

BEFORE
THE
RAJASTHAN ELECTRICITY REGULATORY COMMISSION,
JAIPUR

PETITION
FOR
REVIEW FOR FY 2017-18
AND
APPROVAL OF
AGGREGATE REVENUE REQUIREMENT

AND
TARIFF PETITION
FOR
FY 2018-19
(FIFTH YEAR OF MYT CONTROL PERIOD FROM
FY 2014-15 TO FY 2018-19)

Filed By
JAIPUR VIDYUT VITRAN NIGAM LIMITED, JAIPUR
(A Government of Rajasthan Undertaking)

NOVEMBER 2017

Notes:

In this Application:

(n-1) Year is defined as Financial Year 2016-17 (referred to as FY 17)

(n) Year is defined as Financial Year 2017-18 (referred to as FY 18)

(n+1) Year is defined as Financial Year 2018-19 (referred to as FY 19)

All currency figures used in this Application, unless specifically stated otherwise, are in Rs.Cr.

All energy unit figures used in this Application, unless specifically stated otherwise, are in Million Units.

For the purpose of representation, figures given in the tables are shown as rounded off. However, for calculation purpose, actual figures have been considered.

List of Abbreviations

Application	The application for approval of ARR for FY 2018-19
JaipurDiscom, JVVNL	Jaipur Vidyut Vitran Nigam Ltd.
ARR	Aggregate Revenue Requirement
MYT	Multi Year Tariff
BST	Bulk Supply Tariff
CC&SL	Cosumers' Contribution for Service Connections and Lines
CPP	Captive Power Producers
DS	Domestic Service
EHT	Extra High Tension
EA 2003	Electricity Act, 2003
FRP	Financial Restructuring Plan
FY	Financial Year
FY 17	Financial Year 2016-2017
FY 18	Financial Year 2017-2018
FY 19	Financial Year 2018-2019
GFA	Gross Fixed Assets
GoI	Government of India
GoR	Government of Rajasthan
GSS	Grid Sub Station
HT	High Tension
kVA	Kilo Volt Ampere
kW	Kilo Watt
kWh	Kilo Watt Hour or Unit
LT	Low Tension
MDI	Maximum Demand Indicator
MIP	Medium Industrial Power
MU	Million Units
NDS	Non-Domestic Service
NFA	Net Fixed Assets
NPCIL	Nuclear Power Corporation India Limited
NHPC	NHPC Limited
NRLDC	Northern Region Load Despatch Centre
NTPC	National Thermal Power Corporation
PGCIL	PowerGrid Corporation India Limited
Proj.	Projected
PWW	Public Water Works
RERC, Commission	Rajasthan Electricity Regulatory Commission
RVPN	RajasthanRajyaVidyutPrasaranNigamLimited
RVUN	RajasthanVidyutUtpadanNigamLimited
REC	Rural Electrification Corporation
Rs.	Indian Rupees
RSEB/Board	Rajasthan State Electricity Board
SIP	Small Industrial Power

ARR FOR FY 2018-19

SMD	Simultaneous Maximum Demand
SLDC	State LoadDespatch Centre
STU	State Transmission Utility
UI	UnscheduledInterchange
The Petitioner/utility	Jaipur Vidyut Vitran Nigam Ltd.

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A1: PROJECTIONS FOR FY 2018-19

- 1.1 Section 61 of the Electricity Act, 2003 empowers the State Regulatory Commissions (RERC in this case) to specify the terms and conditions for the determination of tariff and specifies that in doing so, the Commission shall inter alia be guided by multi-year tariff principles (Section 61 (f)). As per the provisions of the Act, while prescribing regulations for the Petitioners in the state, the State Commission would also be guided by the regulations prescribed by Central Electricity Regulatory Commission (CERC).
- 1.2 The Rajasthan Electricity Regulatory Commission (RERC) notified the Rajasthan Electricity Regulatory Commission (Terms and Conditions for Determination of Tariff) Regulation, 2014 for the third control period from FY 2014-15 to FY 2018-19 on March 27, 2014. The third Multi Year Control Period from FY 2014-15 to FY 2018-19 began from 1st April 2014 after end of the second control period.
- 1.3 The RERC notified the Tariff Order for the third and fourth year FY 2016-17 and FY 2017-18 of the control period FY 2015-16 to FY 2018-19 on 2nd November 2017.
- 1.4 Regulation 11(1) of the RERC Tariff Regulations 2014 specify that the Petitioner shall submit the forecast of Aggregate Revenue Requirement, expected revenue from existing tariff and proposed tariff for the ensuing year of the Control Period, accompanied by fees applicable.
- 1.5 The Petitioner has strived to conform to the norms and provisions of the RERC Tariff Regulations 2014 as far as possible for projecting the revised estimates of ARR for FY 2017-18 and projections of ARR for FY 2018-19. The Petitioner has utilised audited annual accounts for FY 2016-17 (n-1 year) and the latest available commercial information on sales, power procurement and the provisional accounts as basis to prepare the revised estimates of ARR for FY 2017-18 and expected ARR for FY 2018-19 i.e. the fifth year of control period FY 2014-15 to FY 2018-19, which has been summarised in subsequent sections of this application.

A2: ENERGY SALES AND REQUIREMENT FOR FY 2018-19

- 2.1 For projections of sales for the fifth year of the control period i.e. FY 2018-19, the Petitioner has utilised past growth in consumers, connected load and energy sales to forecast the category-wise energy sales in accordance with Clause 75 of the RERC Tariff Regulations 2014. The revised estimates for FY 2017-18 are based on the actual trend of category-wise energy sales during the first six months of the current year (FY 2017-18).
- 2.2 The methodology used is also in accordance with the methodology approved by the Hon'ble Commission in the past tariff orders. Other factors affecting the energy sales for various customer class has also been considered while projecting the sales.
- 2.3 The Petitioner has computed category wise actual growth in sales witnessed during the first six months of FY 2017-18 over the sales of first six months of FY 2016-17. The growth rates so obtained have been then applied on the actual category wise sales of last six months of FY 2016-17 to project revised sales for FY 2017-18.
- 2.4 The Petitioner has also computed category wise sales CAGR for 3 years, 5 years, 7 years and so on based on the historical data. The category wise CAGR has then been applied on the revised projected sales for FY 2017-18 to estimate the sales for FY 2018-19.
- 2.5 The Petitioner would further like to submit that this growth trend of increase in sales has been considered as it signifies the best possible projections as per the experience of the Petitioner and latest available data. Also, wherever the trend has seemed unreasonable or unsustainable, the growth factors have been appropriately modified to arrive at more realistic projections.
- 2.6 However, the following events being beyond the control of the Petitioner, sales forecast may need to be reviewed in the future. In such cases, the revenue requirement may also be adjusted accordingly as any such variation is reasonably beyond the control of the Petitioner.
- (a) The impact of any variance (positive or negative) in the industrial sales forecasted due to shifting of consumers into open access or decline in consumption due to economic recession;
 - (b) Change in hours of supply to rural areas and agricultural consumers from the levels taken in the forecast by the Petitioner for any year in the Control Period, resulting in increased actual input to rural areas;
 - (c) Increase in agriculture connections as per the commitment of the State Government as per Budget announcements; &
 - (d) Migration of eligible Open Access consumers from the Petitioner and vice-versa.

- 2.7 The variance in energy sales would change power procurement cost and aggregate revenue requirement and affect the profitability of the Discoms. Hence, Petitioner requests to present its case for the revised energy sales at the time of annual review of performance / true up with suitable measures to adjust such aggregate variance.

Previous years energy sales

- 2.8 The following table summarises the actual energy sold during previous years (including revised projections for FY 2017-18) to different consumer categories:

Table 1: Past trend in energy sales (MU)

Category of Consumers	FY 10	FY 11	FY 12	FY 13	FY 14	FY 15	FY 16	FY 17
Domestic	2,658	3,032	3,142	3,491	3,761	4,068	4,418	4,803
Non-Domestic	898	996	1,188	1,550	1,573	1,805	1,966	2,130
Public Street Light	79	92	110	129	143	168	175	188
Agriculture (Metered)	2,777	3,288	4,148	5,135	4,258	4,715	5,238	5,664
Agriculture (Flat)	1,153	1,011	783	724	581	530	517	468
Small Industry	248	279	267	277	274	335	301	315
Medium Industry	548	619	637	664	722	770	735	727
Large Industry	3,095	3,520	3,835	3,721	3,482	4,294	3,415	3,938
Public Water Works (S)	207	222	218	199	195	218	229	241
Public Water Works (M)	26	26	26	27	32	37	41	41
Public Water Works (L)	114	107	143	189	200	218	259	304
Mixed Load / Bulk Supply	333	430	366	171	161	191	172	209
Electric Traction	350	330	370	404	404	146	385	216
Total	12,486	13,951	15,234	16,682	15,784	17,494	17,852	19,244

- 2.9 All the consumer categories have shown growth in energy sales during this period except flat rate agriculture and electric traction categories. The decreasing trend in flat rate agriculture category is primarily due to the consumers shifting to agriculture metered category.
- 2.10 The growth of energy sales in the metered consumer categories can be attributed to the following:
- The policy decision by the Petitioner to release all pending application for connections in domestic category and to improve the availability of energy in the rural areas;
 - The agriculture (metered) sales have increased due to additional release of connections and substantial increase in consumption of existing consumers due to lowering of the water table which has also resulted in use of motors and pumps of higher load;

- (c) The industries have also shown an increase in consumption of energy during this period due to general industrial growth experienced by the country as a whole during the period.
- 2.11 From the above, it is observed that sales to consumer categories have been dependent on various extraneous variables like increase in consumers, increase in supply hours and industrial revival due to policy initiatives. Therefore, the projection for sales of FY 2017-18 and FY 2018-19 have been estimated by taking into account the recent trend in energy sales and also the variables which are going to affect the energy sales in future.

