (LMV-10)**			**2%**	**3%**	**4%**	**0%**	**2%**

b) HV Consumers – Sub-category-wise

Adopted appropriate value of CAGR for Load Forecast and 3/5/7/10 year's CAGR are as below:

Table 6-12: HV Consumers Growth Rate

CONSUMER NUMBER - CAGR								
SUPPLY TYPE	CATEGORY			Last 3 Year	Last 5 Years	Last 7 Years	Last 10 Years	Assume
HV--1		Rural						
		Urban						
	(A)	Urban Schedule						
		(i)	For supply at 11kV	7%	0%	0%	0%	17
		(ii)	For supply above 11kV and upto & Including 66kV	-65%	0%	0%	0%	27
		(iii)	For supply above 66kV and upto & Including 132kV	0%	0%	0%	0%	1
		(iv)	For supply above 132kV	0%	0%	0%	0%	1
	(B)	Rural Schedule						
		(i)	For supply at 11kV	-55%	0%	0%	0%	-55
		(ii)	For supply above 11kV and upto & Including 66kV	-100%	0%	0%	0%	10
SUB TOTAL	**NON INDUSTRIAL BULK LOADS (HV-1)**			**5%**	**12%**	**23%**	**0%**	**5**
HV--2		Rural						
		Urban						
	(A)	Urban Schedule						
		(i)	For supply at 11kV	11%				11
		(ii)	For supply above 11kV and upto & Including 66kV	-6%				45
		(iii)	For supply above 66kV and upto	-38%				20

CONSUMER NUMBER - CAGR								
SUPPLY TYPE		CATEGORY		Last 3 Year	Last 5 Years	Last 7 Years	Last 10 Years	Assume
			& Including 132kV					
		(iv)	For supply above 132kV	0%				1%
	(B)	Rural Schedule		0%				0%
		(i)	For supply at 11kV	7%				25%
		(ii)	For supply above 11kV and upto & Including 66kV	-100%				-100%
SUB TOTAL	**LARGE & HEAVY POWER ABOVE 100 BHP (75 kW) (HV-2)**			**8%**	**7%**	**11%**	**11%**	**8%**
HV--3		Rural						
		Urban						
	(A)	For supply at the above 132kV		26%	0%	0%	0%	25%
	(B)	For supply below 132kV		0%				0%
	(C)	For Metro Traction		0%				0%
SUB TOTAL	**RAILWAY TRACTION (HV-3)**			**26%**	**41%**	**36%**	**26%**	**30%**
HV--4		Rural						
		Urban						
	(A)	For supply at 11kV		22%	0%	0%	0%	10%
	(B)	For supply above 11kV and upto 66kV		10%	0%	0%	0%	20%
	(C)	For supply above 66kV and upto 132kV		-100%	0%	0%	0%	0%
SUB TOTAL	**LIFT IRRIGATION & P. CANAL ABOVE 100 BHP (75kW) (HV-4)**			**15%**	**9%**	**8%**	**4%**	**0%**
EXTRA STATE		Rural						
		Urban						
	(A)	EXTRA STATE & OTHERS		0%	0%	0%	0%	0%
SUB TOTAL	**EXTRA STATE CONSUMERS**			**0%**	**0%**	**0%**	**-11%**	**0%**
BULK		Rural						
		Urban						
	(A)	NPCL		0%				0%
	(B)	KESCO		0%				0%
SUB TOTAL	**BULK SUPPLY**			0%				0%
	GRAND TOTAL			**11%**	**8%**	**8%**	**7%**	**11%**

c) LMV Consumer Load

Adopted appropriate value of per Consumer Load of Previous Year -3, Previous Year -2, Previous Year -1 and Base Year for LV Consumer sub category are as below:

Table 6-13: Growth in LMV Consumer Load

Per Consumer Load In KW

SUPPLY TYPE		CATEGORY		Previous Year -3	Previous Year -2	Previous Year-1	Current Year	Assumed
LMV--1		Rural						
		Urban						
	(A)	Consumer getting supply as per "Rural Schedule"						
		(i)	Un-metered	1.396	1.416	1.413	1.233	1.365
		(ii)	Metered	0.874	0.863	0.741	0.832	0.828
	(B)	Supply at Single Point for Bulk Load		906.769	1010.636	975.929	746.844	910.045
	(C1)	Other Metered Domestic Consumers		1.536	1.553	1.592	1.845	1.845
	(C2)	Life Line Consumers/BPL		0.743	0.879	0.912	0.917	0.863
SUB TOTAL	**DOMESTIC LIGHT FAN & POWER (LMV-1)**			**1.386**	**1.383**	**1.391**	**1.349**	**1.377**
LMV--2		Rural						
		Urban						
	(A)	Consumer getting supply as per "Rural Schedule"						
		(i)	Un-metered	1.664	1.661	1.685	1.784	1.698
		(ii)	Metered	2.669	2.750	2.853	3.097	2.842
	(B)	Private Advertising/Sign Post/Sign Board/Glow Sign/Flex		1.648	1.648	1.648	0.000	1.236
	(C)	Other Metered Non-Domestic Supply		2.505	2.492	2.609	2.710	2.579
SUB TOTAL	**NON DOMESTIC LIGHT FAN & POWER (LMV-2)**			**2.426**	**2.417**	**2.536**	**2.677**	**2.514**
LMV--3	A	Rural						
		Urban						
	(A)	Un-metered Supply						
		(i)	Gram Panchyat	9.333	6.176	6.080	33.398	33.398
		(ii)	Nagar Palika & Nagar Panchyat	4.210	4.158	4.226	6.777	13.110
		(iii)	Nagar Nigam	15.666	81.325	144.806	112.364	175.000
	(B)	Metered Supply						
		(i)	Gram Panchyat	12.000	604.800	12.000	156.000	555.000
		(ii)	Nagar Palika & Nagar Panchyat	56.571	95.549	112.012	104.417	126.000
		(iii)	Nagar Nigam	538.462	704.635	729.437	557.585	557.585
SUB TOTAL	**PUBLIC LAMPS (LMV-3)**			**12.186**	**14.286**	**15.530**	**26.046**	**17.012**
LMV--4	A	Rural						
		Urban						
	B	Rural						
		Urban						
	(A)	Public Institution(4 A)		9.505	7.017	6.369	5.660	7.137
	(B)	Private Institution(4 B)		8.188	7.837	11.952	11.031	9.752
SUB TOTAL	**LIGHT, FAN & POWER FOR PUBLIC/PRIVATE INSTITUTION (LMV-4)**			**9.175**	**7.169**	**6.985**	**6.339**	**7.417**
LMV--5		Rural						
		Urban						
	(A)	Rural Schedule						
		(i)	Un metered Supply	4.093	4.147	4.112	4.296	4.162
		(ii)	Metered Supply	3.509	3.129	6.465	3.606	4.178
	(B)	Urban Schedule						
		(i)	Metered Supply	4.237	4.770	4.613	4.780	4.780
SUB TOTAL	**PRIVATE TUBE WELL/PUMPING SETS (LMV-5)**			**4.067**	**4.176**	**4.143**	**4.305**	**4.173**
LMV--6		Rural						
		Urban						
	(A)	Small & Medium Power (Power Loom)						
		(i)	Rural Schedule	8.368	7.152	4.294	4.437	6.063

Per Consumer Load In KW								
SUPPLY TYPE		CATEGORY		Previous Year -3	Previous Year -2	Previous Year-1	Current Year	Assumed
		(ii)	Urban Schedule	8.822	4.537	4.658	6.083	6.025
	(B)	Small & Medium Power						
		(i)	Rural Schedule	7.748	7.113	8.529	7.594	7.746
		(ii)	Urban Schedule	12.703	13.697	12.658	14.246	13.326
SUB TOTAL	**SMALL & MEDIUM POWER UPTO 100 HP (75) (LMV-6)**			**10.058**	**8.573**	**8.882**	**8.746**	**9.065**
LMV--7		Rural						
		Urban						
	(A)	Rural Schedule						
		(i)	Jal Nigam	21.885	27.372	37.908	20.469	26.908
		(ii)	Jal Sansthan	18.468	14.553	17.393	58.991	27.351
		(iii)	Others (Water Works)	23.111	40.424	20.601	24.833	27.242
	(B)	Urban Schedule						
		(i)	Jal Nigam	83.358	69.687	52.340	30.871	59.064
		(ii)	Jal Sansthan	51.657	52.791	57.952	62.409	56.202
		(iii)	Others (Water Works)	32.918	50.673	34.719	22.788	35.274
SUB TOTAL	**PUBLIC WATER WORKS(LMV-7)**			**38.614**	**46.328**	**43.902**	**39.309**	**42.038**
LMV--8		Rural						
		Urban						
	(A)	Metered Supply		17.057	13.575	20.921	9.081	15.159
	(B)	Un-metered Supply						
		(i)	STW, Panchayat Raj, WB, I.Duch, P.Canals, LI upto 100 BHP	13.954	15.108	14.691	13.836	14.398
		(ii)	Laghu Dal Nahar above 100 BHP	88.283	345.800	252.571	352.100	259.689
SUB TOTAL	**STATE TUBE WELLS & PUMPS CANAL UPTO 100 HP(LMV-8)**			**14.509**	**15.291**	**15.198**	**14.345**	**14.836**
LMV--9		Rural						
		Urban						
	(A)	Metered Supply						
		(i)	Individual Residential Consumers	3.102	2.898	3.204	3.759	3.241
		(ii)	Others	0.000	0.000	0.000	0.000	3.200
	(B)	Un-metered Supply						
		(i)	Ceremonies	20.169	20.400	0.000	3.154	10.931
		(ii)	Temporary Shops	-	-	-	-	-
SUB TOTAL	**TEMPORARY SUPPLY (LMV-9)**			**3.528**	**3.154**	**3.204**	**3.753**	**3.410**
LMV--10	(A)	Serving						
		(i)	Class IV Employees	2.378	2.428	2.718	2.868	2.598
		(ii)	Class III Employees	3.557	3.414	3.862	3.323	3.539
		(iii)	Junior Engineers & Equivalent	4.511	4.405	3.575	3.703	4.049
		(iv)	Assistant Engineers & Equivalent	3.887	4.906	5.107	4.773	4.668
		(v)	Executive Engineers & Equivalent	1.846	1.905	1.911	4.370	2.508
		(vi)	Deputy General Manager & Equivalent	4.375	4.250	4.571	4.000	4.299
		(vii)	CGM/GM & Equivalent posts and above	7.000	7.000	7.000	7.000	7.000
	(B)	Total Pensioner & Family Pensioner		3.130	3.671	3.735	2.949	3.371
SUB TOTAL	**DEPARTMENTAL EMPLOYEES (LMV-10)**			**3.138**	**3.481**	**3.554**	**3.023**	**3.299**
HV--1		Rural						
		Urban						
	(A)	Urban Schedule						

Per Consumer Load In KW								
SUPPLY TYPE		CATEGORY		Previous Year -3	Previous Year -2	Previous Year-1	Current Year	Assumed
		(i)	For supply at 11kV	356.867	388.160	383.194	376.642	376.216
		(ii)	For supply above 11kV and upto & Including 66kV	670.444	3230.000	550.929	1935.000	1596.593
		(iii)	For supply above 66kV and upto & Including 132kV	8750.000	114.500	820.500	0.000	2421.250
		(iv)	For supply above 132kV	291.476	0.000	0.000	0.000	72.869
	(B)	Rural Schedule						
		(i)	For supply at 11kV	105.667	0.000	184.333	236.000	131.500
		(ii)	For supply above 11kV and upto & Including 66kV	0.000	212.000	0.000	0.000	53.000
SUB TOTAL	**NON INDUSTRIAL BULK LOADS (HV-1)**			**377.493**	**391.419**	**393.007**	**380.584**	**385.626**
HV--2		Rural						
		Urban						
	(A)	Urban Schedule						
		(i)	For supply at 11kV	318.146	331.858	317.311	322.578	322.473
		(ii)	For supply above 11kV and upto & Including 66kV	1136.710	596.714	896.842	774.099	851.091
		(iii)	For supply above 66kV and upto & Including 132kV	3050.889	1674.440	2697.308	5640.000	3265.659
		(iv)	For supply above 132kV	4500.000	4500.000	4500.000	7833.333	5333.333
	(B)	Rural Schedule		0.000	0.000	0.000	0.000	0.000
		(i)	For supply at 11kV	230.886	204.534	255.697	246.769	234.472
		(ii)	For supply above 11kV and upto & Including 66kV	0.000	0.000	212.000	0.000	53.000
SUB TOTAL	**LARGE & HEAVY POWER ABOVE 100 BHP (75 kW) (HV-2)**			**369.529**	**376.773**	**377.349**	**381.786**	**376.359**
HV--3		Rural						
		Urban						
	(A)	For supply at the above 132kV		325.000	6462.500	5606.250	7638.375	5008.031
	(B)	For supply below 132kV		0.000	0.000	0.000	0.000	0.000
	(C)	For Metro Traction		0.000	0.000	0.000	0.000	0.000
SUB TOTAL	**RAILWAY TRACTION (HV-3)**			**325.000**	**6462.500**	**5606.250**	**7638.375**	**5008.031**
HV--4		Rural						
		Urban						
	(A)	For supply at 11kV		1627.615	713.250	704.917	820.167	966.487
	(B)	For supply above 11kV and upto 66kV		3330.333	2997.750	2450.400	1898.167	2669.163
	(C)	For supply above 66kV and upto 132kV		2250.000	2250.000	2250.000	0.000	1687.500
SUB TOTAL	**LIFT IRRIGATION & P. CANAL ABOVE 100 BHP (75kW) (HV-4)**			**1964.706**	**1341.176**	**1275.611**	**1089.667**	**1417.790**
EXTRA STATE		Rural						
		Urban						
	(A)	EXTRA STATE & OTHERS		5000.000	5000.000	5000.000	5000.000	5000.000
SUB	**EXTRA STATE CONSUMERS**			**5000.000**	**5000.000**	**5000.000**	**5000.000**	**5000.000**

Per Consumer Load In KW								
SUPPLY TYPE		CATEGORY		Previous Year -3	Previous Year -2	Previous Year-1	Current Year	Assumed
TOTAL								
BULK		Rural						
		Urban						
	(A)	NPCL		-	-	-	-	-
	(B)	KESCO		-	-	-	-	-
SUB TOTAL	BULK SUPPLY			-	-	-	-	-
	GRAND TOTAL			2.016	2.031	2.053	1.964	2.016

(अनिल कुमार कोहली)
मुख्य अभि० (वाणिज्य)
मध्यांचलविद्युत
4-A, गोदले मार्ग, लखनऊ

d) ENERGY SALES ASSUMPTION

Adopted Appropriate value of Per capita Consumption Per Consumer, Per Capita Consumption Per KW of previous Year-3, previous Year-2, Previous Year-1 and Base Year and Un-Metered Sales norms are as below:

Table 6-14: Energy Sales Assumption

SUPPLY TYPE	CATEGORY			Per Capita Consumption /Consumer					Per Capita Consumption on Load Basis						
				Previous Year-3	Previous Year-2	Previous Year-1	Current Year	Average	Previous Year-3	Previous Year-2	Previous Year-1	Current Year	Average	Unmetered As per Norms	Assumed
LMV--1		Rural													
		Urban													
	(A)	Consumer getting supply as per "Rural Schedule"													
		(i)	Un-metered	1,048	1,124	1,104	1,446	1,181	750	794	781	1,173	875	1,728	1,728
		(ii)	Metered	540	789	866	535	683	618	915	1,168	643	836	-	836
	(B)	Supply at Single Point for Bulk Load		3,981,769	4,454,545	3,655,536	1,582,467	3,418,579	4,391	4,408	3,746	2,119	3,666	-	3,666
	(C1)	Other Metered Domestic Consumers		1,705	1,968	1,958	2,522	2,038	1,110	1,268	1,230	1,367	1,244	-	1,244
	(C2)	Life Line Consumers/BPL		601	705	805	1,336	862	809	802	882	1,457	988	-	988
SUB TOTAL	**DOMESTIC LIGHT FAN & POWER (LMV-1)**			**1,340**	**1,493**	**1,502**	**1,677**	**1,503**	**967**	**1,080**	**1,080**	**1,243**	**1,092**	-	-
LMV--2		Rural													
		Urban													
	(A)	Consumer getting supply as per "Rural Schedule"													
		(i)	Un-metered	1,282	1,308	1,434	2,078	1,526	771	787	851	1,165	894	1,728	1,728
		(ii)	Metered	3,598	4,011	2,873	3,569	3,513	1,348	1,458	1,007	1,153	1,241	-	1,241
	(B)	Private Advertising/Sign Post/Sign Board/Glow Sign/Flex		1,240	1,003	234	-	619	752	609	142	-	376	-	376
	(C)	Other Metered Non-Domestic Supply		3,070	3,235	3,450	3,909	3,416	1,225	1,298	1,322	1,443	1,322	-	1,322
SUB TOTAL	**NON DOMESTIC LIGHT FAN & POWER (LMV-2)**			**2,911**	**3,062**	**3,156**	**3,760**	**3,222**	**1,200**	**1,267**	**1,244**	**1,405**	**1,279**	-	-
LMV--3	A	Rural		-	-	-	-	-	-	-	-	-	-	-	-
		Urban		-	-	-	-	-	-	-	-	-	-	-	-
	(A)	Un-metered Supply		-	-	-	-	-	-	-	-	-	-	-	-
		(i)	Gram Panchyat	21,319	17,049	22,240	81,971	35,645	2,284	2,760	3,658	2,454	2,789	3,600	3,600
		(ii)	Nagar Palika & Nagar Panchyat	13,377	14,229	14,915	15,948	14,617	3,177	3,422	3,530	2,353	3,121	4,320	4,320
		(iii)	Nagar Nigam	30,582	500,000	242,944	377,614	287,785	1,952	6,148	1,678	3,361	3,285	4,320	4,320
	(B)	Metered Supply		-	-	-	-	-	-	-	-	-	-	-	-
		(i)	Gram Panchyat	636,500	800,000	1,321,500	569,333	831,833	53,042	1,323	110,125	3,650	42,035	-	42,035
		(ii)	Nagar Palika & Nagar Panchyat	279,961	231,707	417,612	403,323	333,151	4,949	2,425	3,728	3,863	3,741	-	3,741
		(iii)	Nagar Nigam	2,551,635	2,809,524	2,531,155	2,227,815	2,530,032	4,739	3,987	3,470	3,995	4,048	-	4,048
SUB TOTAL	**PUBLIC LAMPS (LMV-3)**			**43,757**	**51,150**	**53,638**	**86,899**	**58,861**	**3,591**	**3,580**	**3,454**	**3,336**	**3,490**	-	-
LMV--4	A	Rural		-	-	-	-	-	-	-	-	-	-	-	-
		Urban		-	-	-	-	-	-	-	-	-	-	-	-

SUPPLY TYPE	CATEGORY			Per Capita Consumption /Consumer					Per Capita Consumption on Load Basis						
				Previous Year-3	Previous Year -2	Previous Year-1	Current Year	Average	Previous Year-3	Previous Year-2	Previous Year-1	Current Year	Average	Unmetered As per Norms	Assumed
	B	Rural		-	-	-	-	-	-	-	-	-	-	-	-
		Urban		-	-	-	-	-	-	-	-	-	-	-	-
	(A)	Public Institution(4 A)		25,064	19,906	17,036	12,276	18,570	2,637	2,837	2,675	2,169	2,579	-	2,579
	(B)	Private Institution(4 B)		17,050	20,027	28,787	21,740	21,901	2,082	2,555	2,409	1,971	2,254	-	2,254
SUB TOTAL	**LIGHT, FAN & POWER FOR PUBLIC/PRIVATE INSTITUTION (LMV-4)**			**23,057**	**19,928**	**18,332**	**13,473**	**18,697**	**2,513**	**2,780**	**2,625**	**2,125**	**2,511**	-	-
LMV--5		Rural		-	-	-	-	-	-	-	-	-	-	-	-
		Urban		-	-	-	-	-	-	-	-	-	-	-	-
	(A)	Rural Schedule													
		(i)	Un metered Supply	3,658	3,970	3,901	5,387	4,229	894	957	949	1,254	1,013	2,200	2,200
		(ii)	Metered Supply	9,438	6,623	4,745	4,082	6,222	2,689	2,116	734	1,132	1,668	-	1,668
	(B)	Urban Schedule													
		(i)	Metered Supply	16,211	14,948	17,319	16,990	16,367	3,826	3,134	3,754	3,555	3,567	-	4,152
SUB TOTAL	**PRIVATE TUBE WELL/PUMPING SETS (LMV-5)**			**4,453**	**4,520**	**4,536**	**5,844**	**4,838**	**1,095**	**1,082**	**1,095**	**1,358**	**1,157**	-	-
LMV--6		Rural													
		Urban													
	(A)	Small & Medium Power (Power Loom)													
		(i)	Rural Schedule	7,630	9,530	7,132	1,753	6,511	912	1,332	1,661	395	1,075	-	1,075
		(ii)	Urban Schedule	20,203	12,843	41,238	81,359	38,911	2,290	2,830	8,853	13,375	6,837	-	6,837
	(B)	Small & Medium Power													
		(i)	Rural Schedule	5,859	7,581	7,624	7,106	7,043	756	1,066	894	936	913	-	913
		(ii)	Urban Schedule	17,201	20,051	20,785	24,247	20,571	1,354	1,464	1,642	1,702	1,540	-	1,540
SUB TOTAL	**SMALL & MEDIUM POWER UPTO 100 HP (75) (LMV-6)**			**12,465**	**13,374**	**13,784**	**14,571**	**13,549**	**1,239**	**1,560**	**1,552**	**1,666**	**1,504**	-	-
LMV--7		Rural													
		Urban													
	(A)	Rural Schedule													
		(i)	Jal Nigam	43,088	84,507	124,728	109,341	90,416	1,969	3,087	3,290	5,342	3,422	-	3,422
		(ii)	Jal Sansthan	64,818	78,947	569,821	191,158	226,186	3,510	5,425	32,762	3,240	11,234	-	11,234
		(iii)	Others (Water Works)	138,235	122,302	151,320	119,286	132,786	5,981	3,025	7,345	4,804	5,289	-	5,289
	(B)	Urban Schedule													
		(i)	Jal Nigam	228,519	216,418	203,255	108,072	189,066	2,741	3,106	3,883	3,501	3,308	-	3,308
		(ii)	Jal Sansthan	181,306	237,062	291,772	293,887	251,006	3,510	4,491	5,035	4,709	4,436	-	4,436
		(iii)	Others (Water Works)	131,334	212,871	224,844	103,755	168,201	3,990	4,201	6,476	4,553	4,805	-	4,805
SUB TOTAL	**PUBLIC WATER WORKS(LMV-7)**			**132,302**	**183,942**	**224,556**	**177,054**	**179,464**	**3,426**	**3,970**	**5,115**	**4,504**	**4,254**	-	**4,254**
LMV--8		Rural													
		Urban													
	(A)	Metered Supply		69,206	38,716	377,261	152,000	159,296	4,057	2,852	18,032	16,738	18,032	-	18,032
	(B)	Un-metered Supply		-	-	-	-	-	-	-	-	-	-	-	-
		(i)	STW, Panchayat Raj, WB, I.Duch, P.Canals, LI upto 100 BHP	59,036	89,198	90,157	83,858	80,562	4,231	5,904	6,137	6,061	5,583	85,497	85,497
		(ii)	Laghu Dal Nahar above 100 BHP	374,348	1,800,000	1,551,071	1,928,500	1,413,480	4,240	5,205	6,141	5,477	5,266	85,497	85,497
SUB TOTAL	**STATE TUBE WELLS & PUMPS CANAL UPTO 100 HP(LMV-8)**			**61,220**	**85,245**	**98,844**	**89,521**	**83,708**	**4,219**	**5,575**	**6,504**	**6,240**	**5,635**	-	**5,635**
LMV--9		Rural													

SUPPLY TYPE	CATEGORY			Per Capita Consumption /Consumer					Per Capita Consumption on Load Basis						
				Previous Year-3	Previous Year-2	Previous Year-1	Current Year	Average	Previous Year-3	Previous Year-2	Previous Year-1	Current Year	Average	Unmetered As per Norms	Assumed
		Urban													
	(A)	Metered Supply													
		(i)	Individual Residential Consumers	5,711	6,520	9,969	11,031	8,308	1,841	2,250	3,112	2,935	2,534	-	2,534
		(ii)	Others	-	-	-	-	-	-	-	-	-	-	-	3,422
	(B)	Un-metered Supply													
		(i)	Ceremonies	15,932	40,000	-	11,654	16,897	790	1,961	-	3,695	1,611	-	1,611
		(ii)	Temporary Shops	-	-	-	-	-	-	-	-	-	-	-	-
SUB TOTAL	**TEMPORARY SUPPLY (LMV-9)**			**5,967**	**7,009**	**10,001**	**11,038**	**8,504**	**1,691**	**2,223**	**3,122**	**2,941**	**2,494**	**-**	**2,494**
LMV--10	(A)	Serving													
		(i)	Class IV Employees	2,641	2,902	3,241	3,573	3,089	1,111	1,195	1,192	1,246	1,186	-	3,089
		(ii)	Class III Employees	3,389	2,665	2,649	3,662	3,091	953	781	686	1,102	880	-	3,091
		(iii)	Junior Engineers & Equivalent	8,242	5,032	30,696	6,039	12,502	1,827	1,142	8,586	1,631	3,297	-	12,502
		(iv)	Assistant Engineers & Equivalent	10,773	10,417	5,748	7,403	8,585	2,772	2,123	1,125	1,551	1,893	-	8,585
		(v)	Executive Engineers & Equivalent	3,721	1,698	2,174	6,696	3,572	2,016	891	1,138	1,532	1,394	-	3,572
		(vi)	Deputy General Manager & Equivalent	21,250	-	7,286	6,125	8,665	4,857	-	1,594	1,531	1,996	-	8,665
		(vii)	CGM/GM & Equivalent posts and above	20,000	-	103,000	536,000	164,750	2,857	-	14,714	76,571	23,536	-	164,750
	(B)	Total Pensioner & Family Pensioner		7,386	7,865	7,854	6,517	7,405	2,360	2,142	2,103	2,210	2,204	-	7,405
SUB TOTAL	**DEPARTMENTAL EMPLOYEES (LMV-10)**			**5,509**	**5,646**	**6,072**	**5,761**	**5,747**	**1,755**	**1,622**	**1,709**	**1,906**	**1,748**	**-**	**1,748**
HV--1		Rural													
		Urban													
	(A)	Urban Schedule													
		(i)	For supply at 11kV	748,194	785,714	744,610	702,569	745,272	2,097	2,024	1,943	1,865	1,982	-	1,982
		(ii)	For supply above 11kV and upto & Including 66kV	1,296,556	14,000,000	1,148,143	3,263,500	4,927,050	1,934	4,334	2,084	1,687	2,510	-	2,510
		(iii)	For supply above 66kV and upto & Including 132kV	336,000	1,500,000	1,452,000	-	822,000	38	13,100	1,770	-	3,727	-	3,727
		(iv)	For supply above 132kV	-	-	-	-	-	-	-	-	-	-	-	-
	(B)	Rural Schedule		-	-	-	-	#DIV/0!	-	-	-	-	-	-	-
		(i)	For supply at 11kV	1,504,333	-	97,000	206,000	451,833	14,237	-	526	873	3,909	-	3,909
		(ii)	For supply above 11kV and upto & Including 66kV	-	90,000	-	-	22,500	-	425	-	-	106	-	106
SUB TOTAL	**NON INDUSTRIAL BULK LOADS (HV-1)**			**751,491**	**819,689**	**762,116**	**708,719**	**760,504**	**1,991**	**2,094**	**1,939**	**1,862**	**1,972**	**-**	**1,972**
HV--2		Rural													
		Urban													
	(A)	Urban Schedule													
		(i)	For supply at 11kV	950,390	909,900	882,370	850,316	898,244	2,987	2,742	2,781	2,636	2,786	-	2,786
		(ii)	For supply above 11kV and upto & Including	5,277,935	1,908,163	2,953,697	2,069,234	3,052,258	4,643	3,198	3,293	2,673	3,452	-	3,452

SUPPLY TYPE	CATEGORY			Per Capita Consumption /Consumer					Per Capita Consumption on Load Basis						
				Previous Year-3	Previous Year -2	Previous Year-1	Current Year	Average	Previous Year-3	Previous Year-2	Previous Year-1	Current Year	Average	Unmetered As per Norms	Assumed
			66kV												
		(iii)	For supply above 66kV and upto & Including 132kV	3,600,667	2,640,000	5,537,923	11,742,200	5,880,197	1,180	1,577	2,053	2,082	1,723	-	1,723
		(iv)	For supply above 132kV	13,885,000	16,000,000	5,345,000	5,580,333	10,202,583	3,086	3,556	1,188	712	2,135	-	2,135
	(B)	Rural Schedule		-	-	-	-	-	-	-	-	-	-	-	-
		(i)	For supply at 11kV	370,143	417,476	421,835	528,098	434,388	1,603	2,041	1,650	2,140	1,859	-	1,859
		(ii)	For supply above 11kV and upto & Including 66kV	-	-	3,978,000	-	994,500	-	-	18,764	-	4,691	-	4,691
SUB TOTAL	**LARGE & HEAVY POWER ABOVE 100 BHP (75 kW) (HV-2)**			**1,090,463**	**1,003,552**	**1,027,850**	**956,076**	**1,019,485**	**2,951**	**2,664**	**2,724**	**2,504**	**2,711**	**-**	**2,711**
HV--3		Rural													
		Urban													
	(A)	For supply at the above 132kV		30,067,000	15,500,000	8,425,500	14,422,875	17,103,844	92,514	2,398	1,503	1,888	1,930	-	1,930
	(B)	For supply below 132kV		-	-	-	-	-	-	-	-	-	-	-	-
	(C)	For Metro Traction		-	-	-	-	-	-	-	-	-	-	-	-
SUB TOTAL	**RAILWAY TRACTION (HV-3)**			30,067,000	15,500,000	8,625,500	14,885,750	17,269,563	92,514	2,398	1,539	1,949	24,600	-	24,600
HV--4		Rural													
		Urban													
	(A)	For supply at 11kV		1,993,462	3,000,000	3,034,750	3,802,556	2,957,692	1,225	4,206	4,305	4,636	4,383	-	6,631
	(B)	For supply above 11kV and upto 66kV		19,052,000	15,000,000	13,076,000	9,686,333	14,203,583	5,721	5,004	5,336	5,103	5,291	-	5,291
	(C)	For supply above 66kV and upto 132kV		9,449,000	14,000,000	14,957,000	-	9,601,500	4,200	6,222	6,648	-	4,267	-	4,267
SUB TOTAL	**LIFT IRRIGATION & P. CANAL ABOVE 100 BHP (75kW) (HV-4)**			**5,442,353**	**6,470,588**	**6,486,333**	**5,315,292**	**5,928,642**	**2,770**	**4,825**	**5,085**	**4,878**	**4,389**	**-**	**4,389**
EXTRA STATE		Rural													
		Urban													
	(A)	EXTRA STATE & OTHERS		50,520,000	43,000,000	59,052,000	64,612,000	54,296,000	10,104	8,600	11,810	12,922	12,922	-	12,922
SUB TOTAL	**EXTRA STATE CONSUMERS**			50,520,000	43,000,000	59,052,000	64,612,000	54,296,000	10,104	8,600	11,810	12,922	10,859	-	10,859
BULK		Rural													
		Urban													
	(A)	NPCL		-	-	-	-	-	-	-	-	-	-	-	-
	(B)	KESCO		-	-	-	-	-	-	-	-	-	-	-	-
SUB TOTAL	**BULK SUPPLY**			-	-	-	-	-	-	-	-	-	-	-	-
	GRAND TOTAL			**2,748**	**3,042**	**3,122**	**3,122**	**3,008**	**1,363**	**1,498**	**1,521**	**1,589**	**1,493**	**-**	**1,493**

(अनिल कुमार कोहली)
मुख्य अभि० (वाणिज्य)
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e) CONSUMER SUB-CATEGORY WISE PROJECTIONS

Projections for Nos of Consumer sub-category wise for the two years have been made as given below:

Table 6-15: Sub- category wise projections of Number of consumer

Lucknow Discom				No of Consumer				
SUPPLY TYPE		CATEGORY		2015-16	2016-17	2017-18	2018-19	2019-20
LMV--1		Rural						
		Urban						
	(A)	Consumer getting supply as per "Rural Schedule"						
		(i)	Un-metered	1,172,384	1,163,267	833,496	251,863	-
		(ii)	Metered	617,998	808,710	3,194,887	7,222,718	8,864,373
	(B)	Supply at Single Point for Bulk Load		45	53	58	64	71
	(C1)	Other Metered Domestic Consumers		1,261,517	1,388,773	1,407,851	1,503,240	1,579,551
	(C2)	Life Line Consumers/BPL		474,637	449,468	535,966	711,750	894,824
SUB TOTAL	**DOMESTIC LIGHT FAN & POWER (LMV-1)**			**3,526,581**	**3,810,271**	**5,972,259**	**9,689,635**	**11,338,818**
LMV--2		Rural						
		Urban						
	(A)	Consumer getting supply as per "Rural Schedule"						
		(i)	Un-metered	19,567	15,735	11,274	3,407	-
		(ii)	Metered	22,506	31,572	38,559	49,510	56,878
	(B)	Private Advertising/Sign Post/Sign Board/Glow Sign/Flex		-	-	-	-	-
	(C)	Other Metered Non-Domestic Supply		245,259	265,203	291,723	320,896	352,985
SUB TOTAL	**NON DOMESTIC LIGHT FAN & POWER (LMV-2)**			**287,332**	**312,510**	**341,556**	**373,813**	**409,863**
LMV--3	A	Rural						
		Urban						
	(A)	Un-metered Supply						
		(i)	Gram Panchyat	420	409	413	417	-
		(ii)	Nagar Palika & Nagar Panchyat	2,561	1,560	1,622	1,687	-
		(iii)	Nagar Nigam	44	55	56	56	-
	(B)	Metered Supply						
		(i)	Gram Panchyat	3	3	4	5	423
		(ii)	Nagar Palika & Nagar Panchyat	96	95	104	113	1810
		(iii)	Nagar Nigam	65	77	81	85	145
SUB TOTAL	**PUBLIC LAMPS (LMV-3)**			**3,189**	**2,199**	**2,279**	**2,363**	**2,379**
LMV--4	A	Rural						
		Urban						
	B	Rural						
		Urban						
	(A)	Public Institution(4 A)		17,302	17,845	19,273	20,814	22,480
	(B)	Private Institution(4 B)		2,505	2,712	2,848	2,990	3,139
SUB TOTAL	**LIGHT, FAN & POWER FOR PUBLIC/PRIVATE INSTITUTION (LMV-4)**			**19,807**	**20,557**	**22,120**	**23,804**	**25,619**
LMV--5		Rural						
		Urban						
	(A)	Rural Schedule						

