

A5: COMMISSION’S ANALYSIS OF ARR AND TARIFF PETITION

5.1 This section contains a summary of the components of the petition submitted by JUSCO and the Commission’s analysis thereon.

Energy Sales

Petitioner’s submission

5.2 The petitioner has submitted details of actual energy sales for FY 2007-08, provisional sales for FY 2008-09 and projected sales for FY 2009-10. The sale during FY 2007-08 is only for a period of 7 months as actual operations during the year commenced from September 2007 in the FY 2007-08.

5.3 The projections for FY 2008-09 are based on the projected increase in demand by current consumers as well as estimated increase in sales through addition of new consumers in the network. The majority of growth during FY 2008-09 came from the demand generated by consumer additions and the petitioner submitted that it expects that the same pattern will continue during FY 2009-10, due to expansion in coverage area. During FY 2009-10, JUSCO plans to increase its network from the current coverage of about 30 sq. km. to more than 100 sq. km.

5.4 The projected connected load has been derived based on present connected load, load under process and expected load from fresh applications across each consumer category. The load factor for most of the consumer categories has been retained at FY 2008-09 levels except for the HTS and HTSS categories for which the load factor is assumed to be 20%.

5.5 The category-wise number of consumers proposed by the petitioner for FY 2007-08 (actual), FY 2008-09 (provisional) and FY 2009-10 (projected) is detailed below:

Table 6 Number of Consumers

Consumer Category	No. of Consumers		
	FY 2007-08	FY 2008-09	FY 2009-10
	<i>Actual</i>	<i>Provisional</i>	<i>Projected</i>
Domestic - DS I	0	0	200
Domestic - DS II	0	1	118
Domestic - DS III	13	38	90
Domestic - DS HT	2	3	15
Non Domestic - NDS I	0	0	100
Non Domestic - NDS II	8	25	53
Low Tension LTIS I	2	11	34
IAS I	0	0	10

HTS 11 KV	19	36	56
HTS 33 KV	1	5	11
HTSS 33 KV	0	0	1
Total	45	119	688

- 5.6 The category-wise connected load proposed by the petitioner for FY 2007-08 (actual), FY 2008-09 (provisional) and FY 2009-10 (projected) is detailed below:

Table 7 Total connected load (in kVA)

Consumer Category	Connected Load (kVA)		
	FY 2007-08	FY 2008-09	FY 2009-10
	<i>Actual</i>	<i>Provisional</i>	<i>Projected</i>
Domestic - DS I	0	0	235
Domestic - DS II	0	4	651
Domestic - DS III	158	391	1097
Domestic - DS HT	194	251	1251
Non Domestic - NDS I	0	0	176
Non Domestic - NDS II	46	232	1297
Low Tension LTIS I	148	796	2189
IAS I	0	0	41
HTS 11 KV	3884	8108	12943
HTS 33 KV	4100	24260	36260
HTSS 33 KV	0	0	1000
Total	8530	34042	57140

- 5.7 The category-wise contract demand and energy consumption proposed by the petitioner for FY 2009-10 is detailed below:

Table 8 Details of category-wise projected energy sales for FY 2009-10

Category	Contract Demand (in kVA)				Load Factor	Consumption
	Opening	Load under Progress	Fresh Applications	Total Load at end of FY	(%)	MUs
Domestic – DS I	0	0	235	235	6.67%	0.12
Domestic – DS II	4	59	588	651	7.74%	0.20
Domestic – DS III	391	118	588	1097	4.43%	0.30
Domestic – DSHT	251	500	500	1251	11.58%	0.88
Non Domestic - NDS I	0	0	176	176	5.00%	0.04
Non Domestic - NDS II	232	59	1006	1297	10.00%	0.71
Low Tension LTIS I	796	300	1093	2189	7.69%	1.05

IAS II	0	0	41	41	0.41%	0.00
HTS 11 KV	8108	2686	2149	12943	25.00%	19.54
HTS 33 KV	24260	10500	1500	36260	20.00%	48.55
HTSS 33 KV	0	1000	0	1000	20.00%	0.43
Total	34042	15222	7876	57140		71.82

5.8 The actual, provisional and projected sale of energy for FY2007-08, FY 2008-09 and FY 2009-10 respectively as proposed by the petitioner is tabulated below:.

Table 9 Estimates of Energy Sales (in kWh)

Category	FY 2007-08	FY 2008-09	FY 2009-10
	<i>Actual</i>	<i>Provisional</i>	<i>Projected</i>
Domestic - DS I	0	0	116800
Domestic - DS II	0	3391	195703
Domestic - DS III	25583	178440	302785
Domestic - DS HT	61760	254582	879817
Non Domestic - NDS I	0	0	43800
Non Domestic - NDS II	17101	136642	706140
Low Tension LTIS I	14550	500614	1050524
IAS I	0	0	1260
HTS 11 KV	1505953	13425558	19543008
HTS 33 KV	2761200	22649026	48551520
HTSS 33 KV	0	0	432000
Total units	4386147	37148253	71823356
Total sales (in MUs)	4.39	37.15	71.82

Commission's analysis

5.9 The Commission has scrutinized the commercial information and the basis of computation of sales as filed by the petitioner. Since the ARR filing for FY 2009-10 was done after the end of FY 2008-09, the Commission had asked the petitioner to submit the actual/latest commercial information figures for FY 2008-09.

5.10 The Commission observed anomalies in the computation of sales for FY 2009-10 in the submissions made by the petitioner. The discrepancies pertaining to the connected load/contract demand for various categories were brought to the knowledge of the petitioner for seeking clarification. Though the petitioner furnished additional information on the connected load for various categories but the information furnished was not adequate to substantiate the basis of projection of estimated sales.

5.11 However, since the sales figures as proposed by the petitioner for FY 2009-10 are on an estimated basis which shall be subjected to “truing-up” in subsequent tariff orders, the Commission approves the sales of 71.82 MUs as submitted by the petitioner. However, the Commission directs the petitioner to conduct demand forecasting and load research studies to correctly estimate the category-wise sales in future. The Commission has given timelines for the same in the directives section of this tariff order.

Distribution Losses

Petitioner’s submission

5.12 The petitioner submitted the distribution losses at the level of 0.64% and 3.24% for FY 2007-08 and FY 2008-09 respectively.