Energy Sales Projections for categories other than agriculture consumers

Projections of sales for FY 2018-19

- 2.12 The energy sales for FY 2018-19 are projected on the basis of historical sales data using the category wise CAGR as per the methodology approved by the Hon'ble Commission in the previous year tariff orders. For all consumer categories except the agriculture category, past trends have been used while estimating sales. Wherever the trend has seemed unreasonable, the forecast has been appropriately adjusted after taking into consideration the latest available data.
- 2.13 The energy sales for FY 2017-18 in this petition have been revised from the earlier projections made as part of the Petitioner's ARR petition for FY 2017-18 based on the trends observed in the first six months of FY 2017-18.
- 2.14 In the previous years an increasing trend in the energy sales for Domestic category of consumers has been observed. The increase in sales is largely attributable to increase in consumers in rural areas consequent to intensification efforts under RGGVY scheme (subsumed under DDUGJY) and increase in specific consumption of the existing consumers due to increasing supply hours and improving living standards. The Petitioner expects the same trend in growth of sales to continue in the future.
- 2.15 Besides the above, the Government of India and Government of Rajasthan have taken a joint initiative to provide 24 x 7 power in the State to all its consumers (except agriculture consumers). This initiative aims at ensuring uninterrupted supply of quality power to existing consumers and providing access to electricity to all unconnected consumers in the next five years. As per this initiative, six lakh domestic consumers in the state of Rajasthan are envisaged to be added during FY 2018-19.
- 2.16 It is important to mention that the electrification of un-electrified households in the state will lead to change in consumer mix and further increase the percentage of subsidised consumers. Consumer mix is an important determinant of the financial health of a utility and with the increase in subsidised category consumers, it becomes important that the tariff for these categories should move towards being closer to the average cost of supply and reduce the cross subsidy gap.

- 2.17 For Non-Domestic category, the last five years have shown an increasing trend in the energy sales. There has been rapid growth in sales in this category in last few years which is attributable to rapid urbanisation and increase in commercial activities in the recent past. The Petitioner expects the same trend in growth to continue in the future.
- 2.18 For Industrial consumers, the Petitioner submits that there has been a growth in sales in small, medium and large industrial categories in the past.
- 2.19 Owing to the increase in purchase of power by industrial consumers via Open Access, reduction in growth of industrial sales was witnessed during the previous years. However the trend seems to have reversed in the first six months of FY 2017-18. The Petitioner has estimated sales for such consumers with due consideration to the changing scenario.
- 2.20 The energy sales figures for the Public Water Works (PWW) categories have been estimated on the basis of past trends. In the past, public water works category has shown substantial growth, however as all connections have now been metered and there are no new connections pending. However shifting of connections of Public Water Works (M) to Public Water Works (L) has also been observed. Therefore, while projecting sales for this category, the trend has been appropriately adjusted.
- 2.21 In case of Mixed Load/ Bulk Supply category a decreasing trend has been observed in the previous years which can be attributed to the shift in certain consumer groups such as mobile tower consumers and private institutions to non-domestic consumer category and others. However, after migration of such consumers, the sales has demonstrated marginally increasing trends. The Petitioner expects this trend to continue.
- 2.22 Railways has been given the status of distribution licensee and has started procuring power for its requirement from sources other than the Petitioner. As such no sales has been projected under the category of Electric Traction.
- 2.23 The projected energy sales for FY 2017-18 & FY 2018-19 (Other than agriculture) have been summarised in the table below:

Table 2: Projected sales for FY 2017-18 & FY 2018-19 (Other than agriculture)

Category of Consumers	FY 2017-18	FY 2018-19
Domestic	5,153	5,791
Non-Domestic	2,278	2,479
Public Street Light	195	208
Small Industry	315	325
Medium Industry	745	772
Large Industry	4,820	5,253
Public Water Works (S)	255	264
Public Water Works (M)	41	42
Public Water Works (L)	397	444
Mixed Load / Bulk Supply	230	244

Category of Consumers	FY 2017-18	FY 2018-19
Electric Traction	0	0
Total	14,428	15,185

Energy Sales Projections for agriculture consumers

Agriculture metered category

2.24 The energy sales for agriculture metered category have been estimated on the basis of the following factors:

- (a) Existing Consumers at the start of the Financial Year
- (b) Addition in the consumers during the Financial Year
- (c) Consumers converted from 'Agriculture Flat' to 'Agriculture Metered' category
- (d) Connected load per consumer
- (e) Estimated specific energy consumption

$$\text{Agriculture Consumption} = \text{No. of consumers} \times \text{Connected load per consumer} \times \text{Specific Consumption}$$

2.25 The connected load per consumer has been forecasted on the basis of the trend observed in previous years and the growth anticipated in connected load per consumer due to the ever decreasing water table. Moreover, the Petitioner has been constantly promoting voluntary load disclosure scheme, due to which the connected load per consumer is expected to further increase. Therefore, for estimating the connected load per consumer for FY 2018-19, the Petitioner has considered a nominal increase.

2.26 The connected load per consumer for FY 2017-18 in this petition have been revised from the earlier projections made as part of the Petitioner's ARR petition for FY 2017-18 based on the trends observed in the first six months of FY 2017-18.

2.27 The connected load per consumer estimated for FY 2017-18 and FY 2018-19 has been provided in the following table.

Table 3: Projected Connected Load (kW) per consumer for agriculture metered

Year	Connected Load / Consumer
FY 2017-18	7.63
FY 2018-19	7.86

- 2.28 Over the past years, specific consumption of agriculture metered consumers has also shown an increase. CAGR of increase in specific consumption has been computed for last 3 years, 5 years and 7 years. CAGR of last 3 years has then been applied on the specific consumption for FY 2017-18.
- 2.29 The specific consumption for FY 2017-18 in this petition has been revised from the earlier projections made as part of the Petitioner's ARR petition for FY 2017-18 based on the trends observed in the first six months of FY 2017-18.

Table 4: Projected specific consumption (kWh/kW/year) for agriculture metered

Year	Specific Consumption
FY 2017-18	1892.78
FY 2018-19	1921.12

- 2.30 The following table summarises the number of consumers considered for the projections of energy sales for agriculture metered category for the FY 2017-18 & FY 2018-19:

Table 5: Projected no. of consumers in Agriculture Metered Category

Year	Opening Consumers	Addition during the year	Flat to metered category conversion	Closing consumers
FY 2017-18	439,825	2,000	5,500	447,325
FY 2018-19	447,325	15,000	10,000	472,325

- 2.31 It is important to note that conversion of consumers from flat to metered category is an ongoing process and is considered to take place over the entire year. Thus to consider this impact, sales for 6 months have been considered for such converted consumers while computing sales of consumers under 'Agriculture Metered' category.
- 2.32 In view of above, under 'Agriculture Metered' category, the projected energy sales for FY 2018-19 is summarised in the following table:

Table 6: Projections of Sales (MU) for Agriculture Metered Consumption

Particulars	FY 18	FY 19
Energy Sales (MU)	6,467	7,152

Agriculture flat (un-metered) category:

- 2.33 The energy sales for agriculture flat rate category have been estimate on the basis of the following factors:
- Existing Consumers at the start of the Financial Year
 - Consumers converted from 'Agriculture Flat' to 'Agriculture Metered' category

- (c) Connected load per consumer
- (d) Approved specific energy consumption

Agriculture Consumption = No. of consumers x Connected load per consumer x Specific Consumption

- 2.34 The connected load per consumer has been forecasted on the basis of the trend observed in previous years and the growth anticipated in connected load per consumer due to the decreasing water table. For agriculture flat rate (un-metered) category, the Petitioner has considered a nominal escalation for estimating the connected load per consumer for FY 2018-19 and the same has been provided in the following table.
- 2.35 The connected load per consumer for FY 2017-18 in this petition has been revised from the earlier projections made as part of the Petitioner's ARR petition for FY 2017-18 based on the trends observed in the first six months of FY 2017-18.

Table 7: Projected Connected Load per consumer for agriculture flat-rate (kW)

Year	Connected Load / Consumer
FY 2017-18	8.33
FY 2018-19	8.58

- 2.36 The Petitioner submits that the Hon'ble Commission in its previous Tariff Orders has approved the specific energy consumption of 1945 kWh/kW/year for flat rate agriculture consumers. Thus the Petitioner has also adopted the same specific consumption of 1945 kWh/kW/year as approved by the Hon'ble Commission.
- 2.37 The following table summarises the addition of consumers and specific consumption considered for the projections of energy sales for agriculture un-metered category for FY 2017-18 and FY 2018-19:

Table 8: Projected no. of consumers in Agriculture Flat Rate Category

Year	Opening Consumers	Flat to metered category conversion	Closing consumers
FY 2017-18	26,142	5,500	20,642
FY 2018-19	20,642	10,000	10,642

- 2.38 It is important to note that conversion of consumers from flat to metered category is considered to take place over the entire year and thus to consider this impact, sales for 6 months have been considered for such consumers while computing sales of consumers under 'Agriculture Flat Rate' category.
- 2.39 In view of above, under 'Agriculture Flat Rate' category, the projected energy sales for FY 2017-18 and FY 2018-19 is summarised in the following table:

Table 9: Projections of Agriculture Flat Rate Consumption

Particulars	FY 17	FY 18
Energy Sales (MU)	332	175

Summary of energy sales estimates for FY 2018-19

- 2.40 Based on the methodology provided in the aforementioned sections, the revised energy sales for FY 2017-18&projected energy sales for FY2018-19 for various consumer categories is summarised in the table below.
- 2.41 It is pertinent to mention that the sales have been projected for the entire area under JVVNL including areas for which distribution franchisee has been awarded or is under consideration to be awarded.

Table 10: Total sales for FY 2017-18& 2018-19 (MU)

Category of Consumers	FY 2017-18	FY 2018-19
Domestic	5,153	5,791
Non-Domestic	2,278	2,479
Public Street Light	195	208
Agriculture (Metered)	6,467	7,152
Agriculture (Flat)	332	175
Small Industry	315	325
Medium Industry	745	772
Large Industry	4,820	5,253
Public Water Works (S)	255	264
Public Water Works (M)	41	42
Public Water Works (L)	397	444
Mixed Load / Bulk Supply	230	244
Electric Traction	0	0
Total	21,227	23,149

Distribution Lossfor FY 2018-19

- 2.42 The actual distribution loss levels of the Petitioner at the end of FY 2016-17 stood at 25.48%.
- 2.43 The Petitioner recognises the importance of bringing down the distribution losses in order to ensure that the state power sector remains viable. The Petitioner has already undertaken several steps and numerous measures are envisaged to be undertaken to bring down the existing loss levels.
- 2.44 ThePetitioner intends to pursue the loss reduction programs initiated in previous years and also increasingly use technology to target erring consumers and reduce the losses during the projection period. The investments being made under schemes like R-APDRP, FIP, SIP etc. are also expected to aid in the reduction of distribution loss.