Lucknow Discom				No of Consumer				
SUPPLY TYPE		CATEGORY		2015-16	2016-17	2017-18	2018-19	2019-20
		(i)	Un metered Supply	151,780	162,724	116,594	35,232	-
		(ii)	Metered Supply	2,767	3,334	50,464	146,965	226,287
	(B)	Urban Schedule						
		(i)	Metered Supply	6,658	6,797	7,137	7,494	7,868
SUB TOTAL	**PRIVATE TUBE WELL/PUMPING SETS (LMV-5)**			**161,205**	**172,855**	**174,195**	**189,691**	**234,155**
LMV--6		Rural						
		Urban						
	(A)	Small & Medium Power (Power Loom)						
		(i)	Rural Schedule	10,370	10,343	12,412	14,894	17,873
		(ii)	Urban Schedule	1,696	1,602	1,682	1,766	1,855
	(B)	Small & Medium Power						
		(i)	Rural Schedule	12,308	12,884	13,142	13,405	13,673
		(ii)	Urban Schedule	11,525	11,631	12,329	13,069	13,853
SUB TOTAL	**SMALL & MEDIUM POWER UPTO 100 HP (75) (LMV-6)**			**35,899**	**36,460**	**39,564**	**43,133**	**47,253**
LMV--7		Rural						
		Urban						
	(A)	Rural Schedule						
		(i)	Jal Nigam	226	320	323	326	330
		(ii)	Jal Sansthan	114	83	91	100	110
		(iii)	Others (Water Works)	269	228	251	276	303
	(B)	Urban Schedule						
		(i)	Jal Nigam	249	200	216	233	252
		(ii)	Jal Sansthan	758	816	849	883	918
		(iii)	Others (Water Works)	575	1,487	1,561	1,639	1,721
SUB TOTAL	**PUBLIC WATER WORKS(LMV-7)**			**2,191**	**3,134**	**3,291**	**3,458**	**3,635**
LMV--8		Rural						
		Urban						
	(A)	Metered Supply		553	466	3,238	8,417	11,502
	(B)	Un-metered Supply		-	-	-	-	-
		(i)	STW, Panchayat Raj, WB, I.Duch, P.Canals, LI upto 100 BHP	9,349	9,570	6,857	2,072	-
		(ii)	Laghu Dal Nahar above 100 BHP	10	11	8	2	-
SUB TOTAL	**STATE TUBE WELLS & PUMPS CANAL UPTO 100 HP(LMV-8)**			**9,912**	**10,047**	**10,103**	**10,491**	**11,502**
LMV--9		Rural						
		Urban						
	(A)	Metered Supply						
		(i)	Individual Residential Consumers	2,611	223	234	246	258
		(ii)	Others	-	3,451	3,451	3,451	3,451
	(B)	Un-metered Supply						
		(i)	Ceremonies	26	-	-	-	-
		(ii)	Temporary Shops	-	51	52	52	53
SUB TOTAL	**TEMPORARY SUPPLY (LMV-9)**			**2,637**	**3,725**	**3,737**	**3,749**	**3,762**
LMV--10	(A)	Serving						
		(i)	Class IV Employees	2,682	2,613	2,744	2,881	3,025
		(ii)	Class III Employees	3,929	3,894	3,972	4,051	4,132
		(iii)	Junior Engineers & Equivalent	380	380	395	411	427

Lucknow Discom				No of Consumer				
SUPPLY TYPE		CATEGORY		2015-16	2016-17	2017-18	2018-19	2019-20
		(iv)	Assistant Engineers & Equivalent	119	127	132	137	143
		(v)	Executive Engineers & Equivalent	46	48	49	50	51
		(vi)	Deputy General Manager & Equivalent	8	8	8	8	8
		(vii)	CGM/GM & Equivalent posts and above	1	563	563	563	563
	(B)	Total Pensioner & Family Pensioner		17,506	16,052	17,336	18,723	20,221
SUB TOTAL	**DEPARTMENTAL EMPLOYEES (LMV-10)**			**24,671**	**23,685**	**25,199**	**26,825**	**28,571**
HV--1		Rural						
		Urban						
	(A)	Urban Schedule						
		(i)	For supply at 11kV	752	831	889	951	1,018
		(ii)	For supply above 11kV and upto & Including 66kV	2	2	2	3	3
		(iii)	For supply above 66kV and upto & Including 132kV	-	-	-	-	-
		(iv)	For supply above 132kV	-	-	-	-	-
	(B)	Rural Schedule						
		(i)	For supply at 11kV	1	1	1	1	1
		(ii)	For supply above 11kV and upto & Including 66kV	-	-	-	-	-
SUB TOTAL	**NON INDUSTRIAL BULK LOADS (HV-1)**			**755**	**834**	**893**	**955**	**1,023**
HV--2		Rural						
		Urban						
	(A)	Urban Schedule						
		(i)	For supply at 11kV	1,231	1,324	1,364	1,405	1,447
		(ii)	For supply above 11kV and upto & Including 66kV	111	110	132	158	190
		(iii)	For supply above 66kV and upto & Including 132kV	5	5	5	6	6
		(iv)	For supply above 132kV	3	3	3	3	3
	(B)	Rural Schedule						
		(i)	For supply at 11kV	143	125	139	154	170
		(ii)	For supply above 11kV and upto & Including 66kV	-	-	-	-	-
SUB TOTAL	**LARGE & HEAVY POWER ABOVE 100 BHP (75 kW) (HV-2)**			**1,493**	**1,567**	**1,643**	**1,726**	**1,817**
HV--3		Rural						
		Urban						
	(A)	For supply at the above 132kV		8	9	10	12	14
	(B)	For supply below 132kV		-	-	-	-	-
	(C)	For Metro Traction		-	1	1	1	1
SUB TOTAL	**RAILWAY TRACTION (HV-3)**			**8**	**10**	**11**	**13**	**15**

Lucknow Discom			No of Consumer				
SUPPLY TYPE		CATEGORY	2015-16	2016-17	2017-18	2018-19	2019-20
HV--4		Rural					
		Urban					
	(A)	For supply at 11kV	18	15	17	19	21
	(B)	For supply above 11kV and upto 66kV	6	8	9	10	11
	(C)	For supply above 66kV and upto 132kV	-	-	-	-	-
SUB TOTAL	LIFT IRRIGATION & P. CANAL ABOVE 100 BHP (75kW) (HV-4)		24	23	26	29	32
EXTRA STATE		Rural					
		Urban					
	(A)	EXTRA STATE & OTHERS	1	1	1	1	1
SUB TOTAL	EXTRA STATE CONSUMERS		1	1	1	1	1
BULK		Rural					
		Urban					
	(A)	NPCL	-	-	-	-	-
	(B)	KESCO	-	-	-	-	-
SUB TOTAL	BULK SUPPLY		-	-	-	-	-
	GRAND TOTAL		4,075,705	4,397,878	6,596,877	10,369,687	12,108,443

f) Connected Load Sub-category wise Projections

Projections for Connected Load sub-category wise for the two years have been made as given below:

Table 6-16: Sub category wise projections of connected load

SUPPLY TYPE		CATEGORY	2015-16	2016-17	2017-18	2018-19	2019-20
LMV--1		Rural					
		Urban					
	(A)	Consumer getting supply as per "Rural Schedule"					
		(i) Un-metered	1,445,513	1,450,241	1,137,400	343,696	-
		(ii) Metered	513,964	679,098	2,643,814	5,976,901	7,335,394
	(B)	Supply at Single Point for Bulk Load	33,608	33,407	53,056	58,361	64,197
	(C1)	Other Metered Domestic Consumers	2,327,802	2,567,132	2,597,823	2,773,839	2,914,651
	(C2)	Life Line Consumers/BPL	435,126	436,442	462,492	614,178	772,154
SUB TOTAL	DOMESTIC LIGHT FAN & POWER (LMV-1)		4,756,013	5,166,320	6,894,585	9,766,975	11,086,397
LMV--2		Rural					
		Urban					
	(A)	Consumer getting supply as per "Rural Schedule"					
		(i) Un-metered	34,898	29,980	19,148	5,787	-
		(ii) Metered	69,697	82,923	109,596	140,725	161,666
	(B)	Private Advertising/Sign Post/Sign Board/Glow Sign/Flex	-	-	-	-	-
	(C)	Other Metered Non-Domestic Supply	664,640	694,940	752,345	827,579	910,337
SUB	NON DOMESTIC LIGHT FAN & POWER		769,235	807,843	881,089	974,090	1,072,003

SUPPLY TYPE		CATEGORY		2015-16	2016-17	2017-18	2018-19	2019-20
TOTAL		**(LMV-2)**						
LMV--3	A	Rural						
		Urban						
	(A)	Un-metered Supply						
		(i)	Gram Panchyat	14,027	10,448	13,796	13,934	-
		(ii)	Nagar Palika & Nagar Panchyat	17,355	21,205	21,270	22,120	-
		(iii)	Nagar Nigam	4,944	9,442	9,721	9,818	-
	(B)	Metered Supply						
		(i)	Gram Panchyat	468	1,900	2,081	2,602	16,536
		(ii)	Nagar Palika & Nagar Panchyat	10,024	13,337	13,047	14,222	36,342
		(iii)	Nagar Nigam	36,243	39,046	45,081	47,335	57,153
SUB TOTAL		**PUBLIC LAMPS (LMV-3)**		**83,061**	**95,378**	**104,996**	**110,031**	**110,031**
LMV--4	A	Rural						
		Urban						
	B	Rural						
		Urban						
	(A)	Public Institution(4 A)		97,921	106,545	137,557	148,562	160,447
	(B)	Private Institution(4 B)		27,632	29,202	27,770	29,158	30,616
SUB TOTAL		**LIGHT, FAN & POWER FOR PUBLIC/PRIVATE INSTITUTION (LMV-4)**		**125,553**	**135,747**	**165,327**	**177,720**	**191,063**
LMV--5		Rural						
		Urban						
	(A)	Rural Schedule						
		(i)	Un metered Supply	652,118	770,329	485,299	146,646	-
		(ii)	Metered Supply	9,979	33,070	210,816	613,954	945,323
	(B)	Urban Schedule						
		(i)	Metered Supply	31,824	33,780	34,113	35,818	37,609
SUB TOTAL		**PRIVATE TUBE WELL/PUMPING SETS (LMV-5)**		**693,921**	**837,179**	**730,228**	**796,419**	**982,933**
LMV--6		Rural						
		Urban						
	(A)	Small & Medium Power (Power Loom)						
		(i)	Rural Schedule	46,010	43,115	75,248	90,297	108,357
		(ii)	Urban Schedule	10,317	8,239	10,135	10,642	11,174
	(B)	Small & Medium Power						
		(i)	Rural Schedule	93,469	99,382	101,799	103,835	105,912
		(ii)	Urban Schedule	164,185	164,894	164,297	174,155	184,604
SUB TOTAL		**SMALL & MEDIUM POWER UPTO 100 HP (75) (LMV-6)**		**313,981**	**315,630**	**351,479**	**378,929**	**410,047**
LMV--7		Rural						
		Urban						
	(A)	Rural Schedule						
		(i)	Jal Nigam	4,626	6,713	8,697	8,784	8,872
		(ii)	Jal Sansthan	6,725	6,265	2,497	2,747	3,022
		(iii)	Others (Water Works)	6,680	6,025	6,832	7,516	8,267
	(B)	Urban Schedule						
		(i)	Jal Nigam	7,687	10,974	12,758	13,778	14,881
		(ii)	Jal Sansthan	47,306	54,304	47,696	49,603	51,587
		(iii)	Others (Water Works)	13,103	12,393	55,076	57,829	60,721
SUB TOTAL		**PUBLIC WATER WORKS(LMV-7)**		**86,127**	**96,674**	**133,555**	**140,257**	**147,349**
LMV--8		Rural						
		Urban						
	(A)	Metered Supply		5,022	7,558	49,082	127,597	174,348
	(B)	Un-metered Supply		-	-	-	-	-

SUPPLY TYPE		CATEGORY		2015-16	2016-17	2017-18	2018-19	2019-20
		(i)	STW, Panchayat Raj, WB, I.Duch, P.Canals, LI upto 100 BHP	129,354	151,954	98,724	29,832	-
		(ii)	Laghu Dal Nahar above 100 BHP	3,521	3,438	2,078	519	-
SUB TOTAL	**STATE TUBE WELLS & PUMPS CANAL UPTO 100 HP(LMV-8)**			**142,191**	**162,950**	**149,884**	**157,949**	**174,348**
LMV--9		Rural						
		Urban						
	(A)	Metered Supply						
		(i)	Individual Residential Consumers	9,814	1,149	759	797	837
		(ii)	Others	-	10,462	11,043	11,043	11,043
	(B)	Un-metered Supply						
		(i)	Ceremonies	82	-	-	-	-
		(ii)	Temporary Shops	-	115	-	-	-
SUB TOTAL	**TEMPORARY SUPPLY (LMV-9)**			**9,896**	**11,726**	**11,802**	**11,840**	**11,880**
LMV--10	(A)	Serving						
		(i)	Class IV Employees	7,692	7,547	7,128	7,485	7,859
		(ii)	Class III Employees	13,058	14,612	14,057	14,339	14,625
		(iii)	Junior Engineers & Equivalent	1,407	1,407	1,600	1,664	1,731
		(iv)	Assistant Engineers & Equivalent	568	564	617	641	667
		(v)	Executive Engineers & Equivalent	201	219	123	125	128
		(vi)	Deputy General Manager & Equivalent	32	32	35	36	36
		(vii)	CGM/GM & Equivalent posts and above	7	1,181	3,941	3,941	3,941
	(B)	Total Pensioner & Family Pensioner		51,619	47,422	58,448	63,124	68,173
SUB TOTAL	**DEPARTMENTAL EMPLOYEES (LMV-10)**			**74,584**	**72,984**	**85,949**	**91,354**	**97,161**
HV--1		Rural						
		Urban						
	(A)	Urban Schedule						
		(i)	For supply at 11kV	283,235	311,314	333,106	356,423	381,373
		(ii)	For supply above 11kV and upto & Including 66kV	3,870	3,880	4,656	5,587	6,705
		(iii)	For supply above 66kV and upto & Including 132kV	-	-	-	-	-
		(iv)	For supply above 132kV	-	-	-	-	-
	(B)	Rural Schedule						
		(i)	For supply at 11kV	236	236	248	260	273
		(ii)	For supply above 11kV and upto & Including 66kV	-	-	-	-	-
SUB TOTAL	**NON INDUSTRIAL BULK LOADS (HV-1)**			**287,341**	**315,430**	**338,010**	**362,271**	**388,351**
HV--2		Rural						
		Urban						
	(A)	Urban Schedule						
		(i)	For supply at 11kV	397,093	424,211	436,937	450,045	463,547
		(ii)	For supply above 11kV and upto & Including 66kV	85,925	83,106	99,727	119,673	143,607

SUPPLY TYPE		CATEGORY		2015-16	2016-17	2017-18	2018-19	2019-20
		(iii)	For supply above 66kV and upto & Including 132kV	28,200	28,200	30,456	32,892	35,524
		(iv)	For supply above 132kV	23,500	23,500	24,675	25,909	27,204
	(B)	Rural Schedule						
		(i)	For supply at 11kV	35,288	31,210	34,590	38,335	42,486
		(ii)	For supply above 11kV and upto & Including 66kV	-	-	-	-	-
SUB TOTAL	**LARGE & HEAVY POWER ABOVE 100 BHP (75 kW) (HV-2)**			**570,006**	**590,227**	**626,385**	**666,854**	**712,368**
HV--3		Rural						
		Urban						
	(A)	For supply at the above 132kV		61,107	154,715	177,922	204,611	235,302
	(B)	For supply below 132kV		-	-	-	-	-
	(C)	For Metro Traction		-	6,000	6,000	6,000	6,000
SUB TOTAL	**RAILWAY TRACTION (HV-3)**			**61,107**	**160,715**	**183,922**	**210,611**	**241,302**
HV--4		Rural						
		Urban						
	(A)	For supply at 11kV		14,763	12,469	13,965	15,641	17,518
	(B)	For supply above 11kV and upto 66kV		11,389	15,144	16,810	18,659	20,711
	(C)	For supply above 66kV and upto 132kV		-	-	-	-	-
SUB TOTAL	**LIFT IRRIGATION & P. CANAL ABOVE 100 BHP (75kW) (HV-4)**			**26,152**	**27,613**	**30,775**	**34,300**	**38,229**
EXTRA STATE		Rural						
		Urban						
	(A)	EXTRA STATE & OTHERS		5,000	5,000	5,000	5,000	5,000
SUB TOTAL	**EXTRA STATE CONSUMERS**			**5,000**	**5,000**	**5,000**	**5,000**	**5,000**
BULK		Rural						
		Urban						
	(A)	NPCL		-	-	-	-	-
	(B)	KESCO		-	-	-	-	-
SUB TOTAL	**BULK SUPPLY**			-	-	-	-	-
	GRAND TOTAL			**8,004,168**	**8,801,416**	**10,692,987**	**13,884,600**	**15,668,462**

(अनिल कुमार कोहली)
मुख्य अभि० (वाणिज्य)
मण्डि०वि०नि०लि०
4-A, गोखले मार्ग,

g) SALES SUB-CATEGORY WISE PROJECTIONS

Projections for Sales sub-category wise for the two years have been made as given below:

Table 6-17: Sub category wise projections of energy sales

Lucknow Discom				Projected Sales					Projected (Impact of Running Hours on Sales)					Projected (Impact of Demand Side Management on Sales)				
SUPPLY TYPE		CATEGORY		2015-16	2016-17	2017-18	2018-19	2019-20	2015-16	2016-17	2017-18	2018-19	2019-20	2015-16	2016-17	2017-18	2018-19	2019-20
LMV--1		Rural																
		Urban																
	(A)	Consumer getting supply as per "Rural Schedule"																
		(i)	Un-metered	1,695	2,506	1,965	594	-	1,695	2,506	1,965	594	-	1,695	1,806	1,965	594	-
		(ii)	Metered	330	676	2,671	6,038	7,410	330	756	3,303	8,492	11,679	330	730	3,303	8,492	11,679
	(B)	Supply at Single Point for Bulk Load		71	122	194	214	235	71	128	211	241	274	71	62	211	241	274
	(C1)	Other Metered Domestic Consumers		3,182	3,192	3,231	3,449	3,625	3,182	3,493	3,839	4,539	5,231	3,182	3,557	3,839	4,539	5,231
	(C2)	Life Line Consumers/BPL		634	444	529	703	884	634	492	643	959	1,338	634	607	643	959	1,338
SUB TOTAL	**DOMESTIC LIGHT FAN & POWER (LMV-1)**			**5,913**	**6,941**	**8,591**	**10,998**	**12,154**	**5,913**	**7,375**	**9,962**	**14,824**	**18,522**	**5,913**	**6,763**	**9,962**	**14,824**	**18,522**
LMV--2		Rural																
		Urban																
	(A)	Consumer getting supply as per "Rural Schedule"																
		(i)	Un-metered	41	52	33	10	-	41	52	33	10	-	41	40	33	10	-
		(ii)	Metered	80	103	136	175	201	80	115	169	248	320	80	106	169	248	320
	(B)	Private Advertising/Sign Post/Sign Board/Glow Sign/Flex		1	-	-	-	-	1	-	-	-	-	1	-	-	-	-
	(C)	Other Metered Non-Domestic Supply		959	919	995	1,094	1,204	959	998	1,167	1,408	1,687	959	1,021	1,167	1,408	1,687
SUB TOTAL	**NON DOMESTIC LIGHT FAN & POWER (LMV-2)**			**1,080**	**1,074**	**1,164**	**1,279**	**1,404**	**1,080**	**1,166**	**1,369**	**1,666**	**2,007**	**1,080**	**1,167**	**1,369**	**1,666**	**2,007**
LMV--3	A	Rural																
		Urban																
	(A)	Un-metered Supply																
		(i)	Gram Panchyat	34	38	50	50	-	34	38	50	50	-	34	38	50	50	-
		(ii)	Nagar Palika & Nagar Panchyat	41	92	92	96	-	41	92	92	96	-	41	67	92	96	-
		(iii)	Nagar Nigam	17	41	42	42	-	17	41	42	42	-	17	28	42	42	-
	(B)	Metered Supply																
		(i)	Gram Panchyat	2	80	87	109	695	2	91	112	164	1192	2	3	112	164	1192
		(ii)	Nagar Palika	39	50	49	53	136	39	55	59	71	201	39	36	59	71	201

Lucknow Discom				Projected Sales					Projected (Impact of Running Hours on Sales)					Projected (Impact of Demand Side Management on Sales)				
SUPPLY TYPE		CATEGORY		2015-16	2016-17	2017-18	2018-19	2019-20	2015-16	2016-17	2017-18	2018-19	2019-20	2015-16	2016-17	2017-18	2018-19	2019-20
			& Nagar Panchyat															
		(iii)	Nagar Nigam	145	158	182	192	231	145	170	210	240	312	145	143	210	240	312
SUB TOTAL	**PUBLIC LAMPS (LMV-3)**			**277**	**458**	**502**	**542**	**1,062**	**277**	**1,062**	**565**	**663**	**1704**	**277**	**315**	**565**	**663**	**1704**
LMV--4	A	Rural																
		Urban																
	B	Rural																
		Urban																
	(A)	Public Institution(4 A)		212	275	355	383	414	212	305	432	526	631	212	259	432	526	631
	(B)	Private Institution(4 B)		54	66	63	66	69	54	73	76	91	106	54	66	76	91	106
SUB TOTAL	**LIGHT, FAN & POWER FOR PUBLIC/PRIVATE INSTITUTION (LMV-4)**			**267**	**341**	**417**	**449**	**483**	**267**	**378**	**509**	**616**	**737**	**267**	**325**	**509**	**616**	**737**
LMV--5		Rural																
		Urban																
	(A)	Rural Schedule																
		(i)	Un metered Supply	818	1,695	1,068	323	-	818	1,695	1,068	323	-	818	1,001	1,068	323	-
		(ii)	Metered Supply	11	55	352	1,024	1,577	11	55	352	1,024	1,577	11	44	352	1,024	1,577
	(B)	Urban Schedule																
		(i)	Metered Supply	113	140	142	149	156	113	140	142	149	156	113	139	142	149	156
SUB TOTAL	**PRIVATE TUBE WELL/PUMPING SETS (LMV-5)**			**942**	**1,890**	**1,561**	**1,495**	**1,733**	**942**	**1,890**	**1,561**	**1,495**	**1,733**	**942**	**1,184**	**1,561**	**1,495**	**1,733**
LMV--6		Rural																
		Urban																
	(A)	Small & Medium Power (Power Loom)																
		(i)	Rural Schedule	18	46	81	97	116	18	50	93	121	156	18	37	93	121	156
		(ii)	Urban Schedule	138	56	69	73	76	138	58	73	77	81	138	121	73	77	81
	(B)	Small & Medium Power																
		(i)	Rural Schedule	87	91	93	95	97	87	100	112	127	143	87	101	112	127	143
		(ii)	Urban Schedule	279	254	253	268	284	279	280	305	361	423	279	287	305	361	423
SUB TOTAL	**SMALL & MEDIUM POWER UPTO 100 HP (75) (LMV-6)**			**523**	**447**	**496**	**533**	**574**	**523**	**487**	**582**	**685**	**802**	**523**	**547**	**582**	**685**	**802**
LMV--7		Rural																
		Urban																
	(A)	Rural Schedule																
		(i)	Jal Nigam	25	23	30	30	30	25	23	30	30	30	25	33	30	30	30
		(ii)	Jal Sansthan	22	70	28	31	34	22	70	28	31	34	22	34	28	31	34
		(iii)	Others (Water	32	32	36	40	44	32	32	36	40	44	32	42	36	40	44

Lucknow Discom				Projected Sales					Projected (Impact of Running Hours on Sales)					Projected (Impact of Demand Side Management on Sales)				
SUPPLY TYPE		CATEGORY		2015-16	2016-17	2017-18	2018-19	2019-20	2015-16	2016-17	2017-18	2018-19	2019-20	2015-16	2016-17	2017-18	2018-19	2019-20
			Works)															
	(B)	Urban Schedule																
		(i)	Jal Nigam	27	36	42	46	49	27	36	42	46	49	27	41	42	46	49
		(ii)	Jal Sansthan	223	241	212	220	229	223	241	212	220	229	223	280	212	220	229
		(iii)	Others (Water Works)	60	60	265	278	292	60	60	265	278	292	60	54	265	278	292
SUB TOTAL	PUBLIC WATER WORKS(LMV-7)			388	462	612	644	678	388	462	612	644	678	388	484	612	644	678
LMV--8		Rural																
		Urban																
	(A)	Metered Supply		84	136	885	2,301	3,144	84	136	885	2,301	3,144	84	107	885	2,301	3,144
	(B)	Un-metered Supply		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		(i)	STW, Panchayat Raj, WB, I.Duch, P.Canals, LI upto 100 BHP	784	818	586	177	-	784	818	586	177	-	784	1,137	586	177	-
		(ii)	Laghu Dal Nahar above 100 BHP	19	1	1	0	-	19	1	1	0	-	19	26	1	0	-
SUB TOTAL	STATE TUBE WELLS & PUMPS CANAL UPTO 100 HP(LMV-8)			887	955	1,472	2,478	3,144	887	955	1,472	2,478	3,144	887	1,270	1,472	2,478	3,144
LMV--9		Rural																
		Urban																
	(A)	Metered Supply																
		(i)	Individual Residential Consumers	29	3	2	2	2	29	3	2	2	3	29	2	2	2	3
		(ii)	Others	-	36	38	38	38	-	-	38	38	38	-	33	38	38	38
	(B)	Un-metered Supply																
		(i)	Ceremonies	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-
		(ii)	Temporary Shops	-	-	-	-	-	-	-	-	-	-	-	0	-	-	-
SUB TOTAL	TEMPORARY SUPPLY (LMV-9)			29	39	40	40	40	29	3	40	40	40	29	35	40	40	40
LMV--10	(A)	Serving																
		(i)	Class IV Employees	10	8	8	9	9	10	9	10	12	14	10	9	10	12	14
		(ii)	Class III Employees	14	12	12	13	13	14	13	14	15	16	14	16	14	15	16
		(iii)	Junior Engineers & Equivalent	2	5	5	5	5	2	5	6	6	7	2	3	6	6	7
		(iv)	Assistant Engineers & Equivalent	1	1	1	1	1	1	1	1	2	2	1	1	1	2	2
		(v)	Executive Engineers &	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Lucknow Discom				Projected Sales					Projected (Impact of Running Hours on Sales)					Projected (Impact of Demand Side Management on Sales)				
SUPPLY TYPE		CATEGORY		2015-16	2016-17	2017-18	2018-19	2019-20	2015-16	2016-17	2017-18	2018-19	2019-20	2015-16	2016-17	2017-18	2018-19	2019-20
			Equivalent															
		(vi)	Deputy General Manager & Equivalent	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		(vii)	CGM/GM & Equivalent posts and above	1	93	93	93	93	1	95	98	98	99	1	0	98	98	99
	(B)	Total Pensioner & Family Pensioner		114	119	128	139	150	114	128	147	172	199	114	119	147	172	199
SUB TOTAL	**DEPARTMENTAL EMPLOYEES (LMV-10)**			**142**	**238**	**248**	**259**	**271**	**142**	**251**	**276**	**306**	**338**	**142**	**149**	**276**	**306**	**338**
HV--1		Rural																
		Urban																
	(A)	Urban Schedule																
		(i)	For supply at 11kV	528	617	660	707	756	528	617	660	707	756	528	582	660	707	756
		(ii)	For supply above 11kV and upto & Including 66kV	7	10	12	14	17	7	10	12	14	17	7	2	12	14	17
		(iii)	For supply above 66kV and upto & Including 132kV	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		(iv)	For supply above 132kV	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	(B)	Rural Schedule																
		(i)	For supply at 11kV	0	1	1	1	1	0	1	1	1	1	0	0	1	1	1
		(ii)	For supply above 11kV and upto & Including 66kV	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-
SUB TOTAL	**NON INDUSTRIAL BULK LOADS (HV-1)**			**535**	**628**	**673**	**722**	**774**	**535**	**628**	**673**	**722**	**774**	**535**	**585**	**673**	**722**	**774**
HV--2		Rural																
		Urban																
	(A)	Urban Schedule																
		(i)	For supply at 11kV	1,047	1,182	1,218	1,254	1,292	1,047	1,182	1,218	1,254	1,292	1,047	1,167	1,218	1,254	1,292
		(ii)	For supply above 11kV and upto & Including 66kV	230	287	344	413	496	230	287	344	413	496	230	235	344	413	496
		(iii)	For supply above 66kV	59	49	52	57	61	59	49	52	57	61	59	46	52	57	61

Lucknow Discom				Projected Sales					Projected (Impact of Running Hours on Sales)					Projected (Impact of Demand Side Management on Sales)				
SUPPLY TYPE		CATEGORY		2015-16	2016-17	2017-18	2018-19	2019-20	2015-16	2016-17	2017-18	2018-19	2019-20	2015-16	2016-17	2017-18	2018-19	2019-20
			and upto & Including 132kV															
		(iv)	For supply above 132kV	17	50	53	55	58	17	50	53	55	58	17	40	53	55	58
	(B)	Rural Schedule																
		(i)	For supply at 11kV	76	58	64	71	79	76	58	64	71	79	76	70	64	71	79
		(ii)	For supply above 11kV and upto & Including 66kV	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-
SUB TOTAL	**LARGE & HEAVY POWER ABOVE 100 BHP (75 kW) (HV-2)**			**1,427**	**1,626**	**1,731**	**1,850**	**1,986**	**1,427**	**1,626**	**1,731**	**1,850**	**1,986**	**1,427**	**1,557**	**1,731**	**1,850**	**1,986**
HV--3		Rural																
		Urban																
	(A)	For supply at the above 132kV		115	299	343	395	454	115	299	343	395	454	115	133	343	395	454
	(B)	For supply below 132kV		4	-	-	-	-	4	-	-	-	-	4	-	-	-	-
	(C)	For Metro Traction		-	-	-	-	-	-	-	-	-	-	-	0	-	-	-
SUB TOTAL	**RAILWAY TRACTION (HV-3)**			**119**	**299**	**343**	**395**	**454**	**119**	**299**	**343**	**395**	**454**	**119**	**133**	**343**	**395**	**454**
HV--4		Rural																
		Urban																
	(A)	For supply at 11kV		68	83	93	104	116	68	83	93	104	116	68	92	93	104	116
	(B)	For supply above 11kV and upto 66kV		58	80	89	99	110	58	80	89	99	110	58	86	89	99	110
	(C)	For supply above 66kV and upto 132kV		1	-	-	-	-	1	-	-	-	-	1	-	-	-	-
SUB TOTAL	**LIFT IRRIGATION & P. CANAL ABOVE 100 BHP (75kW) (HV-4)**			**128**	**163**	**182**	**202**	**226**	**128**	**163**	**182**	**202**	**226**	**128**	**178**	**182**	**202**	**226**
EXTRA STATE		Rural																
		Urban																
	(A)	EXTRA STATE & OTHERS		65	65	65	65	65	65	65	65	65	65	65	67	65	65	65
SUB TOTAL	**EXTRA STATE CONSUMERS**			**65**	**65**	**65**	**65**	**65**	**65**	**65**	**65**	**65**	**65**	**65**	**67**	**65**	**65**	**65**
BULK		Rural																
		Urban																
	(A)	NPCL		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	(B)	KESCO		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SUB TOTAL	**BULK SUPPLY**			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	GRAND TOTAL			**12,722**	**15,624**	**18,097**	**21,952**	**25084**	**12,722**	**16,233**	**19,942**	**26,652**	**33,209**	**12,722**	**14,759**	**19,942**	**26,652**	**33,209**

6.3 ACTUAL BILLING DETERMINANTS FOR FY 2015-16

The detailed category-wise data for previous year 2015-16 is placed in the table below:

Table 6-18: Actual Billing Determinant for FY 2015-16

Lucknow Discom				2015-16		
SUPPLY TYPE			CATEGORY	CONSUMER (NUMBERS)	CONNECTED LOAD (KW)	PROJECTED BILLED ENERGY (MU)
LMV--1		Rural				
		Urban				
	(A)	Consumer getting supply as per "Rural Schedule"				
		(i)	Un-metered	1,172,384	1,445,513	1,695
		(ii)	Metered	617,998	513,964	330
	(B)	Supply at Single Point for Bulk Load		45	33,608	71
	(C1)	Other Metered Domestic Consumers		1,261,517	2,327,802	3,182
	(C2)	Life Line Consumers/BPL		474,637	435,126	634
SUB TOTAL	**DOMESTIC LIGHT FAN & POWER (LMV-1)**			**3,526,581**	**4,756,013**	**5,913**
LMV--2		Rural				
		Urban				
	(A)	Consumer getting supply as per "Rural Schedule"				
		(i)	Un-metered	19,567	34,898	41
		(ii)	Metered	22,506	69,697	80
	(B)	Private Advertising/Sign Post/Sign Board/Glow Sign/Flex		-	-	1
	(C)	Other Metered Non-Domestic Supply		245,259	664,640	959
SUB TOTAL	**NON DOMESTIC LIGHT FAN & POWER (LMV-2)**			**287,332**	**769,235**	**1,080**
LMV--3	A	Rural				
		Urban				
	(A)	Un-metered Supply				
		(i)	Gram Panchyat	420	14,027	34
		(ii)	Nagar Palika & Nagar Panchyat	2,561	17,355	41
		(iii)	Nagar Nigam	44	4,944	17
	(B)	Metered Supply				
		(i)	Gram Panchyat	3	468	2
		(ii)	Nagar Palika & Nagar Panchyat	96	10,024	39
		(iii)	Nagar Nigam	65	36,243	145
SUB TOTAL	**PUBLIC LAMPS (LMV-3)**			**3,189**	**83,061**	**277**
LMV--4	A	Rural				
		Urban				
	B	Rural				
		Urban				
	(A)	Public Institution(4 A)		17,302	97,921	212
	(B)	Private Institution(4 B)		2,505	27,632	54
SUB TOTAL	**LIGHT, FAN & POWER FOR PUBLIC/PRIVATE INSTITUTION (LMV-4)**			**19,807**	**125,553**	**267**
LMV--5		Rural				
		Urban				
	(A)	Rural Schedule				
		(i)	Un metered Supply	151,780	652,118	818
		(ii)	Metered Supply	2,767	9,979	11
	(B)	Urban Schedule				
		(i)	Metered Supply	6,658	31,824	113
SUB TOTAL	**PRIVATE TUBE WELL/PUMPING SETS (LMV-5)**			**161,205**	**693,921**	**942**
LMV--6		Rural				
		Urban				
	(A)	Small & Medium Power (Power Loom)				
		(i)	Rural Schedule	10,370	46,010	18
		(ii)	Urban Schedule	1,696	10,317	138
	(B)	Small & Medium Power				

Lucknow Discom				2015-16		
SUPPLY TYPE			CATEGORY	CONSUMER (NUMBERS)	CONNECTED LOAD (KW)	PROJECTED BILLED ENERGY (MU)
		(i)	Rural Schedule	12,308	93,469	87
		(ii)	Urban Schedule	11,525	164,185	279
SUB TOTAL	SMALL & MEDIUM POWER UPTO 100 HP (75) (LMV-6)			35,899	313,981	523
LMV--7		Rural				
		Urban				
	(A)	Rural Schedule				
		(i)	Jal Nigam	226	4,626	25
		(ii)	Jal Sansthan	114	6,725	22
		(iii)	Others (Water Works)	269	6,680	32
	(B)	Urban Schedule				
		(i)	Jal Nigam	249	7,687	27
		(ii)	Jal Sansthan	758	47,306	223
		(iii)	Others (Water Works)	575	13,103	60
SUB TOTAL	PUBLIC WATER WORKS(LMV-7)			2,191	86,127	388
LMV--8		Rural				
		Urban				
	(A)	Metered Supply		553	5,022	84
	(B)	Un-metered Supply		-	-	-
		(i)	STW, Panchayat Raj, WB, I.Duch, P.Canals, LI upto 100 BHP	9,349	129,354	784
		(ii)	Laghu Dal Nahar above 100 BHP	10	3,521	19
SUB TOTAL	STATE TUBE WELLS & PUMPS CANAL UPTO 100 HP(LMV-8)			9,912	142,191	887
LMV--9		Rural				
		Urban				
	(A)	Metered Supply				
		(i)	Individual Residential Consumers	2,611	9,814	29
		(ii)	Others	-	-	-
	(B)	Un-metered Supply				
		(i)	Ceremonies	26	82	0
		(ii)	Temporary Shops	-	-	-
SUB TOTAL	TEMPORARY SUPPLY (LMV-9)			2,637	9,896	29
LMV--10	(A)	Serving				
		(i)	Class IV Employees	2,682	7,692	10
		(ii)	Class III Employees	3,929	13,058	14
		(iii)	Junior Engineers & Equivalent	380	1,407	2
		(iv)	Assistant Engineers & Equivalent	119	568	1
		(v)	Executive Engineers & Equivalent	46	201	0
		(vi)	Deputy General Manager & Equivalent	8	32	0
		(vii)	CGM/GM & Equivalent posts and above	1	7	1
	(B)	Total Pensioner & Family Pensioner		17,506	51,619	114
SUB TOTAL	DEPARTMENTAL EMPLOYEES (LMV-10)			24,671	74,584	142
HV--1		Rural				
		Urban				
	(A)	Urban Schedule				
		(i)	For supply at 11kV	752	283,235	528
		(ii)	For supply above 11kV and upto & Including 66kV	2	3,870	7
		(iii)	For supply above 66kV and upto & Including 132kV	-	-	-
		(iv)	For supply above 132kV	-	-	-
	(B)	Rural Schedule				
		(i)	For supply at 11kV	1	236	0
		(ii)	For supply above 11kV and upto & Including 66kV	-	-	0
SUB TOTAL	NON INDUSTRIAL BULK LOADS (HV-1)			755	287,341	535
HV--2		Rural				
		Urban				