5.13 For FY 2009-10, the petitioner submitted that since it is expanding its distribution network from the current coverage of about 30 sq. km. to more than 100 sq. km., it expects higher distribution losses and accordingly proposed 7.50% distribution loss for FY 2009-10. The petitioner had mentioned the following reasons for the higher distribution losses projected during FY 2009-10:

- (a) Energizing of new power transformers in the later part of FY 2008-09 which will require time to reach optimal loading and hence add to existing distribution losses.
- (b) In the initial period, the established system should be able to cater to the expected demand in the area for at least 3 to 5 years. But in this case it remains under-utilized and sub-optimally loaded, which results in additional losses.
- (c) Being a parallel distribution licensee, JUSCO is building up its own distribution network and power line to wheel electric power from the source to the distribution area, and this adds to the losses which will reflect in the overall distribution loss of the licensee in this case, as against the transmission losses which are shown separately for utilities.
- (d) Expects significant increase in consumers within the LT segment which is spread over a large area.
- (e) The electricity distribution network in the area being in a nascent stage with only a few HT consumers being serviced earlier, the previous years’ losses were extremely low. The petitioner further mentions that in fact, the entire T&D loss of 3.24% during FY 2008-09 were only technical loss. Due to envisaged expansion in network, it is expected that the loss levels would increase abruptly due to increase in line length, theft and illegal tapping of electricity.

- 5.14 The petitioner submitted that though it would make best efforts to contain such losses, it still estimates technical loss of 6-7% in FY 2009-10 and additional commercial losses of 1-2%, summing up the total distribution losses to 7-9%. However, since it plans to adopt proactive loss control measures, JUSCO has proposed an estimated distribution loss level of 7.5% during FY 2009-10. The petitioner further submitted that current distribution losses are not relevant as they are not indicative of stabilized distribution business operations.
- 5.15 Therefore, the petitioner has requested the Commission to allow distribution losses at a level of 7.5% for FY 2009-10, which it claims are still lower when compared to distribution losses of other efficient private distribution licensees in India.

Commission's analysis

- 5.16 The Commission notes that 95% of the additional sales proposed in FY 2009-10 over FY 2008-09, are projected to be made to consumers in HT category. The consumers in HT category have much lower distribution and technical losses as compared to LT categories. While the Commission understands that distribution losses may go up due to the network expansion, the Commission finds the loss level of 7.5% too high and deems it fit to approve a distribution loss level of 5% only keeping in view that a major portion of additional sales in FY 2009-10 would be to HT consumer category.
- 5.17 However, since the petitioner is expanding the network and there is little time remaining for the petitioner to improve the loss levels in FY 2009-10, in case the actual losses during FY 2009-10 are reported in the range as stated in the petition, the Commission would review the loss levels in the subsequent tariff order. **Meanwhile, the Commission directs the petitioner to conduct loss estimation and energy audit studies to ascertain the correct loss levels. The Commission has given timelines for the same in the directives section of this tariff order.**

Energy Balance

Petitioner's submission

- 5.18 The petitioner submitted that the energy balance for FY 2007-08 and FY 2008-09 is based on the actual energy purchase, energy sales and corresponding energy losses for both years as submitted by the petitioner in the main petition and additional data submitted to the Commission.
- 5.19 The petitioner's projection of energy balance for FY 2009-10 is based on the energy sales projections being grossed up by a proposed distribution loss level of 7.5%, in order to arrive at the quantum of power purchase required to cater to the expected demand of 71.82 MUs. Therefore, the petitioner's estimated power purchase requirement is 76.21 MUs for FY 2009-10.

Commission's analysis

- 5.20 For FY 2007-08 and FY 2008-09, certified accounts of the petitioner are available and as per these accounts, quantum of power purchased by the petitioner in FY 2007-08 and 2008-09 was 4.41 MUs and 38.39 MUs respectively. Hence, for the purpose of determination of ARR, the Commission has taken these figures into account.
- 5.21 For FY 2009-10, with an approved loss level of 5%, the total power purchase requirement estimated and approved by the Commission is 75.60 MUs.
- 5.22 The source-wise break-up of energy purchase is detailed in the table given below:

Table 10 Proposed and approved quantum of power purchase/sale

Energy Balance (in MUs)	FY 2007-08		FY 2008-09		FY 2009-10	
	Submitted by JUSCO	Approved by JSERC	Submitted by JUSCO	Approved by JSERC	Submitted by JUSCO	Approved by JSERC
<i>Energy Requirement (MUs)</i>						
Total Energy Sales	4.39	4.39	37.15	37.15	71.82	71.82
Overall distribution loss (%)	0.64%	0.49%	3.24%	3.24%	7.50%	5%
Overall distribution loss (MUs)	0.03	0.02	1.24	1.24	5.82	3.78
Total Energy Requirement	4.41	4.41	38.39	38.39	77.65	75.60
<i>Energy Availability (MUs)</i>						
Power purchase from TSL -						
132 Kv	0.00	0.00	7.16	7.16	42.21	42.21
33 Kv	3.67	3.67	29.48	29.48	8.38	8.38
6.6 kV	0.74	0.74	1.76	1.76	1.93	1.93
Power purchase from DVC -						
33 Kv	0.00	0.00	0.00	0.00	25.13	23.08
Total Energy Availability	4.41	4.41	38.39	38.39	77.65	75.60

Power Purchase Cost

Petitioner's submission

- 5.23 The petitioner submitted that at the time of commencement of distribution operations, the only feasible source of electricity was Tata Steel Limited (TSL) due to proximity of the licensed area to Jamshedpur, which is the licensed area of TSL. TSL agreed to supply power to JUSCO, for starting its operations in the licensed area for an initial period of 2-3 years, on availability basis, at the fixed rate of Rs.2.72/kWh at 132 kV level and Rs.2.92/kWh at the level below 132 kV, with no provision for payment of any Annual Fixed Charges. Therefore, for FY 2007-08 and 2009-09, the power purchase cost comprises the power purchased from TSL only.