- 2.45 It is pertinent to mention that the Petitioner has been able to reduce losses by more than 5% from the previous year. This is a result of the various measures undertaken in the previous years. The Discom is committed towards further reducing the losses and achieving the targets envisaged under the tripartite MoU signed under UDAY scheme.
- 2.46 These steps include restricting power supply in areas with high AT&C losses, implementing a performance monitoring and management system, 100% feeder metering, AMR metering for high value consumers, energy audit & accounting at feeder level, feeder segregation, supply to single consumer from single DT for agriculture consumers, etc. Loss reduction targets have been prepared at the division/circle/zonal level and concerned officials have been made responsible for achieving the loss reduction targets. At the same time, efforts are also being made to reduce theft and other illegal activities by undertaking name and shame campaign and aggressive vigilance drives. Further, the capital investment plans are also on-going to achieve the distribution loss trajectory set forth by the Commission. Considering IT as a major enabler to improve the efficiency of the Discom, number of IT initiatives have also been planned which will further assist the Discom in achieving its envisaged targets. A brief description of the planned IT initiatives is provided in Section A7.
- 2.47 The Petitioner is committed towards reduction of losses and therefore time bound targets have been set for each of the above listed activities. These initiatives have also been recognized at the highest levels and form part of the landmark tripartite MoU signed under the UDAY scheme between the Discoms, the Central Ministry and the Rajasthan government.
- 2.48 In order to achieve operational efficiency and bring around improvements, other steps like loss based load management, performance monitoring and management system, AMR metering for high value consumers, energy audit & accounting at feeder level, feeder segregation, etc. have already been initiated.
- 2.49 Loss reduction targets have been prepared at the division/circle/zonal level and concerned officials have been made responsible for achieving the loss reduction targets. At the same time, efforts are also being made to reduce theft and other illegal activities by undertaking name and shame campaign and aggressive vigilance drives. Further, the capital investment plans are also on-going to achieve the distribution loss trajectory set forth by the Commission.
- 2.50 The Discom is committed towards reduction of losses and therefore time bound targets have been set for each of the above listed activities. These initiatives have also been recognized at the highest levels and form part of the landmark tripartite MoU signed under the UDAY scheme between the Discoms, the Central Ministry and the Rajasthan government.

2.51 It is important to note that the UDAY MoU was signed at nearly the end of FY 2015-16 and as such there has been slippage in meeting the expected targets of FY 2015-16 and FY 2016-17. The UDAY MoU also took cognizance of the expected difficulties in achieving the yearly targets and such provided the flexibility to the Discoms to achieve the loss reduction target in subsequent years so as to achieve the envisaged loss levels of 15% by the end of FY 2018-19. The appropriate clause of the UDAY MoU is reproduced hereunder:

“However, if the target in a particular year is not met, then the Discom shall strive to achieve the targets in the subsequent years so as to achieve the desired target of 15% AT&C losses by FY 2018-19.”

2.52 Considering the results achieved in previous years and the progress made in FY 2017-18 towards reduction of AT&C losses, the task force of the Discoms has revised the targets for FY 2017-18 to a more realistic level while keeping the targets for FY 2018-19 at the committed level of 15%.

2.53 The Petitioner prays to the Hon’ble Commission to adopt the targets as summarized in the table below in consideration of the focus and all round efforts being made to reduce the AT&C losses, the provisions under the UDAY MoU and the present available details.

Table 11: Distribution loss reduction plan (%)

Particulars	FY 2017-18	FY 2018-19
Distribution loss (%)	20.00%	15.00%

Energy requirement for FY 2018-19

2.54 Based on the revised sales projection for FY 2017-18 and sales projection for FY 2018-19 provided in the previous sections and the approved distribution loss trajectory, the Petitioner has estimated the energy requirement at Distribution periphery.

Table 12: Distribution Losses and Energy Requirement at Discom Periphery

Description	FY 18	FY19
Total Energy Sales to Consumers (MU)	21,227	23,149
Distribution Loss %	20%	15%
Total Energy Required to Discom (MU) at Discom Periphery	26,534	27,235

A3: POWER PURCHASE QUANTUM AND COST FOR FY 2018-19

Energy Availability & Energy Balance

Energy Availability

- 3.1 For computing the FY 2018-19, the existing availability based on power purchase for FY 2016-17 and first six months of FY 2017-18 has been considered.
- 3.2 The energy availability for FY 2018-19 is projected on the basis of estimated generation from existing stations and projected generation from new stations. For existing stations, the Petitioner submits that the power purchase quantum has been considered as per the actual energy received in previous years. The Petitioner has analysed the existing power scenario and the power purchase has been accordingly projected considering the energy requirement and the merit order principles. While projecting energy availability from different sources for FY 2018-19, energy offtake has been consciously reduced from stations with variable cost of more than anticipated selling price in exchange. The power purchase for FY 2018-19 from stations which were commissioned or are likely to be commissioned in FY 2017-18 and will be available for part of the year has been computed based on capacity, PLF and Auxiliary consumption.
- 3.3 The power purchase from new stations has been considered as per the percentage share allocated to / contracted by the Rajasthan State. The assumption for PLF and Auxiliary Consumption for new stations has been considered as per historical trends and operating norms approved by the appropriate Commission. The power purchase from such new stations for the year has been computed after duly considering the anticipated commercial operation date of these stations.
- 3.4 The Petitioner has been making sincere efforts to fulfil its Renewable Purchase Obligation and have continuously increased the purchase from renewable sources. It is now close to achieving the targets set by the Hon'ble Commission.
- 3.5 It is worthwhile to mention that Rajasthan is one of the states with the highest installed capacity of solar and wind generation in India. Wind energy forms almost 20% of the firm capacity available to the state. Despite of such enormous installed capacity, the distribution companies of Rajasthan have faced difficulties in meeting the required RPO over the past years.

- 3.6 Considering the challenges faced in fulfilling the Renewable Purchase Obligation due to infirm nature of such power, lack of sufficient hydel sources which can be operated in integration with renewable sources to absorb the variations in generation from such renewable sources, inverse relation between generation from renewable sources and demand in the state of Rajasthan, financial burden on the Discoms, etc. the Petitioner has already written to the Hon'ble Commission and also to the MNRE to revise the RPO targets. It is also important to note that the state already has sufficient tied up capacity. Many such stations are likely to be commissioned in near future. This will lead to increasing stranded capacity. The situation will only be worsened if more capacity is to be tied up in order to meet the increasing RPO obligations.
- 3.7 However, it is submitted that for FY 2018-19, the purchase from renewable energy sources has been projected as per the Hon'ble Commission's proposed RPO trajectory.
- 3.8 In line with the above, the Petitioner has computed the revised source wise quantum of power purchase for FY 2017-18 and projected source wise purchase for FY 2018-19 and humbly requests the Hon'ble Commission to approve the same.
- 3.9 For FY 2017-18, the Petitioner has considered the intra-state transmission losses of 3.89% as approved by the Hon'ble Commission. The inter-state transmission losses have been considered as 3.15% as approved by the Hon'ble Commission in its order dated 2nd November 2017. The Petitioner has considered the same level of inter and intra state transmission losses for FY 2018-19.
- 3.10 The total energy availability from all sources for FY 2017-18 and FY 2018-19 has been summarised in the following table:

Table 13: Energy availability for FY 2017-18 and FY 2018-19 (MU)

Particulars	FY 2017-18	FY 2018-19
Gross energy available from outside state sources (A)	9175	11296
Inter-state transmission losses (%)	3.15%	3.15%
Inter-state transmission losses (MU)	289	356
Net energy available from outside state	8886	10940
Add: energy generated within the state (B)	20536	20060
Net energy available for use in State	29422	31000
Intra-state transmission losses (%)	3.89%	3.89%
Intra-state transmission losses (MU)	1145	1206
Energy available for sale to distribution licensee	28277	29794
Total Energy Purchased (A+B)	29711	31356

Table 14: Source wise energy FY 2017-18 and FY 2018-19 (MU)

Particulars	FY 2017-18	FY 2018-19
Source-wise Energy Purchased		
NTPC	2,367	3,361

Particulars	FY 2017-18	FY 2018-19
NHPC	662	662
RVUN	10,675	5,786
Rajwest	2,331	2,596
NPCIL	1,116	1,116
Shared Projects	1,288	1,288
IPP/UMPP/NVVN Bundled	6,179	6,980
NCES (including CPP)	3582	4,364
New Stations	1,066	4,759
Others	445	445
Total	29,711	31,357

Energy Balance for FY 2018-19

3.11 Based on the projected energy sales, distribution loss reduction plan, power purchase based on the drawl ratio and the consequent inter-state sales, the energy balance of JVVNL for FY 2017-18 and for FY 2018-19 has been summarised in following table.

Table 15: Energy Balance for FY 2017-18 and FY 2018-19

Particulars	FY 2017-18	FY 2018-19
Estimated Sales	21,227	23,149
Distribution Loss (%)	20.00%	15.00%
Distribution Loss (MU)	5,307	4,085
Energy Required at Discom Periphery	26,534	27,235
Intra-State Transmission Loss (%)	3.89%	3.89%
Intra-State Transmission Loss (MU)	1,074	1,102
Energy Required at State Periphery	27,608	28,337
Energy available from state sources	20,536	20,060
Energy to be procured from outside state	7,071	8,276
Inter-State Transmission Loss (%)	3%	3%
Inter-State Transmission Loss (MU)	230	269
Net Energy Requirement	27,838	28,606
Total Energy Purchased	29,711	31,356
Surplus / (Deficit)	1,873	2,750

Power purchase cost for FY 2018-19

Fixed and Variable Charges

3.12 The Petitioner has revised the purchase cost for FY 2017-18 & projected the cost for FY 2018-19 from the various sources based on the following assumptions:

- (a) For projecting the fixed and variable charges of RVUN stations, the Petitioner has considered the per-unit cost approved by the Hon'ble Commission in its order dated 2nd November 2017.
- (b) For all other stations, an escalation of 2% in variable cost per unit has been used for computing the variable charges for FY 2017-18. This escalation is also in line with the actual costs incurred during the first six months of FY 2017-18. However, no escalation has been considered for FY 2018-19. Fixed cost for existing stations has been considered equivalent to the fixed cost paid in FY 2016-17.
- (c) The fixed charges and variable charges for the plants which are going to be commissioned in FY 2017-18 and FY 2018-19 have been assumed on the basis of similar type of plants.
- (d) Other charges (including cess, electricity duty, etc.) for FY 2017-18 and FY 2018-19 have not been considered while determining the power purchase cost. It is requested that the actual power purchase cost for FY 2017-18 and FY 2018-19 may be considered at the time of true-up.