Lucknow Discom				2015-16		
SUPPLY TYPE			CATEGORY	CONSUMER (NUMBERS)	CONNECTED LOAD (KW)	PROJECTED BILLED ENERGY (MU)
	(A)	Urban Schedule				
		(i)	For supply at 11kV	1,231	397,093	1,047
		(ii)	For supply above 11kV and upto & Including 66kV	111	85,925	230
		(iii)	For supply above 66kV and upto & Including 132kV	5	28,200	59
		(iv)	For supply above 132kV	3	23,500	17
	(B)	Rural Schedule				
		(i)	For supply at 11kV	143	35,288	76
		(ii)	For supply above 11kV and upto & Including 66kV	-	-	0
SUB TOTAL	**LARGE & HEAVY POWER ABOVE 100 BHP (75 kW) (HV-2)**			**1,493**	**570,006**	**1,427**
HV--3		Rural				
		Urban				
	(A)	For supply at the above 132kV		8	61,107	115
	(B)	For supply below 132kV		-	-	4
	(C)	For Metro Traction		-	-	-
SUB TOTAL	**RAILWAY TRACTION (HV-3)**			**8**	**61,107**	**119**
HV--4		Rural				
		Urban				
	(A)	For supply at 11kV		18	14,763	68
	(B)	For supply above 11kV and upto 66kV		6	11,389	58
	(C)	For supply above 66kV and upto 132kV		-	-	1
SUB TOTAL	**LIFT IRRIGATION & P. CANAL ABOVE 100 BHP (75kW) (HV-4)**			**24**	**26,152**	**128**
EXTRA STATE		Rural				
		Urban				
	(A)	EXTRA STATE & OTHERS		1	5,000	65
SUB TOTAL	**EXTRA STATE CONSUMERS**			**1**	**5,000**	**65**
BULK		Rural				
		Urban				
	(A)	NPCL		-	-	-
	(B)	KESCO		-	-	-
SUB TOTAL	**BULK SUPPLY**			**-**	**-**	**-**
	GRAND TOTAL			**4,075,705**	**8,004,168**	**12,722**

6.4 BILLING DETERMINANTS FOR FY 2016-17

The actual category-wise billing determinants for the FY 2016-17 is placed in the table below:

Table 6-19: Billing Determinant for FY 2016-17

Lucknow Discom				2016-17		
SUPPLY TYPE			CATEGORY	CONSUMER (NUMBERS)	CONNECTED LOAD (KW)	PROJECTED BILLED ENERGY (MU)
LMV--1		Rural				
		Urban				
	(A)	Consumer getting supply as per "Rural Schedule"				
		(i)	Un-metered	1,163,267	1,450,241	2,506
		(ii)	Metered	808,710	679,098	676
	(B)	Supply at Single Point for Bulk Load		53	33,407	122
	(C1)	Other Metered Domestic Consumers		1,388,773	2,567,132	3,192
	(C2)	Life Line Consumers/BPL		449,468	436,442	444
SUB	**DOMESTIC LIGHT FAN & POWER (LMV-1)**			**3,810,271**	**5,166,320**	**6,941**

Lucknow Discom				2016-17		
SUPPLY TYPE			CATEGORY	CONSUMER (NUMBERS)	CONNECTED LOAD (KW)	PROJECTED BILLED ENERGY (MU)
TOTAL						
LMV--2		Rural				
		Urban				
	(A)	Consumer getting supply as per "Rural Schedule"				
		(i)	Un-metered	15,735	29,980	52
		(ii)	Metered	31,572	82,923	103
	(B)	Private Advertising/Sign Post/Sign Board/Glow Sign/Flex		-	-	-
	(C)	Other Metered Non-Domestic Supply		265,203	694,940	919
SUB TOTAL	NON DOMESTIC LIGHT FAN & POWER (LMV-2)			312,510	807,843	1,074
LMV--3	A	Rural				
		Urban				
	(A)	Un-metered Supply				
		(i)	Gram Panchyat	409	10,448	38
		(ii)	Nagar Palika & Nagar Panchyat	1,560	21,205	92
		(iii)	Nagar Nigam	55	9,442	41
	(B)	Metered Supply				
		(i)	Gram Panchyat	3	1,900	80
		(ii)	Nagar Palika & Nagar Panchyat	95	13,337	50
		(iii)	Nagar Nigam	77	39,046	158
SUB TOTAL	PUBLIC LAMPS (LMV-3)			2,199	95,378	458
LMV--4	A	Rural				
		Urban				
	B	Rural				
		Urban				
	(A)	Public Institution(4 A)		17,845	106,545	275
	(B)	Private Institution(4 B)		2,712	29,202	66
SUB TOTAL	LIGHT, FAN & POWER FOR PUBLIC/PRIVATE INSTITUTION (LMV-4)			20,557	135,747	341
LMV--5		Rural				
		Urban				
	(A)	Rural Schedule				
		(i)	Un metered Supply	162,724	770,329	1,695
		(ii)	Metered Supply	3,334	33,070	55
	(B)	Urban Schedule				
		(i)	Metered Supply	6,797	33,780	140
SUB TOTAL	PRIVATE TUBE WELL/PUMPING SETS (LMV-5)			172,855	837,179	1,890
LMV--6		Rural				
		Urban				
	(A)	Small & Medium Power (Power Loom)				
		(i)	Rural Schedule	10,343	43,115	46
		(ii)	Urban Schedule	1,602	8,239	56
	(B)	Small & Medium Power				
		(i)	Rural Schedule	12,884	99,382	91
		(ii)	Urban Schedule	11,631	164,894	254
SUB TOTAL	SMALL & MEDIUM POWER UPTO 100 HP (75) (LMV-6)			36,460	315,630	447
LMV--7		Rural				
		Urban				
	(A)	Rural Schedule				
		(i)	Jal Nigam	320	6,713	23
		(ii)	Jal Sansthan	83	6,265	70
		(iii)	Others (Water Works)	228	6,025	32
	(B)	Urban Schedule				
		(i)	Jal Nigam	200	10,974	36
		(ii)	Jal Sansthan	816	54,304	241
		(iii)	Others (Water Works)	1,487	12,393	60
SUB TOTAL	PUBLIC WATER WORKS(LMV-7)			3,134	96,674	462
LMV--8		Rural				
		Urban				

Lucknow Discom				2016-17		
SUPPLY TYPE			CATEGORY	CONSUMER (NUMBERS)	CONNECTED LOAD (KW)	PROJECTED BILLED ENERGY (MU)
	(A)	Metered Supply		466	7,558	136
	(B)	Un-metered Supply		-	-	-
		(i)	STW, Panchayat Raj, WB, I.Duch, P.Canals, LI upto 100 BHP	9,570	151,954	818
		(ii)	Laghu Dal Nahar above 100 BHP	11	3,438	1
SUB TOTAL	**STATE TUBE WELLS & PUMPS CANAL UPTO 100 HP(LMV-8)**			**10,047**	**162,950**	**955**
LMV--9		Rural				
		Urban				
	(A)	Metered Supply				
		(i)	Individual Residential Consumers	223	1,149	3
		(ii)	Others	3,451	10,462	36
	(B)	Un-metered Supply				
		(i)	Ceremonies	-	-	-
		(ii)	Temporary Shops	51	115	-
SUB TOTAL	**TEMPORARY SUPPLY (LMV-9)**			**3,725**	**11,726**	**39**
LMV--10	(A)	Serving				
		(i)	Class IV Employees	2,613	7,547	8
		(ii)	Class III Employees	3,894	14,612	12
		(iii)	Junior Engineers & Equivalent	380	1,407	5
		(iv)	Assistant Engineers & Equivalent	127	564	1
		(v)	Executive Engineers & Equivalent	48	219	0
		(vi)	Deputy General Manager & Equivalent	8	32	0
		(vii)	CGM/GM & Equivalent posts and above	563	1,181	93
	(B)	Total Pensioner & Family Pensioner		16,052	47,422	119
SUB TOTAL	**DEPARTMENTAL EMPLOYEES (LMV-10)**			**23,685**	**72,984**	**238**
HV--1		Rural				
		Urban				
	(A)	Urban Schedule				
		(i)	For supply at 11kV	831	311,314	617
		(ii)	For supply above 11kV and upto & Including 66kV	2	3,880	10
		(iii)	For supply above 66kV and upto & Including 132kV	-	-	-
		(iv)	For supply above 132kV	-	-	-
	(B)	Rural Schedule				
		(i)	For supply at 11kV	1	236	1
		(ii)	For supply above 11kV and upto & Including 66kV	-	-	-
SUB TOTAL	**NON INDUSTRIAL BULK LOADS (HV-1)**			**834**	**315,430**	**628**
HV--2		Rural				
		Urban				
	(A)	Urban Schedule				
		(i)	For supply at 11kV	1,324	424,211	1,182
		(ii)	For supply above 11kV and upto & Including 66kV	110	83,106	287
		(iii)	For supply above 66kV and upto & Including 132kV	5	28,200	49
		(iv)	For supply above 132kV	3	23,500	50
	(B)	Rural Schedule				
		(i)	For supply at 11kV	125	31,210	58
		(ii)	For supply above 11kV and upto & Including 66kV	-	-	-
SUB TOTAL	**LARGE & HEAVY POWER ABOVE 100 BHP (75 kW) (HV-2)**			**1,567**	**590,227**	**1,626**
HV--3		Rural				
		Urban				
	(A)	For supply at the above 132kV		9	154,715	299
	(B)	For supply below 132kV		-	-	-
	(C)	For Metro Traction		1	6,000	-
SUB	**RAILWAY TRACTION (HV-3)**			**10**	**160,715**	**299**

Lucknow Discom				2016-17		
SUPPLY TYPE			CATEGORY	CONSUMER (NUMBERS)	CONNECTED LOAD (KW)	PROJECTED BILLED ENERGY (MU)
TOTAL						
HV--4		Rural				
		Urban				
	(A)	For supply at 11kV		15	12,469	83
	(B)	For supply above 11kV and upto 66kV		8	15,144	80
	(C)	For supply above 66kV and upto 132kV		-	-	-
SUB TOTAL	LIFT IRRIGATION & P. CANAL ABOVE 100 BHP (75kW) (HV-4)			23	27,613	163
EXTRA STATE		Rural				
		Urban				
	(A)	EXTRA STATE & OTHERS		1	5,000	65
SUB TOTAL	EXTRA STATE CONSUMERS			1	5,000	65
BULK		Rural				
		Urban				
	(A)	NPCL		-	-	-
	(B)	KESCO		-	-	-
SUB TOTAL	BULK SUPPLY			-	-	-
	GRAND TOTAL			4,397,878	8,801,416	15,624

(अनिल कुमार कोठारी)
मुख्य अभि० (वाणिज्य)
मध्यांचल विद्युत वितरण निगम लि०
4-A, गोखले मार्ग, लखनऊ

6.5 PROJECTED BILLING DETERMINANTS FOR FY 2017-18 TO 2019-20

The projected category-wise billing determinants for the FY 2017-18 to 2019-20 is placed in the table below:

Table 6-20: Projected Billing Determinant for FY 2017-18 to 2019-20

Lucknow Discom				2017-18			2018-19			2019-20		
SUPPLY TYPE				CONSUMER (NUMBERS)	CONNECTED LOAD (KW)	PROJECTED BILLED ENERGY (MU)	CONSUMER (NUMBERS)	CONNECTED LOAD (KW)	PROJECTED BILLED ENERGY (MU)	CONSUMER (NUMBERS)	CONNECTED LOAD (KW)	PROJECTED BILLED ENERGY (MU)
LMV--1		Rural										
		Urban										
	(A)	Consumer getting supply as per "Rural Schedule"										
		(i)	Un-metered	833,496	1,137,400	1,965	251,863	343,696	594	-	-	-
		(ii)	Metered	3,194,887	2,643,814	2,671	7,222,718	5,976,901	6,038	8,864,373	7,335,394	7,410
	(B)	Supply at Single Point for Bulk Load		58	53,056	194	64	58,361	214	71	64,197	235
	(C1)	Other Metered Domestic Consumers		1,407,851	2,597,823	3,231	1,503,240	2,773,839	3,449	1,579,551	2,914,651	3,625
	(C2)	Life Line Consumers/BPL		535,966	462,492	529	711,750	614,178	703	894,824	772,154	884
SUB TOTAL	DOMESTIC LIGHT FAN & POWER (LMV-1)			**5,972,259**	**6,894,585**	**8,591**	**9,689,635**	**9,766,975**	**10,998**	**11,338,818**	**11,086,397**	**12,154**
LMV--2		Rural										
		Urban										
	(A)	Consumer getting supply as per "Rural Schedule"										
		(i)	Un-metered	11,274	19,148	33	3,407	5,787	10	-	-	-
		(ii)	Metered	38,559	109,596	136	49,510	140,725	175	56,878	161,666	201
	(B)	Private Advertising/Sign Post/Sign Board/Glow Sign/Flex		-	-	-	-	-	-	-	-	-
	(C)	Other Metered Non-Domestic Supply		291,723	752,345	995	320,896	827,579	1,094	352,985	910,337	1,204
SUB TOTAL	NON DOMESTIC LIGHT FAN & POWER (LMV-2)			**341,556**	**881,089**	**1,164**	**373,813**	**974,090**	**1,279**	**409,863**	**1,072,003**	**1,404**
LMV--3	A	Rural										
		Urban										
	(A)	Un-metered Supply										
		(i)	Gram Panchyat	413	13,796	50	417	13,934	50	-	-	-
		(ii)	Nagar Palika & Nagar Panchyat	1,622	21,270	92	1,687	22,120	96	-	-	-
		(iii)	Nagar Nigam	56	9,721	42	56	9,818	42	-	-	-
	(B)	Metered Supply										
		(i)	Gram Panchyat	4	2,081	87	5	2,602	109	423	16,536	695
		(ii)	Nagar Palika & Nagar Panchyat	104	13,047	49	113	14,222	53	1810	36,342	136
		(iii)	Nagar Nigam	81	45,081	182	85	47,335	192	145	57,153	231
SUB TOTAL	PUBLIC LAMPS (LMV-3)			**2,279**	**104,996**	**502**	**2,363**	**110,031**	**542**	**2,379**	**110,031**	**1,062**
LMV--4	A	Rural										
		Urban										
	B	Rural										

Lucknow Discom				2017-18			2018-19			2019-20		
SUPPLY TYPE				CONSUMER (NUMBERS)	CONNECTED LOAD (KW)	PROJECTED BILLED ENERGY (MU)	CONSUMER (NUMBERS)	CONNECTED LOAD (KW)	PROJECTED BILLED ENERGY (MU)	CONSUMER (NUMBERS)	CONNECTED LOAD (KW)	PROJECTED BILLED ENERGY (MU)
		Urban										
	(A)	Public Institution(4 A)		19,273	137,557	355	20,814	148,562	383	22,480	160,447	414
	(B)	Private Institution(4 B)		2,848	27,770	63	2,990	29,158	66	3,139	30,616	69
SUB TOTAL	**LIGHT, FAN & POWER FOR PUBLIC/PRIVATE INSTITUTION (LMV-4)**			**22,120**	**165,327**	**417**	**23,804**	**177,720**	**449**	**25,619**	**191,063**	**483**
LMV--5		Rural										
		Urban										
	(A)	Rural Schedule										
		(i)	Un metered Supply	116,594	485,299	1,068	35,232	146,646	323	-	-	-
		(ii)	Metered Supply	50,464	210,816	352	146,965	613,954	1,024	226,287	945,323	1,577
	(B)	Urban Schedule										
		(i)	Metered Supply	7,137	34,113	142	7,494	35,818	149	7,868	37,609	156
SUB TOTAL	**PRIVATE TUBE WELL/PUMPING SETS (LMV-5)**			**174,195**	**730,228**	**1,561**	**189,691**	**796,419**	**1,495**	**234,155**	**982,933**	**1,733**
LMV--6		Rural										
		Urban										
	(A)	Small & Medium Power (Power Loom)										
		(i)	Rural Schedule	12,412	75,248	81	14,894	90,297	97	17,873	108,357	116
		(ii)	Urban Schedule	1,682	10,135	69	1,766	10,642	73	1,855	11,174	76
	(B)	Small & Medium Power										
		(i)	Rural Schedule	13,142	101,799	93	13,405	103,835	95	13,673	105,912	97
		(ii)	Urban Schedule	12,329	164,297	253	13,069	174,155	268	13,853	184,604	284
SUB TOTAL	**SMALL & MEDIUM POWER UPTO 100 HP (75) (LMV-6)**			**39,564**	**351,479**	**496**	**43,133**	**378,929**	**533**	**47,253**	**410,047**	**574**
LMV--7		Rural										
		Urban										
	(A)	Rural Schedule										
		(i)	Jal Nigam	323	8,697	30	326	8,784	30	330	8,872	30
		(ii)	Jal Sansthan	91	2,497	28	100	2,747	31	110	3,022	34
		(iii)	Others (Water Works)	251	6,832	36	276	7,516	40	303	8,267	44
	(B)	Urban Schedule										
		(i)	Jal Nigam	216	12,758	42	233	13,778	46	252	14,881	49
		(ii)	Jal Sansthan	849	47,696	212	883	49,603	220	918	51,587	229
		(iii)	Others (Water Works)	1,561	55,076	265	1,639	57,829	278	1,721	60,721	292
SUB TOTAL	**PUBLIC WATER WORKS(LMV-7)**			**3,291**	**133,555**	**612**	**3,458**	**140,257**	**644**	**3,635**	**147,349**	**678**
LMV--8		Rural										
		Urban										
	(A)	Metered Supply		3,238	49,082	885	8,417	127,597	2,301	11,502	174,348	3,144
	(B)	Un-metered Supply		-	-	-	-	-	-	-	-	-
		(i)	STW, Panchayat Raj, WB, I.Duch, P.Canals, LI upto 100 BHP	6,857	98,724	586	2,072	29,832	177	-	-	-
		(ii)	Laghu Dal Nahar above 100 BHP	8	2,078	1	2	519	0	-	-	-
SUB TOTAL	**STATE TUBE WELLS & PUMPS CANAL UPTO 100 HP(LMV-8)**			**10,103**	**149,884**	**1,472**	**10,491**	**157,949**	**2,478**	**11,502**	**174,348**	**3,144**

Lucknow Discom				2017-18			2018-19			2019-20		
SUPPLY TYPE				CONSUMER (NUMBERS)	CONNECTED LOAD (KW)	PROJECTED BILLED ENERGY (MU)	CONSUMER (NUMBERS)	CONNECTED LOAD (KW)	PROJECTED BILLED ENERGY (MU)	CONSUMER (NUMBERS)	CONNECTED LOAD (KW)	PROJECTED BILLED ENERGY (MU)
LMV--9		Rural										
		Urban										
	(A)	Metered Supply										
		(i)	Individual Residential Consumers	234	759	2	246	797	2	258	837	2
		(ii)	Others	3,451	11,043	38	3,451	11,043	38	3,451	11,043	38
	(B)	Un-metered Supply										
		(i)	Ceremonies	-	-	-	-	-	-	-	-	-
		(ii)	Temporary Shops	52	-	-	52	-	-	53	-	-
SUB TOTAL		TEMPORARY SUPPLY (LMV-9)		3,737	11,802	40	3,749	11,840	40	3,762	11,880	40
LMV--10	(A)	Serving										
		(i)	Class IV Employees	2,744	7,128	8	2,881	7,485	9	3,025	7,859	9
		(ii)	Class III Employees	3,972	14,057	12	4,051	14,339	13	4,132	14,625	13
		(iii)	Junior Engineers & Equivalent	395	1,600	5	411	1,664	5	427	1,731	5
		(iv)	Assistant Engineers & Equivalent	132	617	1	137	641	1	143	667	1
		(v)	Executive Engineers & Equivalent	49	123	0	50	125	0	51	128	0
		(vi)	Deputy General Manager & Equivalent	8	35	0	8	36	0	8	36	0
		(vii)	CGM/GM & Equivalent posts and above	563	3,941	93	563	3,941	93	563	3,941	93
	(B)	Total Pensioner & Family Pensioner		17,336	58,448	128	18,723	63,124	139	20,221	68,173	150
SUB TOTAL		DEPARTMENTAL EMPLOYEES (LMV-10)		25,199	85,949	248	26,825	91,354	259	28,571	97,161	271
HV--1		Rural										
		Urban										
	(A)	Urban Schedule										
		(i)	For supply at 11kV	889	333,106	660	951	356,423	707	1,018	381,373	756
		(ii)	For supply above 11kV and upto & Including 66kV	2	4,656	12	3	5,587	14	3	6,705	17
		(iii)	For supply above 66kV and upto & Including 132kV	-	-	-	-	-	-	-	-	-
		(iv)	For supply above 132kV	-	-	-	-	-	-	-	-	-
	(B)	Rural Schedule										
		(i)	For supply at 11kV	1	248	1	1	260	1	1	273	1
		(ii)	For supply above 11kV and upto & Including 66kV	-	-	-	-	-	-	-	-	-
SUB TOTAL		NON INDUSTRIAL BULK LOADS (HV-1)		893	338,010	673	955	362,271	722	1,023	388,351	774
HV--2		Rural										
		Urban										

Lucknow Discom				2017-18			2018-19			2019-20		
SUPPLY TYPE				CONSUMER (NUMBERS)	CONNECTED LOAD (KW)	PROJECTED BILLED ENERGY (MU)	CONSUMER (NUMBERS)	CONNECTED LOAD (KW)	PROJECTED BILLED ENERGY (MU)	CONSUMER (NUMBERS)	CONNECTED LOAD (KW)	PROJECTED BILLED ENERGY (MU)
	(A)	Urban Schedule										
		(i)	For supply at 11kV	1,364	436,937	1,218	1,405	450,045	1,254	1,447	463,547	1,292
		(ii)	For supply above 11kV and upto & Including 66kV	132	99,727	344	158	119,673	413	190	143,607	496
		(iii)	For supply above 66kV and upto & Including 132kV	5	30,456	52	6	32,892	57	6	35,524	61
		(iv)	For supply above 132kV	3	24,675	53	3	25,909	55	3	27,204	58
	(B)	Rural Schedule										
		(i)	For supply at 11kV	139	34,590	64	154	38,335	71	170	42,486	79
		(ii)	For supply above 11kV and upto & Including 66kV	-	-	-	-	-	-	-	-	-
SUB TOTAL	**LARGE & HEAVY POWER ABOVE 100 BHP (75 kW) (HV-2)**			**1,643**	**626,385**	**1,731**	**1,726**	**666,854**	**1,850**	**1,817**	**712,368**	**1,986**
HV--3		Rural										
		Urban										
	(A)	For supply at the above 132kV		10	177,922	343	12	204,611	395	14	235,302	454
	(B)	For supply below 132kV		-	-	-	-	-	-	-	-	-
	(C)	For Metro Traction		1	6,000	-	1	6,000	-	1	6,000	-
SUB TOTAL	**RAILWAY TRACTION (HV-3)**			**11**	**183,922**	**343**	**13**	**210,611**	**395**	**15**	**241,302**	**454**
HV--4		Rural										
		Urban										
	(A)	For supply at 11kV		17	13,965	93	19	15,641	104	21	17,518	116
	(B)	For supply above 11kV and upto 66kV		9	16,810	89	10	18,659	99	11	20,711	110
	(C)	For supply above 66kV and upto 132kV		-	-	-	-	-	-	-	-	-
SUB TOTAL	**LIFT IRRIGATION & P. CANAL ABOVE 100 BHP (75kW) (HV-4)**			**26**	**30,775**	**182**	**29**	**34,300**	**202**	**32**	**38,229**	**226**
EXTRA STATE		Rural										
		Urban										
	(A)	EXTRA STATE & OTHERS		1	5,000	65	1	5,000	65	1	5,000	65
SUB TOTAL	**EXTRA STATE CONSUMERS**			**1**	**5,000**	**65**	**1**	**5,000**	**65**	**1**	**5,000**	**65**
BULK		Rural										
		Urban										
	(A)	NPCL		-	-	-	-	-	-	-	-	-
	(B)	KESCO		-	-	-	-	-	-	-	-	-
SUB TOTAL	**BULK SUPPLY**			-	-	-	-	-	-	-	-	-
	GRAND TOTAL			**6,596,877**	**10,692,987**	**18,097**	**10,369,687**	**13,884,600**	**21,952**	**12,108,443**	**15,668,462**	**25,048**

7. POWER PROCUREMENT PLAN FOR THE MYT CONTROL PERIOD

EXECUTIVE SUMMARY

This report presents the list of key assumptions and methodology employed for estimating the power procurement plan and cost therein for the 1st MYT Control Period.

The key inputs to the power procurement plan are the load forecast for the 1st MYT Control Period, technical parameters of thermal plants of UPRVUNL & UPJVNL plants, fuel costs and tariff (i.e. capacity and energy charges) for central sector plants as well as State Sector & IPPs. For UPRVUNL plants, the Petitioner has taken in to consideration the respective Multi-year Tariff (MYT) Petitions filed by UPRVUNL before the Hon'ble Commission. The other technical parameters have been taken from the Uttar Pradesh Electricity Regulatory Commission (Multi Year Generation Tariff) Regulations, 2014 issued by UPERC in respect of state generating stations. The estimated power availability from various sources has been made on the basis of

- Current long term allocation of allocated and unallocated power from State owned/ Central Sector generating stations and IPPs
- New generating capacity coming in ensuing year and during the MYT Control Period
- Indicated availability and plant load factors of various generators and
- Past availability trends and other relevant information in absence of specific indication by some generators.

Similarly, the cost estimates are based on relevant tariff orders, recent bills, existing arrangements, notifications, etc., for various individual sources. The projected availability from various firm sources of power and associated cost estimates are detailed in the sub-sections below. Various documents referred while estimating these parameters, including energy bills from various generating stations for the period upto March, 2017.

The energy sales, system losses and total power procurement costs for 1st MYT Control period are provided below:

Particulars	Unit	2017-18	2018-19	2019-20
		MYT Projections	MYT Projections	MYT Projections
Energy Sales	MU	98,694	122,494	144,830
System Losses (Including Distribution and Transmission Losses)	%	23.44%	20.24%	16.26%
Energy Required at UPPCL Level	MU	128,908	153,577	172,955
Total Power Procurement Cost at UPPCL Level	Rs Crore	52,919	66,033	77,433
Average Power Procurement Cost at UPPCL Level	**Rs/kWh**	**4.11**	**4.30**	**4.48**

POWER PROCUREMENT FROM STATE GENERATING STATIONS

The State of Uttar Pradesh has got both thermal as well as hydro generating stations. UPRVUNL owns all the thermal generating stations within the State and the Hydro Stations are owned by UPJVNL. The Multi Year Tariff (MYT) Petitions filed by the UPRVUNL before the Hon'ble Commission and the UPERC (Terms and Conditions of Generation Tariff) Regulations, 2014 form the basis for determining

the power purchase costs and thereafter escalations have been considered in the Fixed & Variable Charges for determination of cost for the 1st MYT Control Period.

The computation of cost of power procurement for the 1st Control Period has been done based on

- Provisional power purchase cost and units of FY 2015-16 and 2016-17
- Trend observed in the previous and current year.
- Impact of loss reduction initiatives.
- Estimated growth in sales.
- Share of expected capacity available from various Generators to the UPPCL / Discoms.

The projected quantum and cost of energy available from State Thermal and Hydro generating stations has been derived by the Licensee from tariff petitions filed by the UPRVUNL before the Hon'ble State Commission and the UPERC (Terms and Conditions of Generation Tariff) Regulations 2014. Additionally, the Petitioner has also considered the actual energy bills for the period April 2016 to March, 2017. Thus the total power purchased from State Thermal and Hydro Generating Stations for FY 2017-18 is given in the table below:

DETAILS OF POWER PURCHASE COST FROM UPRUVNL STATIONS FOR FY 2017-18

Source of Power	MW Available	MU	Fixed Cost		Variable Cost		Total Cost		Average Cost
			(Rs. / kWh)	(Rs. Cr.)	(Rs. / kWh)	(Rs. Cr.)	(Rs. / kWh)	(Rs. Cr.)	(Rs. / kWh)
Procurement of power from State Sector Generating Stations									
Thermal Stations									
Anpara A	630	3535	0.79	279.52	2.57	908.81	3.36	1,188.33	3.36
Anpara B	1000	7304	0.67	489.52	2.08	1,518.88	2.75	2,008.40	2.75
Harduagunj	105	370	2.35	87.15	3.80	140.77	6.15	227.92	6.15
Obra A	194	306	1.76	53.84	2.45	74.89	4.21	128.73	4.21
Obra B	1000	3560	0.69	246.75	2.35	837.42	3.05	1,084.17	3.05
Panki	210	747	1.63	121.63	3.80	283.74	5.43	405.37	5.43
Parichha	220	430	1.06	45.49	3.80	163.49	4.86	208.98	4.86
Parichha Extn.	420	2411	1.35	324.36	3.80	916.03	5.15	1,240.40	5.15
Parichha Extn. Stage II	500	3189	1.81	577.41	3.80	1,211.68	5.61	1,789.09	5.61
Harduaganj Ext.	500	3189	1.97	627.38	3.80	1,211.68	5.77	1,839.06	5.77
Anpara D	1000	5779	2.23	1,288.44	2.33	1,347.68	4.56	2,636.12	4.56
Total	**5779**	**30819**	**1.34**	**4,141.49**	**2.80**	**8,615.08**	**4.14**	**12,756.57**	**4.14**

DETAILS OF POWER PURCHASE COST FROM UPRUVNL STATIONS FOR FY 2018-19

Source of Power	MW Available	MU	Fixed Cost		Variable Cost		Total Cost		Average Cost
			(Rs. / kWh)	(Rs. Cr.)	(Rs. / kWh)	(Rs. Cr.)	(Rs. / kWh)	(Rs. Cr.)	(Rs. / kWh)
Anpara A	630	4292	0.79	339.55	2.67	1,147.69	3.46	1,487.24	3.46
Anpara B	1000	7055	0.69	485.68	2.16	1,525.78	2.85	2,011.46	2.85
Harduagunj	105	535	2.43	130.14	3.95	211.47	6.38	341.61	6.38
Obra A	94	519	3.76	194.89	2.55	132.08	6.30	326.97	6.30
Obra B	1000	6328	0.72	453.56	2.45	1,548.30	3.16	2,001.86	3.16
Panki	105	581	3.37	195.83	3.95	229.52	7.32	425.35	7.32
Parichha	220	1291	1.08	139.44	3.95	510.10	5.03	649.54	5.03
Parichha Extn.	420	2846	1.34	381.95	3.95	1,124.68	5.29	1,506.63	5.29
Parichha Extn. Stage II	500	3388	1.79	607.06	3.95	1,338.91	5.74	1,945.97	5.74
Harduaganj Ext.	500	3388	1.94	658.65	3.95	1,338.91	5.90	1,997.56	5.90
Anpara D	1000	7018	2.23	1,567.85	2.43	1,701.93	4.66	3,269.77	4.66

Source of Power	MW Available	MU	Fixed Cost		Variable Cost		Total Cost		Average Cost
Total	**5574**	**37240**	**1.38**	**5,154.60**	**2.90**	**10,809.37**	**4.29**	**15,963.97**	**4.29**

DETAILS OF POWER PURCHASE COST FROM UPRUVNL STATIONS FOR FY 2019-20

Source of Power	MW Available	MU	Fixed Cost		Variable Cost		Total Cost		Average Cost
			(Rs. / kWh)	(Rs. Cr.)	(Rs. / kWh)	(Rs. Cr.)	(Rs. / kWh)	(Rs. Cr.)	(Rs. / kWh)
Anpara A	630	4292	0.82	353.13	2.78	1,193.60	3.60	1,546.73	3.60
Anpara B	1000	7055	0.72	505.11	2.25	1,586.81	2.97	2,091.92	2.97
Harduagunj	105	535	2.53	135.35	4.11	219.93	6.64	355.27	6.64
Obra A	94	519	3.91	202.69	2.65	137.36	6.55	340.05	6.55
Obra B	1000	6328	0.75	471.70	2.54	1,610.23	3.29	2,081.93	3.29
Panki	105	581	3.51	203.66	4.11	238.70	7.62	442.36	7.62
Parichha	220	1291	1.12	145.02	4.11	530.51	5.23	675.52	5.23
Parichha Extn.	420	2846	1.40	397.23	4.11	1,169.67	5.51	1,566.90	5.51
Parichha Extn. Stage II	500	3388	1.86	631.34	4.11	1,392.47	5.97	2,023.81	5.97
Harduaganj Ext.	500	3388	2.02	685.00	4.11	1,392.47	6.13	2,077.46	6.13
Anpara D	1000	7018	2.32	1,630.56	2.52	1,770.00	4.85	3,400.57	4.85
Total	**5574**	**37240**	**1.44**	**5,360.78**	**3.02**	**11,241.75**	**4.46**	**16,602.53**	**4.46**

DETAILS OF POWER PURCHASE COST FROM UPJVNL STATIONS FOR THE 1ST CONTROL PERIOD

Source of Power	MW Available	MU	FY 2017-18 Total Cost		FY 2018-19 Total Cost		FY 2019-20 Total Cost	
			(Rs. / kWh)	(Rs. Cr.)	(Rs. / kWh)	(Rs. Cr.)	(Rs. / kWh)	(Rs. Cr.)
Khara	58	217	0.81	17.63	0.85	18.34	0.88	19.07
Matatila	20	81	0.75	6.04	0.78	6.28	0.81	6.53
Obra (Hydel)	99	217	0.70	15.16	0.73	15.77	0.76	16.40
Rihand	255	469	0.64	29.97	0.66	31.16	0.69	32.41
UGC Power Stations	14	22	2.39	5.17	2.49	5.37	2.59	5.59
Belka & Babail	6	2	2.25	0.47	2.25	0.47	2.34	0.49
Sheetla	4	2	2.84	0.63	2.95	0.65	3.07	0.68
Total	**455**	**1009**	**0.74**	**75.07**	**0.77**	**78.05**	**0.80**	**81.17**

The assumptions considered while projecting the power purchase from the State owned thermal generating stations and Hydro stations are given below in Table below for each source respectively:

ASSUMPTIONS FOR POWER PURCHASE FROM UPRVUNL

S. No.	Particulars	Assumption
1	**Power Purchase Quantum**	Net Power Purchase Quantum for FY 2017-18 is considered based on the Provisional Availability for FY 2016-17 and thereafter for the next two years of the Control Period it has been assumed that all the stations will be able to perform at their target availability. The Auxiliary Consumption norms have been considered in line with the UPERC MYT Generation Tariff Regulations, 2014.
2	**Fixed & Variable Charges**	The Capacity Charges have been considered based on the UPERC's Review Order dated 18.01.2017 for UPRVUNL for the period FY 20014-15 to 2018-19. Thereafter an yearly increase of 4% has been considered for FY 2019-20. An increase of 3% has been considered for calculation of the Variable Charges for each power station. Additionally the improvement in norms and operation parameters along with other changes in cost parameters stipulated by the UPERC (Terms and Conditions of

S. No.	Particulars	Assumption
		Generation Tariff) Regulations, 2014 have been duly considered while projecting the capacity and energy charges.

ASSUMPTIONS FOR POWER PURCHASE FROM UPJVNL

S. No.	Particulars	Assumption
1	**Power Purchase Quantum**	Net Power Purchase Quantum for the MYT Period for all power stations of UPJVNL has been considered based on the latest bills available for last year
2	**Fixed & Variable Charges**	The same for all power stations of UPJVNL has been considered based on the latest bills available for last year with an escalation of 4%.