- 5.24 For FY 2009-10, since JUSCO expects to increase its distribution network manifold, its power needs can no longer be met through TSL alone and hence it has proposed to enter into a Power Purchase Agreement (PPA) with DVC, a government undertaking incorporated through central legislation which required the three governments- the Central Government and the state governments of West Bengal and Bihar (now also Jharkhand) to participate jointly for the purpose of building the DVC, for a medium term power purchase agreement for 10/20 MVA power from Jamshedpur at 33kV and 40/60 MVA power from other sub-station at 132kV.
- 5.25 In case of power purchase from DVC the capacity charges have been considered at Rs.365 per kVA per month and accordingly, the annual fixed charges for an average of 9.5 MVA for 9 months supply works out to Rs.312.08 Lakhs. Whereas, the energy charge is considered at Rs.1.63 per kWh (at the present tariff level of DVC), on a minimum normative energy units at 55% load factor as per the terms and agreement of Draft Agreement. The petitioner further states that irrespective of the actual consumption it will have to bear the energy cost for energy equivalent to 55% load factor. The petitioner had computed the energy charges at 45% load factor due to recessionary trend and accordingly estimates the rate of power purchase of Rs.1.90 per kWh from DVC during FY 2009-10.
- 5.26 In addition to above the fuel surcharge, presently at Rs.0.8071 per kWh is also applicable in case of power purchase from DVC.
- 5.27 The table given below summarizes the petitioner's power purchase cost.

Table 11 Proposed Power Purchase Cost (Rs. lakhs)

Sources	FY 2007-08	FY 2008-09	FY 2009-10
	<i>Actual</i>	<i>Provisional</i>	<i>Projected</i>
Tata Steel Limited			
132 kV	0.00	194.65	1148.04
33 kV	107.21	860.81	244.6
6.6 kV	21.69	51.3	56.43
DVC			
33 kV	0	0	1015.55
Total	128.91	1106.75	2464.62

- 5.28 It was further submitted by the petitioner that in future it will undertake competitive bidding route to procure power in future when a sizable volume is achieved by it and also network connectivity with grid/CTU/STU is established.

Commission's analysis

- 5.29 As per the terms of agreement dated December 1, 2008 with Tata Steel Limited (TSL), the energy charges for supply at 33,000 Volts level is Rs.2.92 per unit and for energy supplied at 132,000 Volts the energy charges is Rs. 2.72 per unit. These rates are valid for FY 2008-09. However, the rates mentioned above can be revised based on the tariff order of JSERC.
- 5.30 It pertinent to note that during FY 2007-08 and FY 2008-09, the petitioner power purchase is fully met by TSL. Therefore, for these financial years, the Commission has determined the cost of power from TSL on the basis of TSL's average power purchase cost of Rs.2.64 per unit and Rs.2.85 per unit for FY 2007-08 and FY 2008-09 respectively. These rates have been derived from the Tariff Order of TSL for FY 2007-08, FY 2008-09 and FY 2009-10, issued in January 2010.
- 5.31 For FY 2009-10, the Commission has again determined the cost of power purchase from TSL based on its average power purchase cost of Rs.2.91 per unit, which is determined on the basis of the Tariff Order for TSL for FY 2009-10, issued by the Commission in January 2010.
- 5.32 Meanwhile, since FY 2009-10 is the first year of contracting of power from the DVC and there is no information available on the load factor. The Commission has considered the energy charges at Rs.1.63 per unit at 55% load factor. The Commission approves the FSA of Rs.0.8071 per unit and fixed charges of Rs. 312.08 Lakhs, as proposed by the petitioner. The power purchase cost shall be trued- up as per the actual data, when it is made available by the petitioner in the next tariff petition.
- 5.33 On the basis of the above, the average power purchase rate for JUSCO is determined at Rs. 3.16 per unit for FY 2009-10. The table given below summarises the proposed and approved power purchase cost for JUSCO for FY 2007-08, FY 2008-09 and FY 2009-10.

Table 12 Proposed and approved Power Purchase Cost (Rs. lakhs)

Sources	FY 2007-08		FY 2008-09		FY 2009-10	
	<i>Submitted by JUSCO</i>	<i>Approved by JSERC</i>	<i>Submitted by JUSCO</i>	<i>Approved by JSERC</i>	<i>Submitted by JUSCO</i>	<i>Approved by JSERC</i>
Tata Steel Limited	128.91	116.52	1106.75	1094.49	1449.07	1517.1
DVC	0.00	0.00	0.00	0.00	1015.55	874.6
Total	128.9	116.52	1106.75	1094.49	2464.62	2391.7

Basis of allocation of common costs for O&M expenses

Petitioner's submission

- 5.34 The petitioner submitted that being an integrated petitioner service provider where supply of electricity is just one of the several services it offers, it has some common costs catering to all operations of JUSCO that are incurred on a common platform in order to reap benefits from the economies of scale. Thus, two components of O&M expenses – employee cost and A&G expenses – consist of both direct costs as well as common costs are allocated from JUSCO's shared services. The petitioner further submitted that the segregation and allocation of costs and assets is based on information currently available with JUSCO.
- 5.35 The petitioner submitted that the cost data is captured through the Financial Accounting System (FAS) maintained on SAP platform and separate cost centres that have been created in the FAS through which identification of directly allocable expenditures has been carried out.
- 5.36 In case of expenditures that are of common nature, either across JUSCO or across the whole Power Services Division, apportionment has been done taking certain assumptions or keeping in view generally accepted accounting norms and principles. The indirect common employee costs arising out of various back office functions of JUSCO have been apportioned on the basis given in table below, whereas those of the Power Business Division has been apportioned equally between the licensee operations of Saraikela-Kharsawan and the franchisee operations of Jamshedpur, keeping in view the extra time and efforts being devoted by the common resources towards the commencement of the former's operations.

Table 13 Allocation of cost

Items	Assumption with Rationale
<i>O&M Cost as per SAP</i>	Common Cost of JUSCO identified as Employee Cost and A&G Expenses and then apportioned to the Saraikela-Kharsawan project based on the following ratio.
HR	Allocation based on number of employees in Saraikela project vis-à-vis JUSCO
IT	Allocation based on number of PCs/laptops in Saraikela project vis-à-vis JUSCO
Legal	Allocated equally among all 8 segments of services within JUSCO and further allocating half of the PSD's share to the Saraikela project
GM (JTS) Secretariat	Allocation based on ratio of turnover of Saraikela project vis-à-vis JUSCO
TPM Activity	Allocation based on ratio of turnover of Saraikela project vis-à-vis JUSCO
Accounts	Allocation based on ratio of turnover of Saraikela project vis-à-vis JUSCO
MD Secretariat	Allocation based on ratio of turnover of Saraikela project vis-à-vis JUSCO
Administration	Allocated equally among all 8 segments of services within JUSCO and further allocating half of the PSD's share to the Saraikela project