Transmission & SLDC Charges

3.13 For FY 2017-18, the transmission charges have been computed by applying 10% escalation over actual transmission charges of FY 2016-17. However, no further escalation has been assumed while projecting transmission charges for FY 2018-19.

3.14 It is requested that the actual power purchase cost for FY 2017-18 and FY 2018-19 may be considered at the time of true-up.

3.15 Transmission and SLDC charges considered by the Petitioner for FY 2017-18 and FY 2018-19 is provided in the table below:

Table 16 : Transmission & SLDC Charges (Rs Cr)

Transmission Charges	FY 2017-18	FY 2018-19
PGCIL	687.19	687.19
RVPN	897.84	897.84
SLDC	7.51	7.51

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NRLDC	1.12	1.12
Total Transmission & SLDC	1,593.67	1,593.67

Total Power Purchase Cost

3.16 The revised estimates of cost for FY 2017-18 & projected power purchase cost for FY 2018-19 from various sources has been summarised in following table:

Table 17 : Power Purchase Cost for FY 2017-18 & FY 2018-19 (Rs. Cr.)

Station	FY 2017-18	FY 2018-19
NTPC	726.51	895.9
NHPC	243.73	243.73
RVUN	4,276.38	2,792.90
Rajwest	944.66	1,001.10
NPCIL	337.74	337.74
Shared Projects	90.85	90.85
IPP/UMPP/NVVN Bundled	2,195.58	2,329.93
NCES (including CPP)	1829.93	2217.35
New Stations	375.57	2,050.82
Others	161	161
Total	11,181.95	12,121.32
Transmission Cost	1,593.67	1,593.67
Total Power Purchase Cost including Transmission Cost	12,775.62	13,714.99

3.17 The break-up of the power purchase cost from different sources has been shown in Form 3.1.

A4: CAPITAL INVESTMENTS, CWIP AND CAPITALISATION

- 4.1 The Petitioner has revised its capital investments for FY 2017-18 based on revised investment plan for FY 2017-18. The Petitioner has also proposed investments for FY 2018-19 in accordance with the Petition for Investment Plan for FY 2018-19 as submitted to the Commission.
- 4.2 The following table provides the summary of projected capital expenditure plan, the CWIP and capitalisation during the year for FY 2017-18 and FY 2018-19:

Table 18: Capital Investments, CWIP & Capitalisation for FY 18 and FY 19 (Rs Cr)

Description	FY 2017-18	FY 2018-19
Opening CWIP	710.86	474.30
Add: Capital investment during the year	1660.64	1673.08
Sub-total	2371.50	2147.38
Less: Assets capitalised during the year (Assets transferred to GFA)	1897.20	1717.90
Closing CWIP	474.30	429.48

A5: AGGREGATE REVENUE REQUIREMENT FOR FY 2018-19**Operation and Maintenance Expenses**

- 5.1 The Operation and Maintenance (O&M) expenses comprise of Employee expenses, Repair and Maintenance (R&M) expenses and Administration and General (A&G) expenses.
- 5.2 The norms for each component of O&M expenses for the distribution business are based on per unit of energy sold and are specified under Regulation 83 of the RERC Tariff Regulations 2014.
- 5.3 The Normative O&M expenses allowed at the commencement of the Control Period (i.e. FY 2014-15) under the aforesaid Tariff Regulations are to be escalated at the rate of 5.85% per annum for each year of the Control Period.
- 5.4 The O&M expenses are determined by multiplying the norms specified in Regulation 83 of the RERC Tariff Regulations 2014 and the projected energy sales for the year. The per unit norms for each component for fourth and fifth year of the control period i.e. FY2017-18 and FY 2018-19 are as follows:

Table 19: Per unit norms for O&M Expenses (Rs/kWh)

Description	FY 2017-18	FY 2018-19
Employee expenses	0.45	0.48
A&G expenses	0.05	0.05
R&M Expenses	0.09	0.10

- 5.5 The O&M expenses based on normative projections for FY 2017-18& FY 2018-19 as per the methodology described above have been summarised in the following table:

Table 20: Operation and Maintenance Expenses

Particulars	FY 2017-18	FY 2018-19
Employee Expenses		
Per unit norm (escalated @ 5.85% p.a. for FY 18, FY 19)	0.45	0.48
Projected energy sales (MU)	21,227	23,149
Gross employee expenses (Rs Cr)	956.64	1104.30
<i>Less: Capitalization (Rs Cr)</i>	<i>311.70</i>	<i>359.81</i>
Net employee expenses (Rs Cr)	644.94	744.49
A&G Expenses		
Per unit norm (escalated @ 5.85% p.a. for FY 16)	0.05	0.05
Projected energy sales (MU)	21,227	23,149
Gross A&G expenses (Rs Cr)	100.70	116.24
<i>Less: Capitalization (Rs Cr)</i>	<i>14.79</i>	<i>17.07</i>
Net A&G expenses (Rs Cr)	85.91	99.17
R&M Expenses		

Particulars	FY 2017-18	FY 2018-19
Per unit norm (escalated @ 5.85% p.a for FY 16.)	0.09	0.10
Projected energy sales (MU)	21,227	23,149
R&M expenses (Rs Cr)	201.40	232.48
Gross O&M Expenses (Rs Cr)	1258.73	1453.03
<i>Less: Expenses Capitalized (Rs Cr)</i>	<i>326.49</i>	<i>376.88</i>
Net O&M Expenses (Rs Cr)	932.25	1076.14

Insurance Expenses

- 5.6 Insurance expenses for FY 2017-18& FY 2018-19 have been estimated on the basis of net fixed assets subject to the ceiling specified in Regulation 25 of the RERC Tariff Regulations 2014.

Table 21: Insurance expenses (Rs Cr)

Particulars	FY 2017-18	FY 2018-19
Average Net Fixed assets (Rs Cr)	12410.24	13304.80
Insurance Expenses @ 0.2% of NFA (Rs Cr)	24.82	26.61

Terminal benefits

- 5.7 For determination of terminal benefits liability, the Petitioner has adopted the guidelines specified under AS-15 (Employee benefit). The guidance of implementing AS-15 states that the benefit involving employer established provident funds, which require interest shortfall to be provided, are to be considered as defined benefit plans. In accordance with the provisions of the AS-15 the company has provided for the shortfall in the terminal benefits in respect to pension and gratuity each year.
- 5.8 The Petitioner has estimated the contributions that will be made towards terminal benefits in the year FY 2017-18 and FY 2018-19. It is prayed to the Commission to allow the expenses as shown in the following table:

Table 22: Terminal Benefits (Rs Cr)

Particulars	FY 2017-18	FY 2018-19
Terminal Benefits	550.00	550.00

Interest on long term loans, security deposits & other finance charges

- 5.9 The interest on long term loan has been considered normatively. The opening normative loan for FY 2017-18 has been considered equivalent to closing balance of long term loans for FY 2016-17 as per audited accounts for the year.
- 5.10 Based on the revised estimates for investment plan of FY 2017-18, the total capitalisation has been estimated. The total capitalisation during the year has been reduced by the amount of capitalisation done through consumer contribution projected to be received during the year. It is pertinent to mention that the addition in consumer contribution results in addition to both CWIP and GFA. As such proportionate consumer contribution has been used while computing capitalisation through consumer contribution. 30% of the remaining capitalisation has been considered to be funded through equity and the balance amount has been considered as addition to long term loans during the year. The loan repayment has been considered in accordance with Regulation 21 of the RERC Tariff Regulations 2014 which caps deemed repayments to the depreciation charged for the year. The closing normative loan is considered after deducting normative repayment for FY 2017-18.
- 5.11 Revised closing balance of normative loan for FY 2017-18 has been considered as the opening loan balance for FY 2018-19 and then similar approach as specified above has been adopted to compute additions to normative loan.
- 5.12 The interest on long term loans is estimated on the basis of actual weighted average interest rate for long term loans of the Petitioner and applied on the average of normative loans (average of opening and closing normative loan). During FY 2016-17, as per the audited accounts, the weighted average interest rate on long term loans is estimated at 9.77% and this rate is applied on average balance of normative loans during the FY 2017-18& FY 2018-19 to estimate interest charges on long term loans for FY 2017-18 and FY 2018-19.
- 5.13 The security deposit for FY 2017-18 and FY 2018-19 has been considered on the basis of average of actual security deposit per consumer in the previous two years as per the audited accounts of FY 2016-17 and audited accounts of FY 2015-16 and the projected growth in number of consumers. The interest rate has been considered equivalent to RBI Bank Rate as on 1st April 2017 i.e. 6.75% which is in accordance with the RERC Supply Code.
- 5.14 The finance charges or other borrowing cost for FY 2017-18& FY 2018-19 have been estimated to increase by 5% per annum from audited accounts for FY 2016-17.
- 5.15 The estimated interest charges on long term loans, security and finance charges, for FY 2017-18 and FY 2018-19 are summarised in the table below:

Table 23: Interest on long term loans, security deposits and finance charges (Rs Cr)

Particulars	FY 2017-18	FY 2018-19
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Particulars	FY 2017-18	FY 2018-19
Opening Balance of Normative Loan	2,664.24	3,009.93
Deemed Addition during the year	1,189.19	1,049.67
Deemed Repayments	843.50	932.53
Closing Balance of Deemed Loan	3,009.93	3,127.07
Average balance during the Year	2,837.08	3,068.50
<i>Interest Rate (%)</i>	9.77%	9.77%
Interest Payment on Normative Loans	277.25	299.87
Interest on Security Deposit	67.69	73.61
Finance charges & other borrowing costs	87.86	92.25
Gross Interest and finance charges	432.79	465.73

