

Aggregate Revenue Requirement  
And  
Retail Tariff Petition  
For  
FY 2011-12

Main Text and Formats

Submitted to

Rajasthan Electricity Regulatory Commission  
Jaipur

By

Jaipur Vidyut Vitran Nigam Limited

Jaipur

January, 2011

**Notes:**

In this Application:

Financial Year 2009- 2010 referred to as FY 10 or FY 09-10

Financial Year 2010- 2011 referred to as FY 11 or FY 10-11

Financial Year 2011- 2012 referred to as FY 12 or FY 11-12

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

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

**List of Abbreviations**

Application	The application for review of ARR & retail supply tariff for FY 2011-12
ARR	Aggregate Revenue Requirement
Existing Tariff	Tariff for supply of electricity approved by RERC for FY 2004-05
FY	Financial Year
FY 2009-10 or FY 10	Financial Year 2009-2010
FY 2010-11 or FY 11	Financial Year 2010-2011
FY 2011-12 or FY 12	Financial Year 2011-2012
Gol	Government of India
GoR	Government of Rajasthan
HT	High Tension
JVVNL or Licensee	Jaipur Vidyut Vitran Nigam Ltd.
kVA	Kilo Volt Ampere
kW	Kilo Watt
kWh	Kilo Watt Hour or Unit
LT	Low Tension
MIP	Medium Industrial Power
MU	Million Units
NDS	Non-Domestic Service
PWW	Public Water Works
Regulation	RERC Tariff Regulations, 2009
RERC, Commission	Rajasthan Electricity Regulatory Commission
RVPN	Rajasthan Rajya Vidyut Prasaran Nigam Limited
Rs.	Indian Rupees
SIP	Small Industrial Power
SLDC	State Load Despatch Centre

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Formats prescribed for ARR and TARIFF filing

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**BEFORE THE RAJATHAN ELECTRICITY REGULATORY COMMISSION**

**JAIPUR**

Filing No.....

Case No.....

IN THE MATTER OF:                      Petition for revision of ARR & Retail Supply Tariff under Section 62 and Section 64 of the Electricity Act 2003 read with the Rajasthan Electricity Regulatory Commission (Tariff) Regulations, 2009.

AND

IN THE MATTER OF                      Jaipur Vidyut Vitran Nigam Ltd.,  
  
Vidyut Bhawan, Janpath  
  
Jaipur-302005

THE HUMBLE APPLICANT ABOVE NAMED MOST RESPECTFULLY SHOWETH:

- A. Jaipur Vidyut Vitran Nigam Ltd. (JVVNL) is a licensee for distribution and supply of electricity in the areas as notified by the Government of Rajasthan (GoR) under the Rajasthan Power Sector Reforms Transfer Scheme, 2000. From the erstwhile Rajasthan State Electricity Board, the circles of Alwar, Bharatpur, Dausa, Jaipur City, Jaipur District, Jhalawar, Kota and Sawai Madhopur forms the licensee area of JVVNL.
- B. This is an application for revision of Aggregate Revenue Requirement and Retail Supply Tariff for FY 2011-12, under Section 62 and Section 64 of the Electricity Act 2003, read with the Rajasthan Electricity Regulatory Commission (Tariff) Regulations, 2009.

**A1: INTRODUCTION**

- 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 licensees in the state, the State Commission would also be guided by the regulations prescribed by Central Electricity Regulatory Commission.
- 1.2 The Central Electricity Regulatory Commission has issued revised regulations on January 19, 2009 for the second control period starting from April 1, 2009. Based on revised regulations issued by CERC, Rajasthan Electricity Regulatory Commission (RERC) has revised the earlier RERC (Terms and Conditions for Determination of Tariff) Regulation 2004 and notified RERC (Terms and Conditions for Determination of Tariff) Regulation, 2009 for the second control period starting FY 2009-10 on January 23, 2009.
- 1.3 The licensee had filed the petition with the Hon'ble Commission for determination of Multi-year Revenue Requirement for FY 10-14 and True-up for FY 08 on 28<sup>th</sup> February 09. Based on the Commission's directive to revise the petition based on the revised petition submitted by RVUN and RVPN, the licensee had submitted the revised petition.
- 1.4 In line with the RERC Terms and Conditions of Tariff Regulations 2009, the RERC issued the second MYT Order for the three DISCOMs on April 15, 2010.
- 1.5 The licensee has utilised the latest available commercial information for FY 09-10 in respect of various parameters including sales, power purchase, O&M, depreciation, interest, etc as basis to prepare the expected aggregate revenue requirements for FY 2010-11 & FY 2011-12.
- 1.6 The following sections explain in detail the basis and forecasts of the following elements for FY 11-12:
- Category wise Energy Sales & Revenues at existing tariffs
  - T&D Losses and Energy Requirement
  - Determination of Aggregate Revenue Requirement by forecasting the following costs, other income & returns:
    - Power Purchase Cost
    - O&M Expense
    - Interest Cost
    - Interest on Working Capital
    - Depreciation
    - Return on Equity and Non-Tariff & Other Income

- Determination of Gap between Revenue & Costs, Additional Revenue through the proposed Tariff Revision and the arrangements to cover the revenue gap
- Tariff revision proposal for FY 11-12 to meet the Revenue Gap

**A2: Energy sales and requirements**

- 2.1 In the MYT Order, the Commission has approved sales for various consumer categories based on the Compound Annual Growth Rate (CAGR) for past 5 years. Sales is an uncontrollable parameter and is dependent on a number of factors including addition of number of consumers, addition in connected load, rainfall, number of agriculture connections converted, etc. Further, Clause 8 of the Regulations provide for review of the Sales Forecast as part of Annual Review of Performance of the licensee considering the uncontrollable nature of the parameter. However as per actual position obtaining during FY 2009-10, the figures have significantly changed.
- 2.2 The variance in energy sales would change power procurement cost and annual revenue requirement and affect the profitability of the Discoms. Hence, licensee requests to allow the licensee to consider the request for revision in energy sales for adjustment of variances.

**Comparison of Actual and Approved Energy Sales for FY 09-10**

- 2.3 The Table 1 summarises the variance in the actual and approved energy sales for FY 09-10.

**Table 1: Variance in energy sales for FY 09-10 (Million Units)**

Categories	Approved	Actual	Variation (in MUs)	Variation (in %)
Domestic	2473	2658	185	7%
Non-Domestic	947	898	-49	-5%
Public Street Light	84	79	-5	-6%
Agriculture (Metered)	2160	2777	617	29%
Agriculture (Flat)	779	1153	374	48%
Small Industry	252	248	-4	-2%
Medium Industry	576	548	-28	-5%
Large Industry	3167	3095	-72	-2%
Public Water Works (S)	219	207	-12	-6%
Public Water Works (M)	30	26	-4	-13%
Public Water Works (L)	104	114	10	10%
Mixed Load	303	333	30	10%
Electric Traction	317	350	33	10%
<b>Total Sales</b>	<b>11411</b>	<b>12486</b>	<b>1075</b>	<b>9%</b>

- 2.4 Variation in sales to all the consumer categories for FY 09-10 has been observed in the actual and approved sales. Major variation is observed in the agriculture (metered) and agriculture (Flat) category. The higher actual sales in agriculture (metered) consumption can be attributed to release of new connections and conversion of flat-rate agriculture consumers to metered agriculture consumers. Further, the higher sales in agriculture (flat) consumer category is primarily on account of slower pace of conversion of this category to metered category as estimated by the Commission in the MYT Order. The slower pace of conversion of agriculture (flat) consumers is due to consumer's enmass resistance in some of the areas.

- 2.5 The increase in domestic consumption is also primarily linked to the electrification of large number of rural consumers in RGGVY. While the sales for domestic and agriculture have been higher than the approved sale, the sales to small, medium & large industrial consumers due to inevitable power cuts imposed on industries have been lower than the approved resulting in adverse impact on the revenues of the licensee.
- 2.6 From the above, it can be observed that sales to consumer categories have been dependent on various extraneous variables like increase in number of consumers, number of rural consumers, etc. Therefore, the projection for sales from FY 10-11 & FY 11-12 have been revised taking into account the actual energy sales for FY 09-10 and other variables which would affect the energy sales.