CAPACITY ALLOCATION FROM CENTRAL GENERATING STATIONS & OTHER STATIONS

Central Generating Stations (CGS) comprise of stations belonging to the National Thermal Power Corporation (NTPC), National Hydro Power Corporation Ltd. and the Nuclear Power Corporation of India Ltd. (NPCIL). At present, UPPCL has a firm share allocation for drawl of power from all stations of NTPC, NHPC and NPCIL Stations. In addition to the firm share allocation, most of these stations have unallocated power. The distribution of this unallocated power among the constituents of Northern Region is decided from time to time based on power requirement and power shortage in different States. UPPCL also gets a substantial portion of the unallocated share.

UPPCL's current Allocated share from various Central Sector Plants is projected as per NRPC circular which contains the UPPCL's total share includes the allocated share from unallocated power also.

The variable (Primary & Secondary fuel) costs of Central Sector plants and other plants have been taken from the energy bills for the period FY 2015-16 and 2016-17 and are inclusive of FPA. All variable costs have been escalated by 3% for the control period.

The computation of cost of power procurement for the 1st Control Period has been done based on

- Provisional power purchase cost and units of FY 2015-16 and 2016-17
- Trend observed in the previous and current year
- Impact of loss reduction initiatives.
- Estimated growth in sales.
- Share of expected capacity available from various Generators to the Licensee

The cost of power purchase from IPPs within the State and outside the State has been derived from the latest available bills of the generators for the period FY 2015-16 and 2016-17. The cost of energy from other sources has been derived from the power purchase / banking / trading agreements and tariffs approved by the Central / Appropriate Commissions. Further the fixed charges and variable charges have been escalated by 4% all power stations.

The power purchased from NTPC generating stations for FY 2017-18 is provided in table given below:

DETAILS OF POWER PURCHASE COST FROM NTPC STATIONS FOR FY 2017-18

Source of Power	MW Available	MU	Fixed Cost		Variable Cost		Total Cost		Average Cost
			(Rs. / kWh)	(Rs. Cr.)	(Rs. / kWh)	(Rs. Cr.)	(Rs. / kWh)	(Rs. Cr.)	(Rs. / kWh)
Anta	119	254	2.44	61.82	2.84	71.98	5.27	133.80	5.27
Auriya	244	310	2.96	91.90	3.40	105.41	6.36	197.31	6.36
Dadri Thermal	84	536	0.94	50.31	3.54	189.52	4.48	239.83	4.48
Dadri Gas	272	970	1.12	109.04	2.75	267.14	3.88	376.18	3.88
Dadri Extension	135	838	1.81	151.72	3.28	274.72	5.09	426.44	5.09
Rihand-I	360	2394	0.88	211.15	1.85	443.62	2.74	654.77	2.74
Rihand-II	333	2655	0.78	206.34	1.68	446.63	2.46	652.97	2.46
Singrauli	822	6031	0.59	353.76	1.71	1,031.69	2.30	1,385.45	2.30
Tanda	440	2985	1.19	354.81	3.34	995.63	4.52	1,350.44	4.52
Unchahar-I	255	1670	0.89	147.95	3.07	512.86	3.96	660.81	3.96
Unchahar-II	146	1142	0.77	88.10	3.09	352.41	3.86	440.51	3.86
Unchahar-III	72	570	1.18	67.26	3.36	191.65	4.54	258.91	4.54
Farakka	35	242	0.86	20.85	2.77	67.09	3.63	87.93	3.63
Kahalgaon St. I	77	553	0.97	53.91	2.60	143.97	3.58	197.88	3.58
Kahalgaon St.II Ph.I	252	1851	1.09	202.38	2.33	431.80	3.43	634.18	3.43
Koldam (Hydro)	101	699	4.29	299.90	2.21	154.72	6.51	454.61	6.51
Rihand-III	361	2823	1.36	384.72	1.72	486.05	3.08	870.77	3.08
Total	**4109**	**26523**		**2,855.92**		**6,166.87**		**9,022.79**	**3.40**

DETAILS OF POWER PURCHASE COST FROM NTPC STATIONS FOR FY 2018-19

Source of Power	MW Available	MU	Fixed Cost		Variable Cost		Total Cost		Average Cost
			(Rs. / kWh)	(Rs. Cr.)	(Rs. / kWh)	(Rs. Cr.)	(Rs. / kWh)	(Rs. Cr.)	(Rs. / kWh)
Anta	119	304	0.75	64.29	2.98	90.69	3.72	154.99	5.09
Auriya	244	414	0.54	95.57	3.57	147.57	4.11	243.14	5.87
Dadri Thermal	84	536	0.94	52.33	3.68	197.10	4.62	249.43	4.66
Dadri Gas	272	1039	0.58	113.40	2.89	300.54	3.47	413.94	3.98
Dadri Extension	135	860	1.77	157.79	3.41	293.03	5.18	450.83	5.24
Rihand-I	360	2451	0.92	219.60	1.93	472.48	2.84	692.08	2.82
Rihand-II	333	2655	0.97	214.59	1.75	464.49	2.72	679.08	2.56
Singrauli	822	6031	0.68	367.91	1.78	1,072.95	2.46	1,440.87	2.39
Tanda	440	2985	1.31	369.00	3.47	1,035.46	4.78	1,404.46	4.71
Unchahar-I	255	1670	0.91	153.87	3.19	533.38	4.10	687.24	4.12
Unchahar-II	146	1142	0.95	91.62	3.21	366.50	4.16	458.13	4.01
Unchahar-III	72	570	1.48	69.95	3.50	199.32	4.97	269.26	4.72
Farakka	35	242	0.92	21.68	2.88	69.77	3.80	91.45	3.78
Kahalgaon St. I	77	553	1.10	56.06	2.71	149.73	3.81	205.79	3.72
Kahalgaon St.II Ph.I	252	1851	1.26	210.48	2.43	449.08	3.69	659.55	3.56
Koldam (Hydro)	101	699	1.56	311.89	2.30	160.91	3.86	472.80	6.77
Rihand-III	361	2823	1.67	400.11	1.79	505.49	3.46	905.60	3.21
Uchchahar-IV	117	626	1.48	92.57	3.50	218.94	4.97	311.51	4.97
Total	**4226**	**27452**		**3063**		**6727**		**9790**	**3.57**

DETAILS OF POWER PURCHASE COST FROM NTPC STATIONS FOR FY 2019-20

Source of Power	MW Available	MU	Fixed Cost		Variable Cost		Total Cost		Average Cost
			(Rs. / kWh)	(Rs. Cr.)	(Rs. / kWh)	(Rs. Cr.)	(Rs. / kWh)	(Rs. Cr.)	(Rs. / kWh)
Anta	119	304	0.78	66.86	3.13	95.23	3.90	162.09	5.33
Auriya	244	414	0.57	99.40	3.74	154.95	4.31	254.35	6.15
Dadri Thermal	84	536	0.98	54.42	3.83	204.98	4.81	259.40	4.84
Dadri Gas	272	1039	0.60	117.94	3.04	315.56	3.64	433.50	4.17
Dadri Extension	135	860	1.84	164.10	3.54	304.76	5.38	468.86	5.45
Rihand-I	360	2451	0.95	228.38	2.00	491.38	2.96	719.76	2.94
Rihand-II	333	2655	1.01	223.18	1.82	483.07	2.83	706.25	2.66
Singrauli	822	6031	0.70	382.63	1.85	1,115.87	2.55	1,498.50	2.48
Tanda	440	2985	1.36	383.76	3.61	1,076.87	4.97	1,460.64	4.89
Unchahar-I	255	1670	0.95	160.02	3.32	554.71	4.27	714.73	4.28
Unchahar-II	146	1142	0.98	95.29	3.34	381.16	4.32	476.45	4.17

Source of Power	MW Available	MU	Fixed Cost		Variable Cost		Total Cost		Average Cost
			(Rs. / kWh)	(Rs. Cr.)	(Rs. / kWh)	(Rs. Cr.)	(Rs. / kWh)	(Rs. Cr.)	(Rs. / kWh)
Unchahar-III	72	570	1.54	72.75	3.64	207.29	5.17	280.03	4.91
Farakka	35	242	0.95	22.55	3.00	72.56	3.95	95.11	3.93
Kahalgaon St. I	77	553	1.14	58.31	2.82	155.72	3.96	214.02	3.87
Kahalgaon St.II Ph.I	252	1851	1.31	218.89	2.52	467.04	3.83	685.93	3.71
Koldam (Hydro)	101	699	1.56	324.37	2.39	167.34	3.95	491.71	7.04
Rihand-III	361	2823	1.74	416.11	1.86	525.71	3.60	941.82	3.34
Tanda Stage-II	155	830	1.36	113.09	3.61	299.31	4.97	412.40	4.97
Uchchahar-IV	117	819	1.55	127.11	3.67	300.62	5.22	427.73	5.22
Total	**4381**	**28474**		**3329**		**7374**		**10703**	**3.76**

The assumptions considered while projecting the power purchase from the NTPC generating stations is given in Table below:

ASSUMPTIONS OF POWER PURCHASE FROM NTPC

S. No.	Particulars	Assumption
1	**Power Purchase Quantum**	Net Power Purchase Quantum is derived as a product of respective power plants MW capacity, plant load factor (PLF) and UP state's share in respective power plant. Further the quantum is approved as per Merit order despatch principles. We have also referred to the actual plant load factor of such stations for the last 2 years while projecting the PLF for the Control period.
2	**Fixed Charges**	Fixed charges are computed after considering UP state's allocated share in respective power plant as per Regional Energy Accounting Report and Annual Report of NRPC and ERPC and fixed cost as per the latest available bills of the generating station. Further the escalation factor has been considered @ 4%.
3	**Variable Charges**	Variable cost is considered as per the recent energy bills raised for the period FY 2015-16 and 2016-17. Further the escalation factor has been considered @ 4%.

The summary of power purchased from NHPC generating stations is provided in table given below:

DETAILS OF POWER PURCHASE COST FROM NHPC STATIONS FOR FY 2017-18

Source of Power	MW Available	MU	Fixed Cost		Variable Cost		Total Cost		Average Cost
			(Rs. / kWh)	(Rs. Cr.)	(Rs. / kWh)	(Rs. Cr.)	(Rs. / kWh)	(Rs. Cr.)	(Rs. / kWh)
Chamera	109	434	0.94	40.76	1.27	55.23	2.21	95.98	2.21
Chamera-II	86	401	1.27	50.76	1.38	55.29	2.65	106.05	2.65
Chamera-III	62	240	2.55	61.27	2.42	58.09	4.97	119.35	4.97
Dhauliganga	75	246	1.74	42.81	2.48	61.12	4.22	103.92	4.22
Salal I&II	48	225	0.64	14.29	1.82	40.92	2.46	55.21	2.46
Tanakpur	21	63	2.55	15.99	2.52	15.81	5.06	31.80	5.06
Uri	96	548	0.88	48.02	1.47	80.57	2.35	128.59	2.35
Dulhasti	111	628	2.74	172.18	3.48	218.30	6.22	390.48	6.22
Sewa-II	35	134	3.00	40.12	2.45	32.75	5.45	72.88	5.45
Uri-II	60	371	2.74	101.57	4.06	150.28	6.80	251.85	6.80
Parbati ST-III	140	180	2.32	41.79	2.87	51.61	5.19	93.40	5.19
Kishanganga HEP	64	277	2.50	69.24	2.40	66.47	4.90	135.71	4.90
Total	**908**	**3746**		**699**		**886**		**1585**	**4.23**

DETAILS OF POWER PURCHASE COST FROM NHPC STATIONS FOR FY 2018-19

Source of Power	MW Available	MU	Fixed Cost		Variable Cost		Total Cost		Average Cost
			(Rs. / kWh)	(Rs. Cr.)	(Rs. / kWh)	(Rs. Cr.)	(Rs. / kWh)	(Rs. Cr.)	(Rs. / kWh)
Chamera	109	434	0.98	42.39	1.32	57.43	2.30	99.82	2.30
Chamera-II	86	401	1.32	52.79	1.44	57.51	2.75	110.30	2.75
Chamera-III	62	240	2.65	63.72	2.51	60.41	5.16	124.12	5.16
Dhauliganga	75	246	1.81	44.52	2.58	63.56	4.39	108.08	4.39
Salal I&II	48	225	0.66	14.86	1.89	42.56	2.55	57.42	2.55
Tanakpur	21	63	2.65	16.63	2.62	16.44	5.27	33.07	5.27
Uri	96	548	0.91	49.94	1.53	83.79	2.44	133.73	2.44
Dulhasti	111	628	2.85	179.06	3.62	227.04	6.47	406.10	6.47
Sewa-II	35	134	3.12	41.73	2.55	34.06	5.67	75.79	5.67
Uri-II	60	371	2.85	105.63	4.22	156.29	7.07	261.92	7.07
Parbati ST-II	155	0	-	-	-	-	-	-	-
Parbati ST-III	140	180	2.42	43.46	2.98	53.68	5.40	97.14	5.40
Kishanganga HEP	64	277	2.45	67.85	2.60	72.01	5.05	139.86	5.05
Parbati II	155	671	2.45	164.33	2.60	174.40	5.05	338.73	5.05
Total	**1218**	**4417**		**887**		**1099**		**1986**	**4.50**

DETAILS OF POWER PURCHASE COST FROM NHPC STATIONS FOR FY 2019-20

Source of Power	MW Available	MU	Fixed Cost		Variable Cost		Total Cost		Average Cost
			(Rs. / kWh)	(Rs. Cr.)	(Rs. / kWh)	(Rs. Cr.)	(Rs. / kWh)	(Rs. Cr.)	(Rs. / kWh)
Chamera	109	434	1.02	44.08	1.38	59.73	2.39	103.82	2.39
Chamera-II	86	400	1.37	54.90	1.49	59.63	2.87	114.53	2.87
Chamera-III	62	240	2.76	66.26	2.61	62.65	5.38	128.92	5.38
Dhauliganga	75	245	1.89	46.30	2.69	65.92	4.57	112.22	4.57
Salal I&II	48	225	0.69	15.45	1.97	44.26	2.66	59.71	2.66
Tanakpur	21	63	2.76	17.30	2.72	17.10	5.48	34.39	5.48
Uri	96	548	0.95	51.93	1.59	87.14	2.54	139.08	2.54
Dulhasti	111	626	2.97	186.23	3.76	235.51	6.73	421.74	6.73
Sewa-II	35	133	3.25	43.40	2.65	35.34	5.90	78.73	5.90
Uri-II	51	314	3.50	109.86	4.39	137.81	7.88	247.67	7.88
Parbati ST-II	160	0	-	-	-	-	-	-	#DIV/0!
Parbati ST-III	104	134	3.38	45.20	3.10	41.53	6.48	86.73	6.48
Tapovan Vishnu Gad	101	262	2.45	64.25	2.60	68.18	5.05	132.43	5.05
Kishanganga HEP	64	277	2.45	70.57	2.70	74.89	5.15	145.46	5.25
Vishnugarh Pipalkoti	166	431	2.45	105.60	2.60	112.06	5.05	217.66	5.05
Parbati II	155	671	2.45	170.91	2.70	181.37	5.15	352.28	5.25
Kameng	55	143	2.45	34.99	2.60	37.13	5.05	72.12	5.05
Total	**1499**	**5146**		**1127**		**1320**		**2448**	**4.76**

The assumptions considered while projecting the power purchase from the NHPC generating stations is given in table below:

ASSUMPTIONS FOR POWER PURCHASE FROM NHPC

S. No.	Particulars	Assumption
1	**Power Purchase Quantum**	Net Power Purchase Quantum is derived as a product of respective power plants MW capacity, plant load factor (PLF) and UP State's share in respective power plant.

S. No.	Particulars	Assumption
3	**Fixed Charges**	Fixed charges are computed after considering UP state's allocated share in respective power plant as per Regional Energy Accounting Report and Annual Report of NRPC and fixed cost as per the latest available bills for the period FY 2015-16 and 2016-17. Further the escalation factor has been considered @ 4%.
4	**Variable Charges**	Variable cost is considered as per the recent energy bills raised for the period FY 2015-16 and 2016-17. Further the escalation factor has been considered @ 4%.

The summary of power purchased from NPCIL generating stations for the 1st Control period is provided in table given below:

DETAILS OF POWER PURCHASE COST FROM NPCIL STATIONS FOR FY 2017-18

Source of Power	MW Available	MU	Fixed Cost		Variable Cost		Total Cost		Average Cost
			(Rs. / kWh)	(Rs. Cr.)	(Rs. / kWh)	(Rs. Cr.)	(Rs. / kWh)	(Rs. Cr.)	(Rs. / kWh)
NAPP	166	1148	-	-	2.75	316.25	2.75	316.25	2.75
RAPP #3&4	80	543	-	-	3.20	174.09	3.20	174.09	3.20
RAPP#5&6	115	715	-	-	3.86	276.29	3.86	276.29	3.86
Total NPCIL	**361**	**2407**				**766.63**		**766.63**	**3.19**

DETAILS OF POWER PURCHASE COST FROM NPCIL STATIONS FOR FY 2018-19

Source of Power	MW Available	MU	Fixed Cost		Variable Cost		Total Cost		Average Cost
			(Rs. / kWh)	(Rs. Cr.)	(Rs. / kWh)	(Rs. Cr.)	(Rs. / kWh)	(Rs. Cr.)	(Rs. / kWh)
NAPP	166	1148	-	-	2.86	328.90	2.86	328.90	2.86
RAPP #3&4	80	543	-	-	3.33	181.05	3.33	181.05	3.33
RAPP#5&6	115	765	-	-	4.02	307.35	4.02	307.35	4.02
Total NPCIL	**361**	**2456**				**817.30**		**817.30**	**3.33**

DETAILS OF POWER PURCHASE COST FROM NPCIL STATIONS FOR FY 2019-20

Source of Power	MW Available	MU	Fixed Cost		Variable Cost		Total Cost		Average Cost
			(Rs. / kWh)	(Rs. Cr.)	(Rs. / kWh)	(Rs. Cr.)	(Rs. / kWh)	(Rs. Cr.)	(Rs. / kWh)
NAPP	166	1148	-	-	2.98	342.06	2.98	342.06	2.98
RAPP #3&4	80	543	-	-	3.47	188.29	3.47	188.29	3.47
RAPP#5&6	115	765	-	-	4.18	319.64	4.18	319.64	4.18
RAPP#7&8	162	634	-	-	4.18	264.73	4.18	264.73	4.18
Sub-Total NPCIL	**523**	**3090**				**1115**		**1115**	**3.61**

The assumptions considered while projecting the power purchase from the NPCIL generating stations is given in table below:

ASSUMPTIONS FOR POWER PURCHASE FROM NPCIL

S. No.	Particulars	Assumption
1	**Power Purchase Quantum**	Net Power Purchase Quantum is derived as a product of respective power plants MW capacity, capacity factor and UP state's share in respective power plant.

2	**Tariff (Single part)**	Variable cost is considered as per the recent energy bills raised for the period FY 2015-16 and 2016-17. Further the escalation factor has been considered @ 4%.

The summary of total power purchased from IPPs and Joint Ventures (JVs) for the 1st Control Period is provided in table given below:

DETAILS OF POWER PURCHASE COST FROM IPPS / JVs FOR FY 2017-18

Source of Power	MW Available	MU	Fixed Cost		Variable Cost		Total Cost		Average Cost
			(Rs. / kWh)	(Rs. Cr.)	(Rs. / kWh)	(Rs. Cr.)	(Rs. / kWh)	(Rs. Cr.)	(Rs. / kWh)
NATHPA JHAKRI HPS	287	1498	1.63	244.75	1.46	219.14	3.10	463.89	3.10
RAMPUR	96	375	2.03	76.10	1.75	65.54	3.78	141.64	3.78
TALA POWER	45	158	-	-	2.11	33.21	2.11	33.21	2.11
Koteshwar	173	569	2.03	115.67	1.97	112.33	4.01	228.00	4.01
Srinagar	290	1135	3.25	368.77	2.59	293.74	5.84	662.51	5.84
Sasan	495	3686	0.17	62.97	1.76	649.82	1.93	712.79	1.93
MB Power	350	2453	2.88	706.00	2.10	514.28	4.98	1,220.28	4.98
KSK	505	2415	2.21	533.20	2.72	656.77	4.93	1,189.96	4.93
TRN Energy	150	489	1.90	93.02	1.41	68.93	3.31	161.95	3.31
Karcham-Wangtoo	200	870	-	-	4.13	359.23	4.13	359.23	4.13
VISHNUPRAYAG	352	2082	0.76	157.69	1.45	302.40	2.21	460.09	2.21
TEHRI STAGE-I	418	1447	2.91	420.64	2.86	413.65	5.77	834.29	5.77
Rosa Power Project	600	4066	1.76	716.81	3.27	1,328.86	5.03	2,045.67	5.03
Rosa Power Project	600	4066	1.76	716.81	3.27	1,330.42	5.04	2,047.23	5.04
Bara	1782	9910	1.68	1,662.98	2.49	2,466.57	4.17	4,129.56	4.17
Anpara 'C'	1100	7453	0.92	689.08	3.00	2,233.24	3.92	2,922.32	3.92
IGSTPP, Jhajhjhar	51	266	2.58	68.67	4.35	115.54	6.93	184.21	6.93
Bajaj Hindusthan	450	2456	2.84	697.84	4.38	1,075.01	7.22	1,772.86	7.22
Lalitpur	1782	9386	2.07	1,945.56	2.97	2,784.85	5.04	4,730.41	5.04
RKM Powergen	350	1996	2.40	479.63	1.53	306.18	3.94	785.81	3.94
Teesta	200	806	2.30	185.36	2.30	185.36	4.60	370.72	4.60
Total	**10275**	**57580**		**9942**		**15515**		**25457**	**4.42**

DETAILS OF POWER PURCHASE COST FROM IPPS / JVs FOR FY 2018-19

Source of Power	MW Available	MU	Fixed Cost		Variable Cost		Total Cost		Average Cost
			(Rs. / kWh)	(Rs. Cr.)	(Rs. / kWh)	(Rs. Cr.)	(Rs. / kWh)	(Rs. Cr.)	(Rs. / kWh)
NATHPA JHAKRI HPS	287	1498	1.70	254.54	1.52	227.91	3.22	482.45	3.22
RAMPUR	96	416	2.11	87.93	1.82	75.73	3.93	163.67	3.93
TALA POWER	45	197	-	-	2.19	43.17	2.19	43.17	2.19
Koteshwar	173	749	2.11	158.28	2.05	153.71	4.17	311.99	4.17
Srinagar	290	1261	3.38	426.13	2.69	339.43	6.07	765.56	6.07
Sasan	495	3686	0.18	65.49	1.83	675.82	2.01	741.30	2.01
MB Power	350	2606	2.99	780.13	2.18	568.28	5.17	1,348.41	5.17
KSK	505	3221	2.30	739.36	2.83	910.72	5.12	1,650.08	5.12
TRN Energy	150	855	1.98	169.30	1.47	125.45	3.45	294.75	3.45
Karcham-Wangtoo	200	870	-	-	4.29	373.60	4.29	373.60	4.29
VISHNUPRAYAG	352	2082	0.79	164.00	1.51	314.49	2.30	478.49	2.30
TEHRI STAGE-I	418	1809	3.02	546.83	2.97	537.75	6.00	1,084.58	6.00
Rosa Power Project	600	4066	1.83	745.48	3.40	1,382.01	5.23	2,127.50	5.23
Rosa Power Project	600	4066	1.83	745.48	3.40	1,383.64	5.24	2,129.12	5.24
Bara	1782	12572	1.75	2,194.15	2.59	3,254.41	4.33	5,448.55	4.33
Anpara 'C'	1100	7453	0.96	716.64	3.12	2,322.57	4.08	3,039.21	4.08
IGSTPP, Jhajhjhar	51	368	2.69	98.79	4.52	166.22	7.21	265.01	7.21

Source of Power	MW Available	MU	Fixed Cost		Variable Cost		Total Cost		Average Cost
			(Rs. / kWh)	(Rs. Cr.)	(Rs. / kWh)	(Rs. Cr.)	(Rs. / kWh)	(Rs. Cr.)	(Rs. / kWh)
Bajaj Hindusthan	450	2982	2.43	725.76	4.55	1,357.59	6.99	2,083.34	6.99
Lalitpur	1782	12274	2.16	2,645.96	3.09	3,787.39	5.24	6,433.36	5.24
RKM Powergen	350	2424	2.50	605.70	1.60	386.66	4.09	992.37	4.09
Teesta	200	967	2.39	231.33	2.39	231.33	4.78	462.66	4.78
NTPC Meja	458	2239	2.23	500.15	2.30	514.91	4.53	1,015.06	4.53
Total	**10733**	**68660**		**12601**		**19133**		**31734**	**4.62**

DETAILS OF POWER PURCHASE COST FROM IPPS / JVs FOR FY 2019-20

Source of Power	MW Available	MU	Fixed Cost		Variable Cost		Total Cost		Average Cost
			(Rs. / kWh)	(Rs. Cr.)	(Rs. / kWh)	(Rs. Cr.)	(Rs. / kWh)	(Rs. Cr.)	(Rs. / kWh)
NATHPA JHAKRI HPS	287	1498	1.77	264.72	1.58	237.02	3.35	501.75	3.35
RAMPUR	96	499	2.20	109.74	1.89	94.52	4.09	204.26	4.09
TALA POWER	45	236	-	-	2.28	53.87	2.28	53.87	2.28
Koteshwar	173	898	2.20	197.53	2.14	191.84	4.33	389.37	4.33
Srinagar	290	1514	3.51	531.81	2.80	423.61	6.31	955.42	6.31
Sasan	495	3686	0.18	68.10	1.91	702.85	2.09	770.95	2.09
MB Power	350	2606	3.11	811.33	2.27	591.01	5.38	1,402.35	5.38
KSK	505	3221	2.39	768.94	2.94	947.15	5.33	1,716.08	5.33
TRN Energy	150	978	2.06	201.23	1.53	149.11	3.58	350.34	3.58
Karcham-Wangtoo	200	1131	-	-	4.47	505.10	4.47	505.10	4.47
VISHNUPRAYAG	352	2296	0.82	188.12	1.57	360.74	2.39	548.86	2.39
TEHRI STAGE-I	418	2786	3.14	875.80	3.09	861.26	6.24	1,737.06	6.24
Rosa Power Project	600	4066	1.91	775.30	3.54	1,437.30	5.44	2,212.60	5.44
Rosa Power Project	600	4066	1.91	775.30	3.54	1,438.98	5.45	2,214.28	5.45
Bara	1782	12572	1.82	2,281.91	2.69	3,384.58	4.51	5,666.49	4.51
Anpara 'C'	1100	7453	1.00	745.31	3.24	2,415.47	4.24	3,160.78	4.24
IGSTPP, Jhajhjhar	51	368	2.80	102.75	4.70	172.87	7.50	275.62	7.50
Bajaj Hindusthan	450	2982	2.53	754.79	4.73	1,411.89	7.27	2,166.68	7.27
Lalitpur	1782	12274	2.24	2,751.80	3.21	3,938.89	5.45	6,690.69	5.45
RKM Powergen	350	2424	2.60	629.93	1.66	402.13	4.26	1,032.06	4.26
Teesta	200	967	2.49	240.58	2.49	240.58	4.98	481.17	4.98
NTPC Meja	916	6343	2.32	1,473.79	2.39	1,517.27	4.72	2,991.06	4.72
Total	**11191**	**74863**		**14549**		**21478**		**36027**	**4.81**

The assumptions considered while projecting the power purchase from IPP's and Joint Ventures (JV's) is given in table below:

ASSUMPTIONS FOR POWER PURCHASE FROM IPPS / JVs -

S. No.	Particulars	Assumption
1	**Power Purchase Quantum**	Net Power Purchase Quantum is derived as a product of respective power plants MW capacity, capacity factor and UP state's share in respective power plant.
2	**Tariff (Single part & Two part)**	Fixed and Variable Charges have been considered as per the recent energy bills raised for the period FY 2015-16 and 2016-17. Further the escalation factor has been considered @ 4%.

The Petitioner has signed PPAs under Case-1 bidding from various generators and traders such as PTC India Limited (TRN Energy & MB Power), Lanco Babandh, KSK Energy. The scheduled date of supply was 1.10.2016. However, early supply from PTC India (MB Power) and KSK Energy has already commenced from August and October 2015 respectively. Accordingly, the projected power

purchase from such generators have been projected at the yearly tariff streams quoted by such generators in the Case-1 bids.

The summary of power purchased from Co-generating stations for the 1st Control Period is provided in table given below:

POWER PURCHASE COST: STATE CO-GENERATION FACILITIES FOR FY 2017-18

Source of Power	MU	Fixed Cost		Variable Cost		Total Cost		Average Cost
		(Rs. / kWh)	(Rs. Cr.)	(Rs. / kWh)	(Rs. Cr.)	(Rs. / kWh)	(Rs. Cr.)	(Rs. / kWh)
Captive and Cogen	3412			5.18	1,765.95	5.18	1,765.95	5.18

POWER PURCHASE COST: STATE CO-GENERATION FACILITIES FOR FY 2018-19

Source of Power	MU	Fixed Cost		Variable Cost		Total Cost		Average Cost
		(Rs. / kWh)	(Rs. Cr.)	(Rs. / kWh)	(Rs. Cr.)	(Rs. / kWh)	(Rs. Cr.)	(Rs. / kWh)
Captive and Cogen	3412			5.38	1,836.59	5.38	1,836.59	5.38

POWER PURCHASE COST: STATE CO-GENERATION FACILITIES FOR FY 2019-20

Source of Power	MU	Fixed Cost		Variable Cost		Total Cost		Average Cost
		(Rs. / kWh)	(Rs. Cr.)	(Rs. / kWh)	(Rs. Cr.)	(Rs. / kWh)	(Rs. Cr.)	(Rs. / kWh)
Captive and Cogen	3412			5.60	1,910.05	5.60	1,910.05	5.60

The summary of power purchase from bilateral and other sources for the 1st Control period is provided in the given below:

POWER PURCHASE COST: OTHER SOURCES FY 2017-18

Source of Power	MU	Fixed Cost		Variable Cost		Total Cost		Average Cost
		(Rs. / kWh)	(Rs. Cr.)	(Rs. / kWh)	(Rs. Cr.)	(Rs. / kWh)	(Rs. Cr.)	(Rs. / kWh)
Inter system exchange (Bilateral & PXIL) / UI	2507			3.80	952.57	3.80	952.57	3.80
Renewable Energy	553			6.46	357.56	6.46	357.56	6.46
NVVN Coal Power	352			5.12	180.04	5.12	180.04	5.12
Total	**3412**			**4.37**	**1490**	**4.37**	**1490**	**4.37**

POWER PURCHASE COST: OTHER SOURCES FY 2018-19

Source of Power	MU	Fixed Cost		Variable Cost		Total Cost		Average Cost
		(Rs. / kWh)	(Rs. Cr.)	(Rs. / kWh)	(Rs. Cr.)	(Rs. / kWh)	(Rs. Cr.)	(Rs. / kWh)
Inter system exchange (Bilateral & PXIL) / UI	6579			4.00	2,631.65	4.00	2,631.65	4.00
Renewable Energy	1999			5.04	1,007.99	5.04	1,007.99	5.04
NVVN Coal Power	352			5.33	187.24	5.33	187.24	5.33
Total	**8929**			**4.29**	**3827**	**4.29**	**3827**	**4.29**

POWER PURCHASE COST: OTHER SOURCES FY 2019-20

Source of Power	MU	Fixed Cost		Variable Cost		Total Cost		Average Cost
		(Rs. / kWh)	(Rs. Cr.)	(Rs. / kWh)	(Rs. Cr.)	(Rs. / kWh)	(Rs. Cr.)	(Rs. / kWh)
Inter system exchange (Bilateral	15727			4.20	6,605.46	4.20	6,605.46	4.20

Source of Power	MU	Fixed Cost		Variable Cost		Total Cost		Average Cost
		(Rs. / kWh)	(Rs. Cr.)	(Rs. / kWh)	(Rs. Cr.)	(Rs. / kWh)	(Rs. Cr.)	(Rs. / kWh)
& PXIL) / UI								
Renewable Energy	3641			4.80	1,747.11	4.80	1,747.11	4.80
NVVN Coal Power	352			5.54	194.73	5.54	194.73	5.54
Total	**19720**			**4.33**	**8547**	**4.33**	**8547**	**4.33**

(अनिल कुमार रोहतगी)
मुख्य अभि० (वाणिज्य)
मवविनि०लि०
4-A, गोखले मार्ग, लखनऊ

SUMMARY OF POWER PURCHASE

The total power purchase quantum available in megawatt (MW) terms from State owned generating stations, central generating stations and other sources along with the quantum and cost for the 1st Control period is presented in the table below:

SUMMARY OF POWER PURCHASE COST FY 2017-18

Source of Power	MW Available	MU	Fixed Cost		Variable Cost		Total Cost		Average Cost
			(Rs. / kWh)	(Rs. Cr.)	(Rs. / kWh)	(Rs. Cr.)	(Rs. / kWh)	(Rs. Cr.)	(Rs. / kWh)
Procurement of power from State Sector Generating Stations									
Thermal Stations									
Anpara A	630	3,535	0.79	280	2.57	909	3.36	1,188	3.36
Anpara B	1,000	7,304	0.67	490	2.08	1,519	2.75	2,008	2.75
Harduagunj	105	370	2.35	87	3.80	141	6.15	228	6.15
Obra A	194	306	1.76	54	2.45	75	4.21	129	4.21
Obra B	1,000	3,560	0.69	247	2.35	837	3.05	1,084	3.05
Panki	210	747	1.63	122	3.80	284	5.43	405	5.43
Parichha	220	430	1.06	45	3.80	163	4.86	209	4.86
Parichha Extn.	420	2,411	1.35	324	3.80	916	5.15	1,240	5.15
Parichha Extn. Stage II	500	3,189	1.81	577	3.80	1,212	5.61	1,789	5.61
Harduaganj Ext.	500	3,189	1.97	627	3.80	1,212	5.77	1,839	5.77
Anpara D	1,000	5,779	2.23	1,288	2.33	1,348	4.56	2,636	4.56
Sub total - Thermal	**5779**	**30819**		**4141**		**8615**		**12757**	**4.14**
Per unit Avg Rate of Thermal Generation								**4.14**	
Hydro Stations									
Khara	58	217	0.81	18			0.81	18	0.81
Matatila	20	81	0.75	6			0.75	6	0.75
Obra (Hydel)	99	217	0.70	15			0.70	15	0.70
Rihand	255	469	0.64	30			0.64	30	0.64
UGC Power Stations	14	22	2.39	5			2.39	5	2.39
Belka & Babail	6	2	2.25	0			2.25	0	2.25
Sheetla	4	2	2.84	1			2.84	1	2.84
Sub total - Hydro	**455**	**1009**		**75.07**		**0.00**		**75.07**	**0.74**
Purchase Per unit Avg Rate from hydro generating stations									
Sub-Total Own generation	**6234**	**31828**		**4,216.56**		**8,615.08**		**12,831.64**	**4.03**
Procurement of power from Central Sector Generating Stations									
Anta	119	254	2.44	62	2.84	72	5.27	134	5.27
Auriya	244	310	2.96	92	3.40	105	6.36	197	6.36
Dadri Thermal	84	536	0.94	50	3.54	190	4.48	240	4.48
Dadri Gas	272	970	1.12	109	2.75	267	3.88	376	3.88
Dadri Extension	135	838	1.81	152	3.28	275	5.09	426	5.09
Rihand-I	360	2,394	0.88	211	1.85	444	2.74	655	2.74
Rihand-II	333	2,655	0.78	206	1.68	447	2.46	653	2.46
Singrauli	822	6,031	0.59	354	1.71	1,032	2.30	1,385	2.30
Tanda	440	2,985	1.19	355	3.34	996	4.52	1,350	4.52
Unchahar-I	255	1,670	0.89	148	3.07	513	3.96	661	3.96
Unchahar-II	146	1,142	0.77	88	3.09	352	3.86	441	3.86
Unchahar-III	72	570	1.18	67	3.36	192	4.54	259	4.54
Farakka	35	242	0.86	21	2.77	67	3.63	88	3.63
Kahalgaon St. I	77	553	0.97	54	2.60	144	3.58	198	3.58
Kahalgaon St.II Ph.I	252	1,851	1.09	202	2.33	432	3.43	634	3.43
Koldam (Hydro)	101	699	4.29	300	2.21	155	6.51	455	6.51
Rihand-III	361	2,823	1.36	385	1.72	486	3.08	871	3.08
Sub-Total	**4109**	**26523**		**2856**		**6167**		**9023**	**3.40**