Corp Communication	Allocated equally among all 8 segments of services within JUSCO and further allocating half of the PSD's share to the Saraikela project
Security	Allocated equally among all 8 segments of services within JUSCO and further allocating half of the PSD's share to the Saraikela project
JUSCO Sahyog, Billing and Collection	Allocation based on number of consumers of Saraikela project vis-à-vis JUSCO
Procurement	Allocation based on value of procurement of Saraikela project vis-à-vis JUSCO

Commission's Analysis

5.37 The Commission approves the methodology for cost allocation used by the petitioner for this tariff petition. **Meanwhile, the Commission directs JUSCO to maintain separate set of accounts for Saraikela-Kharsavan and get it duly certified by the auditors. The Commission has given timelines for the same in the directives section of this tariff order.**

Employee cost

Petitioner's submission

5.38 The direct employee cost for FY 2007-08 has been considered as nil since the entire expense was capitalized since very few operations had commenced. The actual cost of project operations in FY 2007-08 has been factored in the computation of the indirect employee cost as an apportionment of JUSCO's integrated costs and this is given as Rs.22.38 lakhs. For FY 2008-09, the direct employee cost has been estimated to be Rs.92.32 lakhs while the allocated employee cost has been estimated to be Rs. 66.35 lakhs. The net employee cost for FY 2007-08 and FY 2008-09, after taking into account capitalization of nil and Rs.12.70 Lakhs, is estimated to be Rs.22.38 lakhs and Rs.145.97 lakhs respectively.

5.39 For projecting the employee cost for FY 2009-10, an inflation rate of 10% over the previous year's employee cost is considered, which includes considerations on account of distribution network expansion during the year. The common costs thus calculated are then apportioned to the Saraikela project as per the assumptions detailed earlier.

5.40 The allocated employee cost for FY 2009-10 is thus computed by the petitioner at Rs.71.78 lakhs. Similarly, the direct employee cost for FY 2009-10 have also been calculated by considering an inflation factor of 10% over the previous years' direct employee cost, after taking into consideration the average increase in number of employees during FY 2009-10 over FY 2008-09. The direct employee cost for FY 2009-10 is computed by the petitioner to be Rs. 219.88 lakhs.

5.41 The total employee cost proposed for FY 2009-10 is Rs.291.66 Lakhs. The petitioner has proposed to capitalize Rs.30.24 lakhs of the employee's expenses, thereby projecting the net employee costs of Rs. 261.42 lakhs.

Commission's analysis

- 5.42 The Commission approves the number of employees as given in the petition for each year.
- 5.43 The Commission further approves the employee costs submitted by the petitioner for FY 2007-08 & FY 2008-09.
- 5.44 For computing the components of salaries & allowances for FY 2009-10, the Commission first determined the average cost per employee for each component in FY 2008-09 and then computed the corresponding figures for FY 2009-10 for the average number of employees in FY 2009-10 and escalated by an inflation factor of 10%. Therefore, the total direct employee cost approved by the Commission for FY 2009-10 is Rs. 211.81 lakhs as against the petitioner's proposal of Rs.219.88 lakhs.
- 5.45 The Commission has also accepted the basis of apportionment of employee costs and hence approves the allocated employee expenditure of Rs. 71.78 lakhs for FY 2009-10. It also approves the petitioner's submission of capitalizing Rs.30.24 lakhs and thus approves the net employee cost of Rs. 253.34 lakhs for FY 2009-10, as detailed hereunder:

Table 14 Proposed and approved employee costs (Rs. lakhs)

Employee Cost	FY 2007-08		FY 2008-09		FY 2009-10	
	Submitted by JUSCO	Approved by JSERC	Submitted by JUSCO	Approved by JSERC	Submitted by JUSCO	Approved by JSERC
No. of Employees	12	12	23	23	50	50
Salaries & Allowances						
Salary (Basic)			33.08	33.08	78.79	75.89
Sp. Allowance			14.78	14.78	35.20	33.91
Wages & Other Charges			15.54	15.54	37.01	35.65
HRA			2.87	2.87	6.84	6.58
Conveyance			2.78	2.78	6.62	6.38
Reimbursement-Chauffeur			0.33	0.33	0.79	0.76
LTA			1.19	1.19	2.83	2.73
Leave Salary			7.73	7.73	18.41	17.73
Superannuation Fund			3.07	3.07	7.31	7.04
Cont. to PF			3.22	3.22	7.67	7.39
Cont. to TEPS			0.11	0.11	0.26	0.25
Gratuity			4.80	4.80	11.43	11.01
Med. Exp.			2.75	2.75	6.55	6.31
Other			0.07	0.07	0.17	0.16
Employee Cost (Direct)			92.32	92.32	219.88	211.81

Common Cost of JUSCO	22.38	22.38	66.35	66.35	71.78	71.78
Gross Employee Cost	22.38	22.38	158.67	158.67	291.66	283.58
<i>Less: Capitalized</i>			12.70	12.70	30.24	30.24
Net Employee Cost	22.38	22.38	145.97	145.97	261.42	253.34

Administration & General (A&G) Expenses

Petitioner's submission

- 5.46 The direct A&G cost incurred by JUSCO for FY 2007-08 is only Rs. 0.51 lakhs, on account of part-year operations. The same for FY 2008-09 has been proposed as Rs.23.33 lakhs. The petitioner has submitted that the rise in A&G costs is expected due to the manifold increase in the scale of operations during the year. The allocated A&G costs for FY 2007-08 and 2008-09 is proposed to be Rs. 22.76 lakhs and Rs. 44.21 lakhs respectively. Thus, the total A&G cost for FY 2007-08 and 2008-09 sums up to Rs. 23.28 lakhs and Rs. 67.54 lakhs respectively.
- 5.47 For FY 2009-10, an inflation factor of 5% over the previous year's corresponding costs has been used for calculating the common A&G expenses. After allocation, the indirect A&G costs come to Rs. 49.22 lakhs. Combined with the proposed direct cost of Rs. 99.81 lakhs, the total A&G costs for FY 2009-10 amounts to Rs. 149.03 lakhs.