### Energy Sales Projections for FY 10-11 & FY 11-12 (Revised)

- 2.7 The licensee has projected the sales for various consumer categories based on the actual energy sales for FY 09-10. As prescribed in the Clause 111 of the Regulations, the licensee has utilised historical growth in consumers, connected load and energy sales to forecast the category-wise energy sales for FY 10-11 and FY 11-12. Other factors affecting the energy sales for various customer class has also been considered while projecting the sales.
- 2.8 For all consumer categories except the Domestic and Agriculture categories, past trends have been used while estimating sales. The assumptions and methodology adopted in estimating the sales under different categories has been detailed in the following paragraphs.

### Domestic & Non Domestic

- 2.9 The last six years have shown an increasing trend in the energy sales. Further, increase during last three years has been far higher as compared to last six years. It is expected that the growth momentum is expected to continue. Accordingly, it is assumed that the growth in these consumer categories in past three years is expected to continue and may even increase in the forthcoming years. The increase in sales to Domestic consumers would be largely driven by increase in number of consumers in rural areas consequent to intensification efforts under RGGVY scheme and increase in specific consumption of the existing consumers due to improvement in living standards. The urbanisation and increase in commercial activities have resulted in significant energy sales growth to commercial consumers in recent past. The licensee expects the same to continue in future.
- 2.10 The estimated sales for Domestic category have been assumed to grow at 5 year CAGR for the FY 10-11 & FY 11-12. Table below shows the approved and revised sales projection for FY 10-11 and FY 11-12 for domestic and non-domestic category.

**Table 2 : Estimated Energy Sales in Domestic & Non Domestic Category**

Categories	FY 10-11		FY 11-12	
	Approved	Revised Projected	Approved	Revised Projected
Domestic	2806	3014	3183	3417
Non-Domestic	1075	998	1219	1110

**Public Street Lighting**

- 2.11 Assuming energy sales for FY 09-10 as the base, the Licensee has applied the 5 Year CAGR to arrive at the estimated sales for FY 10-11 & FY 11-12 and the same is summarised below in table below.

**Table 3: Approved and Revised Energy Sales in Public Street Lighting Category**

Categories	FY 10-11		FY 11-12	
	Approved	Revised Projected	Approved	Revised Projected
Public Street Light	94	88	106	99

**Agriculture (Metered) & (Flat)**

- 2.12 The agriculture consumption forms substantial portion of the total sales. Metered agriculture consumption has been increasing in the licensee area at a CAGR of 35% in the past six years and 46% in the past four years. This is primarily on account of release of new connections and conversion of agriculture (flat) consumers to agriculture (metered). Each year approximately 65,000 new connections agriculture metered connections have been released in the State resulting in significant increase in sales to agriculture category for the licensee.
- 2.13 The licensee has considered a five year CAGR for projection of sales to agriculture (metered) consumers for FY 10-11 & FY 11-12 in view of new connections to be released during FY 10-11 & FY 11-12 as well as continued drive for conversion of flat rate consumers to metered.
- 2.14 In case of agriculture (flat) consumers, the licensee would like to submit to the Hon'ble Commission that the pace of conversion of these consumers to metered category has been slow due to resistance from the local people in some of the areas. However, the licensee is installing meters at the transformer end to capture the consumption and this process is expected to be completed by the end of FY 10-11. Therefore, the licensee would be able to collect actual consumption data for the flat rate agriculture consumers for energy auditing purpose.
- 2.15 However, despite reduction in number of flat rate consumers but due to increase in connected load, the energy sales to this category have increased and this trend is expected to continue in FY 10-11 & FY 11-12. Also, the consumption per HP is higher as the flat rate consumers do not disclose the actual load. Therefore, the licensee has considered a five year CAGR for projecting the consumption of the agriculture (flat) consumers for FY 10-11 & FY 11-12.
- 2.16 The energy sales under 'Agriculture Metered' & 'Agriculture Flat' category for FY 10-11 & FY 11-12 as computed above is summarised below in the table below:

**Table 4 : Energy Sales to Agriculture (Metered) & Agriculture (Flat) Consumers**

Categories	FY 10-11		FY 11-12	
	Approved	Revised Projected	Approved	Revised Projected
Agriculture (Metered)	2506	3743	2774	5045
Agriculture (Flat)	606	1195	433	1238

**Small Industry, Medium Industry & Large Industry**

2.17 The growth seen in energy sales to consumers under these categories in the past is summarised in the table below

**Table 5: Growth seen in the past in the Industry Categories**

Category	5 Year CAGR	3 Year CAGR
Small Industry	4%	4%
Medium Industry	9%	9%
Large Industry	14%	14%

2.18 As evident from the above table, there has been consistently constant growth in sales in all three categories in past. However, the energy sales to these categories during FY 09-10 have been lower than the approved sales in the MYT Order due to situation of power cuts. The growth in sales during FY 09-10 has been lower than the five-year and three-year CAGR indicating lower industrial growth. However, the licensee have assumed past 5-year CAGR over the FY 09-10 sales to project the sales for the period FY 10-11 & FY 11-12 for all the industrial categories.

2.19 The energy sales figures for the industrial categories for FY 10-11 & FY 11-12 is summarised in the table below

**Table 6: Energy Sales for Industrial Categories for FY 10-11 & FY 11-12 (MUs)**

Categories	FY 10-11		FY 11-12	
	Approved	Revised Projected	Approved	Revised Projected
Small Industry	264	258	278	268
Medium Industry	637	597	705	651
Large Industry	3651	3539	4209	4046

**PWW (Small) , PWW (Medium), PWW (Large) , Mixed Load and Electric Traction**

2.20 The 5-year CAGR has been applied on the FY 09-10 energy sales under these categories. The approved and revised projected energy sales to these categories is summarised in the table below:

**Table 7: Approved and Revised Projected Sales to PWW (Small), PWW (Medium), PWW (Large), Mixed Load and Electric Traction**

Categories	FY 10-11		FY 11-12	
	Approved	Revised Projected	Approved	Revised Projected
Public Water Works (S)	240	223	264	240
Public Water Works (M)	31	26	31	26
Public Water Works (L)	108	122	113	130
Mixed Load	367	422	445	533
Electric Traction	333	378	350	409

2.21 The approved and revised projected energy sales for FY 10-11 & FY 11-12 for various consumer categories is summarised in the table below

**Table 8 : Energy Sales for FY 10-11 & FY 11-12 (MUs)**

Categories	FY 10-11		FY 11-12	
	Approved	Revised Projected	Approved	Revised Projected
Domestic	2806	3014	3183	3417
Non-Domestic	1075	998	1219	1110
Public Street Light	94	88	106	99
Agriculture (Metered)	2506	3743	2774	5045
Agriculture (Flat)	606	1195	433	1238
Small Industry	264	258	278	268
Medium Industry	637	597	705	651
Large Industry	3651	3539	4209	4046
Public Water Works (S)	240	223	264	240
Public Water Works (M)	31	26	31	26
Public Water Works (L)	108	122	113	130
Mixed Load	367	422	445	533
Electric Traction	333	378	350	409
<b>Total Sales</b>	<b>12719</b>	<b>14603</b>	<b>14110</b>	<b>17212</b>

### Distribution Loss

2.22 The licensee has undertaken number of steps to reduce the distribution losses during FY 09-10 & FY 10-11. A comprehensive Feeder Renovation Program for meeting the loss reduction trajectory was also prescribed by the Commission. Main objectives of this ambitious programme are as under:

- Reduce distribution losses on 11 KV feeders to a level below 15%.
- Reduce burning rate of distribution transformers.
- Improve quality of power supply and make it interruption free and increase consumer satisfaction levels

- (d) Consequent to loss reduction, providing 24 hours supply to rural domestic & non domestic consumers and thus eliminating urban-rural supply disparity
- (e) To make investment supported technical interventions for prevention of theft
- 2.23 The feeder renovation program has helped the licensee in reducing the losses from the beginning of the FY 09-10. Since the process of validation of sales to agriculture consumers for FY 09-10 is underway, the actual reduction in distribution loss for FY 09-10 would be ascertained only post the availability of agriculture sales data from the field.
- 2.24 The actual distribution loss for FY 10-11 & FY 11-12 for JVVNL is expected to be similar to the approved distribution loss trajectory by the Commission in the MYT Order. Therefore, the licensee proposes distribution loss of 20.50% & 19.00% in line with the distribution loss level approved by the Commission for the respective years.