Source of Power	MW Available	MU	Fixed Cost		Variable Cost		Total Cost		Average Cost
			(Rs. / kWh)	(Rs. Cr.)	(Rs. / kWh)	(Rs. Cr.)	(Rs. / kWh)	(Rs. Cr.)	(Rs. / kWh)
NTPC									
Chamera	109	434	0.94	41	1.27	55	2.21	96	2.21
Chamera-II	86	401	1.27	51	1.38	55	2.65	106	2.65
Chamera-III	62	240	2.55	61	2.42	58	4.97	119	4.97
Dhauliganga	75	246	1.74	43	2.48	61	4.22	104	4.22
Salal I&II	48	225	0.64	14	1.82	41	2.46	55	2.46
Tanakpur	21	63	2.55	16	2.52	16	5.06	32	5.06
Uri	96	548	0.88	48	1.47	81	2.35	129	2.35
Dulhasti	111	628	2.74	172	3.48	218	6.22	390	6.22
Sewa-II	35	134	3.00	40	2.45	33	5.45	73	5.45
Uri-II	60	371	2.74	102	4.06	150	6.80	252	6.80
Parbati ST-III	140	180	2.32	42	2.87	52	5.19	93	5.19
Kishanganga HEP	64	277	2.50	69	2.40	66	4.90	136	4.90
Sub-Total NHPC	**908**	**3746**		**699**		**886**		**1585**	**4.23**
NAPP	166	1,148	-	-	2.75	316	2.75	316	2.75
RAPP #3&4	80	543	-	-	3.20	174	3.20	174	3.20
RAPP#5&6	115	715	-	-	3.86	276	3.86	276	3.86
Sub-Total NPCIL	**361**	**2407**				**766.63**		**766.63**	**3.19**
Nathpa jhakri HPS	287	1,498	1.63	245	1.46	219	3.10	464	3.10
Rampur	96	375	2.03	76	1.75	66	3.78	142	3.78
Tala power	45	158	-	-	2.11	33	2.11	33	2.11
Koteshwar	173	569	2.03	116	1.97	112	4.01	228	4.01
Srinagar	290	1,135	3.25	369	2.59	294	5.84	663	5.84
Sasan	495	3,686	0.17	63	1.76	650	1.93	713	1.93
MB Power	350	2,453	2.88	706	2.10	514	4.98	1,220	4.98
KSK	505	2,415	2.21	533	2.72	657	4.93	1,190	4.93
TRN Energy	150	489	1.90	93	1.41	69	3.31	162	3.31
Karcham-Wangtoo	200	870	-	-	4.13	359	4.13	359	4.13
VISHNUPRAYAG	352	2,082	0.76	158	1.45	302	2.21	460	2.21
TEHRI STAGE-I	418	1,447	2.91	421	2.86	414	5.77	834	5.77
Rosa Power Project	600	4,066	1.76	717	3.27	1,329	5.03	2,046	5.03
Rosa Power Project	600	4,066	1.76	717	3.27	1,330	5.04	2,047	5.04
Bara	1,782	9,910	1.68	1,663	2.49	2,467	4.17	4,130	4.17
Anpara 'C'	1,100	7,453	0.92	689	3.00	2,233	3.92	2,922	3.92
IGSTPP, Jhajhjhar	51	266	2.58	69	4.35	116	6.93	184	6.93
Bajaj Hindusthan	450	2,456	2.84	698	4.38	1,075	7.22	1,773	7.22
Lalitpur	1,782	9,386	2.07	1,946	2.97	2,785	5.04	4,730	5.04
RKM Powergen	350	1,996	2.40	480	1.53	306	3.94	786	3.94
Teesta	200	806	2.30	185	2.30	185	4.60	371	4.60
Sub-Total IPP/JV	**10275**	**57580**		**9942**		**15515**		**25457**	**4.42**
Captive and Cogen	-	3,412	-	-	5.18	1,766	5.18	1,766	5.18
Inter system exchange (Bilateral & PXIL, IEX) / UI	-	2,507	-	-	3.80	953	3.80	953	3.80
Renewable Energy	-	553	-	-	6.46	358	6.46	358	6.46
NVVN Coal Power	-	352	-	-	5.12	180	5.12	180	5.12
Sub-Total : Co-Generation & Other Sources	**-**	**6824**				**3,256.12**		**3,256.12**	**4.77**
Grand Total of Power Purchase	**21887**	**128908**	**1.37**	**17,712.80**	**2.73**	**35,206.2**	**4.11**	**52,919.02**	**4.11**

SUMMARY OF POWER PURCHASE COST FY 2018-19

Source of Power	MW Available	MU	Fixed Cost		Variable Cost		Total Cost		Average Cost
			(Rs. / kWh)	(Rs. Cr.)	(Rs. / kWh)	(Rs. Cr.)	(Rs. / kWh)	(Rs. Cr.)	(Rs. / kWh)
Procurement of power from State Sector Generating Stations									
Thermal Stations									
Anpara A	630	4,292	0.79	340	2.67	1,148	3.46	1,487	3.46
Anpara B	1,000	7,055	0.69	486	2.16	1,526	2.85	2,011	2.85
Harduagunj	105	535	2.43	130	3.95	211	6.38	342	6.38
Obra A	94	519	3.76	195	2.55	132	6.30	327	6.30
Obra B	1,000	6,328	0.72	454	2.45	1,548	3.16	2,002	3.16
Panki	105	581	3.37	196	3.95	230	7.32	425	7.32
Parichha	220	1,291	1.08	139	3.95	510	5.03	650	5.03
Parichha Extn.	420	2,846	1.34	382	3.95	1,125	5.29	1,507	5.29
Parichha Extn. Stage II	500	3,388	1.79	607	3.95	1,339	5.74	1,946	5.74
Harduaganj Ext.	500	3,388	1.94	659	3.95	1,339	5.90	1,998	5.90
Anpara D	1,000	7,018	2.23	1,568	2.43	1,702	4.66	3,270	4.66
Sub total - Thermal	**5574**	**37240**		**5155**		**10809**		**15964**	**4.29**
Per unit Avg Rate of Thermal Generation								**4.29**	
Hydro Stations									
Khara	58	217	0.85	18			0.85	18	0.85
Matatila	20	81	0.78	6			0.78	6	0.78
Obra (Hydel)	99	217	0.73	16			0.73	16	0.73
Rihand	255	469	0.66	31			0.66	31	0.66
UGC Power Stations	14	22	2.49	5			2.49	5	2.49
Belka & Babail	6	2	2.25	0			2.25	0	2.25
Sheetla	4	2	2.95	1			2.95	1	2.95
Sub total - Hydro	**455**	**1009**		**78.05**		**0.00**		**78.05**	**0.77**
Purchase Per unit Avg Rate from hydro generating stations								**0.77**	
Sub-Total Own generation	**6029**	**38250**		**5,232.65**		**10,809.37**		**16,042.02**	**4.19**
Procurement of power from Central Sector Generating Stations									
Anta	119	304	0.75	64	2.98	91	3.72	155	5.09
Auriya	244	414	0.54	96	3.57	148	4.11	243	5.87
Dadri Thermal	84	536	0.94	52	3.68	197	4.62	249	4.66
Dadri Gas	272	1,039	0.58	113	2.89	301	3.47	414	3.98
Dadri Extension	135	860	1.77	158	3.41	293	5.18	451	5.24
Rihand-I	360	2,451	0.92	220	1.93	472	2.84	692	2.82
Rihand-II	333	2,655	0.97	215	1.75	464	2.72	679	2.56
Singrauli	822	6,031	0.68	368	1.78	1,073	2.46	1,441	2.39
Tanda	440	2,985	1.31	369	3.47	1,035	4.78	1,404	4.71
Unchahar-I	255	1,670	0.91	154	3.19	533	4.10	687	4.12
Unchahar-II	146	1,142	0.95	92	3.21	367	4.16	458	4.01
Unchahar-III	72	570	1.48	70	3.50	199	4.97	269	4.72
Farakka	35	242	0.92	22	2.88	70	3.80	91	3.78
Kahalgaon St. I	77	553	1.10	56	2.71	150	3.81	206	3.72
Kahalgaon St.II Ph.I	252	1,851	1.26	210	2.43	449	3.69	660	3.56
Koldam (Hydro)	101	699	1.56	312	2.30	161	3.86	473	6.77
Rihand-III	361	2,823	1.67	400	1.79	505	3.46	906	3.21
Uchchahar-IV	117	626	1.48	93	3.50	219	4.97	312	4.97
Sub-Total NTPC	**4226**	**27452**		**3063**		**6727**		**9790**	**3.57**
Chamera	109	434	0.98	42	1.32	57	2.30	100	2.30
Chamera-II	86	401	1.32	53	1.44	58	2.75	110	2.75
Chamera-III	62	240	2.65	64	2.51	60	5.16	124	5.16
Dhauliganga	75	246	1.81	45	2.58	64	4.39	108	4.39

Source of Power	MW Available	MU	Fixed Cost		Variable Cost		Total Cost		Average Cost
			(Rs. / kWh)	(Rs. Cr.)	(Rs. / kWh)	(Rs. Cr.)	(Rs. / kWh)	(Rs. Cr.)	(Rs. / kWh)
Salal I&II	48	225	0.66	15	1.89	43	2.55	57	2.55
Tanakpur	21	63	2.65	17	2.62	16	5.27	33	5.27
Uri	96	548	0.91	50	1.53	84	2.44	134	2.44
Dulhasti	111	628	2.85	179	3.62	227	6.47	406	6.47
Sewa-II	35	134	3.12	42	2.55	34	5.67	76	5.67
Uri-II	60	371	2.85	106	4.22	156	7.07	262	7.07
Parbati ST-III	140	180	2.42	43	2.98	54	5.40	97	5.40
Kishanganga HEP	64	277	2.45	68	2.60	72	5.05	140	5.05
Parbati II	155	671	2.45	164	2.60	174	5.05	339	5.05
Sub-Total NHPC	**1063**	**4417**		**887**		**1099**		**1986**	**4.50**
NAPP	166	1,148	-	-	2.86	329	2.86	329	2.86
RAPP #3&4	80	543	-	-	3.33	181	3.33	181	3.33
RAPP#5&6	115	765	-	-	4.02	307	4.02	307	4.02
Sub-Total NPCIL	**361**	**2456**				**817.30**		**817.30**	**3.33**
NATHPA JHAKRI HPS	287	1,498	1.70	255	1.52	228	3.22	482	3.22
RAMPUR	96	416	2.11	88	1.82	76	3.93	164	3.93
TALA POWER	45	197	-	-	2.19	43	2.19	43	2.19
Koteshwar	173	749	2.11	158	2.05	154	4.17	312	4.17
Srinagar	290	1,261	3.38	426	2.69	339	6.07	766	6.07
Sasan	495	3,686	0.18	65	1.83	676	2.01	741	2.01
MB Power	350	2,606	2.99	780	2.18	568	5.17	1,348	5.17
KSK	505	3,221	2.30	739	2.83	911	5.12	1,650	5.12
TRN Energy	150	855	1.98	169	1.47	125	3.45	295	3.45
Karcham-Wangtoo	200	870	-	-	4.29	374	4.29	374	4.29
VISHNUPRAYAG	352	2,082	0.79	164	1.51	314	2.30	478	2.30
TEHRI STAGE-I	418	1,809	3.02	547	2.97	538	6.00	1,085	6.00
Rosa Power Project	600	4,066	1.83	745	3.40	1,382	5.23	2,127	5.23
Rosa Power Project	600	4,066	1.83	745	3.40	1,384	5.24	2,129	5.24
Bara	1,782	12,572	1.75	2,194	2.59	3,254	4.33	5,449	4.33
Anpara 'C'	1,100	7,453	0.96	717	3.12	2,323	4.08	3,039	4.08
IGSTPP, Jhajhjhar	51	368	2.69	99	4.52	166	7.21	265	7.21
Bajaj Hindusthan	450	2,982	2.43	726	4.55	1,358	6.99	2,083	6.99
Lalitpur	1,782	12,274	2.16	2,646	3.09	3,787	5.24	6,433	5.24
RKM Powergen	350	2,424	2.50	606	1.60	387	4.09	992	4.09
Teesta	200	967	2.39	231	2.39	231	4.78	463	4.78
NTPC Meja	458	2,239	2.23	500	2.30	515	4.53	1,015	4.53
Sub-Total IPP/JV	**10733**	**68660**		**12601**		**19133**		**31734**	**4.62**
Captive and Cogen	-	3,412	-	-	5.38	1,837	5.38	1,837	5.38
Inter system exchange (Bilateral & PXIL, IEX) / UI	-	6,579	-	-	4.00	2,632	4.00	2,632	4.00
Renewable Energy	-	1,999	-	-	5.04	1,008	5.04	1,008	5.04
NVVN Coal Power	-	352	-	-	5.33	187	5.33	187	5.33
Sub-Total : Co-Generation & Other Sources	**-**	**12342**				**5,663.47**		**5,663.47**	**4.59**
Grand Total of Power Purchase	**22412**	**153577**	**1.42**	**21,783.74**	**2.88**	**44,249.5**	**4.30**	**66,033.27**	**4.30**

SUMMARY OF POWER PURCHASE COST FY 2019-20

Source of Power	MW Available	MU	Fixed Cost		Variable Cost		Total Cost		Averag Cost
			(Rs. / kWh)	(Rs. Cr.)	(Rs. / kWh)	(Rs. Cr.)	(Rs. / kWh)	(Rs. Cr.)	(Rs. / kWh)
Procurement of power from State Sector Generating Stations									
Thermal Stations									
Anpara A	630	4,292	0.82	353	2.78	1,194	3.60	1,547	3.60
Anpara B	1,000	7,055	0.72	505	2.25	1,587	2.97	2,092	2.97
Harduagunj	105	535	2.53	135	4.11	220	6.64	355	6.64
Obra A	94	519	3.91	203	2.65	137	6.55	340	6.55
Obra B	1,000	6,328	0.75	472	2.54	1,610	3.29	2,082	3.29
Panki	105	581	3.51	204	4.11	239	7.62	442	7.62
Parichha	220	1,291	1.12	145	4.11	531	5.23	676	5.23
Parichha Extn.	420	2,846	1.40	397	4.11	1,170	5.51	1,567	5.51
Parichha Extn. Stage II	500	3,388	1.86	631	4.11	1,392	5.97	2,024	5.97
Harduaganj Ext.	500	3,388	2.02	685	4.11	1,392	6.13	2,077	6.13
Anpara D	1,000	7,018	2.32	1,631	2.52	1,770	4.85	3,401	4.85
Sub total - Thermal	**5574**	**37240**		**5361**		**11242**		**16603**	**4.46**
Per unit Avg Rate of Thermal Generation								**4.46**	
Hydro Stations									
Khara	58	217	0.88	19			0.88	19	0.88
Matatila	20	81	0.81	7			0.81	7	0.81
Obra (Hydel)	99	217	0.76	16			0.76	16	0.76
Rihand	255	469	0.69	32			0.69	32	0.69
UGC Power Stations	14	22	2.59	6			2.59	6	2.59
Belka & Babail	6	2	2.34	0			2.34	0	2.34
Sheetla	4	2	3.07	1			3.07	1	3.07
Sub total - Hydro	**455**	**1009**		**81.17**		**0.00**		**81.17**	**0.80**
Purchase Per unit Avg Rate from hydro generating stations								**0.80**	
Sub-Total Own generation	**6029**	**38250**		**5,441.96**		**11,241.75**		**16,683.70**	**4.36**
Procurement of power from Central Sector Generating Stations									
Anta	119	304	0.78	67	3.13	95	3.90	162	5.33
Auriya	244	414	0.57	99	3.74	155	4.31	254	6.15
Dadri Thermal	84	536	0.98	54	3.83	205	4.81	259	4.84
Dadri Gas	272	1,039	0.60	118	3.04	316	3.64	434	4.17
Dadri Extension	135	860	1.84	164	3.54	305	5.38	469	5.45
Rihand-I	360	2,451	0.95	228	2.00	491	2.96	720	2.94
Rihand-II	333	2,655	1.01	223	1.82	483	2.83	706	2.66
Singrauli	822	6,031	0.70	383	1.85	1,116	2.55	1,498	2.48
Tanda	440	2,985	1.36	384	3.61	1,077	4.97	1,461	4.89
Unchahar-I	255	1,670	0.95	160	3.32	555	4.27	715	4.28
Unchahar-II	146	1,142	0.98	95	3.34	381	4.32	476	4.17
Unchahar-III	72	570	1.54	73	3.64	207	5.17	280	4.91
Farakka	35	242	0.95	23	3.00	73	3.95	95	3.93
Kahalgaon St. I	77	553	1.14	58	2.82	156	3.96	214	3.87
Kahalgaon St.II Ph.I	252	1,851	1.31	219	2.52	467	3.83	686	3.71
Koldam (Hydro)	101	699	1.56	324	2.39	167	3.95	492	7.04
Rihand-III	361	2,823	1.74	416	1.86	526	3.60	942	3.34
Tanda Stage-II	155	830	1.36	113	3.61	299	4.97	412	4.97
Uchchahar-IV	117	819	1.55	127	3.67	301	5.22	428	5.22
Sub-Total NTPC	**4381**	**28474**		**3329**		**7374**		**10703**	**3.76**
Chamera	109	434	1.02	44	1.38	60	2.39	104	2.39
Chamera-II	86	400	1.37	55	1.49	60	2.87	115	2.87
Chamera-III	62	240	2.76	66	2.61	63	5.38	129	5.38
Dhauliganga	75	245	1.89	46	2.69	66	4.57	112	4.57
Salal I&II	48	225	0.69	15	1.97	44	2.66	60	2.66
Tanakpur	21	63	2.76	17	2.72	17	5.48	34	5.48
Uri	96	548	0.95	52	1.59	87	2.54	139	2.54
Dulhasti	111	626	2.97	186	3.76	236	6.73	422	6.73
Sewa-II	35	133	3.25	43	2.65	35	5.90	79	5.90
Uri-II	51	314	3.50	110	4.39	138	7.88	248	7.88
Parbati ST-III	104	134	3.38	45	3.10	42	6.48	87	6.48
Tapovan Vishnu Gad	101	262	2.45	64	2.60	68	5.05	132	5.05

Source of Power	MW Available	MU	Fixed Cost		Variable Cost		Total Cost		Averag Cost
			(Rs. / kWh)	(Rs. Cr.)	(Rs. / kWh)	(Rs. Cr.)	(Rs. / kWh)	(Rs. Cr.)	(Rs. / kWh)
Kishanganga HEP	64	277	2.45	71	2.70	75	5.15	145	5.25
Vishnugarh Pipalkoti	166	431	2.45	106	2.60	112	5.05	218	5.05
Parbati II	155	671	2.45	171	2.70	181	5.15	352	5.25
Kameng	55	143	2.45	35	2.60	37	5.05	72	5.05
Sub-Total NHPC	**1339**	**5146**		**1127**		**1320**		**2448**	**4.76**
NAPP	166	1,148	-	-	2.98	342	2.98	342	2.98
RAPP #3&4	80	543	-	-	3.47	188	3.47	188	3.47
RAPP#5&6	115	765	-	-	4.18	320	4.18	320	4.18
RAPP#7&8	162	634	-	-	4.18	265	4.18	265	4.18
Sub-Total NPCIL	**523**	**3090**				**1115**		**1115**	**3.61**
NATHPA JHAKRI HPS	287	1,498	1.77	265	1.58	237	3.35	502	3.35
RAMPUR	96	499	2.20	110	1.89	95	4.09	204	4.09
TALA POWER	45	236	-	-	2.28	54	2.28	54	2.28
Koteshwar	173	898	2.20	198	2.14	192	4.33	389	4.33
Srinagar	290	1,514	3.51	532	2.80	424	6.31	955	6.31
Sasan	495	3,686	0.18	68	1.91	703	2.09	771	2.09
MB Power	350	2,606	3.11	811	2.27	591	5.38	1,402	5.38
KSK	505	3,221	2.39	769	2.94	947	5.33	1,716	5.33
TRN Energy	150	978	2.06	201	1.53	149	3.58	350	3.58
Karcham-Wangtoo	200	1,131	-	-	4.47	505	4.47	505	4.47
VISHNUPRAYAG	352	2,296	0.82	188	1.57	361	2.39	549	2.39
TEHRI STAGE-I	418	2,786	3.14	876	3.09	861	6.24	1,737	6.24
Rosa Power Project	600	4,066	1.91	775	3.54	1,437	5.44	2,213	5.44
Rosa Power Project	600	4,066	1.91	775	3.54	1,439	5.45	2,214	5.45
Bara	1,782	12,572	1.82	2,282	2.69	3,385	4.51	5,666	4.51
Anpara 'C'	1,100	7,453	1.00	745	3.24	2,415	4.24	3,161	4.24
IGSTPP, Jhajhjhar	51	368	2.80	103	4.70	173	7.50	276	7.50
Bajaj Hindusthan	450	2,982	2.53	755	4.73	1,412	7.27	2,167	7.27
Lalitpur	1,782	12,274	2.24	2,752	3.21	3,939	5.45	6,691	5.45
RKM Powergen	350	2,424	2.60	630	1.66	402	4.26	1,032	4.26
Teesta	200	967	2.49	241	2.49	241	4.98	481	4.98
NTPC Meja	916	6,343	2.32	1,474	2.39	1,517	4.72	2,991	4.72
Sub-Total IPP/JV	**11191**	**74863**		**14549**		**21478**		**36027**	**4.81**
Captive and Cogen	-	3,412	-	-	5.60	1,910	5.60	1,910	5.60
Inter system exchange (Bilateral & PXIL, IEX) / UI	-	15,727	-	-	4.20	6,605	4.20	6,605	4.20
Renewable Energy	-	3,641	-	-	4.80	1,747	4.80	1,747	4.80
NVVN Coal Power	-	352	-	-	5.54	195	5.54	195	5.54
Sub-Total : Co-Generation & Other Sources	**-**	**23132**				**10,457.35**		**10,457.35**	**4.52**
Grand Total of Power Purchase	**23463**	**172955**	**1.41**	**24,447.13**	**3.06**	**52,986.3**	**4.48**	**77,433.42**	**4.48**

MERIT ORDER DISPATCH

Merit Order Dispatch after evaluating the power purchase cost is given in the table below:

MERIT ORDER DISPATCH FOR FY 2017-18

S.No.	Source of Power	Type	Dispatch Mode	Variable Charge (Rs / kWh)	Power Procurement (MU)	Cumulative Procurement (MU)
1	Khara	State-Hydro	Must-Run	0.00	217	217
2	Matatila	State-Hydro	Must-Run	0.00	81	298
3	Obra (Hydel)	State-Hydro	Must-Run	0.00	217	514
4	Rihand	State-Hydro	Must-Run	0.00	469	983
5	UGC Power Stations	State-Hydro	Must-Run	0.00	22	1005
6	Belka & Babail	State-Hydro	Must-Run	0.00	2	1007
7	Sheetla	State-Hydro	Must-Run	0.00	2	1009
8	Chamera	Central	Merit	1.27	434	1444
9	Chamera-II	Central	Merit	1.38	401	1844
10	VISHNUPRAYAG	IPP	Merit	1.45	2082	3926
11	NATHPA JHAKRI HPS	IPP	Merit	1.46	1498	5425

S.No.	Source of Power	Type	Dispatch Mode	Variable Charge (Rs / kWh)	Power Procurement (MU)	Cumulative Procurement (MU)
12	Uri	Central	Merit	1.47	548	5973
13	RKM Powergen	IPP	Merit	1.53	1996	7969
14	Rihand-II	Central	Merit	1.68	2655	10624
15	Singrauli	Central	Merit	1.71	6031	16655
16	Rihand-III	Central	Merit	1.72	2823	19478
17	RAMPUR	IPP	Merit	1.75	375	19853
18	Sasan	IPP	Merit	1.76	3686	23538
19	KSK	IPP	Merit	1.76	2415	25954
20	Salal I&II	Central	Merit	1.82	225	26179
21	Rihand-I	Central	Merit	1.85	2394	28572
22	Koteshwar	IPP	Merit	1.97	569	29141
23	Anpara B	State-Thermal	Merit	2.08	7304	36445
24	TRN Energy	IPP	Merit	2.10	489	36934
25	TALA POWER	IPP	Merit	2.11	158	37092
26	Koldam (Hydro)	Central	Merit	2.21	699	37790
27	Teesta	IPP	Merit	2.30	806	38596
28	Anpara D	State-Thermal	Merit	2.33	5779	44376
29	Kahalgaon St.II Ph.I	Central	Merit	2.33	1851	46226
30	Obra B	State-Thermal	Merit	2.35	3560	49786
31	Kishanganga HEP	Central	Merit	2.40	277	50063
32	Chamera-III	Central	Merit	2.42	240	50303
33	Obra A	State-Thermal	Merit	2.45	306	50609
34	Sewa-II	Central	Merit	2.45	134	50743
35	Dhauliganga	Central	Merit	2.48	246	50989
36	Bara	IPP	Merit	2.49	9910	60899
37	Tanakpur	Central	Merit	2.52	63	60962
38	Anpara A	State-Thermal	Merit	2.57	3535	64497
39	MB Power	IPP	Merit	2.59	2453	66949
40	Srinagar	IPP	Merit	2.59	1135	68085
41	Kahalgaon St. I	Central	Merit	2.60	553	68638
42	Dadri Gas	Central	Merit	2.75	970	69608
43	NAPP	Central	Merit	2.75	1148	70756
44	Farakka	Central	Merit	2.77	242	70998
45	Anta	Central	Merit	2.84	254	71252
46	TEHRI STAGE-I	IPP	Merit	2.86	1447	72699
47	Parbati ST-III	Central	Merit	2.87	180	72879
48	Lalitpur	IPP	Merit	2.97	9386	82264
49	Anpara 'C'	IPP	Merit	3.00	7453	89718
50	Unchahar-I	Central	Merit	3.07	1670	91388
51	Unchahar-II	Central	Merit	3.09	1142	92530
52	RAPP #3&4	Central	Merit	3.20	543	93074
53	Rosa Power Project	IPP	Merit	3.27	4066	97139
54	Rosa Power Project	IPP	Merit	3.27	4066	101205
55	Dadri Extension	Central	Merit	3.28	838	102043
56	Tanda	Central	Merit	3.34	2985	105028
57	Unchahar-III	Central	Merit	3.36	570	105598
58	Auriya	Central	Merit	3.40	310	105908
59	Dulhasti	Central	Merit	3.48	628	106536
60	Dadri Thermal	Central	Merit	3.54	536	107072
61	Inter system exchange (Bilateral & PXIL, IEX) / UI	IPP	Merit	3.80	2507	109579
62	Harduaganj Ext.	State-Thermal	Merit	3.80	3189	112767
63	Parichha Extn. Stage II	State-Thermal	Merit	3.80	3189	115956
64	Parichha Extn.	State-Thermal	Merit	3.80	2411	118367
65	Harduagunj	State-Thermal	Merit	3.80	370	118737
66	Parichha	State-Thermal	Merit	3.80	430	119167
67	Panki	State-Thermal	Merit	3.80	747	119914
68	RAPP#5&6	Central	Merit	3.86	715	120629
69	Uri-II	Central	Merit	4.06	371	121000
70	Karcham-Wangtoo	IPP	Merit	4.13	870	121870
71	IGSTPP, Jhajhjhar	IPP	Merit	4.35	266	122135
72	Bajaj Hindusthan	IPP	Merit	4.38	2456	124591
73	NVVN Coal Power	IPP	Merit	5.12	352	124943
74	Captive and Cogen	IPP	Merit	5.18	3412	128355
75	Renewable Energy	IPP	Must-Run	6.46	553	128908

MERIT ORDER DISPATCH FOR FY 2018-19

S.No.	Source of Power	Type	Dispatch Mode	Variable Charge (Rs / kWh)	Power Procurement (MU)	Cumulative Procurement (MU)
1	Khara	State-Hydro	Must-Run	0.00	217	217
2	Matatila	State-Hydro	Must-Run	0.00	81	298
3	Obra (Hydel)	State-Hydro	Must-Run	0.00	217	514
4	Rihand	State-Hydro	Must-Run	0.00	469	983
5	UGC Power Stations	State-Hydro	Must-Run	0.00	22	1005
6	Belka & Babail	State-Hydro	Must-Run	0.00	2	1007
7	Sheetla	State-Hydro	Must-Run	0.00	2	1009
8	Chamera	Central	Merit	1.32	434	1444
9	Chamera-II	Central	Merit	1.44	401	1844
10	VISHNUPRAYAG	IPP	Merit	1.51	2082	3926
11	NATHPA JHAKRI HPS	IPP	Merit	1.52	1498	5425
12	Uri	Central	Merit	1.53	548	5973
13	RKM Powergen	IPP	Merit	1.60	2424	8397
14	Rihand-II	Central	Merit	1.75	2655	11052
15	Singrauli	Central	Merit	1.78	6031	17082
16	Rihand-III	Central	Merit	1.79	2823	19906
11	RAMPUR	IPP	Merit	1.82	416	20322
17	Sasan	IPP	Merit	1.83	3686	24008
	KSK	IPP	Merit	1.83	3221	27228
18	Salal I&II	Central	Merit	1.89	225	27453
19	Rihand-I	Central	Merit	1.93	2451	29904
20	Koteshwar	IPP	Merit	2.05	749	30653
21	Anpara B	State-Thermal	Merit	2.16	7055	37708
22	TRN Energy	IPP	Merit	2.18	855	38564
23	TALA POWER	IPP	Merit	2.19	197	38761
24	NTPC Meja	IPP	Merit	2.30	2239	40999
25	Koldam (Hydro)	Central	Merit	2.30	699	41698
26	Teesta	IPP	Merit	2.39	967	42665
27	Anpara D	State-Thermal	Merit	2.43	7018	49683
28	Kahalgaon St.II Ph.I	Central	Merit	2.43	1851	51534
29	Obra B	State-Thermal	Merit	2.45	6328	57862
30	Chamera-III	Central	Merit	2.51	240	58102
31	Obra A	State-Thermal	Merit	2.55	519	58621
32	Sewa-II	Central	Merit	2.55	134	58755
33	Dhauliganga	Central	Merit	2.58	246	59001
34	Bara	IPP	Merit	2.59	12572	71573
35	Kishanganga HEP	Central	Merit	2.60	277	71850
36	Parbati II	Central	Merit	2.60	671	72521
37	Tanakpur	Central	Merit	2.62	63	72584
38	Anpara A	State-Thermal	Merit	2.67	4292	76876
	MB Power	IPP	Merit	2.69	2606	79482
39	Srinagar	IPP	Merit	2.69	1261	80743
40	Kahalgaon St. I	Central	Merit	2.71	553	81296
41	NAPP	Central	Merit	2.86	1148	82445
42	Farakka	Central	Merit	2.88	242	82687
43	Dadri Gas	Central	Merit	2.89	1039	83726
44	TEHRI STAGE-I	IPP	Merit	2.97	1809	85535
45	Anta	Central	Merit	2.98	304	85839
46	Parbati ST-III	Central	Merit	2.98	180	86019
47	Lalitpur	IPP	Merit	3.09	12274	98293
48	Anpara 'C'	IPP	Merit	3.12	7453	105746
49	Unchahar-I	Central	Merit	3.19	1670	107416
50	Unchahar-II	Central	Merit	3.21	1142	108559
51	RAPP #3&4	Central	Merit	3.33	543	109102
52	Rosa Power Project	IPP	Merit	3.40	4066	113167
53	Rosa Power Project	IPP	Merit	3.40	4066	117233
54	Dadri Extension	Central	Merit	3.41	860	118093
55	Tanda	Central	Merit	3.47	2985	121078
56	Uchchahar-IV	Central	Merit	3.50	626	121704
57	Unchahar-III	Central	Merit	3.50	570	122274
58	Auriya	Central	Merit	3.57	414	122688
59	Dulhasti	Central	Merit	3.62	628	123316
60	Dadri Thermal	Central	Merit	3.68	536	123852

S.No.	Source of Power	Type	Dispatch Mode	Variable Charge (Rs / kWh)	Power Procurement (MU)	Cumulative Procurement (MU)
61	Harduaganj Ext.	State-Thermal	Merit	3.95	3388	127240
62	Parichha Extn. Stage II	State-Thermal	Merit	3.95	3388	130627
63	Parichha Extn.	State-Thermal	Merit	3.95	2846	133473
64	Harduagunj	State-Thermal	Merit	3.95	535	134008
65	Parichha	State-Thermal	Merit	3.95	1291	135299
66	Panki	State-Thermal	Merit	3.95	581	135880
67	Inter system exchange (Bilateral & PXIL, IEX) / UI	IPP	Merit	4.00	6579	142459
68	RAPP#5&6	Central	Merit	4.02	765	143224
69	Uri-II	Central	Merit	4.22	371	143595
70	Karcham-Wangtoo	IPP	Merit	4.29	870	144464
71	IGSTPP, Jhajhjhar	IPP	Merit	4.52	368	144832
72	Bajaj Hindusthan	IPP	Merit	4.55	2982	147814
73	Renewable Energy	IPP	Must-Run	5.04	1999	149813
74	NVVN Coal Power	IPP	Merit	5.33	352	150164
75	Captive and Cogen	IPP	Merit	5.38	3412	153577

MERIT ORDER DISPATCH FOR FY 2019-20

S.No.	Source of Power	Type	Dispatch Mode	Variable Charge (Rs / kWh)	Power Procurement (MU)	Cumulative Procurement (MU)
1	Khara	State-Hydro	Must-Run	0.00	217	217
2	Matatila	State-Hydro	Must-Run	0.00	81	298
3	Obra (Hydel)	State-Hydro	Must-Run	0.00	217	514
4	Rihand	State-Hydro	Must-Run	0.00	469	983
5	UGC Power Stations	State-Hydro	Must-Run	0.00	22	1005
6	Belka & Babail	State-Hydro	Must-Run	0.00	2	1007
7	Sheetla	State-Hydro	Must-Run	0.00	2	1009
8	Chamera	Central	Merit	1.38	434	1444
9	Chamera-II	Central	Merit	1.49	400	1843
10	VISHNUPRAYAG	IPP	Merit	1.57	2296	4140
11	NATHPA JHAKRI HPS	IPP	Merit	1.58	1498	5638
12	Uri	Central	Merit	1.59	548	6186
13	RKM Powergen	IPP	Merit	1.66	2424	8610
14	Rihand-II	Central	Merit	1.82	2655	11265
15	Singrauli	Central	Merit	1.85	6031	17295
16	Rihand-III	Central	Merit	1.86	2823	20119
17	RAMPUR	IPP	Merit	1.89	499	20618
18	Sasan	IPP	Merit	1.91	3686	24304
19	KSK	IPP	Merit	1.91	3221	27525
20	Salal I&II	Central	Merit	1.97	225	27749
21	Rihand-I	Central	Merit	2.00	2451	30201
22	Koteshwar	IPP	Merit	2.14	898	31099
23	Anpara B	State-Thermal	Merit	2.25	7055	38154
24	TRN Energy	IPP	Merit	2.27	978	39132
25	TALA POWER	IPP	Merit	2.28	236	39368
26	NTPC Meja	IPP	Merit	2.39	6343	45711
27	Koldam (Hydro)	Central	Merit	2.39	699	46410
28	Teesta	IPP	Merit	2.49	967	47377
29	Anpara D	State-Thermal	Merit	2.52	7018	54395
30	Kahalgaon St.II Ph.I	Central	Merit	2.52	1851	56246
31	Obra B	State-Thermal	Merit	2.54	6328	62574
32	Vishnugarh Pipalkoti	Central	Merit	2.60	431	63005
33	Kameng	Central	Merit	2.60	143	63148
34	Tapovan Vishnu Gad	Central	Merit	2.60	262	63410
35	Chamera-III	Central	Merit	2.61	240	63650
36	Obra A	State-Thermal	Merit	2.65	519	64169
37	Sewa-II	Central	Merit	2.65	133	64302
38	Dhauliganga	Central	Merit	2.69	245	64547
39	Bara	IPP	Merit	2.69	12572	77120
40	Kishanganga HEP	Central	Merit	2.70	277	77397
41	Parbati II	Central	Merit	2.70	671	78067
42	Tanakpur	Central	Merit	2.72	63	78130

S.No.	Source of Power	Type	Dispatch Mode	Variable Charge (Rs / kWh)	Power Procurement (MU)	Cumulative Procurement (MU)
43	Anpara A	State-Thermal	Merit	2.78	4292	82422
44	MB Power	IPP	Merit	2.80	2606	85028
45	Srinagar	IPP	Merit	2.80	1514	86542
46	Kahalgaon St. I	Central	Merit	2.82	553	87095
47	NAPP	Central	Merit	2.98	1148	88243
48	Farakka	Central	Merit	3.00	242	88485
49	Dadri Gas	Central	Merit	3.04	1039	89525
50	TEHRI STAGE-I	IPP	Merit	3.09	2786	92310
51	Parbati ST-III	Central	Merit	3.10	134	92444
52	Anta	Central	Merit	3.13	304	92749
53	Lalitpur	IPP	Merit	3.21	12274	105022
54	Anpara 'C'	IPP	Merit	3.24	7453	112476
55	Unchahar-I	Central	Merit	3.32	1670	114146
56	Unchahar-II	Central	Merit	3.34	1142	115288
57	RAPP #3&4	Central	Merit	3.47	543	115831
58	Rosa Power Project	IPP	Merit	3.54	4066	119897
59	Rosa Power Project	IPP	Merit	3.54	4066	123962
60	Dadri Extension	Central	Merit	3.54	860	124822
61	Tanda Stage-II	Central	Merit	3.61	830	125652
62	Tanda	Central	Merit	3.61	2985	128637
63	Unchahar-III	Central	Merit	3.64	570	129207
64	Uchchahar-IV	Central	Merit	3.67	819	130026
65	Auriya	Central	Merit	3.74	414	130440
66	Dulhasti	Central	Merit	3.76	626	131066
67	Dadri Thermal	Central	Merit	3.83	536	131602
68	Harduaganj Ext.	State-Thermal	Merit	4.11	3388	134990
69	Parichha Extn. Stage II	State-Thermal	Merit	4.11	3388	138378
70	Parichha Extn.	State-Thermal	Merit	4.11	2846	141224
71	Harduagunj	State-Thermal	Merit	4.11	535	141759
72	Parichha	State-Thermal	Merit	4.11	1291	143049
73	Panki	State-Thermal	Merit	4.11	581	143630
74	RAPP#5&6	Central	Merit	4.18	765	144395
75	RAPP#7&8	Central	Merit	4.18	634	145029
76	Inter system exchange (Bilateral & PXIL, IEX) / UI	IPP	Merit	4.20	15727	160756
77	Uri-II	Central	Merit	4.39	314	161070
78	Karcham-Wangtoo	IPP	Merit	4.47	1131	162201
79	IGSTPP, Jhajhjhar	IPP	Merit	4.70	368	162568
80	Bajaj Hindusthan	IPP	Merit	4.73	2982	165550
81	Renewable Energy	IPP	Must-Run	4.80	3641	169192
82	NVVN Coal Power	IPP	Merit	5.54	352	169543
83	Captive and Cogen	IPP	Merit	5.60	3412	172955

SOURCE WISE ENERGY MET FOR THE CONTROL PERIOD

Source-wise Energy Met				
State-Thermal	MU	30,819	37,240	37,240
State-Hydro	MU	1,009	1,009	1,009
Central-NTPC	MU	26,523	27,452	28,474
Central-NHPC	MU	3,746	4,417	5,146
Central-NPCIL	MU	2,407	2,456	3,090
IPP's	MU	57,580	68,660	74,863
NVVN Coal Power	MU	352	352	352
Co-Gen	MU	3,412	3,412	3,412
Renewable Energy	MU	553	1,999	3,641
Energy Exchange/Short Term	MU	2,507	6,579	15,727
Total Energy Met	**MU**	**1,28,908**	**1,53,577**	**1,72,955**

(अनिल कुमार कोरपाल)
मुख्य अभि. (वाणिज्य)
4-A, गोमती नगर, ...