Commission's analysis

- 5.48 The Commission observes that the petitioner has not considered the capitalisation of common cost. As per generally accepted accounting principles the cost incurred in relation to creation of fixed assets needs to be capitalised. Considering that, a portion of common expenses of JUSCO are being utilised for creation of fixed assets, the Commission has considered the capitalisation at the nominal rate of 5% and allowed A&G expenses accordingly.
- 5.49 For FY 2007-08 and FY 2008-09, the gross A&G expenses claimed by the petitioner have been allowed and after taking into account the capitalisation of common expenses, the petitioner has been allowed the net A&G expenses of Rs. 22.14 lakhs and Rs.65.35 lakhs for FY 2007-08 and FY 2008-09 respectively.
- 5.50 For FY 2009-10, the Commission observes that the consultancy expenses and expenses on Private Security Guards/ Home Guards are exorbitantly projected at Rs.27.50 lakhs and Rs.18.00 lakhs respectively. The Commission is not convinced with the clarification given by the petitioner and deems it fit to allow only 50% of the expenses claimed by the petitioner under these heads.
- 5.51 Thus, the Commission allows Rs.123.83 lakhs as A&G expenses for FY 2009-10. The item-wise details of A&G expenditure approved by the Commission is detailed hereunder:

Table 15: Item-wise A&G expenses (Rs. Lakhs)

A&G Expenses	FY 2007-08		FY 2008-09		FY 2009-10	
	Submitted by JUSCO	Approved by JSERC	Submitted by JUSCO	Approved by JSERC	Submitted by JUSCO	Approved by JSERC
Legal Charges			11.01	11.01	13.00	13.00
Consultancy Charges/ Tech Fees			3.70	3.70	27.50	13.75
Travelling Exp			2.02	2.02	4.00	4.00
Vehicle Running (Light), Petrol & Oil			0.81	0.81	8.66	8.66
Printing & Stationery			0.02	0.02	1.20	1.20
Donation			0.80	0.80	2.50	2.50
Office maintenance			0.02	0.02	4.20	4.20
Telephone & Mobile Exp					2.40	2.40
Fees & Subscription			0.23	0.23	2.00	2.00
Insurance Premium			3.18	3.18	6.00	6.00
Entertainment	0.47	0.47	0.13	0.13	0.60	0.60
Pvt. Security Guards/ Home Guards	0.02	0.02	0.05	0.05	18.00	9.00
Miscellaneous Exp.			0.92	0.92	1.20	1.20
Training	0.02	0.02	0.46	0.46	1.50	1.50
Bank Charges					0.25	0.25
Vehicle Hire Expenses					2.40	2.40
Rent, Rates & Taxes					3.83	3.83
Bill Distribution Expenses					0.58	0.58
Total A&G Cost (Direct)	0.51	0.51	23.33	23.33	99.81	77.07
Common Cost of JUSCO	22.77	22.76	44.21	44.21	49.2	49.22
Gross A&G Cost	23.28	23.27	67.54	67.54	149.03	126.29
Less: Capitalised	0.00	1.14	0.00	2.19	0.00	2.46
Net A&G Cost	23.28	22.14	67.54	65.35	149.03	123.83

Repairs & Maintenance (R&M) Expenses

Petitioner's submission

- 5.52 The petitioner has submitted that there are no R&M expenses for FY 2007-08 because it was the first year of operation for this project and all assets were newly laid and no repair work was allowed.
- 5.53 In FY 2008-09, an amount of Rs. 24.36 lakhs has been submitted by the petitioner as having been incurred on R&M. The petitioner has submitted that there is no common cost apportioned to the Saraikela project under R&M expenses.
- 5.54 For 2009-10, the petitioner has estimated its R&M expenses at 2.5% of the opening GFA which translates to Rs.179.78 lakhs.

Commission's analysis

- 5.55 The Commission has not considered any R&M expenses for FY 2007-08 as proposed by the petitioner.
- 5.56 For FY 2008-09, the Commission approves R&M expenses of Rs. 24.36 lakhs, in accordance with the audited accounts.
- 5.57 For FY 2009-10, the Commission is not convinced with the petitioner's proposal of considering 2.5% of the opening GFA as R&M expenses because during the immediately preceding financial year (i.e. FY 2008-09), R&M expenses were equivalent to 0.87% of the opening GFA. The Commission feels that since the most of the assets have been laid by the petitioner in the last two years, they would be covered under warranty period and much of the repair works, if required, would be carried out free of cost.
- 5.58 Therefore, for FY 2009-10 the Commission approves 1% of opening GFA as R&M expenses amounting to Rs.71.81 lakhs as detailed hereunder:

Table 16: Proposed and Approved R&M Expenses (Rs. Lakhs)

Particulars	FY 2007-08		FY 2008-09		FY 2009-10	
	Submitted by JUSCO	Approved by JSERC	Submitted by JUSCO	Approved by JSERC	Submitted by JUSCO	Approved by JSERC
Building	0	0	4.94	4.94	36.45	14.56
Civil Works	0	0	0.03	0.03	5.26	2.10
Plant & Machinery	0	0	18.3	18.3	130.03	51.94
Office Equipments	0	0	1.09	1.09	8.04	3.21
Total	0	0	24.36	24.36	179.78	71.81

Total O&M Expenses

- 5.59 Thus the total O&M expenses proposed and approved for FY 2007-08, FY 2008-09 and FY 2009-10 is summarized in the table given below:

Table 17 Proposed and Approved O&M Costs (Rs. Lakhs)

Components	FY 2007-08		FY 2008-09		FY 2009-10	
	Submitted by JUSCO	Approved by JSERC	Submitted by JUSCO	Approved by JSERC	Submitted by JUSCO	Approved by JSERC
Employee Cost	22.38	22.38	145.97	145.97	261.42	253.34
A&G Expenses	23.28	22.14	67.54	65.35	149.03	123.83
R&M Expenses	0	0	24.36	24.36	179.78	71.81
Total O&M Expenses	45.66	44.52	237.87	235.68	590.23	448.98

Capital Investment Plan

Petitioner's submission

5.60 The petitioner has submitted the capital investment plan of Rs.1925 Lakhs for FY 2009-10 as detailed hereunder:

Table 18 Proposed Capital Investment plan for FY 2009-10 (Rs. Lakhs)

S No.	Particulars	Capital Investment
1.	132 kV Line from DVC Chandil Substation	800
2.	33 kV Overhead lines from Gamharia to Saraikela	210
3.	11 kV Overhead lines from secondary distribution	100
4.	11/.433 Volt Distribution transformers substations	100
5.	Land for Substation in various blocks of Saraikela-Kharasawan	60
6.	33/11 kV Substation at Saraikela	120
7.	LDC for distribution system in Saraikela-Kharasawan	150
8.	Vehicle for Testing equipment/staff movement	5
9.	Mobile Transformer with van on Trolley and switchgears	10
10.	56 MVA, 132/33 kV Power Transformer	370
11.	Total Capital Investment Plan	1925

Commission's analysis

5.61 The Commission accepts the Capital investment plan for FY 2009-10 submitted by the petitioner. The Commission directs the petitioner to submit scheme-wise details of actual capital expenditure incurred in FY 2008-09 & upto date for FY 2009-10 and also the scheme-wise implementation schedule for FY 2010-11, with the next tariff petition.