**Table 9 : Distribution Losses estimated by the licensee vis-à-vis targets set by the Commission in the MYT Order**

Year	Approved	Revised Projected
FY 2010-11	20.50%	20.50%
FY 2011-12	19.00%	19.00%

**A3: Aggregate Revenue Requirement****Power Purchase Cost for FY 09-10**

3.1 In absence of finalization of accounts for FY 09-10, the power purchase data available with the commercial department has been utilized for comparison of actual and approved power purchase cost for FY 09-10. The same is summarized in the table below:

**Table 10: Comparison of Actual and Approved Power Purchase in FY 09-10**

Stations	Units (MUs)		Cost (Rs. Crs)		Per Unit Rate (Rs./unit)	
	Approved	Actual	Approved	Actual	Approved	Actual
NTPC	3265	2792	726.77	606.00	2.23	2.17
NHPC	552	507	106.57	134.27	1.93	2.65
NPCIL	551	500	147.39	144.69	2.67	2.89
RVUN	8329	7325	2,384.49	2,163.18	2.86	2.95
Shared Projects	1185	769	33.34	21.12	0.28	0.27
Others	650	494	205.81	156.44	3.17	3.17
Non-conventional/CPP	508	461	186.91	178.25	3.68	3.87
Bilateral/ Trading	614	4322	368.48	2,395.57	6.00	5.54
Inter Discom Trading		144		45.91		3.92
<b>Total</b>	<b>15654</b>	<b>17313</b>	<b>4,159.77</b>	<b>5,845.43</b>	<b>2.66</b>	<b>3.38</b>

3.2 It is observed from the above table that the total power purchase cost for FY 09-10 is higher than the approved total power purchase cost. This is primarily on account of higher than approved per unit power purchase cost by the Commission from various generating stations/bilateral source/UI for FY 09-10 in the MYT Order. Further, the increased cost is also attributable to the higher than approved sales in the licensee area of distribution resulting in purchase of power through other short-term and bilateral sources. For equitable distribution of energy to consumers in licensee's area Seven times of approved quantum of bilateral/trading power had to be purchased.

3.3 "Variation in power purchase expenses for the distribution licensees" is specified as uncontrollable parameter as per Clause 8 (6) of the Tariff Regulations. Since the power purchase cost depends on a number of parameters including fuel cost, energy requirement to meet the sales, delay in commissioning of new plants, etc, the same is beyond the control of the distribution licensee.

3.4 The large variation in power purchase cost would affect the viability of the licensee and therefore the Hon'ble Commission is requested to allow revision in power purchase availability and cost for adjustment of variances.

**Energy Availability for FY 10-11 & FY 11-12**

3.5 The licensee for the purpose of estimation of the power availability during FY 10-11 and FY 11-12 has considered the following sources of power:

- Central Generating Stations i.e. NTPC, NHPC, NPCIL.
  - State Generating Stations
  - NSPCL (NTPC-SAIL Power Company Ltd)
  - Non Conventional Sources(Wind/ Bio mass/ Solar)
  - Shared Projects i.e. Bhakra, Dehar, Chambal, etc.
  - Other Sources like Tala, Tehri, SJVNL, etc
  - New plants expected to commissioned during FY 11-12
  - Purchase through bilateral and other short-term arrangements
  - Inter-discom arrangements
- 3.6 The licensee has considered the latest allocation of power from the Central Generating Stations including, coal, gas and nuclear power stations as per CEA letter dated 30 Nov, 2010.
- 3.7 The power availability from state generating for FY 10-11 and FY 11-12 has been considered based on availability of power during FY 09-10. The power availability from wind, solar and bio-mass stations have been considered similar to that approved by the Commission in the MYT Order for the respective years.
- 3.8 However, for meeting the supply-demand gap, the licensee has assumed to rely on power purchase through sources such as inter-discom exchange of surplus power and short-term & bilateral sources.
- 3.9 Past 52 weeks actual PGCIL losses of 3.66% and RVPN losses of 4.40% as approved by the Commission has been assumed for computing the availability from various generating stations at the licensee periphery.

**Power Purchase Cost (FY 10-11 & FY 11-12)**

- 3.10 In absence of audited power purchase cost for FY 09-10, the power purchase cost from various generating stations as available with the commercial department has been considered for computing the power purchase cost for FY 10-11 & FY 11-12.
- 3.11 Fixed cost for FY 10-11 has been projected considering a 5% escalation over the fixed cost for FY 09-10. For projecting the fixed cost for FY 11-12, an escalation of 10% has been considered based on the impact of new Tariff Regulations FY 2009-14 issued by CERC for computation of tariff for Central Generating Stations.

- 3.12 Variable cost (including other cost) from each central generating stations for FY 10-11 and FY 11-12 have been projected based on the average variable cost and fuel price adjustment per unit for FY 09-10. An escalation of 5% p.a. has been assumed for projecting the variable cost for FY 10-11 & FY 11-12 keeping in view the escalation of approximately 5 per cent p.a. on the coal prices over the past ten years.
- 3.13 For nuclear plants, single part tariff with 5% escalation p.a. on the actual per unit cost for FY 09-10 has been considered for FY 10-11 & FY 11-12, respectively.
- 3.14 For state generating stations, fixed charges with an escalation of 5% p.a. have been considered on the actual fixed cost for FY 09-10. The variable charges have been projected by considering 5% escalation p.a. over the provisional variable charges for FY 09-10. The cost per unit for wind, solar and biomass stations has been assumed similar to the approved cost per unit in the MYT Order.
- 3.15 The licensee has considered the power purchase from new generating stations at Rs. 3.00 per unit for FY 10-11 and Rs. 3.10 per unit for FY 11-12. The cost of power purchased through the new plants of Rajwest has been assumed at Rs. 3.88 per unit for FY 10-11 & FY 11-12. **The power purchase cost from Rajwest is constantly increasing due to imported coal, the Commission is requested to cap the total cost of power purchase from Rajwest which may be affordable to licensee.**
- 3.16 Power purchased under inter-discom transaction has been considered at Rs. 3.00 per unit for FY 10-11 & FY 11-12.
- 3.17 The approved and revised projection for power purchase cost for FY 10-11 and FY 11-12 is summarized in the tables below:

**Table 11 : Power Purchase for FY 10-11**

Stations	Units (Mus)		Cost (Rs. Crs)		Cost per Unit	
	Approved	Projected	Approved	Projected	Approved	Projected
NTPC	3979	2948	939.00	707.25	2.36	2.40
NHPC	806	555	177.53	146.45	2.20	2.64
NPCIL	1003	1002	274.47	248.75	2.74	2.48
RVUN	9931	9164	2,877.46	2,960.44	2.90	3.23
Shared Projects	1208	1516	36.74	141.34	0.30	0.93
Others	1139	523	399.49	175.94	3.51	3.36
Non-conventional	736	736	278.11	278.11	3.78	3.78
Bilateral/ Trading		2679		1,415.15		5.28
Inter Discom Trading		362		108.63		3.00
<b>Total</b>	<b>18801</b>	<b>19484</b>	<b>4,982.80</b>	<b>6,182.05</b>	<b>2.65</b>	<b>3.17</b>

Table 12 : Power Purchase for FY 11-12

Stations	Units (Mus)		Cost (Rs. Crs)		Cost per Unit	
	Approved	Projected	Approved	Projected	Approved	Projected
NTPC	4104	3301	998.87	853.93	2.43	2.59
NHPC	1110	659	264.75	186.70	2.39	2.83
NPCIL	1003	1041	273.58	273.64	2.73	2.63
RVUN	10707	12544	3,144.89	4,137.34	2.94	3.30
Shared Projects	1208	1516	39.64	148.41	0.33	0.98
Others	2099	523	541.46	184.73	2.58	3.53
Non-conventional	966	966	381.74	402.60	3.95	4.17
Bilateral/ Trading		905		452.37		5.00
Inter Discom Trading		991		297.39		3.00
<b>Total</b>	<b>21196</b>	<b>22447</b>	<b>5,644.93</b>	<b>6,937.11</b>	<b>2.66</b>	<b>3.09</b>

### Transmission Charges & SLDC Charges

3.18 The transmission charges of PGCIL and RVPN for FY 10-11 & FY 11-12 have been taken as per the approved transmission charges in the MYT order for FY 10-11 & FY 11-12.