Interest on unfunded revenue gap for past years

- 5.16 In the True-Up Order for FY 2015-16, the Hon'ble Commission had approved an unfunded gap of Rs 17,678.52Cr. up to FY 2015-16 for JVVNL.
- 5.17 However while approving the ARR for FY 2016-17 and FY 2017-18 in its order dated 2nd November 2017, the commission reduced the unfunded gap while taking into account the takeover of loans under UDAY. The Hon'ble Commission as such approved an unfunded gap of Rs. 13,185 Crup to FY 2015-16 and allowed carrying cost on the same.
- 5.18 As per the annual audited accounts of FY 2016-17, the Petitioner had revenue deficit of Rs. 615.76 Cr in the year FY 2016-17. Accordingly the Petitioner has increased the unfunded gap approved by the Hon'ble Commission up to FY 2015-16 by the revenue deficit of the year FY 2016-17.
- 5.19 In order to calculate the interest on unfunded revenue gap, the Petitioner has considered the weighted average rate of interest as per the audited accounts for FY 2016-17 available with the Petitioner.
- 5.20 The interest liability determined on the unfunded gap is detailed in the following table:

Table 24: Interest liability on unfunded revenue gap of past years (Rs Cr)

Description	FY 2017-18	FY 2018-19
Unfunded Gap	13800.76	13800.76
<i>Average rate of interest</i>	9.77%	9.77%
Interest liability	1348.68	1348.68

5.21 The total interest liability on the Petitioner for FY 2017-18 and FY 2018-19 is summarized in the following table:

Table 25: Total interest and finance expenses (Rs Cr)

Description	FY 2017-18	FY 2018-19
	Revised	Projected
Interest payment on normative debt	277.25	299.87
Interest on Security Deposit	67.69	73.61
Finance Charges & Lease Rental	87.86	92.25
Interest liability on unfunded gap	1348.68	1348.68
Gross Interest Charges	1,781.47	1,814.41
Less: Interest Expenses Capitalized	98.08	98.82
Net Interest & Finance charges	1,683.39	1,715.59

Interest on Working Capital

5.22 The Petitioner has revised its estimated working capital requirement for FY 2017-18 and estimated the requirement for FY 2018-19 as per the Regulation 27 (3) of the RERC Tariff Regulations 2014. The working capital requirement has been computed considering the following parameters:

- Operation and Maintenance expenses for one month;
- Maintenance spares @15% of O&M expenses as per Regulation 83 of the RERC Tariff Regulations 2014;
- Receivables equivalent to one and a half-months billing of consumers;
- The security deposits of distribution system users (Open Access consumers) and retail supply consumers except the security deposits held as bank guarantees have been deducted from the above to arrive at the total working capital requirement for the year

5.23 The rate of interest on working capital has been considered on the basis of latest applicable base rate of State Bank of India of FY 2016-17 plus 250 basis points which works out to 11.80%. The following table summarises the interest on working capital for the FY 2017-18 and FY 2018-19 as per the normative figures for FY 2017-18 & FY 2018-19:

Table 26: Interest on Working Capital (Rs Cr)

S.No	Description	FY 2017-18	FY 2018-19
1	O&M expenses	77.69	90.76
2	Maintenance	139.84	163.37
3	Receivables	2,036.87	2,185.20
	<i>Less:</i>		

S.No	Description	FY 2017-18	FY 2018-19
4	Security deposit of Consumers & distribution system users	1,002.75	1,090.52
5	Total Working Capital	1,251.64	1,345.78
6	<i>Interest Rate (%)</i>	11.80%	11.80%
7	Interest on Working Capital	147.69	158.80

Depreciation

- 5.24 The depreciation for FY 2017-18 and FY 2018-19 has been calculated as per Straight Line Method (SLM) at rates specified in Annexure-1 of the RERC Tariff Regulations 2014 in accordance with Regulation 22 of the said Regulations.
- 5.25 The depreciation has been determined by applying applicable depreciation rates on the average balance of opening and closing Gross Fixed Assets.

Table 27: Depreciation for FY 2017-18 and FY 2018-19 (Rs Cr)

Description	FY 2017-18	FY 2018-19
Depreciation	843.50	932.53

Return on Equity

- 5.26 The RERC Tariff Regulations 2014 allows for return on equity @ 16%. However, as the Petitioner has deficit in FY 2017-18 and marginally in surplus in FY 2018-19, the Petitioner has not proposed any return on equity for FY 2017-18 and FY 2018-19.

Non-Tariff Income and Other Income

- 5.27 While projecting non-tariff income for FY 2017-18 and FY 2018-19, an escalation of 5% each year has been considered on the previous year's non-tariff income.
- 5.28 The income from wheeling charges and reactive energy charge for FY 2017-18 have been revised by extrapolating the six month commercial data of FY 2017-18. The same has been considered as income for FY 2018-19.
- 5.29 Similarly, the income from cross subsidy surcharge and additional surcharge for FY 2017-18 has been extrapolated based on six month commercial data of FY 2017-18 and rates approved by the Hon'ble Commission. The same has been considered as income for FY 2018-19.

Interest on funding of principal amount of DPS

- 5.30 It is submitted that the Delayed Payment Surcharge (DPS) is levied on the outstanding receivables of the consumers and considered in the books of accounts on accrual basis. The Commission in the past has considered DPS as part of NTI as provided in the books of accounts. However, it doesn't reflect the actual DPS being realized by the Petitioner, thus the amount of DPS being booked in the annual accounts keeps on inflating. This consideration of DPS from books of accounts adversely affects the revenue gap of the Petitioner.
- 5.31 It is further submitted that if the accrued DPS is considered to form part of NTI, it is important that the financing cost for corresponding receivables must also be considered. It is pertinent to mention here that the Petitioner has already incurred power purchase and other costs on such receivables. However, the Petitioner is allowed only 2 months receivable in allowance of working capital and for period beyond that period DPS is applicable. Thus the financing cost of such receivables must be allowed, especially in the event of considering that DPS as to be the additional income of the Petitioner.
- 5.32 It is pertinent to mention that consideration of financing cost of DPS is in line with the judgement of the Hon'ble Appellate Tribunal for Electricity (APTEL) dated 12.07.2011 in case no. 142 & 142 of 2009. The Hon'ble APTEL has held in case of NDPL vs DERC, dated 20.07.2010, as reproduced below:
- “The normative working capital compensates the distribution company in delay for the 2 months credit period which is given to the consumers. The late payment surcharge is only if the delay is more than the normative credit period. For the period of delay beyond normative period, the distribution company has to be compensated with the cost of such additional financing. It is not the case of the Appellant that the late payment surcharge should not be treated as a non-tariff income. The Appellant is only praying that the financing cost is involved due to late payment and as such the Appellant is entitled to the compensation to incur such additional financing cost. Therefore, the financing cost of outstanding dues, i.e. the entire principal amount, should be allowed and it should not be limited to late payment surcharge amount alone.”*
- 5.33 In line with the above judgement, other state commissions have consistently considered the carrying cost of receivables against which DPS is booked in NTI. For example, the State Electricity Regulatory Commission of Bihar in its latest tariff order dated 24th March 2017 like in its previous orders has also considered such carrying cost of receivables against which DPS is booked in the NTI and has considered the financing cost of DPS as per the interest rate allowed for interest on working capital.
- 5.34 The Petitioner submits that the financing cost of DPS as per the interest rate considered for computation of interest on working capital for FY 2017-18 and FY 2018-19 is as summarised in the table below:

Table 28: Interest on funding of principal amount of DPS (Rs. Cr.)

Interest on funding of Principal DPS	FY 2017-18	FY 2018-19
DPS	244.04	256.24
Principal Amount on which DPS is charged (@2% per month)	1016.82	1067.66
Interest rate for funding principal of DPS	11.80%	11.80%
Interest on funding of Principal DPS	119.98	125.98

- 5.35 The following table summarises the estimated non-tariff income and income from wheeling, cross subsidy and additional surcharge charges for FY 2017-18 and FY 2018-19.

Table 29: Non-Tariff Income & income from wheeling charges (Rs Cr)

S.No.	Particulars	FY 2017-18	FY 2018-19
1	Non- Tariff Income and other income	526.13	552.43
2	<i>Less: Interest on Funding of principle amount of DPS</i>	<i>119.98</i>	<i>125.98</i>
3	Net Non-Tariff Income	406.14	426.45
4	Income from wheeling charges and reactive charges	9.19	9.19
5	Income from Cross Subsidy Surcharge	161.57	161.57
6	Income from Additional Surcharge	95.85	95.85
	Total	672.74	693.05

Aggregate Revenue Requirement for FY 2018-19

- 5.36 Based on the aforementioned element wise details, the revised ARR for FY 2017-18 and projected ARR for FY 2018-19 is summarised in the following table:

Table 30: Aggregate Revenue Requirement (Rs Cr)

S.No.	Particulars	FY 2017-18 Revised	FY 2018-19 Projected
1	Power Purchase Expenses	11,181.95	12,121.32
2	Operation & Maintenance Expenses	1,507.07	1,652.75
2.1	<i>Employee Expenses (net)</i>	<i>644.94</i>	<i>744.49</i>
2.2	<i>Administration & General Expenses (net)</i>	<i>85.91</i>	<i>99.17</i>
2.3	<i>Repair & Maintenance Expenses</i>	<i>201.40</i>	<i>232.48</i>
2.4	<i>Terminal Benefits</i>	<i>550.00</i>	<i>550.00</i>
2.5	<i>Insurance expenses @ 0.2% of NFA</i>	<i>24.82</i>	<i>26.61</i>
3	Depreciation, including advance against depreciation	843.50	932.53
4	Interest on Loan Capital (Includes security deposit & interest on unfunded revenue gap till FY13)	1,683.39	1,715.59
5	Interest on Working Capital (normative)	147.54	158.80
6	Prior period expenses & other expenses	-	-

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S.No.	Particulars	FY 2017-18 Revised	FY 2018-19 Projected
7	Transmission Charges paid PGCIL	687.19	687.19
8	NRLDC Fee	1.12	1.12
9	Transmission Charges paid to RVPN	897.84	897.84
10	SLDC Fee	7.51	7.51
11	Total Revenue Expenditure	16,957.12	18,174.67
12	Return on Equity Capital	-	-
13	Aggregate Revenue Requirement	16,957.12	18,174.67
14	Less: Non-Tariff Income	406.14	426.45
15	Less: Income from wheeling charges, Cross Subsidy and Additional Surcharge	266.60	266.60
16	Aggregate Revenue Requirement from Retail Tariff	16,284.38	17,481.62

A6: REVENUE FROM EXISTING TARIFF

- 6.1 For FY 2017-18 and FY 2018-19, revenue has been estimated based on energy sales forecasts for the period explained in earlier sections and the applicable retail tariff as per the RERC's Tariff Orders.
- 6.2 The following table summarises the category-wise expected revenue for FY 2017-18 and FY 2018-19:

