

Aggregate Revenue Requirement &
Tariff Revision Petition
for FY 2006-07

Volume -1

Main Text & Formats

Submitted to

Jharkhand State Electricity Regulatory Commission
Ranchi

By

State Transmission Utility and Licensee
JHARKHAND STATE ELECTRICITY BOARD
RANCHI

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Notes:**In this Petition:**

- All currency figures used in this Petition, unless specifically stated otherwise, are in Rs Crores and Million Units;
- Volume 1 of this petition contains the Main Text & Formats of the Petition;
- Volume 2 contains the Evidential Documents;
- Volume 3 contains the Proposed Tariff Schedule and Proposed Terms and Conditions of Supply;

1 ARR & Tariff Revision Petition for FY 06-07

**BEFORE THE JHARKHAND STATE ELECTRICITY REGULATORY
COMMISSION, RANCHI**

Filing No.....

Case No.....

IN THE MATTER OF: Filing of the Expected Aggregate Revenue from Charges or Aggregate Revenue Requirement (ARR) for the financial year 2006-07 for the State Transmission Utility and Licensee under Section 62 and 86 of the Electricity Act, 2003

AND

IN THE MATTER OF Jharkhand State Electricity Board
(hereinafter referred to as "JSEB" or "The Board" which shall mean for the purpose of this petition the State Transmission Utility and the Licensee
- Applicant

The Applicant respectfully submits as under: -

1. As per the orders of the Government of Jharkhand as well as Government of India, JSEB has been allowed to function as State Transmission Utility and a Licensee till 9th October 2006. Currently the Board is functioning as two entities i.e. State Transmission Utility (STU) and a Licensee. This Annual Revenue Requirement (ARR) and Tariff petition has been submitted by the State Transmission utility and the Licensee. Since the power from Patratu Thermal Power Station (PTPS) and Sikidri Hydel Power Station (SHPS) is completely purchased by JSEB as Distribution licensee the generation tariff has also been proposed in this petition. The Hon'ble Commission is requested to approve the proposed tariff separately for generation entity, STU and Licensee. Accordingly the "Board" has segregated the expenditure for these three entities for the Financial Year 2006-07. Based on the provisions of Section 62 of the Act, STU and Licensee is filing the current petition, in order to meet its financial requirements and in compliance with the directives of the Commission on the matter.
2. This petition also includes the proposed Tariff Schedule and General Terms and Conditions of Supply.
3. In this Petition, JSEB has responded to the Hon'ble Commission's directives listed in Section 23 of the Order.

2 Contents of this Petition

1. This Petition covers in detail the basis, assumptions and projections of individual elements constituting the determination of ARR for FY 06-07 for Generation, Transmission and Distribution function. The following sections explain in detail the basis and forecasts of the following elements for FY 06-07:
 - a. Category wise Energy Sales & Revenues at existing tariffs
 - b. T&D Losses and Energy Requirement
 - c. Generation from PTPS and SHPS and Power Purchase from various sources to meet the Energy Requirement
 - d. Determination of Aggregate Revenue Requirement for Generation, Transmission and Distribution and Aggregate ARR by forecasting the following costs, other income & returns:
 - Fuel Cost
 - Power Purchase Cost
 - Employee Cost
 - Repairs & Maintenance Cost
 - Admin & General Cost
 - Interest Cost
 - Depreciation
 - Provision for Bad & Doubtful debt
 - Other Costs
 - Reasonable return
 - Non-Tariff Income
 - e. Determination of the ARR for the STU, the Licensee and Generation entity.
 - f. Determination of Gap between Revenue & Costs, Additional Revenue through the proposed Tariff Revision and the arrangements to cover the revenue gap of the Licensee
 - g. Truing-up of cost increase during FY 03-04, FY 04-05 & FY 05-06
 - h. Capital Investment Plan for Generation, Transmission, Rural Electrification & Distribution
 - i. Section 22 of this Petition covers in detail the Tariff revision proposal for FY 06-07 to meet part of the Revenue Gap
 - j. Section 23 of this petition covers in detail JSEB's response to the Commission's directives issued in its last order

3 Energy Sales

1. Energy Sales to various consumer categories for FY04-05 and FY 05-06 is on actuals, while Energy sales for FY06-07 is primarily projected based on past 3 years' Compounded Annual Growth Rate (CAGR) of category wise sales.
2. Table 1 summarizes category wise actual energy sales for FY04-05, FY05-06 and FY06-07 for all categories. As can be seen, JSEB's overall energy sales are significantly dependent upon HT Industries and Railway Traction.
3. JSEB submits to the Hon'ble Commission to approve the energy sales forecasted herein.