3.19 Further, the SLDC charges as approved by the Commission in the MYT Order for FY 10-11 and FY 11-12 has been considered. The details of the transmission and SLDC charges is summarized in table below:

Table 13 : Transmission &amp; SLDC Charges (Rs. Crore)

Particulars	FY 10-11		FY 11-12	
	Approved	Revised Projected	Approved	Revised Projected
PGCIL Charges	70.86	70.86	74.01	74.01
RVPN Charges	413.05	413.05	470.23	470.23
SLDC Charges	11.07	11.07	12.78	12.78
<b>Total Transmission Charges</b>	<b>494.99</b>	<b>494.99</b>	<b>557.03</b>	<b>557.03</b>

### Operation and Maintenance Expenses

3.20 The Regulations have specified a gross normative O&M expenses for the distribution business on the basis of the total energy sales to customers. The gross normative O&M expense projected for the FY 10, FY 11 and FY 12 as per the provisions of the Regulations is summarised below.

**Table 14: Operation and Maintenance Expenses (Rs in crore)**

	FY 10	FY 11	FY 12
Employee Costs	325	401	500
Repairs & Maintenance Costs	37	46	58
Administrative & General Costs	75	93	115
<b>Total O&amp;M Costs</b>	<b>437</b>	<b>540</b>	<b>673</b>
Expenses to be Capitalized	155	192	239
<b>Net O&amp;M Costs charged to revenue</b>	<b>282</b>	<b>348</b>	<b>434</b>

3.21 Terminal benefit liability have been projected for FY 10, FY 11 and FY 12 based on the actuarial valuation report by valuer for FY 2008-09 is as follows

**Table 15: Terminal Benefit (Rs in crore)**

	FY 10	FY 11	FY 12
Terminal Benefit	398	413	429

#### Interest on loans, Lease Rentals and Finance charges

3.22 The Interest Charges, Lease Rentals and Finance Charges for FY 10 to FY 12 is summarised in the table below

**Table 16: Interest and Financing charges (Rs in crore)**

Description	FY 10 (Actual)	FY 11 (Estimated)	FY 12 (Projection)
Interest Charges	863	1272	1422
Interest Expenses Capitalized	52	15	11
<b>Total Interest &amp; Financing Charges</b>	<b>811</b>	<b>1257</b>	<b>1411</b>

3.23 Clause 22 of the Regulations requires the capping of loan repayments to the depreciation charged for the year. Though, the repayments have not been considered as part of expenditure in this petition, the licensee would like to submit that the borrowings for funding the capital investments in past have not followed the above concept. Therefore, the annual repayments would be more than the depreciation allowed annually. The interest component of the term loan and short term borrowings is included in the Form 3.6 for the respective years

#### Working Capital Calculations as per Norms

3.24 The total working capital requirement for the licensee can be broadly categorised under following two sub-heads:

- (i) Working Capital required for meeting operational requirements
- (ii) Working Capital required to fund the revenue deficit

**Working Capital for Operations**

3.25 The licensee has estimated its working capital requirement for FY 12 as per the regulation issued by the Commission

**Table 17: Interest on Working Capital for FY 10, FY 11 & FY 12 (Rs in crore)**

Description	FY 10	FY 11	FY 12
O&M expenses (as per norms)	57	63	72
Maintenance Spare (as per norms)	102	114	129
Receivables (as per norms)	996	1,120	1,263
Less:			
Security deposit of Consumers	467	481	495
Total Working Capital	688	816	969
Interest Rate (%)	11.75%	11.75%	12.25%
<b>Interest on Working Capital</b>	<b>81</b>	<b>96</b>	<b>119</b>

**Short-term borrowings to meet Revenue Deficit**

3.26 The licensee has not been able to recover the full cost from the tariff in the past which has resulted in large revenue deficit. Therefore, the licensee has to borrow short-term loans for meeting this revenue deficit, so as to avoid any financial dislocation. The interest component of the short-term borrowings is included in the Form 3.6 for the respective years.

**Depreciation**

3.27 The depreciation for FY 12 has been projected by applying applicable depreciation rates on the opening Gross Fixed Assets & addition during the year in Form 3.5

**Table 18: Depreciation for FY 10, FY 11 & FY 12**

	FY 10 (Actual)	FY 11 (Estimated)	FY 12 (Projected)
Depreciation	185	264	319

**Return on Equity**

3.28 The MYT Regulations for the second control period allows for a rate of return of 16% on the equity from FY 10. Since the licensee is not able to recover the full cost from the tariff as explained earlier and has to depend on the GoR subsidy to meet the revenue gap, the licensee has not proposed any return on equity for FY 12.

**Non Tariff income**

3.29 The Non Tariff Income for FY 11 and FY 12 including interest on loan from staff, interest on fixed deposit, gain on sale of fixed assets, etc has been estimated as under:

**Table 19: Non Tariff Income (Rs in Crore)**

<b>Particular</b>	<b>2009-10</b>	<b>2010-11</b>	<b>2011-12</b>
Interest on Loans and Advances to Staff	0.15	0.14	0.15
Interest Income from FDR & SD	0.66	0.72	0.80
Sale of Scrap & Income from Trading	9.53	10.51	4.51
Gain on sale of Fixed Assets	14.71	16.18	17.80
Miscellaneous Receipts	20.34	22.37	24.61
Rebate for Prompt Payment	40.37	44.41	48.85
Interest on Loans and Advances	0.15	0.16	0.18
Other Income	1.39	1.53	1.68
<b>Total Non Tariff Income</b>	<b>87.30</b>	<b>96.03</b>	<b>98.57</b>

**Aggregate Revenue Requirement for FY 10, FY 11 and FY 12**

3.30 The revised estimated ARR for FY 10 and the projected ARR for FY 12 is based on the expense elements considered in the preceding section is summarised in the following table.

**Table 20: ARR for FY 10, FY 11 & FY 12**

Particulars	2009-10		2010-11		2011-12	
	Approved	Revised Estimate	Approved	Revised Estimate	Approved	Revised Estimate
Power purchase	4,160	5845	4996	6182	5614	6937
<i>Transmission Charges:</i>						
PGCIL	67	67	71	71	74	74
RVPN	378	378	413	413	470	470
SLDC	9	9	11	11	13	13
O&M Expense (Normative)	323	282	382	348	447	434
Terminal Benefit		398		413		429
Interest and Finance Charges	336	811	340	1257	373	1411
Interest on Working Capital (Normative)	51	81	56	96	63	119
Depreciation	238	185	259	264	280	319
Other Expenses	26	0	28	0	31	0
<b>Gross Aggregate Revenue Requirement</b>	<b>5588</b>	<b>8057</b>	<b>6556</b>	<b>9055</b>	<b>7365</b>	<b>10206</b>
Less: Non Tariff Income	119	87	124	96	129	99
Less: Income from trading activity		0	541	0	816	0
<b>Aggregate Revenue Requirement</b>	<b>5469</b>	<b>7969</b>	<b>5891</b>	<b>8959</b>	<b>6420</b>	<b>10108</b>

**A4: Revenue from existing tariff**

- 4.1 The revised estimated revenue for FY 11 and projections for FY 12 from the forecasted energy sales for different consumer categories have been summarised in the table below. The revenue for each category has been calculated on the basis of retail tariff approved by the Commission on December 17, 2004. The charges mentioned category-wise for FY 10-11 & FY 11-12 are inclusive of only fixed and energy charges. All the rest charges are added in the other charges component.