Table 31: Revenue from sale of power at existing Tariff (Rs Cr)

Category of Consumers	FY 2016-17	FY 2017-18
	(Rs. Cr.)	(Rs. Cr.)
Domestic Service	3,503.82	3,940.24
Non-Domestic Service	2,213.29	2,415.03
Public Street Light	130.54	139.25
Agriculture Metered Supply	3,196.52	3,533.69
Agriculture Flat Rate Supply	178.97	94.44
Small Industrial Service	240.92	248.26
Medium Industrial Service	618.70	641.61
Large Industrial Service	4,237.40	4,604.39
P.W.W. & S. Pumping –Small	173.69	180.21
P.W.W. & S. Pumping –Medium	31.21	31.95
P.W.W. & S. Pumping –Large	311.44	348.45
Mixed Load / Bulk Supply	179.08	190.05
Electric Traction		
Total	15,015.59	16,367.56

Income from Trading Activity

- 6.3 The Petitioner submits that sale and purchase of power is a dynamic process. The market clearing prices in exchange are dependent on the bids submitted by buyers and other sellers and the power available in the entire market. It is important to note that the Petitioner has no control over the mentioned factors. With the increasing surplus energy across the nation, the market prices are further expected to reduce. It is important to note that the rates discovered in the exchange for selling of surplus power are lower than the variable cost payable to generators by the Petitioner.
- 6.4 However, in light of the surplus energy which is expected to be available with the Petitioner during FY 2017-18 and FY 2018-19 owing to the upcoming stations, reduction in losses, etc., the available surplus energy has been proposed to be sold through short term market @ Rs. 2.50 per unit.

- 6.5 Due to allocation of power in certain ratio to respective Discom, the purchase of power from stations cannot be further reduced as it leads to surplus in one Discom and deficit in the other. The significant difference in quantum of surplus power available with the three Discoms is also due to this allocation ratio. With the changing drawal and sales mix between the three Discoms and reducing difference between AT&C loss levels, the Discoms are considering changing the allocation ratio which has also been suggested by the Hon'ble Commission in its order dated 2nd November 2017.
- 6.6 The following table summarises the impact of short term purchase/ sale of power and the same has been considered as revenue from trading activity in subsequent sections.

Table 32: Surplus/ Deficit account for FY 2016-17 & FY 2017-18 (Rs Cr)

Particulars	Units	FY 2017-18	FY 2018-19
Energy surplus/ (deficit)	MU	1,873	2,750
Short term rate *	Rs kWh	2.50	2.50
Power Purchase Cost/ Revenue from Trading	Rs. Cr	468.26	687.53

Subsidy from State Government

- 6.7 The State Government used to provide transitional period support to the Petitioner including reimbursement of past losses, subventions against electricity duty and cash support to meet operational losses. However, as per the UDAY scheme, no further cash support will be provided by the State Government except subvention against ED. Subvention against ED has been estimated based on the sales projected for the year and the category wise per unit ED subvention receivable. The following table summarises the subsidy expected to be received in FY 2017-18 and FY 2018-19.

Table 33: Subsidy support from State Government (Rs Cr)

Description	FY 2017-18	FY 2018-19
Subvention from State Govt. against ED	604.29	662.19
Subsidy against compounding charges	13.80	13.80
Total Subsidy Amount	618.09	675.99

Revenue Deficit at existing tariff

- 6.8 The revised revenue deficit for FY 2017-18 and projected deficit for FY 2018-19 at the existing tariff has been summarised in the following table.

Table 34: Revenue deficit at existing tariff (Rs Cr)

Particulars	FY 2017-18	FY 2018-19
Aggregate revenue requirements [A]	16,284.38	17,481.62
Revenue at existing tariffs [B]	15,015.59	16,367.56
Revenue from trading activity [C]	468.26	687.53
Revenue surplus / (deficit) before subsidy	(800.52)	426.53

Particulars	FY 2017-18	FY 2018-19
[D = A- B-C]		
Subsidy support from State Government [E]	618.10	675.99
Revenue deficit /(surplus) after subsidy [F =D- E]	(182.41)	249.46
Add: Revenue deficit for previous year [G]		(182.41)
Carrying cost on revenue deficit as per SBI Base rate during first half of FY [H]		(5.64)
Revenue deficit / (surplus) after adjusting for previous year gap [I = F + G + H]	(182.41)	61.41

- 6.9 For computation of carrying cost on revenue gap for FY 2017-18, interest rate equivalent to average interest rate on long term loans has been considered.
- 6.10 As can be seen from table above, the Petitioner would be in revenue deficit in FY 2017-18 and marginally surplus in FY 2018-19 at the existing tariffs.

A7: TREATMENT OF REVENUE DEFICIT

- 7.1 As detailed in above sections, the revenue deficit of the Petitioner at existing tariffs for the year FY 2017-18 is estimated to be Rs. 182.41 Cr. However for FY 2018-19 a surplus of Rs. 249.46 Cr. As such it is estimated that the cumulative revenue gap for FY 2017-18 and FY 2018-19 will be Rs 182.41 Cr and Rs 61.41 Cr. respectively (including carrying cost on revenue gap for FY 2017-18 and FY 2018-19).
- 7.2 The Petitioner would like to mention that necessary steps are being undertaken to reduce the cumulative revenue gap and to ensure improvement in the overall efficiency. As such, the Petitioner submits that no tariff hike is being proposed for FY 2018-19.

IT Initiatives

- 7.3 It is pertinent to mention that achieving the envisaged targets of 15% distribution loss and achieving a financial turnaround will require the Petitioner to undertake a number of initiatives and redefine business processes with a fresh approach.
- 7.4 The Hon'ble Commission in its various orders over the years has also suggested and directed the Petitioner to make a number of changes including switch to monthly billing, implementation of ERP, development of consumer centric mobile apps, better material management and inventory control, etc. The Hon'ble Commission has also time and again directed to improve and monitor system reliability and ensure safety of consumers as well as employees.
- 7.5 It is envisaged that the use of Information Technology Systems in the core business operations will enhance the overall quality of data, enable effective and real time monitoring thereby improving the flow of information for decision support and would help lay the foundation for achieving sustainable operational and financial reforms. It would also ensure implementation of standard practices and controls at the operations level and bring about sustainable improvements in the overall health of the utilities. The overall vision for the Discom in using IT is to improve the service towards the end consumers. With the use of IT, it would be possible to reduce the time gap between occurrence and action leading to processing and resolution of customer requests/queries/complaints in the minimum possible time.
- 7.6 Needless to say, cost will be involved in implementing the planned solutions. However it is envisaged that due to the benefit accrued out of these systems in terms of improved billing, collection, material management, etc. will ensure that the net impact on costs is not there. As such the same has not been considered as part of the Aggregate Revenue Requirement for the FY 2018-19. In case of any minimalistic impact on costs, the same will be submitted to the Hon'ble Commission at the time of true-up.

Revenue and Information Management System

7.7 The Petitioner has planned for a new system for Revenue management and Customer Information System on SaaS (System as a Service) basis. The planned system is consumer centric and is envisaged to provide information for Revenue and Management purposes.

7.8 The proposed solution will have the following benefits:

- **Automated meter reading:** The meter reader will not have to note the meter reading thereby improving the accuracy and reducing any possibility of human error. Removing the manual intervention in meter reading process will also lead to reduction in cases of meter readers colluding with consumers.
- **Timely bill delivery:** The bills would be printed and delivered to the consumer at the time of meter reading itself which will reduce the time span of the entire process (collection of meter reading to bill delivery) from 15 days to 0 days.
- **Geo tagging:** The geo position of consumers as well as electrical network assets will be tagged which will enable consumer indexing and also help identify consumer location for re-connection/dis-connection, etc. It will also ease the task of locating faults as well as consumers for attending to complaints or providing any other service.
- **Real time availability of data on mobile/system:** Availability of data on mobile/system will help achieve the objective of anytime anywhere availability of data thereby improving control, efficiency, etc.
- **Customer portal to provide host of services:** To provide new avenues to interact with consumers the proposed solution will have host of services on web portal as well as mobile apps which will enable the consumer to view their billing history, request for new connection/reconnection/dis-connection, request for meter check, report issues, etc.
- **Query/Report builder tool:** With humungous amount of data being generated, query/report builder will enable the various levels of management to extract relevant information and even run what-if scenarios.

Feeder Monitoring System

7.9 To improve customer satisfaction, it is essential to monitor current status of feeders and DTs to improve reliability. Having real time monitoring techniques to improve monitoring and to reduce the time taken to act will also go a long way in ensuring customer satisfaction. To enable effective data acquisition from 11 kV feeders, feeder monitoring system has been implemented. This will provide meter data for all 11 kV feeders.

7.10 One of the primary features of this system is that it will give feeder wise losses. Moreover it will also provide breakup of agriculture and domestic losses in case of rural feeders which will go a long way in planning loss reduction measures.

- 7.11 The system will provide multiple parameters for easy monitoring including Meter data at 15 min interval, Break down status, Total supply hours, Substation/feeder interruption status, Constituency wise information for 11 kV feeders, Drilldown dashboards for real time status of the feeders with details of the energy flow statistics
- 7.12 With acquisition of such details on real time basis, the monitoring of feeders would become much easier leading to reduction in time gaps between faults and rectification. The system will also be integrated with the revenue management system to provide feeder wise input energy data and generate energy audit reports

Mobile Apps

- 7.13 To improve control at transactional level and ensure anytime anywhere availability of data, Revenue management system and other IT systems will be made available with integrated mobile apps. For the time being, four separate mobile apps have been planned to cater to different set of users.
- **BijliMitra:** The app is targeted to be consumer facing and will enable the consumers to request for host of services from their fingertips. This will include viewing and downloading their bill details, consumption history, previous payment details, etc. The consumers will have an option to pay their bills through the app itself. The consumers will also be able to lodge complaints and track the status of such complaints. It will also be possible to apply for meter checking, re-connection and dis-connection.
 - **BijliPrabandh:** This app will provide real time information to the management regarding key parameters. The management will be able to monitor the billing progress, collection made, list of consumers with outstanding payments, etc. The management will be able to identify the location of consumers with outstanding dues thereby leading to better recovery drives.
 - **Feeder In-charge App:** The app will enable the functioning of revenue management system. The designated feeder in charge will be able to carry out consumer and asset indexing on its respective feeder with the support of the app. This app will also enable the feeder in charge to take meter readings, provide on the on-site bills and collect payments. The app will also send instant alerts to consumers regarding completion of meter reading, bill generation, delivery, payment, etc.
 - **BijliAapurti App:** The app will be used for feeder monitoring. The app will provide real time detail of feeder health including its meter data, breakdown status, interruption status, etc.
- 7.14 The apps are aimed to reduce the time lag between occurrence of events and action taken. Moreover all future systems will be made to integrate seamlessly with these mobile apps.