SUMMARY OF MONTHLY POWER PURCHASE FOR FY 2017-18

The summary of monthly power purchase at UPPCL level along with the allocation of the same among all the Discoms is shown in the table below:

Particulars	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec	Jan	Feb	Mar	Total
Total Monthly Power Purchase Required	11,241	12,354	12,316	12,332	12,442	10,426	10,368	9,258	9,627	9,832	8,644	10,068	**128,908**
Allocation of Approved Power Purchase (MU) among Discoms													
DVVNL	2,335	2,566	2,558	2,561	2,584	2,165	2,153	1,923	1,999	2,042	1,795	2,091	**26,773**
MVVNL	2,274	2,499	2,492	2,495	2,517	2,109	2,098	1,873	1,948	1,989	1,749	2,037	**26,079**
PVNNL	3,384	3,719	3,707	3,712	3,745	3,138	3,121	2,787	2,898	2,959	2,602	3,031	**38,803**
PuVVNL	2,839	3,120	3,110	3,115	3,142	2,633	2,618	2,338	2,431	2,483	2,183	2,543	**32,556**
KESCO	410	450	449	449	453	380	378	337	351	358	315	367	**4,697**

SUMMARY OF MONTHLY POWER PURCHASE FOR FY 2018-19

The summary of monthly power purchase at UPPCL level along with the allocation of the same among all the Discoms is shown in the table below:

Particulars	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec	Jan	Feb	Mar	Total
Total Monthly Power Purchase Required	13,392	14,719	14,673	14,692	14,824	12,421	12,352	11,030	11,469	11,713	10,298	11,995	**153,577**
Allocation of Approved Power Purchase (MU) among Discoms													
DVVNL	2,783	3,058	3,049	3,053	3,080	2,581	2,566	2,292	2,383	2,434	2,140	2,492	**31,910**
MVVNL	2,920	3,209	3,199	3,204	3,232	2,708	2,693	2,405	2,501	2,554	2,245	2,615	**33,485**
PVNNL	3,929	4,318	4,304	4,310	4,349	3,644	3,623	3,236	3,364	3,436	3,021	3,519	**45,052**
PuVVNL	3,307	3,634	3,623	3,628	3,660	3,067	3,050	2,723	2,832	2,892	2,543	2,962	**37,920**
KESCO	454	499	498	498	503	421	419	374	389	397	349	407	**5,210**

SUMMARY OF MONTHLY POWER PURCHASE FOR FY 2019-20

The summary of monthly power purchase at UPPCL level along with the allocation of the same among all the Discoms is shown in the table below:

Particulars	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec	Jan	Feb	Mar	Total
Total Monthly Power Purchase Required	15,082	16,576	16,524	16,546	16,694	13,988	13,910	12,422	12,916	13,191	11,597	13,508	**172,955**
Allocation of Approved Power Purchase (MU) among Discoms													
DVVNL	3,097	3,403	3,393	3,397	3,428	2,872	2,856	2,551	2,652	2,708	2,381	2,774	**35,512**
MVVNL	3,452	3,794	3,782	3,787	3,821	3,202	3,184	2,843	2,956	3,019	2,654	3,092	**39,587**
PVNNL	4,372	4,805	4,790	4,796	4,839	4,055	4,032	3,601	3,744	3,824	3,362	3,916	**50,134**
PuVVNL	3,676	4,040	4,027	4,033	4,069	3,409	3,390	3,028	3,148	3,215	2,827	3,292	**42,154**
KESCO	486	534	532	533	537	450	448	400	416	425	373	435	**5,568**

8. FINANCIAL PLAN FOR FY 2017-18 TO FY 2019-20

The Hon'ble Commission has issued MYT Distribution Tariff Regulations, which require that the Distribution Licensee shall file Aggregate Revenue Requirement (ARR) complete in all respect along with requisite fees as prescribed by the Commission. The ARR Petition shall contain details of estimated expenditure and expected revenue that it may recover in the ensuing financial year at the prevailing rate of tariff. Further the Distribution Tariff Regulations require that ARR shall separately indicate Aggregate Revenue Requirement (ARR) for Wheeling & Retail Supply function embedded in the distribution function. Till such time complete segregation of accounts between Wheeling and Retail Supply Business takes place, ARR proposals for Wheeling and Retail Supply Business shall be prepared based on an allocation statement to the best judgment of the distribution licensee. The Hon'ble Commission in MYT Distribution Tariff Regulations has broadly classified cost incurred by the licensee as controllable & uncontrollable costs. Uncontrollable cost include fuel cost, increase in cost due to changes in interest rate, increase of cost due to inflation, taxes & cess, variation of power purchase unit costs etc. In its Tariff Order for 2007-08, the Hon'ble Commission used allocation methodology for segregation of Wheeling & Retail Supply business function of ARR. The Petitioner has adopted the same methodology for deriving wheeling charges, as the complete segregation of accounts between Wheeling and Retail Supply business has not yet been completed.

8.1 COMPONENTS OF ANNUAL REVENUE REQUIREMENT

The Hon'ble Commission notified Uttar Pradesh Electricity Regulatory Commission (Multi Year Distribution Tariff) Regulations, 2014 on May 12th, 2014. Regulation 24 of the MYT Distribution Regulations provides the principles for determination of ARR wherein the Aggregate Revenue Requirement for the Distribution Business of the Distribution Licensees for each year of the Control Period, shall contain the following financial parameters:

- Cost of power procurement;
- Transmission & Load Dispatch charges;
- Operation and Maintenance expenses;
  - Employee Expenses
  - Repair and Maintenance Expenses
  - Administrative & General Expenses
- Depreciation;
- Contingency Reserves;
- Interest on Loan;
- Interest on Working Capital;
- Bad Debts;
- Return on Equity;
- Income Tax;
- Non-Tariff Income; and
- Income from Other Business

8.2 POWER PURCHASE COSTS

As per the source wise details provided in the previous sections of this Business Plan, the total power purchase quantum along with the yearly inter-state transmission charges (PGCIL) as envisaged in the MYT Petition, are summarized below:

Table 8-1: Power Purchase Summary

Financial Year	Power Purchase MU's	Power Purchase Cost (Rs. Crore)	PGCIL Charges (Rs. Crore)	Total Power Purchase Cost at UPPCL Level

2017-18	128,908	52,919	1,868	**(Rs. Crore)**
2018-19	153,577	66,033	2,317	**54,787**
2019-20	172,955	77,433	3,031	**68,350**
				80,465

Table 8-2: Projected Power Purchase Costs for the Tariff Period for MVVNL

Particulars	Derivation	2017-18	2018-19	2019-20
Energy Sales (MU)	A	19,942.10	26,652.12	33,209.16
Distribution Loss (%)	B	19.16%	16.09%	11.80%
Distribution Loss (MU)	C = A/(1-B)-A	4,725.05	5,110.78	4,442.95
Power Purchase Required (MU)	D=A+C	24,667.15	31,762.90	37,652.11
Bulk Power Purchase Rate (Rs/kWh)	E	4.49	4.69	4.89
Power Purchase Cost (Rs Crore)	**F=DxE/10**	**11,083.83**	**14,902.78**	**18,417.13**

8.3 TRANSMISSION CHARGES

The inter-state transmission charges payable by the UPPCL to PGCIL during the MYT period as projected in the table below. The PGCIL charges consequent to inter-state transmission is being levied on energy procured from NTPC, NPCIL, NHPC, SJVNL, Tehri, TALA and others generator supplying power from outside the boundary of the state. These charges have been incorporated in Power Procurement Cost. The petitioner submits that while considering power procurement to meet the State's requirement, losses external to its system i.e., in the Northern Region PGCIL system need to be accounted for. The projections of transmission charges have been traced from the ARR/MYT Tariff Petition filed by U.P. Power Transmission Corporation Ltd (UPPTCL) for the 1st MYT control period filed before the Hon'ble Commission.

In such Petition U.P. Power Transmission Corporation Ltd has projected transmission charge at the rate of Rs. 0.2071 per kWh for FY 2017-18, Rs. 0.2365 per kWh and Rs. 0.2622 per kWh in FY 2019-20, Accordingly licensee has estimated the cost of intra state transmission charges for the MYT period in the tables given below.

Table 8-3: Projected Transmission Charges for MVVNL

Particulars		FY 2017-18	FY 2018-19	FY 2019-20
Energy Procured (MU)	A	24,667	31,763	37,652
Transmission Tariff (Rs/kWh)	B	0.2071	0.2365	0.2622
Transmission Cost (Rs Crore)	C=AxB/10	**510.86**	**751.19**	**987.24**

8.4 OPERATION & MAINTENANCE EXPENSES

The MYT Distribution Tariff Regulations, 2014 mandates the Commission to stipulate a separate trajectory of norms for each of the components of O&M expenses viz., Employee cost, Repairs and maintenance (R&M) expenses and Administrative and General Expenses (A&G) Expenses.

Regulation 25 of the MYT Distribution Regulations issued by the Hon'ble Commission provides the methodology for projection of Operation & Maintenance expenses for the control period. O&M expenses comprise of Employee costs, Administrative & General (A&G) Expenses and Repair & Maintenance (R&M) expenses. Further the detailed methodology stated in Regulation 25 of the MYT Distribution Regulations is re-produced as below:

"25. Operation & Maintenance Expense

(a) The Commission shall stipulate a separate trajectory of norms for each of the components of O&M expenses viz., Employee cost, Repairs and maintenance (R&M) expense and Administrative and General Expense (A&G) expense. Provided that such

norms may be specified for a specific Distribution Licensee or a class of Distribution Licensees.

(b) Norms shall be defined in terms of combination of number of personnel per 1000 consumers and number of personnel per substation along with annual expenses per personnel for Employee cost; combination of A&G expense per personnel and A&G expense per 1000 consumers for A&G expenses and R&M expense as percentage of gross fixed assets for estimation of R&M expenses:

(c) One-time expenses such as expense due to change in accounting policy, arrears paid due to pay commissions etc., shall be excluded from the norms in the trajectory.

(d) The expenses beyond the control of the Distribution Licensee such as dearness allowance, terminal benefits etc. in Employee cost etc., shall be excluded from the norms in the trajectory.

(e) The One-time expenses and the expenses beyond the control of the Distribution Licensee shall be allowed by the Commission over and above normative Operation & Maintenance Expenses after prudence check.

(f) The norms in the trajectory shall be specified over the control period with due consideration to productivity improvements.

(g) The norms shall be determined at constant prices of base year and escalation on account of inflation shall be over and above the baseline.

(h) The Distribution Licensee specific trajectory of norms shall be identified by the Commission on the basis of simple average of previous five years audited figures, duly normalized for any abnormal variation.....".

Thus, the MYT Distribution Tariff Regulations, 2014 provides for determination of the Employee cost norm, which would evidently be done pursuant to the benchmarking study. The Discom has successfully completed its benchmarking study of operational parameters in line with the MYT Distribution Tariff Regulations, 2014 and has also submitted the report to the Hon'ble Commission. Further, as per the observations and comments of the said benchmarking report the number of personnel per 1000 consumers in case of MVVNL is 2.36 as compared to the statistical mean of the data of sample Discoms (excluding UP Discoms) which is 2.85, which is owing to significant under deployment of personnel against sanctioned employee strength. Thus, the employee engagement has to be seen as working employee strength vs. sanctioned employee strength. It depicts that the actual deployment of staff is hardly 74% against the sanctioned employee strength, there by depicting that it is acutely under-staffed. The shortage is even more pronounced in respect of technical staff as compared to non-technical staff, which is reflective of both lower Employee cost per unit of energy sales as well as lower efficiency scores. Thus the Petitioner plans to increase its no. of employees in order to cater the increasing no. of consumers and sales on account of increase in supply hours and connecting the unconnected consumers of the state.

Accordingly the Petitioner in the instant Petition for the purpose of projecting the Employee costs and Administrative & General (A&G) Expenses, considering the observations made in the benchmarking report has claimed additional establishment expenses on the account that if there would have been no under-staffing and the actual employee strength would be parallel to the sanctioned employee strength, the actual establishment cost would have been higher as compared to what has been reflected in the audited accounts of the Petitioner. For this purpose the Petitioner has taken the financial year 2014-15 as the Base year for which the Audited accounts are available with the Petitioner.

8.4.1 EMPLOYEE EXPENSES FOR FY 2017-18 TO 2019-20

The Petitioner has computed the Employee expenses for the control period FY 2017-18 to FY 2019-20 as per the Regulation 25.1 of the MYT Transmission Regulations as below:-

"Employee cost shall be computed as per the approved norm escalated by consumer price index (CPI), adjusted by provisions for expenses beyond the control of the Licensee and one time expected expenses, such as recovery/adjustment of terminal benefits, implications of pay commission, arrears, Interim Relief etc., governed by the following formula:

*EMPn= (EMPb * CPI inflation) + Provision*

Where:

EMPn: Employee expense for the year n.

EMPb: Employee expense as per the norm

CPI inflation: is the average increase in the Consumer Price Index (CPI) for immediately preceding three financial years.

Provision: Provision for expenses beyond control of the Distribution Licensee and expected one-time expenses as specified above."

Further the Petitioner has also considered the methodology provided in the Hon'ble Commission's approach note for calculation of O&M Expenses dated February 23rd, 2017. The Petitioner has considered the base year as '2014-15', for which the audited accounts are available as on the date of submission of the Multi-Year Tariff Petition. The Petitioner in the following table has worked out the norms depicting cost of per employee deployed based on the actual employee expenses incurred during the past five financial years:

Table 8-4: Norms - Rs. Crore Employee Cost per 1000' Consumers

Particulars	2011-12	2012-13	2013-14	2014-15	2015-16	Average of 5 years
Gross Employee Costs	379.39	515.52	500.06	481.34	424.56	
No. of Consumers	3,029,242	3,157,661	3,336,182	3,984,678	4,075,705	**0.133**
Norms per 1000 consumer	0.125	0.163	0.150	0.121	0.104	

The Petitioner has considered the above worked out norm of Rs. Crore employee cost per 1000' Consumers as the employee cost per 1000's consumer for the middle year i.e. for FY 2013-14 and has thereafter applied the yearly increase in the CPI inflation Index for FY 2014-15, 2015-16 and 2016-17 to reach the base year norms, for the purpose of calculation of employee expenses for the MYT Period. The determination of Rs. Crore employee cost per 1000' employee and thereafter the total employee cost in Rs. Crore for the Control period is depicted in the table below:

Table 8-5: Determination of Employee Cost per employee for FY 2017-18 (Rs. Crore)

Particulars	Base Value	2016-17	2017-18	2018-19	2019-20
CPI Inflation		4.12%	7.21%	7.21%	7.21%
Norms per 1000 consumer (Rs Crore)	0.133	0.155	0.166	0.178	0.191
No. of Consumers		4,397,878	6,596,877	10,369,687	12,108,443
Employee Expenses (Rs Crore)		**682.16**	**1,096.98**	**1,848.60**	**2,314.10**

Further in addition to above, the Petitioner also requests the Hon'ble Commission to allow the additional Employee Expenses on account of increase in No. of Employees to cover up the under deployment of the staff at the Discom end. The work out the same the Petitioner has considered the data for FY 2014-15, being the latest available audited accounts of the Petitioner and thus the same would provide a true and fair picture of the employee strength vis-a-cis the employee cost of the Petitioner.

The Sanctioned employee strength for MVVNL for FY 2014-15 is 13216, against which the actual no. of employees deployed are 9794, thus there is a shortage of 3422 employees resulting in under-performance of the disocms in terms of operational parameters. Therefore to determine the additional cost on account of increase in employee strength the Petitioner in the below table as a first step has worked out the Notional Gross establishment expenses for FY 2014-15, had been the complete employee sanctioned strength was deployed at the Petitioner's office, to reach at the Base value of Gross establishment cost for the year as detailed in the table below:

Table 8-6: Additional Employee Expenses for FY 2014-15

Particulars	Unit	Amount
Gross Establishment Expenses for FY 2014-15	Rs. Crore	481
Actual No. of Employees	No.s	9,794
Sanctioned Employees	No.s	13,216
Under Deployment of Employees	**No.s**	**3,422**
Gross Employee Expenses considering the full Sanctioned Employees being the Actual Employees	Rs. Crore	650
Additional Employee Cost for the year if total sanctioned employees are being hired	**Rs. Crore**	**168.18**

Thereafter the above derived employee cost has been escalated by average increase in the CPI inflation index for FY 2015-16 and 2016-17 to reach the base values for projection of additional employee cost for the MYT period as detailed in the table below:

Table 8-7: Additional Employee Expenses projected for the MYT Period (Rs. Crore)

Particulars	Base Value	2016-17	2017-18	2018-19	2019-20
CPI Inflation		4.12%	7.21%	7.21%	7.21%
Additional Employee Cost	168.18	**185.00**	**198.33**	**212.62**	**227.94**

Thus, the total gross employee expenses claimed for the control period in depicted in the table below:

Table 8-8: Gross Employee Expenses for the MYT Period (Rs. Crore)

Particulars	2017-18	2018-19	2019-20
Employee Costs as per the provisions of the MYT Regulations	1,096.98	1,848.60	2,314.10
Additional Employee expenses on account of increase in Employee Strength	198.33	212.62	227.94
Gross Employee Expenses	**1295.31**	**2061.22**	**2542.05**

The Petitioner further submits that the 7th pay is expected to be implemented in the state by next financial year i.e. FY 2017-18. Thus in addition to the above the Petitioner has also claimed arrears and implications of the 7th pay commission which are expected to be

discharged in FY 2017-18 and subsequent years. Since the 7th pay is effective from 1st January 2016, hence the impact of the 7th pay over the employee expenses is computed for different years starting from FY 2015-16 (last quarter of FY 2015-16). The overall increase in the employee expenses due to implementation of the 7th pay is estimated to be approximately 15%. The Petitioner has computed the yearly impact of the 7th pay by escalating the employees expenses for FY 2015-16 at 15% and the expenses thus arrived are further escalated by the applicable escalation rate of each year to derive the 7th pay impact of subsequent years.

The impact of the 7th pay for FY 2015-16 and FY 2016-17 are expected to be discharged in FY 2017-18 and FY 2018-19 in two equal installments. Based on the above the overall employee expenses are worked out as follows:

Table 8-9: Employee Expenses for the MYT Control Period (Rs Crore)

Particulars	2015-16 Revised Estimates	2016-17 Revised Estimates	2017-18 MYT Projections	2018-19 MYT Projections	2019-20 MYT Projections
Before Considering the provision of 7th Pay Commission					
Gross Employee Expenses Before Provision	**497.42**	**519.54**	**1295.31**	**2061.22**	**2542.03**
Less: Capitalisation	**16.18**	**77.93**	**230.67**	**362.79**	**438.50**
Net Employee Expenses Before Provision	**481.24**	**441.61**	**1064.64**	**1698.43**	**2103.53**
Escalation Index / CPI Inflation (%)		4.12%			
Effective 7th Pay Impact (%)	***15.00%***				
Total 7th Pay Impact (Rs. Crore)	18.65	77.69	194.30	309.18	381.30
Arrears Payable (Rs. Crore)			48.17	48.17	
Total 7th Pay Impact Payable, including Arrears (Rs. Crore)*			242.47	357.35	381.30
Allowable Gross Employee Expenses (Rs. Crore)	**497.42**	**519.54**	**1537.78**	**2418.57**	**2923.34**
After Considering the provision of 7th Pay Commission					
Gross Employee Expenses (Rs. Crore)	**497.42**	**519.54**	**1537.78**	**2418.57**	**2923.34**
Less: Capitalization	**16.18**	**77.93**	**230.67**	**362.79**	**438.50**
Net Employee Expenses (Rs. Crore)	**481.24**	**441.61**	**1307.11**	**2055.78**	**2484.84**

**The 7th pay commission is effective from 1.1.2016. The arrears and revision in salaries are expected to be implemented in F 2017-18. The arrears for FY 2015-16 & FY 2016-17 are expected to be paid in FY 2017-18 and FY 2018-19 in equal installments.*

The employee expenses capitalized during the MYT period have been considered at a normative rate of 15%, in line with the similar methodology considered by the Hon'ble Commission, in its Previous Tariff Orders.

The Petitioner respectfully submits that it has considered the pay revision impact of 15 %, however, the Petitioner reserves the right to claim any deviation in the employee expenses on account of any "recovery/adjustment of terminal benefits, implications of pay commission, arrears, Interim Relief etc." at the stage of truing up.

8.4.2 REPAIR & MAINTENANCE EXPENSES FOR FY 2017-18 TO 2019-20

The Petitioner has computed the Repair & Maintenance expenses for the control period FY 2017-18 to FY 2019-20 in accordance with provisions of Regulation 25.2 of the MYT Distribution Regulations as re-produced below:-

"Repairs and Maintenance expense shall be calculated as percentage (as per the norm defined) of Average Gross Fixed Assets for the year governed by following formula:

*R&Mn= Kb * GFAn*

Where:

R&Mn: Repairs & Maintenance expense for nth year

GFAn: Average Gross Fixed Assets for nthyear

Kb: Percentage point as per the norm."

Thus, R&M expenses as a percentage of Average GFA is calculated by dividing the total R&M expenses with GFA balance of the relevant year. To arrive at the percentage norm or the factor 'Kb' for calculation of R&M expenses for the MYT period the Petitioner has referred to the methodology provided in the Hon'ble Commission's approach note for calculation of O&M Expenses dated February 23rd, 2017. The WPI annual escalation index has been considered for for computing the R&M expense for the Control Period.

Accordingly the Petitioner in the instant Petition has firstly worked out the norms for the base year considering the average of past five years of the R&M expenses as a percentage of average GFA balance for each year. The % base norms of R&M expenses is calculated as depicted in the table below:

Table 8-10: % Norm for R&M Expenses for the MYT Control Period

Particulars	2011-12	2012-13	2013-14	2014-15	2015-16	Average of 11-16
Opening GFA	*3,210.14*	*3,621.92*	*3,599.34*	*4,145.18*	*5,053.29*	
Opening Closing	*3,621.92*	*3,599.34*	*4,145.18*	*5,053.29*	*5,217.00*	
Average GFA	**3,416.03**	**3,610.63**	**3,872.26**	**4,599.24**	**5,135.15**	**5.44%**
R&M Expenses	**142.86**	**157.09**	**225.00**	**284.03**	**343.22**	
Kb	**4.18%**	**4.35%**	**5.81%**	**6.18%**	**6.68%**	

The Petitioner has considered the above worked out norm of % R&M expenses of average GFA balance as the % R&M expenses of average GFA balance for the middle year i.e. for FY 2013-14 and has thereafter applied the yearly increase in the WPI inflation Index for FY 2014-15, 2015-16 and 2016-17 to reach the base year norms, for the purpose of calculation of repair and maintenance expenses for the MYT Period. The determination of R&M for the control period is depicted in the table below:

Table 8-11: R&M Expenses for the MYT Control Period (Rs. Crore)

MVVNL	2015-16	2016-17	2017-18	2018-19	2019-20
Average GFA	5,135.15	6,487.37	9,143.38	11,746.21	14,096.92
WPI Index		3.67%	1.83%	1.83%	1.83%
Kb	5.44%	5.64%	5.74%	5.85%	5.96%
R&M Expenses	**279.38**	**365.90**	**525.15**	**687.01**	**839.60**

8.4.3 ADMINISTRATIVE AND GENERAL EXPENSES FOR FY 2017-18 TO 2019-20

The Petitioner has computed the administrative and general expenses for the control period FY 2017-18 to FY 2019-20 as per the Regulation 25.3 of the MYT Distribution Regulations stated as below:-

"A&G expense shall be computed as per the norm escalated by wholesale price index (WPI) and adjusted by provisions for confirmed initiatives (IT etc. initiatives as proposed by the Distribution Licensee and validated by the Commission) or other expected one-time expenses, and shall be governed by following formula:

*A&Gn= (A&Gb * WPI inflation) + Provision*

Where:

A&Gn: A&G expense for the year n A&Gb: A&G expense as per the norm WPI inflation: is the average increase in the Wholesale Price Index (WPI) for immediately preceding three financial years Provision: Cost for initiatives or other one-time expenses as proposed by the Distribution Licensee and validated by the Commission. "

Further the Petitioner has also considered the methodology provided in the Hon'ble Commission's approach note for calculation of O&M Expenses dated February 23rd, 2017. The Petitioner has considered the base year as '2014-15', for which the audited accounts are available as on the date of submission of the Multi-Year Tariff Petition. The Petitioner in the following table has worked out the norms depicting cost of A&G expenses per 1000' employees based on the actual A&G expenses incurred during the past five financial years:

Table 8-12: Norms - Rs. Crore A&G Cost per 1000' Consumers

Particulars	2011-12	2012-13	2013-14	2014-15	2015-16	Average 5 years
Gross A&G Expenses	151.90	178.65	163.71	232.89	103.37	
No. of Consumers	3,029,242	3,157,661	3,336,182	3,984,678	4,075,705	0.048
Norms per 1000 consumer	**0.050**	**0.057**	**0.049**	**0.058**	**0.025**	

The Petitioner has considered the above worked out norm of Rs. Crore A&G cost per 1000' Consumers as the A&G cost per 1000's consumer for the middle year i.e. for FY 2013-14 and has thereafter applied the yearly increase in the CPI inflation Index for FY 2014-15, 2015-16 and 2016-17 to reach the base year norms, for the purpose of calculation of A&G expenses for the MYT Period. The determination of Rs. Crore A&G cost per 1000' employees and thereafter the total A&G cost in Rs. Crore for the Control period is depicted in the table below:

Table 8-13: A&G Expenses for the MYT Period (Rs. Crore)

Particulars	Base Value	2016-17	2017-18	2018-19	2019-20
CPI Inflation		3.67%	1.83%	1.83%	1.83%
Norms per 1000 consumer (Rs Crore)	0.048	0.049	0.050	0.051	0.052
No. of Consumers		4,397,878	6,596,877	10,369,687	12,108,443
A&G Expenses (Rs. Crore)		**217.29**	**331.91**	**531.29**	**631.74**

Currently, no amounts have been claimed under the entitlement "Provision" provided by the MYT Distribution Regulations. However, the Petitioner reserves the right to claim any deviation in A&G expenditure owing to any "cost for initiatives or other one-time expenses" at the stage of truing up.

8.5 OPERATION AND MAINTENANCE EXPENSES FOR FY 2017-18 TO 2019-20

The allowable O&M expenses as claimed by the Petitioner in the instant petition for the control period FY 2017-18 to FY 2019-20 are depicted in the table below:

Table 8-14: Allowable O&M Expenses for MYT control period (Rs Crore)

Particulars	FY 2017-18 Projected	FY 2018-19 Projected	FY 2019-20 Projected
Employee Expenses			
Gross Employee Costs and Provisions	1,295.31	2,061.22	2,542.03
Arrear of Pay Commission/Time Scale	242.47	357.35	381.30
Gross Employee Expenses	**1,537.78**	**2,418.57**	**2,923.34**
Employee expenses capitalized	230.67	362.79	438.50
Net Employee Expenses	**1,307.11**	**2,055.78**	**2,484.84**
A&G Expenses			
Gross A&G Expenses	331.91	531.29	631.74

Particulars	FY 2017-18 Projected	FY 2018-19 Projected	FY 2019-20 Projected
Gross A&G Expenses	331.91	531.29	631.74
A&G expenses capitalized	49.79	79.69	94.76
Net A&G Expenses	**282.12**	**451.60**	**536.98**
R&M Expenses			
Repair & Maintenance Expenditure	525.15	687.01	839.60
Gross Repair & Maintenance Expenses	**525.15**	**687.01**	**839.60**
Gross O&M Expenses	2,394.83	3,636.86	4,394.68
Less: Capitalsed	280.45	442.48	533.26
Total O&M Expenses Allowable as per Regulations	**2,114.38**	**3,194.39**	**3,861.42**

The Petitioner submits that increase in dearness pay may be higher than the escalation index determined as per the Distribution Tariff Regulations. It is humbly prayed that any variation in employee expenses due to increase in dearness pay, may be considered by the Hon'ble Commission, at the time of true-up for the relevant year; based on specific submissions by the Petitioner in this regard.

8.6 CAPITAL EXPENDITURE, CAPITAL FORMATION ASSUMPTION AND GROSS FIXED ASSET (GFA) BALANCES

In line with the Regulation 23A of the MYT Distribution Tariff Regulations, 2014, the Petitioner has provided the detailed breakup of scheme wise capital expenditure proposed during the control period in its business plan for the purpose of determination of ARR for the Control period along-with the financing plan for each of the capex scheme proposed and the details of capital expenditure to be done from the deposit works received as consumer contribution towards cost of capital asset. The complete details of the capital investment schemes for FY 2017-18 and 2019-20 are provided in the MYT Business Plan of the Distribution Licensee which is being submitted along with this petition. The physical and financial progress of the ongoing and new capex schemes has also been provided in the MYT Business Plan.

Accordingly, the summary of the total Proposed Capital Expenditure for each year of the Control period is depicted in the tables below:

Table 8-15: Summary of Proposed Capital Expenditure during the Control Period (Rs Crore)

FY	Loans	Equity / Internal Accruals	Deposit Works	Total
2016-17	1,400.10	600.05	280.02	**2,280.15**
2017-18	1,690.05	724.31	338.01	**2,752.36**
2018-19	850.30	364.42	170.06	**1,384.78**
2019-20	844.00	361.72	168.80	**1,374.52**

8.7 FINANCING OF THE CAPITAL INVESTMENT

The Petitioner has considered a normative gearing of 70:30. Considering this approach, 70% of the capital expenditure undertaken in any year has been considered to be financed through loan and balance 30% has been considered to be financed through equity contributions. The portion of capital expenditure financed through consumer contribution, capital subsidies and grants has been separated as the depreciation and interest thereon would not be charged to the beneficiaries.

The amounts received as consumer contributions, capital subsidies and grants are traced from the provisional accounts for FY 2015-16. Further, the consumer contributions, capital subsidies and grants for 1st Control Period have been considered to be in the same ratio to the total investments, as received by it in FY 2014-15 for which the audited accounts are available.

The table below summarizes the amounts considered towards consumer contributions, capital grants and subsidies for the MYT control period:

Table 8-16: Consumer Contribution, Capital Grants & Subsidies (Rs Crore)

Particulars	2017-18	2018-19	2019-20
Opening Balance of Consumer Contributions, Grants and Subsidies towards Cost of Capital Assets	1,455.59	1,644.35	1,611.40
Additions during the year	338.01	170.06	168.80
Less: Amortisation	149.25	203.01	247.83
Closing Balance	**1,644.35**	**1,611.40**	**1,532.38**

Table 8-17: Financing of the Capital Investment (Rs Crore)

Particulars	Derivation	2017-18	2018-19	2019-20
Investment	A	2,752.36	1,384.78	1,374.52
Less:		-	-	-
Consumer Contribution	B	338.01	170.06	168.80
Investment funded by debt and equity	C=A-B	2,414.35	1,214.72	1,205.72
Debt Funded	70%	1,690.05	850.30	844.00
Equity Funded	30%	724.31	364.42	361.72

Thus, the Petitioner submits that the capital investments proposed during the MYT period after netting off the capital investment through deposit works, has been considered to be funded through debt and equity of 70:30, as depicted in the above table.

8.8 DEPRECIATION EXPENSE

The summary of the Depreciation claimed for each year of the MYT Period is provided in the table below:

Table 8-18: Gross Allowable Depreciation for 1st MYT control period (Rs Crore)

Particulars	Derivation	2017-18	2018-19	2019-20
Opening GFA	A	7,757.73	10,529.03	12,963.39
Additions to GFA	B	2,771.30	2,434.36	2,267.05
Deductions to GFA	C	-	-	-
Closing GFA	D	**10,529.03**	**12,963.39**	**15,230.44**
Cumulative Depreciation	E	2,867.13	3,209.71	3,675.66
Rate of Depreciation (%)	F	7.84%	7.84%	7.84%
Gross Allowable Depreciation	**((A-E)+B/2)*F**	**491.83**	**668.95**	**816.65**

The Petitioner has also projected the depreciation on assets created out of consumer contributions, capital grants and subsidies for the 1st Control period in the same ratio as per the audited accounts of FY 2014-15. The Petitioner has reduced the equivalent depreciation in respect of depreciation on assets created out of consumer contributions, capital grants and subsidies from the Gross Allowable Depreciation to arrive at Net Allowable Depreciation for the purpose of ARR determination.