**Table 21 : Revenue from existing Tariff**

<b>Consumer Categories</b>	<b>FY 11</b>	<b>FY 12</b>
Domestic	1,116	1,263
Non- Domestic	533	590
Public Street Lighting	33	37
<i>Public Water Works</i>		
Small	83	89
Medium	11	11
Large	51	54
Agriculture (M)	462	620
Agriculture (F)	103	93
Small Industrial	113	117
Medium Industrial	270	295
Bulk Supply for Mixed Load	202	227
HT- Large industrial	1,490	1,697
HT- Electric Traction – Railways	161	173
<b>Total</b>	<b>4,627</b>	<b>5,265</b>
Other Charges*	307	360
Other Income**	112	124
<b>Total</b>	<b>5046</b>	<b>5749</b>

\*It is presumed that Government will allow licensee to retain Electricity Duty collected on behalf of Government

\*\*Revenue from meter & transformer rent, theft and malpractices, DPS and other income

**Revenue Deficit**

4.2 The revised revenue deficit estimated for FY 11 and projections for control period FY 12 at the existing tariff is summarised in the table below:

**Table 22 : Revenue deficit/Surplus at existing tariff**

Description	FY 11	FY 12
Annual Revenue Requirement (Total Costs) [A]	8959	10108
Revenue Generation at existing tariff [B]	5046	5749
<b>Revenue (Deficit)/Surplus [B]-[A]</b>	<b>3913</b>	<b>4359</b>

4.3 The revenue deficit has shown an increasing trend from FY 11 & FY 12, this is primarily due to:

- (a) Increase in the Power Procurement Cost and Transmission Cost
- (b) Increase in the interest on loans.
- (c) Higher sales to agriculture consumers and lower rate in industrial sector resulting in reduced revenue

4.4 In view of significant gap in the ARR, the licensee has proposed for the revision of the retail supply tariff for consumers to meet the above revenue deficit. JVVNL requests the Commission through this tariff application, to revise the existing tariff structures in order to meet the uncovered deficit for FY 2011-12.

4.5 In view of the fact that the retail supply tariff in the state of Rajasthan has not been revised since 2005, JVVNL has proposed tariff similar to the tariff proposed by the other two DISCOMs. Thus any uncovered gap on account of revised retail supply tariff will be considered at the time of true up or subsequent tariff petition. This is proposed to be done to avoid any tariff shock to the consumers within the State.

4.6 JVVNL requests the Hon'ble Commission to approve the proposed tariff and make it applicable from April 1, 2011.

4.7 JVVNL proposes the recovery of revenue gap of Rs 1630 out of Rs. 4359 crore leaving unfilled deficit of Rs. 2729 crore, in following manner

- i. Transitional support from GoR – Rs. 152 crore
- ii. Additional subsidy of Rs. 94 crore towards BPL consumer, small domestic consumers having consumption upto 50 units per month and agriculture consumers.
- iii. Tariff hike of Rs 1384 crore, (excluding addition subsidy of Rs 94 crore as mentioned in point iii above)

The state government has committed to provide subsidy in the following manner:

1. *“At present, tariff subsidy is being provided by the state government to discoms under section 65 of Electricity Act for subsidizing the tariff of agricultural consumers, BPL consumer and small domestic consumers having consumption upto 50 units. The state government will provide a further annual subsidy upto Rs. 300 Crore as tariff subsidy under section 65 of the Electricity Act for absorbing increase in tariff for agricultural consumers, BPL consumers and small domestic consumers with monthly consumption of 50 units. Therefore, there will be no actual impact of increase of tariff on the agricultural consumers, BPL consumers and small domestic consumers (consumption less than 50 units per month).*
2. *The discoms have been allowed to retain electricity duty collected from the consumers till 2011-12 under the provisions of Financial Restructuring Plan. The retention of ED is proposed to be extended upto 2016-17 under Revised FRP.*
3. *The discoms are being provided Rs. 400 crore per annum as transitional cash support till 2011-12 under the provisions of Financial Restructuring Plan. This is also proposed to be extended till 2016-17 under revised FRP”*

**A5: REVENUE AT PROPOSED TARIFF AND REVENUE DEFICIT**

5.1 The tariff revision proposal will result in additional revenue of Rs. 1478 crore inclusive of Additional subsidy of Rs. 94 crore towards BPL consumer, small domestic consumers having consumption upto 50 units per month and agriculture consumers. The category-wise revenue generated for different category of consumers is provided in the table below:

**Table 23 : Revenue at proposed tariff FY 2011-12 (Rs. crore)**

<b>Consumer Categories</b>	<b>Existing</b>	<b>Proposed</b>
Domestic	1,263	1,626
Non- Domestic	590	804
Public Street Lighting	37	44
Public Water Works		
Small	89	106
Medium	11	15
Large	54	71
Agriculture (M)	620	675
Agriculture (F)	93	105
Small Industrial	117	153
Medium Industrial	295	384
Bulk Supply for Mixed Load	227	297
HT- Large industrial	1,697	2,235
HT- Electric Traction – Railways	173	228
<b>Total</b>	<b>5,265</b>	<b>6,743</b>
Other Charges	360	360
Other Non-tariff Income	124	124
<b>Total</b>	<b>5,749</b>	<b>7,227</b>

**A6: REVENUE SURPLUS/ DEFICIT AT PROPOSED TARIFF**

6.1 The revenue deficit for FY 2011-12 reworked out on the basis of the revenue at proposed tariff for full year is Rs. 2729 Crore as summarized in table below:

**Table 24 : Revenue Deficit at Proposed Tariff (Rs. Crore)**

Particular	Existing Tariff (Rs. Crore)	Proposed Tariff (Rs. Crore)
Aggregate Revenue Requirement	10108	10108
Revenue for Full Year (including other charges)	5749	7227
Revenue Surplus / (Deficit)	<b>4359</b>	<b>2881</b>
Transition Cash Support from GoR		152
<b>Revenue Surplus / (Deficit)</b>		<b>2729</b>

6.2 The licensee is not proposing to meet the entire deficit of FY 11-12 in the proposed tariff as this would result in a tariff shock for the consumers in the State. Therefore, it is proposed that the balance gap of Rs. 2729 Crore will be considered at the time of true-up / subsequent tariff petition.

**A7: Principles for Proposed retail Tariff**

7.1 JVVNL proposes the current retail tariff revision for different consumer categories, while taking into consideration the following:

- i. Ensure availability of electricity to consumers at reasonable and competitive rates as per the objectives of the National Tariff Policy.
- ii. Follow tariff guidelines provided in Section 61 of the Electricity Act 2003
- iii. Reduce the cross subsidies and move progressively towards cost to serve as per Para 8.3 of the National Tariff Policy.
- iv. Avoid any tariff shock due to full cost recovery from economically weaker sections of consumer categories like BPL, Domestic consumers and Agriculture consumers.
- v. Simplify the tariff structure for ease of implementation and understanding
- vi. Design the tariff structure to progressively reflect the cost structure of JVVNL i.e. fixed charge recoveries to match the fixed cost of the licensee.
- vii. Design the tariff structure to provide sufficient incentives and impetus to JVVNL's efforts of improving the operational efficiencies.
- viii. Design voltage-wise tariff structure to reflect the cost to serve the consumers.

7.2 **The salient features of the tariff proposal are:**

- i. Introduction of Below Poverty Line (BPL) category to the Domestic category. BPL consumers have been defined as consumers who have BPL cards issued by the Government of Rajasthan.
- ii. Achieving the objective that tariff progressively reflects the cost of supply of electricity and is within  $\pm 20$  % of the average cost of supply.
- iii. Increasing fixed charges recovery to match the fixed cost of the licensee
- iv. Introduction of new slabs in the domestic and non domestic category in order to encourage judicious consumption of electricity in a deficit scenario
- v. Re-classification of consumer categories to reflect the supply voltage and nature of supply
- vi. Providing incentives to encourage metering and billing
- vii. Providing incentives for energy efficiency measures
- viii. Rationalization of tariff and consumer categories
- ix. Subsidize the retail tariff for BPL, small domestic consumers upto 50 unit and agriculture consumers for which state government commitment in writing has already

been received. Therefore, there will be no actual impact of increase of tariff on BPL and small domestic consumers upto 50 units per month and agriculture consumers

- x. load management techniques - differential tariff structure for peak and off peak supply and metering arrangements (Time of Day metering)

7.3 The modifications and changes proposed in the existing tariff structure in the state of Rajasthan are briefly summarised in the following sections.

**A8: PROPOSED RETAIL TARIFF STRUCTURE**

- 8.1 JVVNL has proposed to increase the retail tariff for FY 2011-12 as the existing retail tariffs are not adequate to meet the ARR for FY 2011-12. The category-wise proposed increase in tariff and changes in tariff schedule for FY 2011-12 are summarized below.