Table 1: Category wise Energy Sales (MU)

Energy Sales (MU)	FY 04-05 Actuals	FY 05-06 Actuals	FY 06-07 Projections	FY 05 to FY 07 CAGR
Domestic	777	989	1,206	24.57%
Commercial	140	159	170	10.46%
LT Industry	113	116	119	2.59%
HT Industry	1,318	1,485	1,621	10.90%
Railway Traction	383	530	556	20.49%
Agriculture	56	59	64	7.00%
Public Street Lighting	75	80	84	6.40%
TOTAL ENERGY SOLD	2,862	3,418	3,821	15.55%

4 T&D Loss Reduction

1. JSEB proposes to reduce the T&D losses from 46.76% in FY 05-06 to 42.50% in FY 06-07, a loss reduction of 4.26% during FY06-07, as provided in Table 2.
2. JSEB has taken the following initiatives to identify the loss making areas and to take corrective actions for reducing high T&D losses
 - a. Energy Audit at 11kV feeder and Distribution Transformer levels to localize the distribution losses
 - b. Strengthening of Transmission and Distribution network through Capital Investments, which would enable reduction of overloading and technical losses of the system
3. T&D losses of SEBs of states, which were bifurcated, viz., Uttaranchal and Chhattisgarh are also high at 36.51% and 38.96% respectively. T&D losses of SEBs of neighbouring states, Bihar and Orissa are also high. Orissa's losses are still high at ~ 35% inspite of over 10 years of power sector reforms & Institutional Strengthening exercises. Orissa's losses were as high as 50% before privatization of Distribution Companies.
4. JSEB submits to the Hon'ble Commission to approve the T&D losses submitted herein, keeping in mind the issues highlighted above.

Table 2: T&D Losses

T&D Losses (%)	FY 04-05 Actuals	FY 05-06 Actuals	FY 06-07 Projections	Reduction
Overall T&D Losses	50.73%	46.76%	42.50%	4.26%
Sub-Transmission & Distribution Losses	-	44.69%	40.23%	4.45%
Transmission Losses	-	6.17%	6.10%	0.07%

5 Energy Requirement of the System

- Overall energy sales to various categories are estimated to grow at 15.55% (from FY 05 to FY 07) during FY 06-07, as shown in Table 3.

Table 3: Energy Sales in the System

Energy Sales (MU)	FY 04-05 Actuals	FY 05-06 Actuals	FY 06-07 Projections	FY 05 to FY 07 CAGR
Domestic	777	989	1,206	24.57%
Commercial	140	159	170	10.46%
LT Industry	113	116	119	2.59%
HT Industry	1,318	1,485	1,621	10.90%
Railway Traction	383	530	556	20.49%
Agriculture	56	59	64	7.00%
Public Street Lighting	75	80	84	6.40%
TOTAL ENERGY SOLD	2,862	3,418	3,821	15.55%

- Thus, the overall energy requirement for FY05-06 was 6,420 MUs and is projected to be 6,646 MUs in FY 06-07 respectively, an increase of 3.51%, as shown in Table 4.

Table 4: Energy Requirement of the System

Energy Requirement (Million Units)	FY 04-05 Actuals	FY 05-06 Actuals	FY 06-07 Projections
Energy Sales within System	2,862	3,418	3,821
Total T&D Loss %	50.73%	46.76%	42.50%
Total T&D Loss	2,947	3,002	2,824
<i>Sub-Transmission and Distribution loss %</i>		44.69%	40.23%
<i>Sub-Transmission and Distribution loss</i>		2,761	2,572
<i>Transmission loss %</i>		6.17%	6.10%
<i>Transmission loss</i>		241	252
Energy Requirement	5,809	6,420	6,646

- 3.5% external losses from the purchase of power from the external sources such as NTPC, NHPC, etc has been considered while calculating the T&D losses of JSEB power system.