CWIP & Gross Fixed Asset

Petitioner's submission

5.62 The petitioner has submitted that it would be able to convert Rs.1078.00 Lakhs out of the total CWIP outstanding at the beginning of the year and capex planned during the year. The petitioner submitted the following figures for CWIP and Gross Fixed Assets for FY 2007-08, FY 2008-09 and FY 2009-10.

Table 19 Proposed CWIP and GFA (Rs. Lakhs)

Particulars	FY 2007-08	FY 2008-09	FY 2009-10
Capital Investment	4831.54	2429.74	1925.00
CWIP Capitalized	2921.06	4269.37	1078.51

Closing Balance of GFA	2921.35	7190.71	8269.22
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Commission's analysis

5.63 The Commission has approved the CWIP and GFA for FY 2007-08 and 2008-09 as per the certified accounts submitted by the petitioner. For FY 2009-10, the Commission approves the conversion of Rs.1078.00 Lakhs from opening CWIP and capex planned during FY 2009-10:

Table 20 Approved CWIP (Rs. Lakhs)

Particulars	FY 2007-08	FY 2008-09	FY 2009-10
Opening CWIP	-	2162.89	1166.72
Capex During the Year	5084.24	3263.66	1925.00
Total CWIP	5084.24	5426.56	3091.72
Less. Transferred to FA	2921.35	4259.84	1078.00
Closing CWIP	2162.89	1166.72	2013.72

5.1 On the basis of approved CWIP detailed above, value of approved GFA for FY 2009-10 is detailed hereunder:

Table 21: Approved GFA (Rs. Lakhs)

Gross Fixed Assets	FY 2007-08	FY 2008-09	FY 2009-10
Opening balance of GFA	-	2921.35	7181.18
Transferred from CWIP	2921.35	4259.84	1078.00
Closing balance of GFA	2921.35	7181.18	8259.18

Depreciation

Petitioner's submission

5.2 The computation of depreciation expense is based on the straight-line method (SLM) as prescribed in the 'Distribution Tariff Regulations, 2004'. The petitioner submitted that the rates of depreciation are as per the depreciation schedule given in Appendix II of the said Regulations. For assets capitalized during the financial year, depreciation is charged on a *pro-rata* basis. For assets projected to be capitalized in FY 2009-10, depreciation has been computed for 6 months only based on the assumption that the assets would be capitalized at different points of time during the year. Accordingly, depreciation charges for FY 2007-08, FY 2008-09 and FY 2009-10 amounts to Rs. 33.88 lakhs, Rs 281.51 lakhs and Rs. 498.26 lakhs respectively.

Commission's analysis

- 5.3 The 'Distribution Tariff Regulations, 2004' specify that the capital base for the purpose of depreciation shall be the historical cost of the asset with the residual life of the asset being 10% of its approved original cost. Since the said Regulations state that in case of operation of the asset for part-year depreciation shall be charged on *pro-rata* basis, hence the Commission has made use of the information submitted by the petitioner regarding the date of capitalization of various assets and accordingly calculated depreciation on *pro-rata* basis for assets capitalized during the year.
- 5.4 The Commission has not considered depreciation rates of certain category of assets taken by the petitioner as they do not form part of the depreciation schedule. Further, in accordance with the 'Distribution Tariff Regulations, 2004', the Commission calculated depreciation on newly capitalized assets taking into account their exact date of capitalization as opposed to the petitioner's computations on average basis.
- 5.5 Out of the total depreciation as calculated above, the proportionate depreciation on the assets created out of consumer contribution is deducted to arrive at the permissible depreciation. Accordingly, the Commission approves depreciation charge of Rs. 28.16 lakhs for FY 2007-08, Rs. 236.86 lakhs for FY 2008-09 and Rs. 475.11 lakhs for FY 2009-10.

Table 22 Proposed and approved depreciation costs

Particulars of Assets	Approved Depreciation Rate	Depreciation Cost (Rs. lakhs)					
		FY 2007-08		FY 2008-09		FY 2009-10	
		<i>Submitted by JUSCO</i>	<i>Approved by JSERC</i>	<i>Submitted by JUSCO</i>	<i>Approved by JSERC</i>	<i>Submitted by JUSCO</i>	<i>Approved by JSERC</i>
Land Development	0.00%	0.00	0.00	0.00	0.00	0.00	0.00
Offices & Showroom	3.02%	0.02	0.00	9.88	9.88	16.22	16.22
Other Buildings	3.02%	0.09	0.09	0.18	0.18	0.18	0.18
Transformers	7.81%	4.20	4.17	42.47	42.43	86.56	59.49
Switchgear including cable connections	7.84%	16.02	15.94	104.03	103.96	152.83	152.83
Underground cable	5.27%	7.30	7.23	56.80	56.75	80.09	80.09
Overhead Lines < 66kv (LT)	7.84%	0.00	0.00	0.27	0.26	4.59	4.59
Overhead Lines > 66kv	5.27%	0.90	0.90	51.20	51.19	115.50	107.33
Meters	12.77%	0.00	0.00	1.13	1.13	2.30	2.30
Self propelled vehicles	33.40%	0.72	0.72	0.96	0.96	3.47	0.96
Air conditioner (portable)	33.40%	0.00	0.00	0.05	0.05	0.50	0.50
Office furniture	12.77%	0.08	0.08	0.35	0.35	0.79	0.77