**DOMESTIC SERVICE (LT-1 and HT-1)*****Introduction of additional Slabs:***

- 8.2 JVVNL proposes to increase the number of slabs in the domestic category from the existing two slabs. The slabs have been increased keeping in view that it does not unduly burden consumers with less consumption but at the same time provides for charging appropriately from high-consuming consumers and recovers the cost of additional power purchased to meet their demand. This would help in encouraging judicious consumption of electricity in the current energy-deficit scenario in the state.

***BPL and Small Consumers in the Domestic Category***

- 8.3 Govt. of Rajasthan has already allowed subsidy to BPL consumers consuming up to 50 units in a month who have been issued BPL card from the Govt. of Rajasthan. As per Section 5.5 of the National Electricity Policy (NEP), which states that *"A minimum level of support may be required to make the electricity affordable for consumers of very poor category. Consumers below poverty line who consume below a specified level, say 30 units per month, may receive special support in terms of tariff which are cross-subsidized. Tariffs for such designated group of consumers will be at least 50 % of the average (overall) cost of supply."* In view of the NEP provision, and direction of the Commission as per the Tariff Rationalization Order dated 31.08.07, It has been proposed by the JVVNL that the burden on BPL consumers due to rise in energy charges shall be born by Govt. of Rajasthan in the form of subsidy so that the effective rate in this category shall remain at the prevailing effective rates. Similarly in the case of small domestic consumer consuming up to 50 units in a month also remains at the prevailing effective rates as Govt. of Rajasthan shall bear the burden of hike in tariff in the form of subsidy.
- 8.4 The BPL domestic tariff shall be exclusively applicable to individual consumer /person and shall not be applicable to any institution. In case any BPL consumer has consumed more than 50 units per month in any billing cycle, the consumer will be charged as per the applicable tariff of the respective slab under the LT-I residential category for the additional units consumed.

**Tariff Increase**

8.5 The tariffs have been increased for the domestic consumers keeping in view the gap between the average cost of supply and average revenue realization from the domestic category. The energy charges for the domestic slabs consuming more units per month have been proposed higher considering the additional cost of power required to service these consumers. This would help in encouraging energy conservation and reduce the purchase of costlier power under UI.

8.6 The existing and proposed tariff schedule for domestic consumers is tabled below:

**Table 25: Domestic Category Existing and Proposed Tariff for FY 2011-12**

Category	Existing Tariff				Proposed Tariff				
	Energy Charges (EC)			Fixed Charges (FC)	Category	Energy Charges			Fixed Charges
Domestic Rural & Urban	EC	Subsidy by GoR	Effective EC after subsidy		Domestic Rural & Urban	EC	Subsidy by GoR	Effective EC after subsidy	
Upto 50 units per month (BPL)	Rs 1.95/ unit	Rs 1.10/ unit	Rs 0.85/ unit	Rs 80/ consumer/ month (effective FC Rs 50 consumer/month after subsidy of Rs. 30/connection/month)	0-50 units per month (BPL)	Rs. 2.25/ unit	Rs 1.40/ unit	Rs 0.85/ unit	Rs 80/ consumer/ month (effective FC Rs 50 consumer/month after subsidy of Rs. 30/connection/month)
0-50 units per month (small DL)	Rs 1.95/ unit	Rs 0.25/ unit*	Rs 1.70/ unit	Rs 80/ consumer/ month	0-50 units per month (small DL)	Rs 2.50/ unit	Rs 0.80/ unit*	Rs 1.70/ unit	Rs 80/ consumer/ month
0-50 units per month (General DL)	Rs 1.95/ unit		Rs 1.95/ unit	Rs 80/ consumer/ month	0-50 units per month General DL	Rs 2.50/ unit		Rs 2.50/ unit	Rs 80/ consumer/ month
Above 50 units per month	Rs 3.50/ unit		Rs 3.50/ unit	Rs 105/ consumer/ month	51-150 units per month	Rs 4.10/ unit		Rs 4.10/ unit	Rs 160/ consumer/ month
					151-300 units per month	Rs 4.30/ unit		Rs 4.30/ unit	Rs 160/ consumer/ month
					>300 units per month	Rs 4.50/ unit		Rs 4.50/ unit	Rs 205/ consumer/ month
<b>HT – Domestic</b>					<b>HT – Domestic</b>				
For contract demand over 50 KVA	Rs. 3.00/ unit		Rs. 3.00/ unit	Rs. 100 per KVA	For contract demand over 50 KVA	Rs. 4.50/ unit		Rs. 4.50/ unit	Rs. 150 per KVA

\*Subsidy allowed as per GoR for Small Domestic Consumers consuming 50 units in a month

**NON- DOMESTIC SERVICE (LT-2 & HT-2)****Introduction of additional Slabs:**

8.7 JVVNL proposes to increase the number of slabs in the non domestic category from the existing two slabs. The slabs have been increased with a view that it does not unduly burden consumers with less consumption but at the same time charges appropriately from high-consuming consumers and recovers the cost of additional power purchased to meet their demand. This would help in encouraging judicious consumption of electricity in the current energy-deficit scenario in the state.

8.8 The table below details the existing and proposed tariff of JVVNL for FY 2011-12.

**Table 26 : Non Domestic Category Existing and Proposed tariff for FY 2011-12**

Existing Tariff			Proposed Tariff		
Non-Domestic	Energy Charges	Fixed Charges	Non-Domestic	Energy Charges	Fixed Charges
<b>NDS up to 5 KW of SCL</b>			<b>NDS up to 5 KW of SCL</b>		
Upto 100 units	Rs.4.50/unit	Rs.80/ connection/ month	0-100 units	Rs.5.40/unit	Rs. 160/ connection/ month
Above 100 units	Rs.4.90/unit	Rs.120/ connection/ month	101-200 Unit	Rs.6.25/unit	Rs.160/ connection/ month
			Above-200 Unit	Rs.6.75/unit	Rs.205/ connection/ month
<b>NDS above 5 KW of SCL</b>			<b>NDS above 5 KW of SCL</b>		
Upto 100 units	Rs.4.50/unit	Rs.40/ KW of SCL / month	0-100 units	Rs.5.40/unit	Rs.60/ KW of SCL / month
Above 100 units	Rs.4.90/unit	Rs.40/ KW of SCL / month	101-200 Unit	Rs.6.25/unit	Rs.60/ KW of SCL / month
			Above-200 Unit	Rs.6.75/unit	Rs.60/ KW of SCL / month
<b>HT- NDS</b>			<b>HT-NDS</b>		

Existing Tariff			Proposed Tariff		
Non-Domestic	Energy Charges	Fixed Charges	Non-Domestic	Energy Charges	Fixed Charges
For contract demand over 50 KVA			For contract demand over 50 KVA		
Upto 100 units	Rs.4.50/ unit	Rs.60/ KVA of Billing Demand per month	Upto 100 units	Rs.6.75/unit	Rs.150/ KVA of Billing Demand per month
Above 100 units	Rs.4.90/ unit	Rs.60/ KVA of Billing Demand per month	Above 100 units	Rs.6.75/unit	Rs.150/ KVA of Billing Demand per month

8.9 JVVNL proposes the following modification in the Non-domestic category:

8.10 **Inclusion of Tariff for Telephone Exchanges in NDS category:** According to Para 96 of the Commission order dated 31.8.07 issued in the matter of rationalization of retail tariff, all (BSNL or otherwise) telephone/ mobile exchange/ switches including attached offices are covered under ML/LT-7. JVVNL proposes to categorize these connections under NDS as the telephone companies are run on a commercial basis and should not be kept at par with the Gol-P&T Department.

8.11 **Inclusion of educational institutions, hospital, and dispensaries maintained and run by agencies other than state Government or agencies of the state Government.**

#### **PUBLIC STREET LIGHTING SERVICE (LT-3)**

8.12 Considering the increase in the average cost of supply, JVVNL has proposed a revision in the fixed and variable charges for Public Street Lighting category. The proposed charges have been summarized below.

**Table 27: Public Street lighting Category Existing and Proposed tariff for FY 2011-12**

Public Street Lighting	Existing Tariff		Proposed Tariff	
	Energy Charges	Fixed Charges	Energy Charges	Fixed Charges
Population <1 Lakh	Rs.3.50/unit	Rs.30/ Lamp point/ month	Rs. 4.10/ unit	Rs. 50/ Lamp point/ month
Population = >1 Lakh	Rs.3.75/unit	Rs.45/ Lamp point/ month	Rs. 4.50/ unit	Rs. 60/ Lamp point/ month

8.13 JVVNL proposes to continue rebate of 30 paise per unit currently applicable on the Street Lights installed with time switch, subject to verification every six month of operation of time switch.