6 Energy Availability

6.1 Thermal Generation

1. Table 5 summarizes the performance and input parameters for Patrattu Thermal Power Station (PTPS)
2. PTPS has 10 units with the following installed capacities
 - a. Units 1 – 4 of 50MW each totaling 200MW
 - b. Units 5 & 6 of 100 MW each totaling 200MW
 - c. Units 7 – 10 of 110MW each totaling 440 MW
 - d. Total Installed capacity of the station stands at 840MW
3. De-rated capacity of the 10 units of PTPS are:
 - a. Units 1 – 4 of 40MW each totaling 160MW
 - b. Units 5 & 6 of 90 MW each totaling 180MW
 - c. Units 7 & 8 of 105 MW each totaling 210 MW
 - d. Units 9 & 10 of 110 MW each totaling 220 MW
 - e. Total De-rated capacity of the station stands at 770MW
4. Of the 10 units of PTPS, Units 1 –6 of the station are around 33 – 40 years old (installed in 1966 -71) and have run beyond normal economic life of these stations. While Units 7 –10 are installed during 1977 – 86, which have also become reasonably old.
5. Due to the aging of these stations, capacities of Units 1–8 are de-rated by 70 MW and hence the overall capacity of the station stands reduced to 770MW as against the installed capacity of 840 MW.
6. Units 3, 4, 5, 7 and 8 with total de-rated capacity of 380 MW are shut-down completely and require renovation and modernization before generation can be started from these units. At present unit 1, 7, 9 and 10 are being restored for generation.
7. The restoration of Unit 1 and 7 are undertaken by M/s NASL. Where as for Unit 7, RLA study has been completed and generation is expected by December 2006.
8. Of the de-rated capacity of Unit 6 of 90MW, only 70 MW is effectively available for generation, as capital overhauling of its TG set has not been done since 1992 and its last stage blades of turbine are cut.
9. 2nd Boiler of Unit 6 is also expected to commence generation from December 2006.

10. Thus, only 340 MW of the plant capacity was available for the generation in FY 06-07 till the fire broke out in Unit No 9 and 10 in August. Currently the unit under operation is as follows:
 - § Unit No 1 & 2: 40 X 2 MW
 - § Unit No 6 with 1 boiler: 40 MW
11. Unit No 9 and 10 has been damaged due to fire in switchgear, cable gallery and control room damaging power and control cables, breakers, control room equipments and instruments, FSSS panel, SADC panel, DAVR panel, protection and interlock release.
12. PLF of the station as a whole is provided in Table 5 for the de-rated capacity of 770 MW
13. JSEB inherited this aging station from BSEB with poor performance on key performance parameters like Availability factor, PLF, Station Heat Rate and Specific Oil consumption.
14. JSEB has been taking major initiatives to renovate and modernize the station for the past 2.5 years in terms of conducting RLA studies, finalizing tenders for renovation of the units as well as arranging for funds through AG&SP scheme of Government of India with the objective of significantly improving the performance of the station. Results of these initiatives are expected to accrue by the end of FY06-07.
15. As summarized in Table 6 and Table 7, Harduaganj and Barauni Thermal power stations in Uttar Pradesh and Bihar, which are of similar age as Patratu TPS of Jharkhand, also operate at very low efficiencies due to aging of the station. ATPS Chachai, one of the thermal power plants in Madhya Pradesh, is also operating at very low efficiency because of the aging. In FY2004-05 its auxiliary consumption was 12.37% and Station Heat Rate was 4137 Kcal/Kwh.
16. PTPS is expected to have gross generation of 708.25 Mus in FY2006-07 in view of the recent fire in Unit No 9 and 10.
17. Due to the reasons mentioned above, JSEB submits to the Hon'ble Commission to approve the performance of the station, as mentioned in Table 5 for FY 04-05, FY 05-06 and FY 06-07. JSEB is optimistic of improving the station performance from FY07-08 because of performance improvement through comprehensive overhauling of the units of the station as well as revival of Unit No 9 and 10.