& fittings							
Office Equipments	12.77%	0.06	0.04	2.09	2.09	7.86	7.86
Street Light fittings	12.77%	0.00	0.00	0.02	0.02	0.04	0.04
Communication System	12.77%	0.00	0.00	0.02	0.02	0.13	0.13
Data Processing Machine	12.77%	0.02	0.01	2.19	1.72	4.14	3.26
Software	9.00%	1.20	0.00	2.96	0.56	3.56	1.15
Other Assets	Different rates	3.27	3.27	6.91	6.88	19.51	19.51
Depreciation Charges		33.88	32.46	281.51	278.43	498.26	457.22
Add: Dep. on assets added during FY10		-	-	-	-	-	34.27
Less: Depreciation on assets created out of consumer contribution		-	4.30	-	41.57	-	16.38
Net Depreciation Charges		33.88	28.16	281.51	236.86	498.26	475.11

Interest and Other Finance Charges

Interest on Loan

Petitioner's submission

- 5.6 The petitioner has submitted that the entire capital expenditure incurred by JUSCO has been funded through its own resources in the form of equity infusion and through consumer contribution.
- 5.7 Therefore, the total capital expenditure undertaken during the year is reduced by consumer contribution for the year, and the balance of the investment in the project till date is divided into debt and equity on normative basis in a ratio of 70:30. The normative loan has been calculated as 70% of closing balance of Gross Fixed Assets (GFA) net of consumer contribution.
- 5.8 Based on normative debt as described above, the interest liability is calculated at an interest rate of 12.75% which is equivalent to the SBI PLR as on April 1, 2007 (viz. 12.25%) plus an additional 0.50% for the risk margin considered by bank in case of long-term loans. Thus, interest charge on debts for FY 2007-08, FY 2008-09 and FY 2009-10 have been computed by the petitioner to be Rs. 113.08 lakhs, Rs. 356.39 lakhs and Rs.498.13 lakhs respectively.

Commission's analysis

- 5.9 In accordance with the 'Distribution Tariff Regulations, 2004', the Commission has computed the normative loan for the year equal to 70% of the closing GFA net of consumer contribution. Normative repayment is deemed to be equal to the depreciation charge during the year.
- 5.10 In accordance with the generally accepted accounting principles and norms specified in the 'Distribution Tariff Regulations, 2004', interest on normative loan has been calculated on the average normative loan as outstanding during the year at the interest rate of 12.75%.
- 5.11 The normative interest amount approved by the Commission for FY 2007-08, 2008-09 and 2009-10 amounts to Rs. 111.02 lakhs, Rs. 346.54 lakhs and Rs. 475.52 lakhs respectively, as detailed in the table given below:

Table 23 Approved interest on loan (Rs. In Lakhs)

Particulars	FY 2007-08	FY 2008-09	FY 2009-10
Opening Balance	-	1,741.53	3,694.40
Deemed Addition during the year	1,769.68	2,189.72	545.50
Deemed Repayments	28.16	236.86	475.11
Closing Balance	1,741.53	3,694.40	3,764.79
Average balance during the Year	870.76	2,717.96	3,729.59
Net interest	111.02	346.54	475.52

Interest on Security Deposits

Petitioner's submission

- 5.12 The licensee is paying interest on security deposits of consumers at the rate of 5.75% p.a. The petitioner mentions Rs. 2.82 lakhs, Rs. 29.16 lakhs and Rs. 59.67 lakhs respectively as the interest on consumers' security deposits for FY 2007-08, FY 2008-09 and FY 2009-10.

Commission's analysis

- 5.13 Regulation 13 of the 'Distribution Tariff Regulation, 2004' states that "*interest on consumer security deposits shall be equivalent to the bank rate or more, as may be specified by the Commission from time to time.*"
- 5.14 For FY 2007-08 and 2008-09, the Commission approves Rs. 2.82 lakhs and Rs. 29.37 lakhs as the interest on security deposits, on the basis of the audited accounts of the petitioner.

- 5.15 The consumer security deposit for FY 2009-10 has been projected on the basis of projected addition of consumers during FY 2009-10. The interest on consumer security deposit has been computed @ 5.75% p.a.
- 5.16 The Commission approves the interest on security deposit of Rs. 57.14 lakhs for FY 2009-10.

Total Interest and Finance Charges

- 5.17 As per the analysis of the Commission detailed above, the Interest and Finance Charges for the FYs 2007-08, 2008-09 and 2009-10 are approved as follows

Table 24 Proposed and approved Interest and other Finance charges (Rs. In Lakhs)

Particulars	FY 2007-08		FY 2008-09		FY 2009-10	
	Submitted by JUSCO	Approved by JSERC	Submitted by JUSCO	Approved by JSERC	Submitted by JUSCO	Approved by JSERC
Interest on Loan	113.08	111.02	356.39	346.54	498.13	475.52
Interest on Security Deposits	2.82	2.82	29.16	29.16	59.67	57.14
Total Interest & Finance Charges	115.90	113.84	385.55	375.91	557.80	532.67

Return on Equity (RoE)

Petitioner's submission

- 5.18 The petitioner has submitted that although the Commission recommends a return of 14% on equity, the power distribution business is perceived to have a greater inherent risk than generation or transmission business due to various factors including direct interface with retail consumers. The petitioner further submitted that various SERC's offer a rate of return of 16% for power distribution business in acknowledgment of the greater business risk. Hence the petitioner has computed RoE considering a 16% rate of return.
- 5.19 The equity base considered by petitioner is 30% of GFA less consumer contribution. RoE is also computed proportionately on the assets capitalized during the year. The RoE proposed by the petitioner for FY 2007-08, FY 2008-09 and FY 2009-10 is Rs.60.83 lakhs, Rs.197.77 lakhs and Rs.293.77 lakhs respectively.

Commission's analysis

- 5.20 In accordance with the 'Distribution Tariff Regulations, 2004', the Commission has considered the equity base to be equal to 30% of gross fixed assets net of consumer contribution.