DT and AMR Metering

7.15 Realizing the necessity of DT metering and AMR metering, JVVNL intends to outsource this activity. The model proposed is Opex model wherein the vendor will need to make the necessary investments and will be reimbursed based on per DT meter reading and per consumer meter reading. This will include the upkeep of the existing AMR meters and the associated equipment as well as installation of new hardware wherever required.

Smart Customer Care System

7.16 The Petitioner intends to adopt advanced technologies to implement a state of art Smart Customer Care Centre system which would also enhance customer satisfaction. The customer care system will use the data collected through all other IT systems in place and as such will be able to delegate the work to the correct authority. This would enable reduction in time between occurrence and action. This would also ensure that the consumers get regular and correct updates regarding their concerns. It is envisaged that the smart customer care system will be able to

- **Complaint registration:** The customer care system will be able to register complaints of consumers not only through calls but also through social media.
- **Identification of consumer:** The system will be able to identify the consumer through the registered mobile phone number/email-id. It would also be possible to identify the feeder/DT/pole to which the consumer is connected to.
- **Delegation of work:** Based on nature of complaint, the system will be able to direct the call to fault rectification team (for no current complaints) or to the concerned sub-division office.
- **Regular Update:** The system will provide regular updates to the consumers based on details received from fault rectification team or sub-division office.
- **Automated messages:** The system is also expected to provide automated messages to customers in case of DT outage or any other such issue concerning a number of consumers. Other messages like billing alerts, festive greetings, energy efficiency measures are also expected to be sent through this system.

ERP

7.17 The Discom is operating with legacy systems and the departments like finance and accounts, human resources, materials management etc. face various challenges in their day to day operation. The tasks are being performed manually which provides a scope for further improvement in efficiency. Due to routine and repetitive nature of work, manual efforts are required to be put in by staff in preparation of reports on regular basis, which could be carried out by a software solution. Also, the departments across the Discoms are dependent and reliant on each other which necessitates the transfer of data and reports on a regular basis.

7.18 To improve the current situation, the Petitioner has planned for implementation of ERP in areas of

- Finance and Accounts

- Materials Management (Purchase and Stores)
- Human Resources Management including Self Service for executive category of officials and payroll for all JVVNL's employees
- Project Management

Smart Meters

- 7.19 Smart metering is an initiatives taken for system improvement and accurate energy accounting of the distribution utility, which would help Discoms achieve their milestones under the UDAY scheme. GoR in its endeavour to provide 24x7 power supply for consumers in urban areas has envisioned for installation of Smart Meters/AMI on LT/HT consumers. With metering at all nodal points, the energy accounting and auditing would be improved, resulting in better administrative actions and demand side planning. AMI would help not only in reduced cost of meter reading and data entry but timely detection of defective meters, improvement in billing efficiency with reduction in human error in meter reading and billing.
- 7.20 Additional funding for the same has been sought under the IPDS scheme which will cover about 60% of the required Capex.
- 7.21 A number of other initiatives have also been planned and are listed below with the estimated yearly cost of each.

Table 35: Planned IT initiatives

Particulars	Estimated Cost (Rs. Cr. per year)
Revenue Management System on SAAS Basis	11.50
Feeder Monitoring System on SAAS Basis	1.80
Supply, Installation and Commissioning of - DT Meters & Modems on DTs - Modems on Consumer meter and monthly meter reading through AMR	30.00
Smart Customer Care System on SAAS Basis	62.00
ERP	12.00
Smart Meters (Opex Cost)	10.00
Installation and Commissioning of IP based CCTV Surveillance System in Sub-Divisional Stores / Assistant Control Stores on SAAS Basis	2.50
Deployment of E-Office System	2.00
Vendor Self Service System on SAAS Basis	0.50

Tariff Rationalization

- 7.22 The Petitioner proposes to include certain tariff rationalization measures in order to facilitate better utilisation of resources, better revenue management and to provide clarity on certain aspects.
- 7.23 The Petitioner proposes to include the following tariff rationalization measures for FY 2018-19 in order to facilitate better utilisation of resources, economic pricing and better revenue management:

Prompt Payment Rebate

- 7.24 An incentive of 0.15% is being allowed on energy and fixed charges in the next bill if payment is received before seven (7) working days from the due date of the bill. The Petitioner in its previous ARR and Tariff Petition had proposed to add another provision to further incentivise consumers for prompt payment which is also likely to improve the cash flows of the Discom. Accordingly the Petitioner had proposed to allow an incentive of 0.35% on energy and fixed charges in the next bill if payment is received before ten (10) days from the due date of the bill. The Hon'ble Commission in its order dated 2nd November 2017 accepted the proposal of the Petitioner.
- 7.25 It is pertinent to mention that the benefit accrued out of improved cash flows of the Discom is essentially used to avail rebate in power purchase bills by making prompt payments to generators. The rebate on payment to generators is applicable if payments are made within specified number of days of due date. This provision of rebate does not take into account working days. The petitioner had considered this while proposing the increased incentive of 0.35% on energy and fixed charges if bill payment is received before ten (10) days from the due date of the bill instead of 10 (ten) working days.
- 7.26 Similarly, the Petitioner prays to the Hon'ble Commission to modify the prompt payment rebate clause to provide rebate of 0.15% on energy and fixed charges in the next bill if payment is received before seven (7) days from the due date of the bill and 0.35% on energy and fixed charges in the next bill if payment is received before ten (10) days from the due date of the bill.

HT Supply to LT Consumers

- 7.27 As per the current practice, if a consumer under LT tariff schedule is provided with High Tension supply with metering provided on HT side, a rebate of 7.5% is provided on the billed amount (Fixed charges plus Energy charges) In case the metering equipment is provided on the low voltage side of consumer's transformer, 3% of recorded consumption is added to cover transformer losses and thereafter a rebate of 7.5% is provided on the billed amount (Fixed charges plus Energy charges).

- 7.28 The above provision is similar to the voltage rebate provided to HT consumers availing supply at 33 kV or above. With respect to the voltage rebate, the Hon'ble Commission in its order dated 2nd November 2017 observed that availing power at high voltage gives permanent benefit to the consumers in terms of quality of power. Further, availing power supply at high voltage is in overall interest of the electricity consumers.
- 7.29 The Petitioner benefits by providing supply at higher voltages in terms of savings in energy due to lower losses at higher voltages but there is no impact on fixed charges.
- 7.30 Considering the above, the Hon'ble Commission directed the Discoms to provide voltage rebate only on energy charges or in other terms the units billed, instead of providing rebate on both energy and fixed charges.
- 7.31 In line with the principles laid down in the order dated 2nd November 2017, the Petitioner prays to the Hon'ble Commission to modify the present applicable rebate to consumers under LT tariff schedule receiving HT supply such that the applicable rebate is provided only on energy charges. The relevant clause may be redefined as provided below:

“If a consumer under LT Tariff Schedule is provided with High Tension Supply with metering provided on the HT side, a rebate of 7.5% on the energy charges under this schedule will be given. However, the Discom may at its discretion, provide metering equipment on Low Voltage side of consumer's transformer and in such cases 3% (three percent) of recorded consumption shall be added to cover transformation losses, thereafter rebate @ 7.5% on energy charges shall be allowed.”

Definition of Industries

- 7.32 In the tariff schedule, there are multiple categories of industrial consumer viz. Small Industrial Service, Medium Industrial Service-LT, Medium Industrial Service-HT and Large Industrial Service. The tariff schedule applicable to these categories are SP/LT-5, MP/LT-6, MP/HT-3 and LP/HT-5 respectively.
- 7.33 The applicability under each of the aforementioned schedules mentions a list of industries covered under the schedule. Any consumer having an industry not covered under the list of industries mentioned comes under Non-Domestic connection. This leads to consumer grievances.
- 7.34 In order to reduce instances of such grievances and bring further clarity, the Petitioner prays to the Hon'ble Commission that in addition to the list of industries, a generic definition of industry be provided. The Petitioner also recommends that it be explicitly mentioned that the list provided in the schedule is indicative and not exhaustive.
- 7.35 The Petitioner proposes the addition of the following definition in the aforementioned schedules without change in any other condition of the respective schedules.

“This tariff shall be applicable to Industrial Consumers and the following consumers but not limited to Printing Presses, Government Lift Irrigation Projects, Cottage Industries (such as Zari making, Silver and Gold Wire drawing, Gem Stone polishing), Hatcheries, Water Supply by RIICO in RIICO Industrial Areas, Water Works for public Supply and Water Supply by Trusts/Local Bodies, Pumping Stations, Pumping Back Seepage Water by IGNP, Handicraft, Textile, Dyeing & Printing Industries, Cold Storage, IOC/HPC etc., Jaipur Metro and Railway Traction Load, Flour Mills, Software units IT & IT enabled Service registered under Company's Act with aims and objects of IT or those registered with Industries Department of Govt. of Rajasthan for IT under IT & ITES Policy of GoR.*

**Industrial consumers are consumers engaged in the physical or chemical transformation of materials, substance or components into new products. The materials, substances or components transformed are raw materials that are products of agriculture, forestry, fishing, mining or quarrying as well as products of other manufacturing activities.”*

Definition of Hostels

- 7.36 Hostels run by the Government/Government recognised educational institutions and by registered charitable institutions are classified as domestic connection under the Domestic Service Tariff Schedule (DS/LT-1).
- 7.37 All other hostels not covered under the Domestic Service Schedule are classified under non-domestic category.

- 7.38 In many instances, it has been observed that owner of residential spaces rent out the spare rooms available with them. However, many consumers are also engaged in the commercial business of renting out spaces as hostels. Without any proper definition of hostel, it becomes difficult for field officials to differentiate one from the other.
- 7.39 The Petitioner proposes that a note be added in the applicability of Non Domestic Tariff Schedule as follows:

“Residential spaces with upto 3 rooms or 6 beds, whichever is less, being used as hostel will not be considered as hostel and Domestic Tariff will be applicable to such connections.”