Table 5: Thermal Generation: Patrattu Thermal Power Station

PATRATU TPS	Units	FY 04-05	FY 05-06	FY 06-07
		Prov.	Rev. Est.	Proj.
Assumptions				
Installed Capacity	MW	840	840	840
Derated Capacity (Usable)	MW	770	770	770
Plant Load Factor	%	11.0%	12.5%	10.5%
Auxiliary Consumption	%	19.8%	16.6%	16.0%
Station Heat Rate	Kcal/kWh	4,315	4,230	4,230
Sp. Oil Consumption	ml/kWh	37	26	25
Calorific Value of Coal	Kcal/kg	4,100	4,165	4,165
Calorific Value of Oil	Kcal/L	10,500	10,500	10,500
Coal Transit Loss	%	5.02%	4.00%	4.00%
Price of Coal - Landed Cost (Incl Transit Loss)	Rs/Tonne	849	965	965
Price of Oil	Rs/KL	17,270	22,919	24,065
Specific Coal Consumption	kg/kWh	0.96	0.96	0.96
Projections				
Gross Generation	MU	743.31	846.32	708.25
Auxiliary Consumption	MU	146.87	140.16	113.32
Net Generation	MU	596.45	706.17	594.93
Coal Consumption	Tonnes	710,967	811,904	680,698
Oil Consumption	KL	27,867	21,846	17,706
Coal Cost	Rs Cr.	60.38	78.38	65.71
Oil Cost	Rs Cr.	48.13	50.07	42.61
Total Fuel Cost	Rs Cr.	108.51	128.45	108.33
Other Expenses related to Generation	Rs. Cr.	6.00	6.00	6.00
Total Cost of Fuel	Rs. Cr.	114.51	134.45	114.33
Per unit Fuel Cost (on Gross Generation)	Rs/kWH	1.54	1.59	1.61
Per unit Fuel Cost (on Net Generation)	Rs/kWH	1.92	1.90	1.92

Table 6: Harduaganj Thermal Power Plant for FY03-04 (Uttar Pradesh)

Units	Capacity (MW)	Generation (MU)	Planned Maintenance (%)	Forced Outage (%)	Availability (%)	Partial Unavail (%)	PLF(%)
Unit 1	40	0	100.00%	0.00%	0.00%	0.00%	0.00%
Unit 3	60	180	0.51%	32.34%	67.15%	33.06%	34.09%
Unit 4	60	228	0.00%	23.36%	76.64%	33.45%	43.18%
Unit 5	60	0	100.00%	0.00%	0.00%	0.00%	0.00%
Unit 6	60	0	100.00%	0.00%	0.00%	0.00%	0.00%
Unit 7	105	325	33.97%	14.43%	51.60%	16.33%	35.27%
Total	385	733	50.90%	12.62%	36.48%	14.82%	21.66%

Table 7: Barauni Thermal Power Plant for FY03-04 (Bihar)

Units	Capacity (MW)	Generation (MU)	Planned Maintenance (%)	Forced Outage (%)	Availability (%)	Partial Unavail (%)	PLF(%)
Unit 4	50	0	100.00%	0.00%	0.00%	0.00%	0.00%
Unit 5	50	0	100.00%	0.00%	0.00%	0.00%	0.00%
Unit 6	105	135	0.00%	61.49%	38.51%	4.11%	14.64%
Unit 7	105	141	0.00%	64.29%	35.71%	1.86%	15.29%
Total	310	276	32.26%	42.60%	25.14%	2.02%	10.14%

6.2 Hydel Generation

1. Table 8 summarizes energy availability from Sikidiri Hydel Power station for the FY04-05, FY05-06 & FY 06-07.
2. Energy Availability for FY 06-07 has increased as compared to FY05-06 because of the good rainfall in FY06-07.
3. The main reason for shortfall in generation in 05-06 was due to the low level of reservoir. The plant was designed for continuous operation at the reservoir level of 1925 ft. However, from the records made available to the appointed technical consultants Lahmeyer International (India) Pvt. Ltd., it is observed that the reservoir level was above the level of 1925 ft. for only 3 - 4 months in a year as there are restrictions on the use of water by the project. The restrictions are on account of the fact that the same reservoir is the source of supply of water to the city of Ranchi. Moreover, the actual quantity of water in the reservoir is lower than reported due to heavy silting.
4. Considering the above, Net Energy available from Sikidiri hydel station is estimated to be 144.76 MU in FY 06-07.