**AGRICULTURE SUPPLY (LT-4)**

8.14 The tariff in the state has not been revised since 2004. However, the average cost of supply has increased during the period leading to an increase in cross subsidy requirement. Therefore, JVVNL proposes to increase the tariff of both the metered and un-metered agricultural consumers. The Govt of Rajasthan as per provision 65 of the Electricity Act, 2003 would provide additional subsidy to compensate for the increase in tariff for agriculture consumers.

8.15 JVVNL also proposes to provide incentive of 10 paisa per unit in energy charges for installing energy efficient pump sets (3 star and above) as well as sprinklers sets by metered agriculture consumers.

8.16 The existing and the proposed tariff for agriculture supply are summarized below.

**Table 28: Agriculture Category Existing and Proposed tariff for FY 2011-12**

Agriculture Supply	Existing Tariff				Proposed Tariff				
	Energy Charges (EC)			Fixed Charges	Metered (AG/MS/LT-4)	Energy Charges			Fixed Charges
	EC	Subsidy by Gor	Effective EC after subsidy				EC	Subsidy by Gor	Effective EC after subsidy
Metered (AG/MS/LT-4)									
General (Not getting round the clock supply)	Rs. 1.10/unit	Rs. 0.20/unit	Rs. 0.90/unit	Rs.50/ connection/ month	General (Not getting round the clock supply)	Rs. 1.23/unit	Rs. 0.33/unit	Rs. 0.90/unit	Rs.50/ connection/ month
Farm house	Rs. 3.40/unit		Rs. 3.40/unit	Rs.50/ connection/ month	Farm house	Rs. 4.05/unit	Rs. 0.65/unit	Rs. 3.40/unit	Rs.50/ connection/ month
All others not covered under items above and getting round the clock supply & Poultry Farm.	Rs. 2.10/unit		Rs. 2.10/unit	Rs.50/ connection/ month	All others not covered under items above and getting round the clock supply & Poultry Farm.	Rs. 2.55/unit	Rs. 0.45/unit	Rs. 2.10/unit	Rs.50/ connection/ month
Flat/ unmetered (AG/FR/LT-4)					Flat/ unmetered (AG/FR/LT-4)				
General (Not getting round the clock supply)	Rs. 140/ HP/ Month	Rs. 55/ HP/ Month	Rs. 85/ HP/ Month	Rs.20/ connection/ month	General (Not getting round the clock supply)	Rs. 159/ HP/ Month	Rs. 74/ HP/ Month	Rs. 85/ HP/ Month	Rs.20/ connection/ month
Fodder	Rs. 200/ HP/ Month		Rs. 200/ HP/ Month	Rs.20/ connection/ month	Fodder	Rs. 240/ HP/ Month	Rs. 40/ HP/	Rs. 200/ HP/	Rs.20/ connection/ month

Agriculture Supply	Existing Tariff			Proposed Tariff				
	Energy Charges (EC)		Fixed Charges	Energy Charges			Fixed Charges	
						Month	Month	
All others not covered under items above and getting round the clock supply & Poultry Farm.	Rs 230/ HP/ Month	Rs 230/ HP/ Month	Rs.20/ connection/ month	All others not covered under items above and getting round the clock supply & Poultry Farm.	Rs 280/ HP/ Month	Rs. 50/ HP/ Month	Rs. 230/ HP/ Month	Rs.20/ connection/ month

8.17 Further, JVVNL proposes to abolish minimum charges for agriculture category of consumers as fixed charges are collected from the agricultural consumers for providing services irrespective of energy drawl.

**INDUSTRIAL SERVICE (LT and HT Industrial Consumers)**

8.18 JVVNL proposes to have differential tariff for upto 5 KW and more than 5 KW but not exceeding 18.65KW (25 HP) consumers under small industrial service.

8.19 JVVNL also proposes to introduce Time of Day (ToD) metering for HT industrial consumers – Large industrial service (LP / HT - 5). The details of the same are provided in General Terms and Conditions 6.8 (f) of this Petition

8.20 JVVNL further proposes to abolish the incentive scheme linked to consumption for LIP consumers including railways and public water works in view of the energy deficit scenario.

8.21 The table below gives a snapshot of the existing and proposed tariff structure for industrial categories.

**Table 29: Industrial Category Existing and Proposed tariff for FY 2011-12**

	Existing Tariff		Proposed Tariff		
	Energy Charges	Fixed Charges		Energy Charges	Fixed Charges
<b>LT Categories</b>					
<b>Small Industrial Service (LT-5)</b>			<b>Small Industrial Service (LT-5)</b>		
Up to 5 KW	Rs. 3.50/ unit	Rs. 35/ HP/ month	Up to 5 KW	Rs. 4.10/ unit	Rs. 50/ HP/ month
Above 5 KW But not exceeding 18.65 KW (25HP)	Rs.3.50/ unit	Rs. 35/ HP/ month	Above 5 KW But not exceeding	Rs.4.50/ unit	Rs. 50/ HP/ month

	Existing Tariff		Proposed Tariff		
	Energy Charges	Fixed Charges		Energy Charges	Fixed Charges
			18.65 KW (25HP)		
<b>Medium Industrial Service (LT-6)</b>			<b>Medium Industrial Service (LT-6)</b>		
SCL above 18.65 KW (25HP) but not exceeding 112 KW (150HP) &/or Maximum Demand of 50 KVA	Rs.3.75/ unit	Rs. 50/ HP/ month	SCL above 18.65 KW (25HP) but not exceeding 112 KW (150HP) &/or Maximum Demand of 50 KVA	Rs.4.75/ unit	Rs. 50/ HP/ month
<b>HT Categories</b>			<b>HT Categories</b>		
<b>Medium Industrial Service (HT-3)</b>			<b>Medium Industrial Service (HT-3)</b>		
SCL above 18.65 KW (25HP) but not exceeding 112 KW (150HP) &/or Maximum Demand of 125 KVA	Rs.3.75/ unit	Rs. 80/ KVA/ month	SCL above 18.65 KW (25HP) but not exceeding 112 KW (150HP) &/or Maximum Demand of 125 KVA	Rs.5.00/ unit	Rs. 125/ KVA/ month
<b>Large Industrial Service (HT-5)</b>			<b>Large Industrial Service (HT-5)</b>		
SCL above 150 HP &/or having Contract/ Maximum Demand above 125 KVA	Rs.4.01/ unit	Rs. 90/ KVA/ month	SCL above 150 HP &/or having Contract/ Maximum Demand above 125 KVA	Rs.5.25/ unit	Rs. 125/ KVA/ month

**BULK SUPPLY FOR MIXED LOAD (LT-7 and HT-4)**

8.22 JVVNL proposes the following revision in the fixed and variable charges for Bulk Supply for Mixed Load category:

Table 30: Bulk Supply for Mixed Load Category Existing and Proposed tariff for FY 2011-12

Bulk Supply for mixed Load	Existing Tariff		Proposed Tariff	
	Energy Charges	Fixed Charges	Energy Charges	Fixed Charges
<u>Schedule ML/LT-7</u>				
Up to 50 KVA	Rs.3.75/unit	Rs.50/HP/month	Rs.4.75/ unit	Rs.50/ HP/ month
<u>Schedule ML/HT-4</u>				
Above 50 KVA	Rs.3.75/unit	Rs.80/KVA/month	Rs.5.00/ unit	Rs. 125/ KVA/ month

### General Terms and Condition of Tariff

8.23 **Rebate for taking HT supply by LT consumers** – JVVNL proposes a uniform rebate for all categories of LT consumers taking supply on HT. Presently; domestic consumers are allowed a rebate of 6% on the billed amount while PSL, Ag (M) and SIP consumers are allowed a rebate of 7.5% on the billed amount. JVVNL proposes a uniform 7.5% rebate for all categories to avoid any ambiguity and encourage more consumers to shift to HT supply.