A8: COMPLIANCE TO DIRECTIVES ISSUED BY HON'BLE COMMISSION IN TARIFF ORDER DATED 2ND NOVEMBER 2017

- 8.1 The following section summarises the issue-wise compliance to directives issued by the Hon'ble Commission in the previous ARR and Tariff Order dated 2nd November 2017.
- 8.2 It is pertinent to mention that the previous tariff order and as such the directives were notified recently on 2nd November 2017. In order to meet the regulatory compliances of filing the ARR and Tariff petition by 30th November of the previous year, the Petitioner has not been able to analyse all the directives in detail and would require additional time to finalise the measures to implement them. Although the Petitioner has made all efforts to provide appropriate compliance in this Petition to the directives issued, it is prayed that the Petitioner be allowed further additional time to provide detailed compliances.

Focus on metering, billing and collection

- 8.3 The Discom acknowledges the emphasis laid by the Hon'ble Commission on the aspects like AMR metering, e-billing and e-collection. The Discom is working vigorously in this regard. The existing roles and responsibilities have been re-formulated and a feeder in charge has been appointed for 11kV feeders in Non R-APDRP areas. The dedicated feeder in charge would be responsible for maintaining various aspects of the feeder like metering, bill collections and reduction in the losses associated. In order to motivate the feeder in charges towards this direction, incentive schemes have been proposed wherein feeder in-charge would be incentivised if the losses are brought to levels lesser than 15%.
- 8.4 The mentioned re-organization would prove to be beneficial and would provide a clearer way ahead in carrying out the energy audit as it organizes the structure of the petitioner in line with the electrical structure rather than the geographical structure.
- 8.5 Also a new IT system is being designed which would reduce the time gap between meter reading and the delivery of bills. The new system will also ensure error free bill generation and reduction in cases of average billing. It is also envisaged that cases of meter readers/employees conniving with consumers will also reduce leading to improved process of billing and collection. It will also lead to prompt resolution of consumer complaints including testing/replacement of defective meters.

Stepping up of vigilance activities

8.6 The Petitioner recognizes and values the importance of stepping up its vigilance related activities. In the recent time the Petitioner has increased its focus on the vigilance drives and activities have been stepped up. The results are a clear reflection of the commitment shown by the Discom towards it. The Petitioner is ensuring that the consumers engaged in theft of electricity or malpractice are appropriately punished. As such in appropriate cases, instead of giving benefit of compounding, the Petitioner is pursuing penal actions such as initiating prosecution both against the consumers and others who conspire so that people are deterred from indulging in theft. A comparison of vigilance activities and its results undertaken till the month of September in the previous year and this year is summarised in the table below:

Table 36: Increase in vigilance activities

Particulars	Assessment (Rs. Cr.)	Realization (Rs. Cr.)	FIRs Lodged (Nos.)	Arrests Made (Nos.)
FY 2015-16 (upto Sept)	85.00	31.33	6513	166
FY 2016-17 (upto Sept)	103.20	47.50	7093	276
% Increase	21%	52%	9%	66%

Monthly Billing

8.7 It is submitted the billing will be done on monthly basis on implementation of the new billing system under consideration. The system will initially be implemented in non R-APDRP areas. The Discom will also explore the possibilities of modifying the current billing system and putting in place appropriate manpower to ensure that the same can be started at the earliest in all areas of the Discom.

Load/demand based billing

8.8 As directed by the Hon'ble Commission, the Petitioner will explore the present scenario of implementing load/demand based billing and the status of installation of the requisite meters. As the Tariff Order had been issued on 2nd November 2017 itself, the Discom prays to the Hon'ble Commission to provide additional time in order to make a detailed assessment and present a suitable proposal along with the tariff petition for next year.

Private sector participation

8.9 The Discom has already introduced the Distribution Franchisee model in two of its circles namely Kota and Bharatpur. The performance of the same is being scrutinized and accordingly the possibility of implementing the same with added parameters in other circles is also being looked into.

Control on power purchase cost

8.10 The Petitioner admits to the fact that the power purchase expense continues to be a major contributor in its overall expenditure. The Rajasthan UrjaVikas Nigam Limited had been formed by the Government of Rajasthan to carry out Power trading business for the distribution companies. RUVNL is also entrusted with the responsibility of monitoring and controlling the power purchase expense. RUVNL on day to day basis ensures that the power is procured on the basis of merit order, over drawal and under drawal is controlled, commercially sound decisions are taken with respect to purchase/sale of energy from exchange. It is also undertaking review of long term PPAs to identify possibility of reduction in costs of power purchase for the Rajasthan Discoms.

Control on late payment surcharge and interest cost

8.11 The Petitioner is making all bound efforts to cut down on its interest costs. It is now made sure that all the bills pertaining to power generators are cleared on time and there is no further accumulation of the late payment surcharge on this account. It is worthwhile to mention that instead of being levied with late payment surcharge due to non-payment of bills on time, the Petitioner is now availing the benefit of rebates on prompt payment. This is a clear reflection of the focussed efforts being made.

Day power to agriculture sector

8.12 The inputs provided by the Hon'ble Commission are very much relevant and of great significance. Distributed generation and micro-grids working in tandem with the Grid supply is a great way to improve duration and reliability of supply. Such an endeavour needs detailed analysis and the petitioner would request for further time to put in efforts to carry out the same and present it along with the next tariff petition. However, it is pertinent to mention here that considering the current power scenario, the Petitioner is already facing the burden of stranded capacity which is adversely impacting its financial condition.

Focus on Service Improvement

8.13 The Petitioner submits that it is constantly striving towards improving the quality of services being extended to its consumers. Regular training workshops are being carried out for the Discom officials in order to improve upon their existing skill sets. The new entrants are given hands on training before being inducted into the system and post induction also regular knowledge session are carried out for them to constantly update them with the system requirements. Also the requirement for manpower is being analysed regularly and according recruitment derives are carried out.

Employee and Consumer Education

- 8.14 Providing quality services to the end consumers is the ultimate goal of the Discoms. In order to address the complaints and grievances of the consumers, the Petitioner is making efforts at different levels. Consumer grievance redressal forum has been constituted to address the consumers. Also regular choupals are organized where the consumers can come forward with their concerns. Further the Discom also uses various other platforms like advertising and social media in order to create awareness about the system among the consumers

Safety Measures

- 8.15 In the power distribution sector, safety plays a very crucial role which cannot be overlooked in any condition. The Discom is committed towards ensuring the safety of its employees and consumers. A number of steps are being undertaken to further enhance the focus on safety.
- 8.16 Labour unions are being provided with financial assistance for organising safety training and awareness programs for technical workers as well as public. Circle SEs have been directed to expedite pending enquiries to find out causes of accidents in the past and accordingly prepare action plans. The Discoms Co-ordination Forum in its meeting had already approved the specification of safety items and procedures for purchase thereof. Moreover it has also been decided to provide safety devices like insulated shoes, helmets and rubber hand gloves individually to each and every technical worker besides other safety devices like lineman safety belt, earthing chain, etc. which are being provided to technical workmen regularly. The workers have been given the right to refuse to do work in absence of availability of adequate safety devices.
- 8.17 Committee of senior officers has been constituted at circle level to carry out regular inspection of 33/11 kV sub-stations and provide practical training to workers at work place, check availability of safety devices and ensure their use by workers while performing work and initiate action against defaulters. A safety and training cell has been created and technical officers have been nominated as safety officers in each circle.
- 8.18 Chairman Discoms has issued directions to the MDs of the three Discoms that 5 types of complaints received at the Consumer Grievance Redressal Centre are to be monitored by the respective O&M Circle SE which also included “delay in proper maintenance where there is possibility of accident due to loose wire, tilted poles, etc.” Directions have also been given that status “closed” shall only be marked after tightening of such wires and straightening of such poles.
- 8.19 As mentioned above regular awareness session are carried out for its employees and public as well. The Discom also uses various other platforms like advertising and social media in order to create awareness about the system among the consumers and educate them about the do’s and don’ts related to electricity in order to avoid any mishaps or accidents.

Energy Efficiency Measures

- 8.20 The Petitioner requests the Hon'ble Commission to allow additional time to carry out a detailed analysis on the same and present it along with the next tariff proposal.

Tariff for charging station of Electrical Vehicles

- 8.21 The Petitioner recognises the importance of affordable alternate sources of eco-friendly energy for transport. The Petitioner will carry out a detailed analysis of the possibility of incentivising charging stations and present it along with the next tariff proposal. In the meanwhile the tariff for Non-Domestic category maybe applied on the same as the charging station will basically be carrying out a commercial activity.

IT and ERP Implementation

- 8.22 The Petitioner is working towards embracing Information Technology to improve its working and provide quality services to its consumers wherein they have to face minimum hassles. The Discom has prepared a DPR for ERP implementation and is in the process of seeking approval from PFC regarding the same.
- 8.23 The Petitioner has planned for implementation of ERP in the areas of Finance and Accounts, Materials Management, Project Management and Human Resource Management including self-service for executive category of officials and payroll for all its employees.
- 8.24 The Discom has also developed various mobile apps like BijliMitra, BijliPrabandh App, Feeder Incharge App etc. These apps are aimed at reducing the time lag between occurrence of events and action taken to resolve the issues. This will improve the control at transactional level and ensure anytime anywhere availability of data which will help in monitoring feeder health, improving commercial activities including collection of dues. The availability of data along with analytics tool would also assist the management in making faster and better decisions.
- 8.25 Also various IT based initiatives like Revenue Management System and spot billing, Feeder monitoring system etc. have been planned in order to improve the working efficiency of the Disocm.

A9: PRAYER

9.1 Jaipur Vidyut Vitaran Nigam Limited respectfully prays to the Hon'ble Commission:

- To admit the ARR Petition for FY 2018-19;
- To review the revised estimates of ARR for FY 2017-18
- To approve the principles and methodology proposed for projection of ARR for FY 2018-19 given in the detailed formats along with this application;
- To approve the planned IT initiatives ;
- To approve the changes in the tariff schedule proposed by the Petitioner;
- To condone any error/omission and to give opportunity to rectify the same;
- To permit the Petitioner to make further submissions, additions and alterations to this Petition as maybe necessary from time to time;
- To pass any other order as the Hon'ble Commission may deem appropriate.