Table 8: Hydel Generation: Sikidiri

HYDEL GENERATION	FY 04-05	FY 05-06	FY 06-07
Sikidiri	Actual	Actual	Proj.
Capacity (MW)	130.00	130.00	130.00
Gross Generation (MU)	141.50	50.61	145.00
Aux Consumption (MU)	0.24	0.24	0.24
Net Hydel Generation (MU)	141.26	50.37	144.76

6.3 Power Purchase

1. Table 9 lists down station wise Power Purchase for FY04-05, FY05-06 and FY06-07.
2. Due to poor energy availability from PTPS, as explained in the previous sections, JSEB shall be procuring high cost power from DVC and other sources to meet its energy requirement during the FY06-07.
3. Energy availability from NTPC, NHPC and DVC stations in FY06-07 for the intra-state sale are estimated to be at the same level as FY05-06. Power purchase from WBSEB and TVNL in FY 06-07 is estimated to be at 18 MUs and 1607 MUs respectively, as mentioned in Table 9.
4. JSEB has been procuring power from TVNL to the maximum extent possible, subject to the prevailing power evacuation constraints through the existing transmission lines. However, JSEB is in the process of strengthening the power evacuation system from TVNL to maximize power procurement from TVNL.
5. External Transmission losses on power purchase in FY 06-07 is estimated to be 3.5% of Gross Power purchase (Inter-state power purchase) (except TVNL & DVC because of intra state transfer of power) on which JSEB has little control, based on ER external losses.
6. Average Power Purchase cost from each station in FY06-07 is estimated to be at similar levels as in FY05-06 except TVNL as the rates have been revised. Should there be any change in the power procurement cost including fuel cost during the course of the ARR and Tariff petition finalisation, the Hon'ble Commission is requested to appropriately consider the same in its Tariff order.
7. Average Power Purchase cost per unit for FY 06-07 is expected to be the same as in FY05-06 i.e. Rs. 2.26/kWh. JSEB further submits that the average power purchase cost per unit for FY 06-07 can be further reduced as the cost of power purchase from DVC is high and presently it is under the review of CERC. For the FY 06-07 Average Cost/unit for procurement from DVC has been kept at same level as that of FY05-06.
8. JSEB submits to the Hon'ble Commission to approve the Power Purchase level and costs estimated by the petitioner as summarized in tables below.

Table 9: Power Purchase

Sources	(MU)		
	FY 04-05 Actual	FY 05-06 Actual	FY 06-07 Projection
NTPC			
Farakka	376	704	704
Kahalgaon	332	533	533
Talcher	315	397	397
NTPC - TOTAL	1,023	1,634	1,634
NHPC			
Rangit	20	43	43
Chukha	53	158	158
Kuruchi	0	0	0
NHPC - TOTAL	73	201	201
OTHER SOURCES			
DVC	2,323	2,511	2,511
TVNL	1,093	1,309	1,607
WBSEB	29	34	18
PTC & NVVN	152	0	0
Unscheduled Interchange	439	43	0
PGCIL	0	0	0
ERLDC	0	0	0
Other Sources - Total	4,036	3,896	4,136
GROSS POWER PURCHASE	5,131	5,730	5,971
External Losses (%)[#]	3.50%	3.50%	3.50%
NET POWER PURCHASE (less External Losses)	5,071	5,663	5,906

[#] *Not applicable on DVC and TVNL*

Additional power purchase from TVNL 400 Mus has also been considered during the FY2006-07 which shall be treated as UI sales and receivables.