8.24 **Higher Voltage Rebate** – As per the Tariff rationalization Order of the Commission dated 31.8.2007, RERC had reasoned for upward revision in the voltage rebates. To provide a substantial incentive to HT consumers to shift to 33KV/132KV, particularly to the consumers requiring changeover from 11KV to 33KV, JVVNL proposes to increase the present rebate of 1%, 3% and 5% for taking supply at 33kv, 132kv and 220kv, respectively, to 3%, 4% and 5%, respectively.

8.25 **Higher Voltage Surcharge** - The National Electricity policy mentions that a high voltage distribution system is an effective method of reducing AT&C losses and also helps in improving voltage profile. Therefore, JVVNL proposes that the HT consumers taking supply at a voltage lower than the specified voltage corresponding to his contract demand shall be liable to pay surcharge at the rates indicated below:

- i. 220 or 132kv consumers taking supply at 11kv: 5%
- ii. 220 or 132kv consumers taking supply at 33kv: 3%
- iii. 33kv consumers taking supply at 11kv: 3%

Simultaneously, the sentence 'Contract Demand Based tariff is basically tariff for supply at 11kv' appearing under Preamble 1 of the 'Tariff Structure –Part II- HT Tariff is proposed to be deleted.

- 8.26 **Rural Rebate** – JVVNL proposes to abolish the existing rebate of 10% allowed to domestic consumers in rural areas which are not getting round the clock single phase supply as majority of the feeders are now getting round the clock supply.
- 8.27 **Power Factor** - Presently, the free band of power factor is 90% to 95%. A surcharge of 1% on the energy charge is levied for fall in average power factor by 0.01% and incentive of 1% on the energy charge is allowed for each 0.01% improvement in the power factor. However, in view of the advancement in equipment technology, JVVNL proposes the free band be revised to 95 to 98%. Also in view of the Commission's direction in the Tariff Rationalization Order dated 31.08.07, JVVNL proposes to revise the surcharge to 0.5% on energy charges for each 0.001% fall in power factor below 95% and an incentive of 1% on energy charges for each 0.001% improvement in power factor above 98%.
- 8.28 **Time of Day (ToD) Tariff** - ToD is an important Demand Side management tool and is being widely used by different states to flatten their load curve. To encourage shift of load to night off-peak hours, ToD tariff is used as a two-pronged tool, i.e., both to incentivize consumption during off-peak hours and offer disincentives for consumption during peak hours.
- 8.29 The National Electricity Policy also emphasizes on the ToD metering. As per NEP *"in order to reduce the requirements for capacity additions, the difference between electrical power demand during peak periods and off-peak periods would have to be reduced. Suitable load management techniques should be adopted for this purpose. Differential tariff structure for peak and off peak supply and metering arrangements (Time of Day metering) should be conducive to load management objectives"*
- 8.30 Further, the Commission vide Para 82 its Rationalization of Retail Tariffs Order dated 31.8.07 had directed the DISCOMs to include the concept of ToD tariff mechanism at least in those categories of consumers with higher contract demand. As a first step, JVVNL proposes to implement the ToD tariff for the HT, large Industrial service category. For the ToD tariff purpose, peak and off-peaks hours and applicable surcharge and rebate would be as follows:

**Table 31: ToD Time Slots and Surcharge/Rebate**

Definition	Time Slot	Surcharge / (Rebate) in Energy Charges
<b>(April to October)</b>		
Normal Hours	06:00 hrs to 19:00 hrs	0%
Peak Hours	19:00 hrs to 23:00 hrs	+10% increase
Off Peak Hours	23:00 hrs to 06:00 hrs	-2% decrease
<b>(November to March)</b>		
Normal Hours	06:00 hrs to 18:00 hrs	0 %
Peak Hours	18:00 hrs to 22:00 hrs	+10% increase
Off Peak Hours	22:00 hrs to 06:00 hrs	-2% decrease

- 8.31 **Redesigning of fixed and variable components of Tariff** - In the Tariff Rationalization Order dated 31.8.2007, while analyzing the data for the year 2007-08, the Commission has observed that as per the Aggregate Revenue Requirement of the DISCOMs, the actual ratio of Fixed Component (FC) and Variable Component (VC) is approximately 50-50% while the existing tariff structure provides for 12% Fixed Charges, 88% Energy Charges and 4% difference in minimum charge (before abolition). Therefore, the Commission had directed the DISCOMs to redesign the Fixed Charges and Energy Charges in the subsequent tariff petition.
- 8.32 In view of this direction of the Commission, JVVNL in this tariff petition has modified the structuring of fixed and energy charges in the retail tariffs for all the categories. This would help in recovering a larger proportion of the fixed cost of the utility. However, JVVNL would like to submit that increasing the Fixed Charges to 50% may not be in the interest of consumers which have lower consumption as it would increase their per unit charges significantly. Therefore, JVVNL has revised the ratio to the extent which does not unduly burdens the consumers with lower consumption but at the same time reduces the risk of recovery of lower fixed charges of the utility.

**A9: FUEL SURCHARGE**

- 9.1 RERC (Tariff) Regulations, 2009 provides for recovery of power purchase from consumers for variations in the cost of power purchase including fuel related cost. Since the licensee is currently contracting directly with the generators for the power procurement and also has to meet the requirements of the ABT regime, it has to bear the impact of variations in power purchase cost.
- 9.2 JVVNL requests to allow recovery of the Power Purchase Cost Adjustment Charge from consumers as per a formula approved by the Commission in the RERC Tariff Regulations, 2009.
- 9.3 **The Fuel Surcharge (FS) chargeable** by the distribution licensee from its consumers for any quarter, shall be computed as per the following formula:

$$FS = C / E \text{ (Rs./ kWh)}$$

Where

C (in Rs. Lakh) = {(Weighted Average Variable Cost of all sources of power purchase during previous quarter in Rs/kWh – Base Weighted Average Variable Cost of all sources of power purchase as approved under Tariff Order for the year under operation in Rs/kWh) x Corresponding Power Purchase from all sources during previous quarter in MU}/10.

E (in Lakh Units) =Energy sold (metered plus estimated) during previous quarter.

Note:

- a) Quarter referred under this formula shall correspond to financial quarter (s) viz.Q1 (Apr. to Jun) Q.2 (Jul to Sept), Q3 (Oct to Dec) and Q4 (Jan to Mar).
- b) The variation in power purchase cost due to UI and Hydro based generation and other unapproved purchases shall not be covered under fuel surcharge adjustment.
- c) For the generation stations/power purchase sources, which have single part tariff, 1/3 of the tariff shall be considered as fixed charge and 2/3 of the tariff shall be considered as energy charge for adjustment under this formula.
- d) The cost and quantum of power purchase shall be based on bills paid/credits received during the previous quarter irrespective of period to which it pertains and shall include arrears or refunds, if any, for previous period, not considered earlier.
- e) The rate of Fuel Surcharge shall be worked out in Rs./kWh rounded off next second decimal place.

- f) The Fuel Surcharge per unit for any quarter shall not exceed 10% of weighted average power purchase cost approved by the Commission, or such other ceiling as may be stipulated by the Commission from time to time.
  
- g) The total Fuel Surcharge recoverable, as per the formula specified above, shall be recovered from the actual sales and in case of un-metered consumers, it shall be recoverable based on estimated sales to such consumers, calculated in accordance with such methodology as may be stipulated by the Commission.

**A10: PRAYER**

10.1 JVVNL requests the Honourable Commission to:

- a. Admit the Revised Aggregate Revenue Requirement of FY 11-12 and the Tariff Revision Proposal for FY 11-12 as submitted herewith
- b. Approve the Aggregate Revenue Requirement of FY 11-12 as well as the Tariff Revision Proposal for FY 11-12
- c. Make the proposed Distribution and Retail Supply Tariff applicable from April 1, 2011 or as may be deemed fit by the Hon'ble Commission
- d. Condone any inadvertent omissions/ errors/ shortcomings and permit the Licensee to add/ change/ modify/ alter this filing and make further submissions as may be required at a future date.
- e. Allow the Licensee to submit additional information required by the Commission during the processing of this petition.
- f. Allow the Power Purchase and Fuel Cost Variations Adjustment as a pass-through to consumers based on the Power Purchase and Fuel Cost Adjustment formula to be filed separately by the DISCOM; and
- g. Pass such other and further orders as are deemed fit and proper in the facts and circumstances of the case.