Thus, the net allowable depreciation for the 1st Control Period has been depicted in the table below:

Table 8-19: Net Allowable Depreciation for the 1st Control Period (Rs Crore)

Particulars	2017-18	2018-19	2019-20

Particulars	2017-18	2018-19	2019-20
Gross Allowable Depreciation	491.83	668.95	816.65
Less: Equivalent amount of depreciation on assets acquired out of the Consumer Contribution and GoUP Subsidy	149.25	203.01	247.83
Net Allowable Depreciation	**342.58**	**465.95**	**568.82**

8.9 INTEREST ON LONG TERM LOANS

It is reiterated that the Petitioner has considered a normative tariff approach with a gearing of 70:30. In this approach, 70% of the capital expenditure undertaken in any year has been considered to be financed through loan and balance 30% has been considered to be funded through equity contributions. The portion of capital expenditure financed through consumer contributions, capital subsidies and grants has been separated as the depreciation and interest thereon has not been charged to the beneficiaries.

Allowable depreciation for the year has been considered as normative loan repayment. The weighted average rate of interest of overall long term loan portfolio for FY 2014-15 has been considered for 1st Control Period, as it seems to be fair and equitable. The interest capitalization has been considered at a rate of 23% which is consistent with the rate considered by the Hon'ble Commission in previous tariff orders.

The computations for interest on long term loan are depicted below:

Table 8-20: Allowable Interest on Long Term Loans for MYT Control Period (Rs Crore)

Particulars	2017-18	2018-19	2019-20
Opening Loan	3,528.98	4,876.45	5,260.80
Loan Additions (70% of Investments)	1,690.05	850.30	844.00
Less: Repayments (Depreciation allowable for the year)	342.58	465.95	568.82
Closing Loan Balance	**4,876.45**	**5,260.80**	**5,535.99**
Weighted Average Rate of Interest	8.72%	8.72%	8.72%
Interest on long term loan	366.62	442.16	470.93
Interest Capitalisation Rate	23.00%	23.00%	23.00%
Less: Interest Capitalized	84.32	101.70	108.31
Net Interest Charged	**282.30**	**340.46**	**362.61**

8.10 FINANCE CHARGES

The Petitioner has projected finance charges towards expenses such as guarantee fees and bank charges to the tune of Rs. 27.76 crore, Rs. 28.84 crore and Rs. 29.96 crore in FY 2017-18, FY 2018-19 and 2019-20 respectively. The same have been computed by extrapolating the guarantee fees and bank charges derived for FY 2015-16 by using the Inflation Index of 3.89%.

8.11 INTEREST ON CONSUMER SECURITY DEPOSITS

In the MYT petition, the Petitioner has computed the interest to be paid on the consumer's security deposits on the Average of opening and closing balance of the Security Deposits for the year, at SBI bank rate of 9.36%. However, the same shall be trued up based on audited accounts. The opening balances of security deposits have been considered as per closing figures of provisional accounts for FY 2015-16 and additions during the year 2016-17 is estimated in line with the projected load growth, as depicted in the load forecast model.

Table 8-21: Interest on Consumer Security Deposits (Rs Crore)

Particulars	2017-18	2018-19	2019-20
Opening Balance for Security Deposit	414.30	439.64	467.21

Particulars	2017-18	2018-19	2019-20
Additions during the year	25.34	27.56	30.06
Closing Balance for Security Deposit	**439.64**	**467.21**	**497.26**
Rate of Interest	9.36%	9.36%	9.36%
Interest Paid / Payable on Security Deposits	**39.96**	**42.44**	**45.14**

8.12 INTEREST ON WORKING CAPITAL

In accordance with the MYT Distribution Regulations, the interest on the working capital requirement is to be considered equal to the State Bank Advance Rate (SBAR) as notified on the current date i.e. 14.05%. Considering the methodology as prescribed in the MYT Distribution Regulations, the Petitioner has worked out the working capital requirement for each year of the Control period and interest thereon, as shown in the table below:

Table 8-22: Allowable Interest on Working Capital (Rs Crore)

Particulars	2017-18	2018-19	2019-20
One month's O & M Expenses	199.57	303.07	366.22
Maintenance spares @ 40% of R&M expenses for two months	35.01	45.80	55.97
Receivables equivalent to 60 days average billing of Beneficiaries	1,718.97	2,250.08	2,758.81
Gross Total	**1,953.55**	**2,598.95**	**3,181.00**
Security Deposits by the beneficiaries	439.64	467.21	497.26
Net Working Capital	1,513.91	2,131.75	2,683.74
Rate of Interest for Working Capital	14.05%	14.05%	14.05%
Interest on Working Capital	**212.70**	**299.51**	**377.07**

8.13 SUMMARY OF INTEREST AND FINANCE CHARGES

The allowable interest and finance charges are thus summarized in the table below:

Table 8-23: Interest and Finance Charges for the 1st Control Period (Rs. Crore)

Particulars	2017-18	2018-19	2019-20
Interest on Long term Loans	366.62	442.16	470.93
Interest on Working Capital Loans	212.70	299.51	377.07
Sub Total	**579.33**	**741.67**	**847.99**
Interest on Consumer Security Deposits	39.96	42.44	45.14
Bank Charges	27.76	28.84	29.96
Discount to Consumers	-	-	-
Sub Total	**67.72**	**71.28**	**75.10**
Gross Total Interest & Finance Charges	**647.05**	**812.95**	**923.09**
Less: Capitalization of interest on Long term Loans	84.32	101.70	108.31
Interest Capitalization Rate (%)	23.00%	23.00%	23.00%
Net Interest & Finance Charges	**562.73**	**711.25**	**814.78**

8.14 PROVISION FOR BAD AND DOUBTFUL DEBTS

The Petitioner has made provisions for bad debts for the 1st Control Period in line with the provisions stipulated in the MYT Distribution Regulations. The Provision for Bad and Doubtful Debts for 1st Control Period are summarized in the table below:

Table 8-24: Provision for Bad and Doubtful Debts (Rs Crore)

Particulars	2017-18	2018-19	2019-20
Opening Receivables	6,295.79	6,811.48	7,351.50
Add: Revenue Assessment	10,313.82	13,500.49	16,552.83
Less: Revenue Collection	9,798.13	12,960.47	15,973.48
Closing Receivables	6,811.48	7,351.50	7,930.85

Particulars	2017-18	2018-19	2019-20
Average Receivables	6,553.63	7,081.49	7,641.17
Percentage of Bad and Doubtful Debts	2.00%	2.00%	2.00%
Provision for Bad Debts	**131.07**	**141.63**	**152.82**

8.15 NON TARIFF INCOME

Non Tariff Income includes incomes such as interest on loans and advances to employees, income from fixed rate investment deposits, interest on loans and advances to licensees and other miscellaneous income from retail sources. The Petitioner has projected non-tariff income to the tune of Rs. 28.50 crore, Rs. 29.61 crore and Rs. 30.76 crore in FY 2017-18, FY 2018-19 and 2019-20 respectively. The same have been computed by extrapolating the non-tariff income booked in provisional accounts for FY 2015-16 and by using the Inflation Index of 3.89%. The same has been summarized below:

Table 8-25: Other Income (Rs Crore)

Particulars	2017-18	2018-19	2019-20
Non-Tariff Income	28.50	29.61	30.76

8.16 REASONABLE RETURN / RETURN ON EQUITY

The Petitioner has claimed the following eligible return on Equity as detailed in the table below:

Table 8-26: Return on Equity during the MYT Period

(in Rs. Crore)

Particulars	#	2017-18	2018-19	2019-20
Opening Balance of Equity Base	A	2,034.50	2,749.49	3,377.56
Gross Additions during the Year	B	831.39	730.31	680.12
Less: allocated balance of consumer contribution, capital subsidies / grants	C	116.39	102.24	95.22
Net Equity Additions	D=B-C	714.99	628.06	584.90
Closing Equity Balance	**E=A+D**	**2,749.49**	**3,377.56**	**3,962.46**
Average Equity Balance	F=(A+E)/2	2,391.99	3,063.52	3,670.01
Rate of Return on Equity (%)	G	0.16	0.16	0.16
Return on Equity	**H=F*G**	**382.72**	**490.16**	**587.20**

8.17 ARR SUMMARY

The Consolidated Retail & Wheeling Business of ARR along with revenue gap for the 1st MYT Control Period at current tariff is summarized in the table below.

Table 8-27: Annual Revenue Requirement for FY 2017-18 to FY 2019-20 (Rs Crore)

Particulars	2017-18 MYT Projections	2018-19 MYT Projections	2019-20 MYT Projections
Power Purchase (MU)	24667.15	31762.90	37652.11
Units Sold (MU)	19942.10	26652.12	33209.16
Power Purchase Cost from UPPCL	11083.83	14902.78	18417.13
Intra-state Transmission Charges	510.86	751.19	987.24
Employee Cost (Net of Capitalization)	1307.11	2055.78	2484.84
A&G Expense (Net of Capitalization)	282.12	451.60	536.98
Repair & Maintenance Expense	525.15	687.01	839.60
Interest & Finance Charges (Net)	562.73	711.25	814.78
Provision for Bad and Doubtful Debts	131.07	141.63	152.82
Depreciation	342.58	465.95	568.82
Apportionment of O&M Expenses	40.10	44.91	48.98
Total Expenses	**14785.55**	**20212.10**	**24851.19**
Add: Return on Equity	382.72	490.16	587.20
Less: Other Income	28.50	29.61	30.76
Total Annual Revenue Requirement	**15139.77**	**20672.65**	**25407.62**
Revenue From Existing Tariff	10313.82	13500.49	16552.83
Remaining Gap	**4825.94**	**7172.16**	**8854.79**

9. PRAYERS

The Petitioner prays that the Hon'ble Commission may be pleased to:

- Approve this Business Plan for the MYT Control period from FY 2017-18 to FY 2019-20 submitted herewith;
- Approve the capital expenditure plan along with the physical targets and financing plan provided therein for the MYT Control period as proposed in the instant petition;
- Approve for the schemes for which the capital expenditure has been proposed for more than Rs. 10 crore.
- Pass suitable orders with respect to the Business Plan for the MYT Control Period from FY 2017-18 to FY 2019-20 as proposed by the Petitioner in this petition along with the relevant operational and financial parameters as proposed in the petition;
- Allow the petitioner to add/change / alter / modify this application at a future date.

(अनिल कुमार गोयल)

UTTAR PRADESH SHASAN
URJA ANUBHAG-2

In pursuance of the provisions of clause (3) of Article 348 of the Constitution, the Governor is pleased to order the publication of the following English translation of notification no. 1528/24-P-2-2015-Sa.(218)/2014 dated 03 November, 2015 for general information

NOTIFICATION

No. 1528/ 24-P-2-2015-Sa.(218)/2014
Lucknow, Dated: 03 November, 2015

In exercise of the powers conferred under sub-section (4) of section 131 of the Electricity Act, 2003(Act no. 36 of 2003) and sub-section (4) of section 23 of the Uttar Pradesh Electricity Reforms Act, 1999 (U.P. Act no. 24 of 1999) read with clause 7 of the Uttar Pradesh Power Sector Reforms (Transfer of Distribution Undertakings) Scheme, 2003 (Notification no. 2740/P-1/2003-24-14P/2003 dated August 12, 2003), the Governor hereby modifies, varies and otherwise changes the terms and conditions of the said Uttar Pradesh Power Sector Reforms (Transfer of Distribution Undertakings) Scheme, 2003 in regard to the transfer of properties, interests, rights, liabilities, personnel and proceedings by this notification by substituting in place of Schedules A to D of the Notification no. 2740/P-1/2003-24-14P/2003 dated August 12, 2003, the Schedules A to D attached to this notification.

2. The effective date of the provisionality period under the Uttar Pradesh Power Sector Reforms (Transfer of Distribution Undertakings) Scheme, 2003 (Notification no. 2740/P-1/2003-24-14P/2003 dated August 12, 2003) as extended by the Uttar Pradesh Power Sector Reforms (Transfer of Distribution Undertakings) (Sixth Amendment), Scheme 2008 (Notification no. 2131 / P – 2 - 2008 I 24 – 61 (M) E / 2000 Lucknow dated October 10, 2008) has lapsed on December 11, 2009. The Governor hereby modifies, varies and otherwise changes the terms and conditions of the Uttar Pradesh Power Sector Reforms (Transfer of Distribution Undertakings) Scheme, 2003 (Notification no. 2740/P-1/2003-24-14P/2003 dated August 12, 2003) to provide for the provisionality period to be as under:

For sub-clauses (1), (2) and (3) of clause 7 of the Uttar Pradesh Power Sector Reforms (Transfer of Distribution Undertakings) Scheme, 2003 shall stand substituted as follows:-

(1) The classification and transfer of Undertakings under clause 3, unless otherwise specified in any order made by the State Government, shall be provisional and shall be final upon the expiry of **thirteen** years from the date

of issuance of the Notification no. 2740/P-1/2003-24-14P/2003 dated August 12, 2003.

(2) At any time within a period of **thirteen** years from the date of issuance of the Notification no. 2740/P-1/2003-24-14P/2003 dated August 12, 2003, the State Government may by order to be notified amend, vary, modify, add, delete or otherwise change terms and conditions of the transfer including items included in the transfer or the value thereof, and transfer such properties, interests, rights and liabilities forming part of an Undertaking of one Transferee to that of any other Transferee or to the State Government in such manner and on such terms and conditions as the State Government may consider appropriate. Upon such orders having being passed, the relevant Schedule shall stand amended accordingly.

(3) On the expiry of the period of **thirteen** years from the date of issuance of the Notification no. 2740/P-1/2003-24-14P/2003 dated August 12, 2003 or the date on which the Final Transfer Scheme is published in the Gazette, whichever is earlier, subject to any directions given by the State Government, the transfer of Undertakings, properties, interests, rights and liabilities made in accordance with this Scheme shall become final.

3. The Uttar Pradesh Power Sector Reforms (Transfer of Distribution Undertakings) Scheme, 2003 shall be effective for all intent and purposes with the above modifications as from the date of the effective date of transfer i.e. August 12, 2003.

4. Notwithstanding anything contained in this notification, the foregoing provisions shall not apply to the transfer of personnel.

By Order,

(Sanjay Agarwal)
Principal Secretary

SCHEDULE -'A' – PART I

ZONE I DISTRIBUTION UNDERTAKINGS

I. DISTRIBUTION ASSETS:

All 33 kV, 11 kV, LT. (Single phase 2 wire to 3 phase 5 wire) lines (with overhead lines, Aerial Bunched cables and underground cables), and lines above 33 kV directly going to consumers from transmission Grid sub-stations, on different types of supports with various sizes of conductors and step up/step down transformers, breakers, protective and metering devices and control rooms, testing laboratories, lands (including right of way), buildings, roads, diesel generating sets or other conventional and non-conventional generating units, service connections and installations inside consumer's premises, street lighting and signal systems owned by or leased to the UPPCL but excluding fittings, fixtures and installations owned, by private persons or local authorities.

II. GENERAL ASSETS/LIABILITIES:

Special tools and equipment, material handling equipment, earth movers, bulldozers, concrete mixtures, cranes, trailers, heavy and light vehicles, furniture, fixtures, office equipment, air conditioners, refrigerators, computers and signal systems, spares, consumables, raw materials, lands and civil works installations including roads, buildings, schools, dispensaries, testing laboratories and equipment, training centers, workshops, works in progress, machineries and equipment sent for repairs, scrap and obsolete materials.

III. OTHER ASSETS:

Other assets and movable properties including plant and machinery, motor car, jeeps, trucks, cranes, trailers and other vehicles, furniture, fixtures, air conditioners, computers, etc. to the extent they are utilized and operated by or associated with the assets referred to under clauses I. and II above shall also form part of Distribution Undertakings.

IV. MISCELLANEOUS:

1. Contracts, agreements, interest and arrangements to the extent they are associated with or related to distribution activities or to the Undertakings or assets referred to in clauses I, II, and III above.

2. Loans, secured and unsecured to the extent they are associated with or related to distribution activities or to the Undertakings or assets referred to in clauses I, II, and III above.

3. Cash and bank balance to the extent they are associated with or related to distribution activities or the Undertakings or assets referred to in clauses I, II, and III above.

4. Other Current Assets to the extent they are associated with or related to distribution activities or to the Undertakings or assets referred to in clauses I, II, and III above.

5. Other Current liabilities and provisions to the extent they are associated with or related to distribution activities or to the Undertakings or Assets referred to in clauses I, II, and III above.

6. Contingent liabilities to the extent they are recognised and are associated with or related to distribution activities or to the Undertakings or Assets referred to in clauses I, II, and III above.

7. Share capital of the U.P. Power Corporation Ltd. to the extent required to match the assets and liabilities referred in clauses I, II and III above.

8. Other liabilities to the extent they are associated with or related to distribution activities or to the Undertakings or Assets referred to in clauses I, II, and III above.

9. Proceedings to the extent they are associated with or related to distribution activities or to the Undertakings or Assets referred to in clauses I, II, and III above.

V. In consideration of the transfer as mentioned above, the UPPCL shall be issued 1,34,85,019 shares of face value of Rs 1000/- each in the Agra Discom.

SCHEDULE - 'A' – PART II

Aggregate Assets and Liabilities to be vested in the Agra Discom

BALANCE SHEET AUGUST 11th 2003	AMOUNT IN RUPEES
FIXED ASSETS	
Gross Fixed Assets	14,94,14,59,182
Less Accumulated depreciation	6,58,28,18,224
Net Fixed Assets	**8,35,86,40,958**
Cap. Expd. In progress	40,36,86,837
Total Fixed Assets	**8,76,23,27,795**
CURRENT ASSETS	
Cash and Bank Balances	46,87,30,472
Total stocks	2,35,58,14,347
Less Provision for Obsolete Stores	58,78,24,692
Net Stock	**1,76,79,89,655**
Gross Receivable for Sale of Electricity	17,14,84,56,418
Provision for Bad & Doubtful debts	9,17,69,93,179
Net Receivables for Sale of Power	**7,97,14,63,239**
Other Current Assets	11,21,37,428
Loans & Advances	2,36,00,125
Inter Unit Transfers	87,52,42,424
Total Current Assets	**11,21,91,63,343**
TOTAL ASSETS	**19,98,14,91,138**
NET WORTH	
Paid up and Subscribed Share Capital	13,48,50,19,000
Consumers Contribution towards Service Connection Charges	86,96,62,102
Subsidies towards Cost of Capital Assets	50,95,93,053
Total Net Worth	**14,86,42,74,155**

LONG TERM DEBTS	
NCRPB	9,17,52,000
NOIDA	39,75,000
UPSIDC	1,03,22,032
HDFC	14,55,590
Greater NOIDA	1,87,08,000
IDBI	12,49,00,000
REC	2,25,79,00,000
PFC	38,78,00,000
Financial Participation by Consumers	(55,01,616)
Interest Accrued & Due on Financial Participation by Consumers	-
Total Long Term Loans	**2,89,13,11,006**
CURRENT LIABILITIES & PROVISIONS	2,22,59,05,977
TOTAL LIABILITIES	**19,98,14,91,138**

SCHEDULE -'B' – PART I

ZONE II DISTRIBUTION UNDERTAKINGS

I. DISTRIBUTION ASSETS:

All 33 kV, 11 kV, LT. (Single phase 2 wire to 3 phase 5 wire) lines (with overhead lines, Aerial Bunched cables and underground cables), and lines above 33 kV directly going to consumers from transmission Grid sub-stations, on different types of supports with various sizes of conductors and step up/step down transformers, breakers, protective and metering devices and control rooms, testing laboratories, lands (including right of way), buildings, roads, diesel generating sets or other conventional and non-conventional generating units, service connections and installations inside consumer's premises, street lighting and signal systems owned by or leased to the UPPCL but excluding fittings, fixtures and installations owned, by private persons or local authorities.

II. GENERAL ASSETS/LIABILITIES:

Special tools and equipment, material handling equipment, earth movers, bulldozers, concrete mixtures, cranes, trailers, heavy and light vehicles, furniture, fixtures, office equipment, air conditioners, refrigerators, computers and signal systems, spares, consumables, raw materials, lands and civil works installations including roads, buildings, schools, dispensaries, testing laboratories and equipment, training centers, workshops, works in progress, machineries and equipment sent for repairs, scrap and obsolete materials.

III. OTHER ASSETS:

Other assets and movable properties including plant and machinery, motor car, jeeps, trucks, cranes, trailers and other vehicles, furniture, fixtures, air conditioners, computers, etc. to the extent they are utilized and operated by or associated with the assets referred to under clauses I. and II above shall also form part of Distribution Undertakings.

IV. MISCELLANEOUS:

1. Contracts, agreements, interest and arrangements to the extent they are associated with or related to distribution activities or to the Undertakings or assets referred to in clauses I, II, and III above.

2. Loans, secured and unsecured to the extent they are associated with or related to distribution activities or to the Undertakings or assets referred to in clauses I, II, and III above.

3. Cash and bank balance to the extent they are associated with or related to distribution activities or the Undertakings or assets referred to in clauses I, II, and III above.

4. Other Current Assets to the extent they are associated with or related to distribution activities or to the Undertakings or assets referred to in clauses I, II, and III above.

5. Other Current liabilities and provisions to the extent they are associated with or related to distribution activities or to the Undertakings or Assets referred to in clauses I, II, and III above.

6. Contingent liabilities to the extent they are recognised and are associated with or related to distribution activities or to the Undertakings or Assets referred to in clauses I, II, and III above.

7. Share capital of the U.P. Power Corporation Ltd. to the extent required to match the assets and liabilities referred in clauses I, II and III above.

8. Other liabilities to the extent they are associated with or related to distribution activities or to the Undertakings or Assets referred to in clauses I, II, and III above.

9. Proceedings to the extent they are associated with or related to distribution activities or to the Undertakings or Assets referred to in clauses I, II, and III above.

V. In consideration of the transfer as mentioned above, the UPPCL shall be issued 95,53,885 shares of face value of Rs 1000/- each in the Lucknow Discom.

SCHEDULE - 'B' – PART II

Aggregate Assets and Liabilities to be vested in the Lucknow Discom

BALANCE SHEET AUGUST 11th 2003	AMOUNT IN RUPEES
FIXED ASSETS	
Gross Fixed Assets	15,82,22,87,767
Less Accumulated depreciation	6,97,08,88,385
Net Fixed Assets	**8,85,13,99,382**
Cap. Expd. In progress	63,93,70,524
Total Fixed Assets	**9,49,07,69,906**
CURRENT ASSETS	
Cash and Bank Balances	62,10,30,135
Total stocks	1.65.50,80,228
Less Provision for Obsolete Stores	41,21,52,020
Net Stock	**1,24,29,28,208**
Gross Receivable for Sale of Electricity	11,22,10,32,907
Provision for Bad & Doubtful debts	6,00,49,33,618
Net Receivables for Sale of Power	**5,21,60,99,289**
Other Current Assets	10,70,55,644
Loans & Advances	2,12,48,653
Inter Unit Transfers	1,11,59,39,427
Total Current Assets	**8,32,43,01,356**
TOTAL ASSETS	**17,81,50,71,262**
NET-WORTH	
Paid up and Subscribed Share Capital	9,55,38,85,000
Consumers Contribution towards Service Connection Charges	72,28,10,756
Subsidies towards Cost of Capital Assets	53,96,34,572
Total Net Worth	**10,81,63,30,328**

LONG TERM DEBTS	
NCRPB	29,81,94,000
NOIDA	1,29,18,750
UPSIDC	1,18,31,653
HDFC	47,30,667
Greater NOIDA	6,08,01,000
IDBI	14,40,00,000
REC	2,56,58,00,000
PFC	45,39,00,000
Financial Participation by Consumers	-
Interest Accrued & Due on Financial Participation by Consumers	-
Total Long Term Loans	**3,55,21,76,070**
CURRENT LIABILITIES & PROVISIONS	3,44,65,64,864
TOTAL LIABILITIES	**17,81,50,71,262**

SCHEDULE -'C' – PART I

ZONE III DISTRIBUTION UNDERTAKINGS

I. DISTRIBUTION ASSETS:

All 33 kV, 11 kV, LT. (Single phase 2 wire to 3 phase 5 wire) lines (with overhead lines, Aerial Bunched cables and underground cables), and lines above 33 kV directly going to consumers from transmission Grid sub-stations, on different types of supports with various sizes of conductors and step up/step down transformers, breakers, protective and metering devices and control rooms, testing laboratories, lands (including right of way), buildings, roads, diesel generating sets or other conventional and non-conventional generating units, service connections and installations inside consumer's premises, street lighting and signal systems owned by or leased to the UPPCL but excluding fittings, fixtures and installations owned, by private persons or local authorities.

II. GENERAL ASSETS/LIABILITIES:

Special tools and equipment, material handling equipment, earth movers, bulldozers, concrete mixtures, cranes, trailers, heavy and light vehicles, furniture, fixtures, office equipment, air conditioners, refrigerators, computers and signal systems, spares, consumables, raw materials, lands and civil works installations including roads, buildings, schools, dispensaries, testing laboratories and equipment, training centers, workshops, works in progress, machineries and equipment sent for repairs, scrap and obsolete materials.

III. OTHER ASSETS:

Other assets and movable properties including plant and machinery, motor car, jeeps, trucks, cranes, trailers and other vehicles, furniture, fixtures, air conditioners, computers, etc. to the extent they are utilized and operated by or associated with the assets referred to under clauses I. and II above shall also form part of Distribution Undertakings.

IV. MISCELLANEOUS:

1. Contracts, agreements, interest and arrangements to the extent they are associated with or related to distribution activities or to the Undertakings or assets referred to in clauses I, II, and III above.

2. Loans, secured and unsecured to the extent they are associated with or related to distribution activities or to the Undertakings or assets referred to in clauses I, II, and III above.

3. Cash and bank balance to the extent they are associated with or related to distribution activities or the Undertakings or assets referred to in clauses I, II, and III above.

4. Other Current Assets to the extent they are associated with or related to distribution activities or to the Undertakings or assets referred to in clauses I, II, and III above.

5. Other Current liabilities and provisions to the extent they are associated with or related to distribution activities or to the Undertakings or Assets referred to in clauses I, II, and III above.

6. Contingent liabilities to the extent they are recognised and are associated with or related to distribution activities or to the Undertakings or Assets referred to in clauses I, II, and III above.

7. Share capital of the U.P. Power Corporation Ltd. to the extent required to match the assets and liabilities referred in clauses I, II and III above.

8. Other liabilities to the extent they are associated with or related to distribution activities or to the Undertakings or Assets referred to in clauses I, II, and III above.

9. Proceedings to the extent they are associated with or related to distribution activities or to the Undertakings or Assets referred to in clauses I, II, and III above.

V. In consideration of the transfer as mentioned above, the UPPCL shall be issued 1,40,11,018 shares of face value of Rs 1000/- each in the Meerut Discom.

SCHEDULE - 'C' – PART II

Aggregate Assets and Liabilities to be vested in the Meerut Discom

BALANCE SHEET AUGUST 11th 2003	AMOUNT IN RUPEES
FIXED ASSETS	
Gross Fixed Assets	22,54,27,98,954
Less Accumulated depreciation	9,93,94,90,193
Net Fixed Assets	**12,60,33,08,761**
Cap. Expd. In progress	27,67,22,383
Total Fixed Assets	**12,88,00,31,144**
CURRENT ASSETS	
Cash and Bank Balances	77,65,60,521
Total stocks	1,96,12,33,771
Less Provision for Obsolete Stores	48,93,68,629
Net Stock	**1,47,18,65,142**
Gross Receivable for Sale of Electricity	16,93,04,33,179
Provision for Bad & Doubtful debts	9,06,03,18,084
Net Receivables for Sale of Power	**7,87,01,15,095**
Other Current Assets	20,34,73,848
Loans & Advances	2,11,32,391
Inter Unit Transfers	(18,11,58,882)
Total Current Assets	**10,16,19,88,115**
TOTAL ASSETS	**23,04,20,19,259**
NET WORTH	
Paid up and Subscribed Share Capital	14,01,10,18,000
Consumers Contribution towards Service Connection Charges	1,09,57,45,966
Subsidies towards Cost of Capital Assets	76,88,44,168
Total Net Worth	**15,87,56,08,134**

LONG TERM DEBTS	
NCRPB	9,93,98,000
NOIDA	43,06,250
UPSIDC	1,19,07,134
HDFC	15,76,889
Greater NOIDA	2,02,67,000
IDBI	14,96,00,000
REC	2,56,58,00,000
PFC	48,90,00,000
Financial Participation by Consumers	37,60,035
Interest Accrued & Due on Financial Participation by Consumers	6,796
Total Long Term Loans	**3,34,56,22,104**
CURRENT LIABILITIES & PROVISIONS	3,82,07,89,021
TOTAL LIABILITIES	**23,04,20,19,259**

SCHEDULE -'D' – PART I

ZONE IV DISTRIBUTION UNDERTAKINGS

I. DISTRIBUTION ASSETS:

All 33 kV, 11 kV, LT. (Single phase 2 wire to 3 phase 5 wire) lines (with overhead lines, Aerial Bunched cables and underground cables), and lines above 33 kV directly going to consumers from transmission Grid sub-stations, on different types of supports with various sizes of conductors and step up/step down transformers, breakers, protective and metering devices and control rooms, testing laboratories, lands (including right of way), buildings, roads, diesel generating sets or other conventional and non-conventional generating units, service connections and installations inside consumer's premises, street lighting and signal systems owned by or leased to the UPPCL but excluding fittings, fixtures and installations owned, by private persons or local authorities.

II. GENERAL ASSETS/LIABILITIES:

Special tools and equipment, material handling equipment, earth movers, bulldozers, concrete mixtures, cranes, trailers, heavy and light vehicles, furniture, fixtures, office equipment, air conditioners, refrigerators, computers and signal systems, spares, consumables, raw materials, lands and civil works installations including roads, buildings, schools, dispensaries, testing laboratories and equipment, training centers, workshops, works in progress, machineries and equipment sent for repairs, scrap and obsolete materials.

III. OTHER ASSETS:

Other assets and movable properties including plant and machinery, motor car, jeeps, trucks, cranes, trailers and other vehicles, furniture, fixtures, air conditioners, computers, etc. to the extent they are utilized and operated by or associated with the assets referred to under clauses I. and II above shall also form part of Distribution Undertakings.

IV. MISCELLANEOUS:

1. Contracts, agreements, interest and arrangements to the extent they are associated with or related to distribution activities or to the Undertakings or assets referred to in clauses I, II, and III above.

2. Loans, secured and unsecured to the extent they are associated with or related to distribution activities or to the Undertakings or assets referred to in clauses I, II, and III above.

3. Cash and bank balance to the extent they are associated with or related to distribution activities or the Undertakings or assets referred to in clauses I, II, and III above.

4. Other Current Assets to the extent they are associated with or related to distribution activities or to the Undertakings or assets referred to in clauses I, II, and III above.

5. Other Current liabilities and provisions to the extent they are associated with or related to distribution activities or to the Undertakings or Assets referred to in clauses I, II, and III above.

6. Contingent liabilities to the extent they are recognised and are associated with or related to distribution activities or to the Undertakings or Assets referred to in clauses I, II, and III above.

7. Share capital of the U.P. Power Corporation Ltd. to the extent required to match the assets and liabilities referred in clauses I, II and III above.

8. Other liabilities to the extent they are associated with or related to distribution activities or to the Undertakings or Assets referred to in clauses I, II, and III above.

9. Proceedings to the extent they are associated with or related to distribution activities or to the Undertakings or Assets referred to in clauses I, II, and III above.

V. In consideration of the transfer as mentioned above, the UPPCL shall be issued 1,45,70,206 shares of face value of Rs 1000/- each in the Varanasi Discom.