Hence effectively JSEB shall be purchasing additional power from TVNL. The details of the same has been summarised below:

Table 10: Additional Power Purchase from TVNL

Power Purchase from TVNL	Mus
Power Purchase for Intra-state sale	1,607
UI sale	400
Total	2,007

9. Table 11 summarizes the station wise power purchase costs for FY04-05, FY05-06 and FY06-07, while Table 12 summarizes station-wise average

procurement cost per unit of net energy available after adjusting for external transmission losses.

10. The power purchase cost from Rangit has been increased for the FY 2004-05 due to the revision of Tariff by Central electricity Regulatory Commission.
11. JSEB submits to the Hon'ble Commission to approve the power procurement cost as estimated by the Petitioner.

Table 11: Power Purchase Cost

Sources	(Rs. Crores)		
	FY 04-05 Prov.	FY 05-06 Rev. Est.	FY 06-07 Projection
NTPC			
Farakka	65.80	116.08	116.08
Kahalgaon	66.40	91.64	91.64
Talcher	39.47	48.98	48.98
NTPC - TOTAL	171.68	256.70	256.70
NHPC			
Rangit	7.00	12.54	12.54
Chukha	7.81	24.02	24.02
Kuruchi	0.00	0.00	0.00
NHPC - TOTAL	14.81	36.55	36.55
OTHER SOURCES			
DVC	599.06	710.47	710.47
TVNL	193.82	240.97	306.06
WBSEB	12.18	13.73	8.01
PTC & NVVN	31.90	0.00	0.00
Unscheduled Interchange	110.16	5.28	0.00
PGCIL	15.87	16.96	16.96
ERLDC	0.38	0.52	0.52
Other Sources - Total	963.37	987.95	1,042.03
Total PP Costs	1,149.85	1,281.20	1,335.29

Table 12: Average Cost of Power Purchased

Sources	(Rs./kWH)		
	FY 04-05 Prov.	FY 05-06 Rev. Est.	FY 06-07 Projection
NTPC			
Farakka	1.82	1.71	1.71
Kahalgaon	2.07	1.78	1.78
Talcher	1.30	1.28	1.28
NTPC - TOTAL	1.74	1.63	1.63
NHPC			
Rangit	3.60	3.01	3.01
Chukha	1.53	1.58	1.58
Kuruchi	0.00	0.00	0.00
NHPC - TOTAL	2.10	1.89	1.89
OTHER SOURCES			
DVC	2.58	2.83	2.83
TVNL	1.77	1.84	1.90
WBSEB	4.28	4.23	4.61
PTC & NVVN	2.17	0.00	0.00
Unscheduled Interchange	2.60	1.29	0.00
PGCIL	0.00	0.00	0.00
ERLDC	0.00	0.00	0.00
Other Sources - Total	2.40	2.54	2.52
Avg Cost / Unit Received	2.27	2.26	2.26

6.4 Energy Requirement & Availability

- As shown in Table 13, energy sales is estimated to grow at 11.8% during FY06-07 over FY05-06, while energy availability is estimated to increase by 3.5% during the same period, due to T&D loss reduction of 4.26%.

Table 13: Energy Balance

Energy Balance (MU)	FY 04-05 Actuals	FY 05-06 Actuals	FY 06-07 Projections	Growth during FY06 and FY07 (%)
ENERGY AVAILABILITY				
Net Thermal Generation	596	706	595	-15.8%
Net Hydel Generation	141	50	145	187.4%
Net Power Purchase	5,071	5,663	5,906	4.3%
Total Net Energy Availability	5,809	6,420	6,646	3.5%
<i>Less: Energy from DVC</i>		2,511	2,511	
Energy Input into Transmission System		3,909	4,135	
Total Transmission Losses (%)		6.17%	6.10%	-1.1%
Total Transmission Losses (MU)		241	252	
Energy Input into sub-Transmission System / Distribution System		3,668	3,883	
<i>Add: Energy input from DVC</i>		2,511	2,511	
Net Energy Input into sub-Transmission System / Distribution System		6,179	6,394	
Distribution Losses (%)		44.69%	40.23%	
Distribution Losses (MU)		2,761	2,572	-6.84%
Energy Available for Retail Sale (Retail Sales) / Total Energy Requirement	2,862	3,418	3,821	11.8%
Overall T&D Loss (Mus)	2,947	3,002	2,824	-5.92%
Overall T&D Loss (%)	50.73%	46.76%	42.50%	