- 5.21 Further, the Commission permits a rate of return of 14% as specified by Regulation 20.1 of the ‘Distribution Tariff Regulations, 2004’ as against the petitioners’ requested rate of return of 16%.
- 5.22 For FY 2007-08, the return on average equity outstanding during the year has been computed for a period of 7 months only corresponding to the actual operations of the petitioner during that year. For subsequent years the RoE has been allowed for 12 months period. Accordingly, the Commission approves RoE amounting to Rs.31.04 lakhs for FY 2007-08, Rs.173.37 lakhs for FY 2008-09 and Rs.257.17 lakhs for FY 2009-10, as detailed in the table given below:

Table 25 Proposed and approved Return on Equity

Return on Equity	FY 2007-08		FY 2008-09		FY 2009-10	
	Submitted by JUSCO	Approved by JSERC	Submitted by JUSCO	Approved by JSERC	Submitted by JUSCO	Approved by JSERC
Normative Equity Base (Rs. lakhs)	380.19	380.10	1236.06	1238.33	1836.06	1836.95
Rate of Return (%)	16%	14%	16%	14%	16%	14%
Return on Equity (Rs. lakhs)	60.83	31.04	197.77	173.37	293.77	257.17

Income Tax

Petitioner’s submission

- 5.23 The income tax is calculated based on the provisions of the Income Tax Act, 1961. The tax computations are based on adding back the depreciation as per the amount claimed in the ARR (calculated based on the rates of depreciation as specified in Annexure-II to the Distribution Tariff Regulations, 2004) and then deducting the depreciation calculated as per the requirement under the Income Tax Act, 1961 using the written down value (WDV) method.
- 5.24 Accordingly, the petitioner has proposed the income tax liability of Rs. 0.41 lakhs, Rs.10.19 lakhs and 170.07 lakhs for FY 2007-08, FY 2008-09 & FY 2009-10 respectively.

Commission’s analysis

- 5.25 The Commission has considered the method of computation of income tax as proposed the petitioner and computed income tax liability accordingly. There is deviation in the income tax claimed and approved by the Commission. This is due to the difference in RoE and depreciation figures approved by the Commission and proposed by the petitioner.
- 5.26 The table given below summarises the income-tax liability proposed by the petitioner and approved by the Commission:

Table 26 Proposed and approved Income Tax (Rs. Lakhs)

Return on Equity	FY 2007-08		FY 2008-09		FY 2009-10	
	<i>Submitted by JUSCO</i>	<i>Approved by JSERC</i>	<i>Submitted by JUSCO</i>	<i>Approved by JSERC</i>	<i>Submitted by JUSCO</i>	<i>Approved by JSERC</i>
Return on Equity	60.83	31.04	197.77	173.4	293.77	257.17
Income Tax rate	33.99%	33.99%	33.99%	33.99%	33.99%	33.99%
Gross RoE	92.2	47.0	299.6	262.7	445.0	389.60
Depreciation as per ARR	33.88	28.16	281.51	236.86	498.26	475.11
Depreciation as per Income-Tax	-237.9	-237.9	-907.53	-907.53	-941.1	-941.08
Normative interest on Loan	113.08	111.32	356.39	349.76	498.13	475.52
Taxable income	1.20	-51.4	30.0	-58.3	500.3	399.15
Income tax	0.41	0.00	10.19	0.00	170.07	135.67

Non Tariff Income (NTI)*Petitioner's submission*

- 5.27 The Non-tariff income includes meter rent, DPS and supervision charges, among others. Meter rent for FY 2009-10 has been estimated based on projected increase in number of consumers compared to FY 2008-09, whereas DPS has been projected in proportion to the tariff income.
- 5.28 The NTI for 2007-08, 2008-09 and 2009-10 is proposed as Rs.29.86 lakhs, Rs.28.04 lakhs and Rs.37.32 lakhs.

Commission's analysis

- 5.29 The Commission has considered the non-tariff income as proposed by the petitioner as shown below in Table 18.

Table 27 Proposed and approved NTI

Particulars	FY 2007-08		FY 2008-09		FY 2009-10	
	<i>Submitted by JUSCO</i>	<i>Approved by JSERC</i>	<i>Submitted by JUSCO</i>	<i>Approved by JSERC</i>	<i>Submitted by JUSCO</i>	<i>Approved by JSERC</i>
Meter Rent	0.23	0.23	2.35	2.35	7.95	7.95
Delayed Payment Surcharge			1.60	1.60	3.32	3.32
Supervision charges	29.63	29.63	22.47	22.47	26.05	26.05
Others	-	-	1.62	1.62	-	-
Total Income	29.86	29.86	28.04	28.04	37.32	37.32

Revenue from existing tariff

Petitioner's submission

5.30 The petitioner has submitted the category-wise revenue from existing tariffs for FY 2007-08, FY 2008-09 on the basis of the accounts and for FY 2009-10 on the basis of the projected sales and connected load for each category. The revenues from existing tariff submitted by the petitioner for FY 2007-08, FY 2008-09 and FY 2009-10 are Rs. 204.79 lakhs, Rs 1685.86 lakhs and Rs. 3505.05 lakhs. The petitioner has requested for allowing revenue as per 99% collection efficiency.

Commission's Analysis

5.31 The Commission approves the revenues from existing tariff for FY 2007-08 and FY 2008-09 as these are as per the annual accounts submitted by the petitioner. For FY 2009-10, the Commission has approved the revenues at existing tariffs which amounts to Rs.3505.05 Lakhs.

5.32 The Commission disallows the reduction in revenue on account of lower collection efficiency, as there is no provision for bad debts as per clause 10 of the ‘‘Distribution Tariff Regulations, 2004’’ and any inefficiency on part of the petitioner should not be loaded to the consumers.

Table 28 Revenue from existing tariffs for FY 2009-10

Consumer Category	FY 2009-10					
	Sales (Kwh)	Revenue (fixed charges)	Revenue (energy charges)	Others	Total revenue (in Rupees)	Average Tariff (Rs/Kwh)
Domestic - DS I	116,800	24,000	157,680		181,680	1.56
Domestic - DS II	195,703	14,160	298,446		312,606	1.60
Domestic - DS III	302,785	30,720	514,734		545,454	1.80
Domestic - DS HT	879,817	315,360	1,319,726		1,635,086	1.86
Non Domestic - NDS I	43,800	976,200	54,750		54,750	1.25
Non Domestic - NDS II	706,140		2,542,104		3,477,204	4.98
Low Tension LTIS I	1,050,124	1,130,760	3,676,834	292,177	5,097,612	4.85
IAS I	1,260		630		630	0.50
HTS 11 KV	19,543,008	17,970,960	77,800,775	1,278,335	96,612,686	4.97
HTS 33 KV	48,551,520	50,206,800	187,291,532	2,510,796	230,369,796	4.74
HT 132 KV						
HTSS 33 KV	43,200	900,000	1,041,547	155,920	1,900,252	4.86
Total	71,823,357	71,568,960	274,698,112	4,237,228	350,504,947	4.88
Total (Rs. Lakhs)		715.69	2746.98	42.37	3505.05	