SCHEDULE - 'D' – PART II

Aggregate Assets and Liabilities to be vested in the Varanasi Discom

BALANCE SHEET AUGUST 11th 2003	AMOUNT IN RUPEES
FIXED ASSETS	
Gross Fixed Assets	17,16,05,10,719
Less Accumulated depreciation	7,56,04,74,605
Net Fixed Assets	**9,60,00,36,114**
Cap. Expd. In progress	12,99,28,746
Total Fixed Assets	**9,72,99,64,860**
CURRENT ASSETS	
Cash and Bank Balances	96,04,64,658
Total stocks	2,52,38,38,129
Less Provision for Obsolete Stores	62,97,50,121
Net Stock	**1,89,40,88,008**
Gross Receivable for Sale of Electricity	20,56,67,88,027
Provision for Bad & Doubtful debts	11,00,63,12,687
Net Receivables for Sale of Power	**9,56,04,75,340**
Other Current Assets	27,38,45,959
Loans & Advances	76,03,472
Inter Unit Transfers	(17,48,13,927)
Total Current Assets	**12,52,16,63,510**
TOTAL ASSETS	**22,25,16,28,370**
NET WORTH	
Paid up and Subscribed Share Capital	14,57,02,06,000
Consumers Contribution towards Service Connection Charges	97,61,37,732
Subsidies towards Cost of Capital Assets	58,52,75,973
Total Net Worth	**16,13,16,19,705**

LONG TERM DEBTS	
NCRPB	27,52,56,000
NOIDA •	1,19,25,000
UPSIDC	1,31,14,831
HDFC	43,66,770
Greater NOIDA	5,61,24,000
IDBI	15,76,00,000
REC	2,87,37,00,000
PFC	48,50,00,000
Financial Participation by Consumers	1,58,019
Interest Accrued & Due on Financial Participation by Consumers	6,472
Total Long Term Loans	**3,87,72,51,092**
CURRENT LIABILITIES & PROVISIONS	2,24,27,57,573
TOTAL LIABILITIES	**22,25,16,28,370**

उत्तर प्रदेश शासन
ऊर्जा अनुभाग-2

अधिसूचना

संख्या 1528/24-पी-2-2015 एसए.(218)/2014
लखनऊ, दिनांक 03 नवम्बर,2015

उत्तर प्रदेश ऊर्जा क्षेत्र सुधार (वितरण उपक्रमों का अन्तरण) स्कीम, 2003 (अधिसूचना संख्या 2740/पी-1/2003-24-14पी/2003 दिनांक 12 अगस्त, 2003) के खण्ड 7 के साथ पठित विद्युत अधिनियम, 2003 (अधिनियम संख्या 36, सन् 2003) की धारा 131 की उपधारा (4) तथा उत्तर प्रदेश विद्युत सुधार अधिनियम, 1999 (उत्तर प्रदेश अधिनियम संख्या 24, सन् 1999) की धारा 23 की उपधारा (4) के अधीन प्रदत्त शक्ति का प्रयोग करके एतद्द्वारा राज्यपाल सम्पत्तियों, हितों, अधिकारों, दायित्वों, कार्मिकों तथा कार्यवाहियों के अन्तरण के सम्बन्ध में अधिसूचना संख्या 2740/पी-1/2003-24-14पी/2003 दिनांक 12 अगस्त, 2003 की अनुसूची क से घ के स्थान पर इस अधिसूचना के साथ संलग्न अनुसूची क से घ के प्रतिस्थापन द्वारा इस अधिसूचना के माध्यम से उक्त उत्तर प्रदेश ऊर्जा क्षेत्र सुधार (वितरण उपक्रमों का अन्तरण) स्कीम, 2003 की निबन्धन एवं शर्तों में उपान्तरण, फेर-बदल और अन्यथा परिवर्तन करते हैं।

2. उत्तर प्रदेश ऊर्जा क्षेत्र सुधार (वितरण उपक्रमों का अन्तरण) स्कीम, 2003 (अधिसूचना संख्या 2740/पी-1/2003-24-14पी/2003 दिनांक 12 अगस्त, 2003) के अधीन सामयिकता अवधि की प्रभावी तिथि, जैसा कि उत्तर प्रदेश ऊर्जा क्षेत्र सुधार (वितरण उपक्रमों का अन्तरण) (छठा संशोधन) स्कीम, 2008 (अधिसूचना संख्या 2131/पी-2-2008-24-61 (एम) ई/2000 लखनऊ दिनांक 10 अक्तूबर, 2008) द्वारा विस्तारित की गयी थी, दिनांक 11 दिसम्बर, 2009 को समाप्त हो गयी। एतद्द्वारा राज्यपाल निम्नानुसार सामयिकता अवधि हेतु उत्तर प्रदेश ऊर्जा क्षेत्र सुधार (वितरण उपक्रमों का अन्तरण) स्कीम, 2003 (अधिसूचना संख्या 2740/पी-1/2003-24-14पी/2003 दिनांक 12 अगस्त, 2003) की निबन्धन एवं शर्तों में उपान्तरण, फेर-बदल और अन्यथा परिवर्तन करते है:-

उत्तर प्रदेश ऊर्जा क्षेत्र सुधार (वितरण उपक्रमों का अन्तरण) स्कीम, 2003 के खण्ड 7 के उपखण्ड (1), (2) एवं (3) के स्थान पर निम्नवत प्रतिस्थापित होंगे:-

(1) खण्ड 3 के अधीन उपक्रमों का वर्गीकरण और अन्तरण, जब तक कि राज्य सरकार द्वारा दिये गये किसी आदेश में अन्यथा विनिर्दिष्ट न हो, अनन्तिम होगा और अधिसूचना संख्या 2740/पी-1/2003-24-14पी/2003 दिनांक 12 अगस्त, 2003 के निर्गमन की तिथि से तेरह वर्षों के अवसान पर अन्तिम होगा।

(2) अधिसूचना संख्या 2740/पी-1/2003-24-14पी/2003 दिनांक 12 अगस्त, 2003 के निर्गमन की तिथि से तेरह वर्षों की अवधि के भीतर किसी भी समय राज्य सरकार, अधिसूचित किये जाने वाले आदेश से, अन्तरण को, जिसमें अन्तरण में सम्मिलित मदें या उनके मूल्य सम्मिलित हों, संशोधित, परिवर्तित, उपान्तरित, परिवर्धित, विलोपित या अन्यथा उसके निबन्धन और शर्तों में परिवर्तन कर सकती है, और ऐसी सम्पत्तियों, हितों, अधिकारों और दायित्वों को जो एक अन्तरिती के उपक्रम का भाग हों, किसी अन्य अन्तरिती को या राज्य सरकार को ऐसी रीति से और ऐसे निबन्धन और शर्तों पर, जिसे राज्य सरकार समुचित समझे, अन्तरित कर सकती है। ऐसे आदेशों के पारित होने पर सुसंगत अनुसूची तद्नुसार संशोधित हो जायेगी।

(3) अधिसूचना संख्या 2740/पी-1/2003-24-14पी/2003 दिनांक 12 अगस्त, 2003 के निर्गमन की तिथि से तेरह वर्षों की अवधि के अवसान पर या वह तिथि जिस पर अन्तिम अन्तरण स्कीम गजट में प्रकाशित होती है, इनमें जो भी पहले हो, राज्य सरकार द्वारा दिये गये किन्हीं निदेशों के अधीन रहते हुए उपक्रमों, सम्पत्तियों, हितों, अधिकारों और दायित्वों का इस स्कीम के अनुसार किया गया अन्तरण, अन्तिम हो जायेगा।

3. उत्तर प्रदेश ऊर्जा क्षेत्र सुधार (वितरण उपक्रमों का अन्तरण) स्कीम, 2003 उपरोक्त उपान्तरणों सहित सभी अभिप्रायों एवं प्रयोजनों के लिए अन्तरण की प्रभावी तिथि, अर्थात दिनांक 12 अगस्त, 2003 से, प्रभावी होगी।

4. इस अधिसूचना में अन्तर्विष्ट किसी अन्य बात के होते हुये भी, कार्मिकों के अन्तरण पर पूर्वगामी प्रावधान लागू नहीं होंगे।

आज्ञा से,

(संजय अग्रवाल)
प्रमुख सचिव

अनुसूची-'क' - भाग- एक
(जोन- I वितरण उपक्रमों)

एकः वितरण आस्तियां

विभिन्न आकार के कन्डक्टरों और स्टेप-अप और स्टेप-डाउन ट्रांसफार्मरों, ब्रेकरों, संरक्षण और मीटरमापी युक्तियों के साथ विभिन्न प्रकार के अवलम्बों पर शीर्षस्थ लाइनें, एरियल बंच्ड और भूमिगत केबिलों पर 33 के0वी0, 11 के0वी0, एल0टी0 (एकल फेज के 2 वायर से 3 फेज के 5 वायर) की समस्त लाइनें एवं 33 के0वी0 से ऊपर की लाइनें जो पारेषण ग्रिड उप-संस्थान से सीधे उपभोक्ता को जा रही हैं, और नियन्त्रण कक्ष, परीक्षण प्रयोगशालायें, भूमि (मार्ग के अधिकार सहित), भवनों, सड़कें, डीजल उत्पादक सेट्स या अन्य परम्परागत और अपारम्परिक उत्पादन इकाईयां, उपभोक्ता परिसरों के भीतर सेवा संयोजन और प्रतिष्ठापन, उ0प्र0पा0का0लि0 के स्वामित्वाधीन या उसे पट्टे पर दी गयी मार्ग प्रकाश और सिग्नल प्रणालियां, किन्तु इसके अन्तर्गत निजी व्यक्तियों या स्थानीय प्राधिकारियों के स्वामित्वाधीन फिटिंग्स, फिक्स्चर्स और प्रतिष्ठापन नहीं हैं।

दोः सामान्य आस्तियां/दायित्व

विशेष उपकरणों और उपस्कर सामग्री, प्रयुक्त उपस्कर, मिट्टी हटाने का यन्त्र, बुलडोजर्स, कंक्रीट मिक्स्चर्स, क्रेन्स, ट्रेलर्स, भारी और हल्के वाहनों, फर्नीचर, फिक्स्चर्स, कार्यालय उपस्कर, वातानुकूलक, रेफ्रीजिरेटर्स, कम्प्यूटर्स और सिग्नल प्रणाली, फालतू पुर्जे, उपभोज्य सामग्री, कच्चे माल, भूमि और सिविल संकर्म, प्रतिष्ठान जिसके अन्तर्गत सड़कों, भवनों, विद्यालयों, चिकित्सालयों, परीक्षण प्रयोगशालायें और उपस्कर, प्रशिक्षण केन्द्रों, कार्यशालाओं, चालू संकर्मों, मरम्मत के लिए भेजी गयी मशीनरी और उपस्कर, रद्दी माल और पुरानी सामग्री भी सम्मिलित है।

तीनः अन्य आस्तियां

अन्य आस्तियां और जंगम सम्पत्तियां, संयंत्र और मशीनरी, मोटरकार, जीपें, ट्रकें, क्रेन्स, ट्रेलर्स और अन्य वाहनों, फर्नीचर, फिक्सर, वातानुकूलक, कम्प्यूटर्स आदि को सम्मिलित करते हुये जिस सीमा तक वे ऊपर खण्ड-एक और दो के अधीन निर्दिष्ट आस्तियों द्वारा उससे प्रयुक्त और प्रचालित या सहयुक्त हैं, भी वितरण उपक्रमों के भाग होंगे।

चारः विविध

1. उस सीमा तक संविदायें, करारों, हित और व्यवस्थायें जिस सीमा तक वे ऊपर खण्ड एक, दो और तीन में निर्दिष्ट वितरण क्रिया-कलापों या उपक्रमों या आस्तियों से सम्बद्ध या सम्बन्धित हों।

2. उस सीमा तक प्रतिभूत और अप्रतिभूत ऋण जिस सीमा तक वे ऊपर खण्ड एक, दो और तीन में निर्दिष्ट वितरण क्रिया-कलापों या उपक्रमों या आस्तियों से सम्बद्ध या सम्बन्धित हों।

3. उस सीमा तक नकद और बैंक अवशेष जिस सीमा तक वे ऊपर खण्ड एक, दो और तीन में निर्दिष्ट वितरण क्रिया-कलापों या उपक्रमों या आस्तियों से सम्बद्ध या सम्बन्धित हों।

4. उस सीमा तक अन्य चालू आस्तियां जिस सीमा तक वे ऊपर खण्ड एक, दो और तीन में निर्दिष्ट वितरण क्रिया-कलापों या उपक्रमों या आस्तियों से सम्बद्ध या सम्बन्धित हों।

5. उस सीमा तक अन्य चालू दायित्व और उपबन्ध जिस सीमा तक वे ऊपर खण्ड एक, दो और तीन में निर्दिष्ट वितरण क्रिया-कलापों या उपक्रमों या आस्तियों से सम्बद्ध या सम्बन्धित हों।

6. उस सीमा तक आकस्मिक दायित्व जिस सीमा तक वे ऊपर खण्ड एक, दो और तीन में निर्दिष्ट वितरण क्रिया-कलापों या उपक्रमों या आस्तियों से मान्यता प्राप्त हों और उससे सम्बद्ध या सम्बन्धित हों।

7. उस सीमा तक उ0प्र0 पावर कारपोरेशन लिमिटेड की शेयर पूंजी जिस सीमा तक वे ऊपर खण्ड एक, दो और तीन में निर्दिष्ट आस्तियों और दायित्वों के अनुरूप होगी।

8. उस सीमा तक अन्य दायित्व जिस सीमा तक वे ऊपर खण्ड एक, दो और तीन में निर्दिष्ट वितरण क्रिया-कलापों या उपक्रमों या आस्तियों से सम्बद्ध या सम्बन्धित हों।

9. उस सीमा तक कार्यवाहियां जिस सीमा तक वे ऊपर खण्ड एक, दो और तीन में निर्दिष्ट वितरण क्रिया-कलापों या उपक्रमों या आस्तियों से सम्बद्ध या सम्बन्धित हों।

पांचः ऊपर यथा उल्लिखित अन्तरण के प्रतिफल स्वरूप उ0प्र0पा0का0लि0 को 1000 रूपये प्रत्येक के अंकित मूल्य के 1,34,85,019 शेयर आगरा डिस्काम द्वारा जारी किये जाएंगे।

अनुसूची 'क'-भाग-दो

आगरा डिस्काम में निहित की जाने वाली कुल आस्तियां व दायित्व

तुलन पत्र 11 अगस्त, 2003	धनराशि (रूपये मे)
स्थिर आस्तियां	
सकल स्थिर आस्तियां	14,94,14,59,182
घटाइए : संचित अवक्षयण (ह्रास)	6,58,28,18,224
शुद्ध स्थिर आस्तियां	8,35,86,40,958
प्रगतिशील पूंजीगत कार्य	40,36,86,837
कुल स्थिर आस्तियां	8,76,23,27,795
चालू आस्तियां	
नकद और बैंक अवशेष	46,87,30,472
कुल भण्डार	2,35,58,14,347
घटायें-अप्रचलित भण्डार हेतु प्रावधान	58,78,24,692
शुद्ध भण्डार	1,76,79,89,655
विद्युत विक्रय से सकल प्राप्य	17,14,84,56,418
डूबत और शंकास्पद ऋण के लिये प्रावधान	9,17,69,93,179
विद्युत विक्रय से शुद्ध प्राप्य	7,97,14,63,239
अन्य चालू आस्तियां	11,21,37,428
ऋण एवं अग्रिम	2,36,00,125
अन्तर इकाई अन्तरण	87,52,42,424
कुल चालू आस्तियां	11,21,91,63,343
कुल आस्तियां	19,98,14,91,138
शुद्ध मूल्य	
प्रदत्त और अभिदत्त अंश पूंजी	13,48,50,19,000
सेवा संयोजन प्रभार हेतु उपभोक्ता अंशदान	86,96,62,102
पूंजीगत आस्तियों की लागत हेतु सहायिकी	50,95,93,053
कुल शुद्ध मूल्य	14,86,42,74,155
दीर्घ कालिक ऋण	
एन0सी0आर0पी0बी0	
नोयडा	9,17,52,000
यू0पी0एस0आई0डी0सी0	39,75,000
एच0डी0एफ0सी0	1,03,22,032
ग्रेटर नोयडा	14,55,590
आई0डी0बी0आई0	1,87,08,000
	12,49,00,000

आर0ई0सी0	2,25,79,00,000
पी0एफ0सी0	38,78,00,000
उपभोक्ताओं द्वारा वित्तीय भागीदारी	(55,01,616)
उपभोक्ताओं द्वारा वित्तीय भागीदारी पर उपार्जित एवं देय ब्याज	-
कुल दीर्घकालिक ऋण	2,89,13,11,006
चालू दायित्व व प्रावधान	2,22,59,05,977
कुल दायित्व	19,98,14,91,138

अनुसूची-'ख' - भाग- एक
(जोन- II वितरण उपक्रमों)

एकः वितरण आस्तियां

विभिन्न आकार के कन्डक्टरों और स्टेप-अप और स्टेप-डाउन ट्रांसफार्मरों, ब्रेकरों, संरक्षण और मीटरमापी युक्तियों के साथ विभिन्न प्रकार के अवलम्बों पर शीर्षस्थ लाइनें, एरियल बंच्ड और भूमिगत केबिलों पर 33 के0वी0, 11 के0वी0, एल0टी0 (एकल फेज के 2 वायर से 3 फेज के 5 वायर) की समस्त लाइनें एवं 33 के0वी0 से ऊपर की लाइनें जो पारेषण ग्रिड उप-संस्थान से सीधे उपभोक्ता को जा रही हैं, और नियन्त्रण कक्ष, परीक्षण प्रयोगशालायें, भूमि (मार्ग के अधिकार सहित), भवनों, सड़कें, डीजल उत्पादक सेट्स या अन्य परम्परागत और अपारम्परिक उत्पादन इकाईयां, उपभोक्ता परिसरों के भीतर सेवा संयोजन और प्रतिष्ठापन, उ0प्र0पा0का0लि0 के स्वामित्वाधीन या उसे पट्टे पर दी गयी मार्ग प्रकाश और सिग्नल प्रणालियां, किन्तु इसके अन्तर्गत निजी व्यक्तियों या स्थानीय प्राधिकारियों के स्वामित्वाधीन फिटिंग्स, फिक्स्चर्स और प्रतिष्ठापन नहीं हैं।

दोः सामान्य आस्तियां/दायित्व

विशेष उपकरणों और उपस्कर सामग्री, प्रयुक्त उपस्कर, मिट्टी हटाने का यन्त्र, बुलडोजर्स, कंक्रीट मिक्स्चर्स, क्रेन्स, ट्रेलर्स, भारी और हल्के वाहनों, फर्नीचर, फिक्स्चर्स, कार्यालय उपस्कर, वातानुकूलक, रेफ्रीजिरेटर्स, कम्प्यूटर्स और सिग्नल प्रणाली, फालतू पुर्जे, उपभोज्य सामग्री, कच्चे माल, भूमि और सिविल संकर्म, प्रतिष्ठान जिसके अन्तर्गत सड़कों, भवनों, विद्यालयों, चिकित्सालयों, परीक्षण प्रयोगशालायें और उपस्कर, प्रशिक्षण केन्द्रों, कार्यशालाओं, चालू संकर्मों, मरम्मत के लिए भेजी गयी मशीनरी और उपस्कर, रद्दी माल और पुरानी सामग्री भी सम्मिलित है।

तीनः अन्य आस्तियां

अन्य आस्तियां और जंगम सम्पत्तियां, संयंत्र और मशीनरी, मोटरकार, जीपें, ट्रकें, क्रेन्स, ट्रेलर्स और अन्य वाहनों, फर्नीचर, फिक्सर, वातानुकूलक, कम्प्यूटर्स आदि को सम्मिलित करते हुये जिस सीमा तक वे ऊपर खण्ड-एक और दो के अधीन निर्दिष्ट आस्तियों द्वारा उससे प्रयुक्त और प्रचालित या सहयुक्त हैं, भी वितरण उपक्रमों के भाग होंगे।

चारः विविध

1. उस सीमा तक संविदायें, करारें, हित और व्यवस्थायें जिस सीमा तक वे ऊपर खण्ड एक, दो और तीन में निर्दिष्ट वितरण क्रिया-कलापों या उपक्रमों या आस्तियों से सम्बद्ध या सम्बन्धित हों।

2. उस सीमा तक प्रतिभूत और अप्रतिभूत ऋण जिस सीमा तक वे ऊपर खण्ड एक, दो और तीन में निर्दिष्ट वितरण क्रिया-कलापों या उपक्रमों या आस्तियों से सम्बद्ध या सम्बन्धित हों।

3. उस सीमा तक नकद और बैंक अवशेष जिस सीमा तक वे ऊपर खण्ड एक, दो और तीन में निर्दिष्ट वितरण क्रिया-कलापों या उपक्रमों या आस्तियों से सम्बद्ध या सम्बन्धित हों।

4. उस सीमा तक अन्य चालू आस्तियां जिस सीमा तक वे ऊपर खण्ड एक, दो और तीन में निर्दिष्ट वितरण क्रिया-कलापों या उपक्रमों या आस्तियों से सम्बद्ध या सम्बन्धित हों।

5. उस सीमा तक अन्य चालू दायित्व और उपबन्ध जिस सीमा तक वे ऊपर खण्ड एक, दो और तीन में निर्दिष्ट वितरण क्रिया-कलापों या उपक्रमों या आस्तियों से सम्बद्ध या सम्बन्धित हों।

6. उस सीमा तक आकस्मिक दायित्व जिस सीमा तक वे ऊपर खण्ड एक, दो और तीन में निर्दिष्ट वितरण क्रिया-कलापों या उपक्रमों या आस्तियों से मान्यता प्राप्त हों और उससे सम्बद्ध या सम्बन्धित हों।

7. उस सीमा तक उ0प्र0 पावर कारपोरेशन लिमिटेड की शेयर पूंजी जिस सीमा तक वे ऊपर खण्ड एक, दो और तीन में निर्दिष्ट आस्तियों और दायित्वों के अनुरूप होगी।

8. उस सीमा तक अन्य दायित्व जिस सीमा तक वे ऊपर खण्ड एक, दो और तीन में निर्दिष्ट वितरण क्रिया-कलापों या उपक्रमों या आस्तियों से सम्बद्ध या सम्बन्धित हों।

9. उस सीमा तक कार्यवाहियां जिस सीमा तक वे ऊपर खण्ड एक, दो और तीन में निर्दिष्ट वितरण क्रिया-कलापों या उपक्रमों या आस्तियों से सम्बद्ध या सम्बन्धित हों।

पांचः ऊपर यथा उल्लिखित अन्तरण के प्रतिफल स्वरूप उ0प्र0पा0का0लि0 को 1000 रूपये प्रत्येक के अंकित मूल्य के 95,53,885 शेयर लखनऊ डिस्काम द्वारा जारी किये जाएंगे।

अनुसूची 'ख'-भाग-दो

लखनऊ डिस्काम में निहित की जाने वाली कुल आस्तियां व दायित्व

तुलन पत्र 11 अगस्त, 2003	धनराशि (रूपये मे)
स्थिर आस्तियां	
सकल स्थिर आस्तियां	15,82,22,87,767
घटाइए : संचित अवक्षयण (ह्रास)	6,97,08,88,385
शुद्ध स्थिर आस्तियां	8,85,13,99,382
प्रगतिशील पूंजीगत कार्य	63,93,70,524
कुल स्थिर आस्तियां	9,49,07,69,906
चालू आस्तियां	
नकद और बैंक अवशेष	62,10,30,135
कुल भण्डार	1,65,50,80,228
घटायें-अप्रचलित भण्डार हेतु प्रावधान	41,21,52,020
शुद्ध भण्डार	1,24,29,28,208
विद्युत विक्रय से सकल प्राप्य	11,22,10,32,907
डूबत और शंकास्पद ऋण के लिये प्रावधान	6,00,49,33,618
विद्युत विक्रय से शुद्ध प्राप्य	5,21,60,99,289
अन्य चालू आस्तियां	10,70,55,644
ऋण एवं अग्रिम	2,12,48,653
अन्तर इकाई अन्तरण	1,11,59,39,427
कुल चालू आस्तियां	8,32,43,01,356
कुल आस्तियां	17,81,50,71,262
शुद्ध मूल्य	
प्रदत्त और अभिदत्त अंश पूंजी	9,55,38,85,000
सेवा संयोजन प्रभार हेतु उपभोक्ता अंशदान	72,28,10,756
पूंजीगत आस्तियों की लागत हेतु सहायिकी	53,96,34,572
कुल शुद्ध मूल्य	10,81,63,30,328
दीर्घ कालिक ऋण	
एन0सी0आर0पी0बी0	29,81,94,000
नोयडा	1,29,18,750
यू0पी0एस0आई0डी0सी0	1,18,31,653
एच0डी0एफ0सी0	47,30,667
ग्रेटर नोयडा	6,08,01,000
आई0डी0बी0आई0	14,40,00,000

आर0ई0सी0	2,56,58,00,000
पी0एफ0सी0	45,39,00,000
उपभोक्ताओं द्वारा वित्तीय भागीदारी	-
उपभोक्ताओं द्वारा वित्तीय भागीदारी पर उपार्जित एवं देय ब्याज	-
कुल दीर्घकालिक ऋण	3,55,21,76,070
चालू दायित्व व प्रावधान	3,44,65,64,864
कुल दायित्व	17,81,50,71,262

अनुसूची-'ग' - भाग- एक
(जोन- III वितरण उपक्रमों)

एकः वितरण आस्तियां

विभिन्न आकार के कन्डक्टरों और स्टेप-अप और स्टेप-डाउन ट्रांसफार्मरों, ब्रेकरों, संरक्षण और मीटरमापी युक्तियों के साथ विभिन्न प्रकार के अवलम्बों पर शीर्षस्थ लाइनें, एरियल बंच्ड और भूमिगत केबिलों पर 33 के0वी0, 11 के0वी0, एल0टी0 (एकल फेज के 2 वायर से 3 फेज के 5 वायर) की समस्त लाइनें एवं 33 के0वी0 से ऊपर की लाइनें जो पारेषण ग्रिड उप-संस्थान से सीधे उपभोक्ता को जा रही हैं, और नियन्त्रण कक्ष, परीक्षण प्रयोगशालायें, भूमि (मार्ग के अधिकार सहित), भवनों, सड़कें, डीजल उत्पादक सेट्स या अन्य परम्परागत और अपारम्परिक उत्पादन इकाईयां, उपभोक्ता परिसरों के भीतर सेवा संयोजन और प्रतिष्ठापन, उ0प्र0पा0का0लि0 के स्वामित्वाधीन या उसे पट्टे पर दी गयी मार्ग प्रकाश और सिग्नल प्रणालियां, किन्तु इसके अन्तर्गत निजी व्यक्तियों या स्थानीय प्राधिकारियों के स्वामित्वाधीन फिटिंग्स, फिक्स्चर्स और प्रतिष्ठापन नहीं हैं।

दोः सामान्य आस्तियां/दायित्व

विशेष उपकरणों और उपस्कर सामग्री, प्रयुक्त उपस्कर, मिट्टी हटाने का यन्त्र, बुलडोजर्स, कंक्रीट मिक्स्चर्स, क्रेन्स, ट्रेलर्स, भारी और हल्के वाहनों, फर्नीचर, फिक्स्चर्स, कार्यालय उपस्कर, वातानुकूलक, रेफ्रीजिरेटर्स, कम्प्यूटर्स और सिग्नल प्रणाली, फालतू पुर्जे, उपभोज्य सामग्री, कच्चे माल, भूमि और सिविल संकर्म, प्रतिष्ठान जिसके अन्तर्गत सड़कों, भवनों, विद्यालयों, चिकित्सालयों, परीक्षण प्रयोगशालायें और उपस्कर, प्रशिक्षण केन्द्रों, कार्यशालाओं, चालू संकर्मो, मरम्मत के लिए भेजी गयी मशीनरी और उपस्कर, रद्दी माल और पुरानी सामग्री भी सम्मिलित है।

तीनः अन्य आस्तियां

अन्य आस्तियां और जंगम सम्पत्तियां, संयंत्र और मशीनरी, मोटरकार, जीपें, ट्रकें, क्रेन्स, ट्रेलर्स और अन्य वाहनों, फर्नीचर, फिक्सर, वातानुकूलक, कम्प्यूटर्स आदि कों सम्मिलित करते हुये जिस सीमा तक वे ऊपर खण्ड-एक और दो के अधीन निर्दिष्ट आस्तियों द्वारा उससे प्रयुक्त और प्रचालित या सहयुक्त हैं, भी वितरण उपक्रमों के भाग होंगे।

चारः विविध

1. उस सीमा तक संविदायें, करारों, हित और व्यवस्थायें जिस सीमा तक वे ऊपर खण्ड एक, दो और तीन में निर्दिष्ट वितरण क्रिया-कलापों या उपक्रमों या आस्तियों से सम्बद्ध या सम्बन्धित हों।

2. उस सीमा तक प्रतिभूत और अप्रतिभूत ऋण जिस सीमा तक वे ऊपर खण्ड एक, दो और तीन में निर्दिष्ट वितरण क्रिया-कलापों या उपक्रमों या आस्तियों से सम्बद्ध या सम्बन्धित हों।

3. उस सीमा तक नकद और बैंक अवशेष जिस सीमा तक वे ऊपर खण्ड एक, दो और तीन में निर्दिष्ट वितरण क्रिया-कलापों या उपक्रमों या आस्तियों से सम्बद्ध या सम्बन्धित हों।

4. उस सीमा तक अन्य चालू आस्तियां जिस सीमा तक वे ऊपर खण्ड एक, दो और तीन में निर्दिष्ट वितरण क्रिया-कलापों या उपक्रमों या आस्तियों से सम्बद्ध या सम्बन्धित हों।

5. उस सीमा तक अन्य चालू दायित्व और उपबन्ध जिस सीमा तक वे ऊपर खण्ड एक, दो और तीन में निर्दिष्ट वितरण क्रिया-कलापों या उपक्रमों या आस्तियों से सम्बद्ध या सम्बन्धित हों।

6. उस सीमा तक आकस्मिक दायित्व जिस सीमा तक वे ऊपर खण्ड एक, दो और तीन में निर्दिष्ट वितरण क्रिया-कलापों या उपक्रमों या आस्तियों से मान्यता प्राप्त हों और उससे सम्बद्ध या सम्बन्धित हों।

7. उस सीमा तक उ0प्र0 पावर कारपोरेशन लिमिटेड की शेयर पूंजी जिस सीमा तक वे ऊपर खण्ड एक, दो और तीन में निर्दिष्ट आस्तियों और दायित्वों के अनुरूप होगी।

8. उस सीमा तक अन्य दायित्व जिस सीमा तक वे ऊपर खण्ड एक, दो और तीन में निर्दिष्ट वितरण क्रिया-कलापों या उपक्रमों या आस्तियों से सम्बद्ध या सम्बन्धित हों।

9. उस सीमा तक कार्यवाहियां जिस सीमा तक वे ऊपर खण्ड एक, दो और तीन में निर्दिष्ट वितरण क्रिया-कलापों या उपक्रमों या आस्तियों से सम्बद्ध या सम्बन्धित हों।

पांचः ऊपर यथा उल्लिखित अन्तरण के प्रतिफल स्वरूप उ0प्र0पा0का0लि0 को 1000 रूपये प्रत्येक के अंकित मूल्य के 1,40,11,018 शेयर मेरठ डिस्काम द्वारा जारी किये जाएंगे।

अनुसूची 'ग'-भाग-दो

मेरठ डिस्काम में निहित की जाने वाली कुल आस्तियां व दायित्व

तुलन पत्र 11 अगस्त, 2003	धनराशि (रूपये में)
स्थिर आस्तियां	
सकल स्थिर आस्तियां	22,54,27,98,954
घटाइए : संचित अवक्षयण (ह्रास)	9,93,94,90,193
शुद्ध स्थिर आस्तियां	12,60,33,08,761
प्रगतिशील पूंजीगत कार्य	27,67,22,383
कुल स्थिर आस्तियां	12,88,00,31,144
चालू आस्तियां	
नकद और बैंक अवशेष	77,65,60,521
कुल भण्डार	1,96,12,33,771
घटायें-अप्रचलित भण्डार हेतु प्रावधान	48,93,68,629
शुद्ध भण्डार	1,47,18,65,142
विद्युत विक्रय से सकल प्राप्य	16,93,04,33,179
डूबत और शंकास्पद ऋण के लिये प्रावधान	9,06,03,18,084
विद्युत विक्रय से शुद्ध प्राप्य	7,87,01,15,095
अन्य चालू आस्तियां	20,34,73,848
ऋण एवं अग्रिम	2,11,32,391
अन्तर इकाई अन्तरण	(18,11,58,882)
कुल चालू आस्तियां	10,16,19,88,115
कुल आस्तियां	23,04,20,19,259
शुद्ध मूल्य	
प्रदत्त और अभिदत्त अंश पूंजी	14,01,10,18,000
सेवा संयोजन प्रभार हेतु उपभोक्ता अंशदान	1,09,57,45,966
पूंजीगत आस्तियों की लागत हेतु सहायिकी	76,88,44,168
कुल शुद्ध मूल्य	15,87,56,08,134
दीर्घ कालिक ऋण	
एन0सी0आर0पी0बी0	9,93,98,000
नोयडा	43,06,250
यू0पी0एस0आई0डी0सी0	1,19,07,134
एच0डी0एफ0सी0	15,76,889
ग्रेटर नोयडा	2,02,67,000
आई0डी0बी0आई0	14,96,00,000

आर0ई0सी0	2,56,58,00,000
पी0एफ0सी0	48,90,00,000
उपभोक्ताओं द्वारा वित्तीय भागीदारी	37,60,035
उपभोक्ताओं द्वारा वित्तीय भागीदारी पर उपार्जित एवं देय ब्याज	6,796
कुल दीर्घकालिक ऋण	3,34,56,22,104
चालू दायित्व व प्रावधान	3,82,07,89,021
कुल दायित्व	23,04,20,19,259

अनुसूची-'घ' - भाग- एक
(जोन- IV वितरण उपक्रमों)

एकः वितरण आस्तियां

विभिन्न आकार के कन्डक्टरों और स्टेप-अप और स्टेप-डाउन ट्रांसफार्मरों, ब्रेकरों, संरक्षण और मीटरमापी युक्तियों के साथ विभिन्न प्रकार के अवलम्बों पर शीर्षस्थ लाइनें, एरियल बंच्ड और भूमिगत केबिलों पर 33 के0वी0, 11 के0वी0, एल0टी0 (एकल फेज के 2 वायर से 3 फेज के 5 वायर) की समस्त लाइनें एवं 33 के0वी0 से ऊपर की लाइनें जो पारेषण ग्रिड उप-संस्थान से सीधे उपभोक्ता को जा रही हैं, और नियन्त्रण कक्ष, परीक्षण प्रयोगशालायें, भूमि (मार्ग के अधिकार सहित), भवनों, सड़कें, डीजल उत्पादक सेट्स या अन्य परम्परागत और अपारम्परिक उत्पादन इकाईयां, उपभोक्ता परिसरों के भीतर सेवा संयोजन और प्रतिष्ठापन, उ0प्र0पा0का0लि0 के स्वामित्वाधीन या उसे पट्टे पर दी गयी मार्ग प्रकाश और सिग्नल प्रणालियां, किन्तु इसके अन्तर्गत निजी व्यक्तियों या स्थानीय प्राधिकारियों के स्वामित्वाधीन फिटिंग्स, फिक्स्चर्स और प्रतिष्ठापन नहीं हैं।

दोः सामान्य आस्तियां/दायित्व

विशेष उपकरणों और उपस्कर सामग्री, प्रयुक्त उपस्कर, मिट्टी हटाने का यन्त्र, बुलडोजर्स, कंक्रीट मिक्स्चर्स, क्रेन्स, ट्रेलर्स, भारी और हल्के वाहनों, फर्नीचर, फिक्स्चर्स, कार्यालय उपस्कर, वातानुकूलक, रेफ्रीजिरेटर्स, कम्प्यूटर्स और सिग्नल प्रणाली, फालतू पुर्जे, उपभोज्य सामग्री, कच्चे माल, भूमि और सिविल संकर्म, प्रतिष्ठान जिसके अन्तर्गत सड़कों, भवनों, विद्यालयों, चिकित्सालयों, परीक्षण प्रयोगशालायें और उपस्कर, प्रशिक्षण केन्द्रों, कार्यशालाओं, चालू संकर्मो, मरम्मत के लिए भेजी गयी मशीनरी और उपस्कर, रद्दी माल और पुरानी सामग्री भी सम्मिलित है।

तीनः अन्य आस्तियां

अन्य आस्तियां और जंगम सम्पत्तियां, संयंत्र और मशीनरी, मोटरकार, जीपें, ट्रकें, क्रेन्स, ट्रेलर्स और अन्य वाहनों, फर्नीचर, फिक्सर, वातानुकूलक, कम्प्यूटर्स आदि को सम्मिलित करते हुये जिस सीमा तक वे ऊपर खण्ड-एक और दो के अधीन निर्दिष्ट आस्तियों द्वारा उससे प्रयुक्त और प्रचालित या सहयुक्त हैं, भी वितरण उपक्रमों के भाग होंगे।

चारः विविध

1. उस सीमा तक संविदायें, करारों, हित और व्यवस्थायें जिस सीमा तक वे ऊपर खण्ड एक, दो और तीन में निर्दिष्ट वितरण क्रिया-कलापों या उपक्रमों या आस्तियों से सम्बद्ध या सम्बन्धित हों।

2. उस सीमा तक प्रतिभूत और अप्रतिभूत ऋण जिस सीमा तक वे ऊपर खण्ड एक, दो और तीन में निर्दिष्ट वितरण क्रिया-कलापों या उपक्रमों या आस्तियों से सम्बद्ध या सम्बन्धित हों।

3. उस सीमा तक नकद और बैंक अवशेष जिस सीमा तक वे ऊपर खण्ड एक, दो और तीन में निर्दिष्ट वितरण क्रिया-कलापों या उपक्रमों या आस्तियों से सम्बद्ध या सम्बन्धित हों।

4. उस सीमा तक अन्य चालू आस्तियां जिस सीमा तक वे ऊपर खण्ड एक, दो और तीन में निर्दिष्ट वितरण क्रिया-कलापों या उपक्रमों या आस्तियों से सम्बद्ध या सम्बन्धित हों।

5. उस सीमा तक अन्य चालू दायित्व और उपबन्ध जिस सीमा तक वे ऊपर खण्ड एक, दो और तीन में निर्दिष्ट वितरण क्रिया-कलापों या उपक्रमों या आस्तियों से सम्बद्ध या सम्बन्धित हों।

6. उस सीमा तक आकस्मिक दायित्व जिस सीमा तक वे ऊपर खण्ड एक, दो और तीन में निर्दिष्ट वितरण क्रिया-कलापों या उपक्रमों या आस्तियों से मान्यता प्राप्त हों और उससे सम्बद्ध या सम्बन्धित हों।

7. उस सीमा तक उ0प्र0 पावर कारपोरेशन लिमिटेड की शेयर पूंजी जिस सीमा तक वे ऊपर खण्ड एक, दो और तीन में निर्दिष्ट आस्तियों और दायित्वों के अनुरूप होगी।

8. उस सीमा तक अन्य दायित्व जिस सीमा तक वे ऊपर खण्ड एक, दो और तीन में निर्दिष्ट वितरण क्रिया-कलापों या उपक्रमों या आस्तियों से सम्बद्ध या सम्बन्धित हों।

9. उस सीमा तक कार्यवाहियां जिस सीमा तक वे ऊपर खण्ड एक, दो और तीन में निर्दिष्ट वितरण क्रिया-कलापों या उपक्रमों या आस्तियों से सम्बद्ध या सम्बन्धित हों।

पांचः ऊपर यथा उल्लिखित अन्तरण के प्रतिफल स्वरूप उ0प्र0पा0का0लि0 को 1000 रूपये प्रत्येक के अंकित मूल्य के 1,45,70,206 शेयर वाराणसी डिस्काम द्वारा जारी किये जाएंगे।