7 Capital Expenditure

1. JSEB is in the process of tie-up of funds with Financial Institutions to finance these Capital Projects apart from getting Government support for the Capital expenditure. JSEB has not considered interest on such finances while determining the Annual Revenue Requirement for FY 06-07. JSEB shall submit the interest cost estimates due to this Capital expenditure as and when it is finalized during the petition process.
2. JSEB submits to the Hon'ble Commission that the Capital expenditure program assumed herein is significantly higher than the Capital expenditure done in the previous years. JSEB proposes to scale up the Capital expenditure significantly to strengthen and expand its system in order to improve the quality of supply, to meet the increasing demand in the state, to improve the system efficiency including reduction in technical and commercial losses significantly as well as to increase the level of rural electrification & power supply.
3. JSEB submits to the Hon'ble Commission to approve the Capital expenditure and its financing, as summarized below

Table 14: Capital Investment Plan

Capital Investment Plan	FY 06-07
(Rs Cr)	Proj.
Generation Function	183.00
Transmission Function	298.97
Distribution	538.86
<i>Distribution</i>	<i>106.00</i>
<i>Rural Electrification</i>	<i>150.00</i>
<i>APDRP</i>	<i>282.86</i>
TOTAL	1020.83

4. For the FY06-07, JSEB has planned for capital expenditure of Rs. 1020.83 Crs. However, depending upon the additional fund availability JSEB shall take up additional capital work in the FY06-07 upon approval from the Hon'ble Commission.

8 Employee Costs

1. Employee costs for FY04-05 is provisional figure, while employee costs in FY05-06 and FY 06-07 are based on revised estimates and budget estimates basis.
2. Increase in employee costs (prior to capitalization) excluding provision for pension corpus in FY06-07 is estimated to increase moderately by 5.07% over FY05-06 due to increase in DA and increments.
3. As depicted in Table 15, salaries and allowances are estimated to increase by 5% p.a. between FY 05-06 and FY 06-07. As this can be seen in the Table 15, the increase in FY 04-05 is purely because of pay revision arrears of Rs. 27.48 Crores paid in FY 04-05. Had this amount been paid, the increase in FY 04-05 would have been very nominal as the base amount in FY 03-04 would have been significantly higher.
4. In the Tariff Order for FY 03-04 the Hon'ble Commission has approved employee costs of Rs. 166.84 crores for FY03-04, against which JSEB has incurred only Rs. 155.55 crores in FY03-04. However, the Board has paid to its employees Rs. 27.48 crores in FY04-05 against pay revision arrears, which needs to be allowed. JSEB submits to the Hon'ble Commission that any disallowance of employee costs by the Commission would compel JSEB to borrow funds in order to finance the difference between actual employee costs incurred and Commission approved costs, which would result in significant burden on JSEB resources.
5. During the creation of JSEB, no funds have been transferred to JSEB for payment of outstanding liabilities like pension, GPF, Gratuity and other terminal benefits. As such JSEB is paying all these liabilities from its monthly revenue collection. Therefore, to meet such liabilities, Board is proposing to create a nominal pension corpus of Rs. 60 crores for FY 06-07.
6. Keeping in mind the above, JSEB submits to the Hon'ble Commission to approve the employee costs.

Table 15: Employee Costs

EMPLOYEE COSTS	FY 04-05	FY 05-06	FY 06-07
Rs Crores	Prov.	Rev. Est.	Proj.
Salaries & Allowances			
Basic	78.01	71.69	76.59
Dearness Allowance	55.51	57.42	62.92
Overtimes	1.67	4.51	4.79
HRA	5.21	5.83	6.30
Pay Revision Arrears	27.48	8.78	3.86
Other Allowances	5.58	6.39	7.90
Salaries – Total	173.45	154.62	162.36
Other Staff Costs:			
Medical Expenses Reimbursement	1.45	2.83	2.59
Earned Leave encashment	5.68	6.55	7.42
Leave Travel Assistance	0.00	0.34	0.04
Payment – Workmen's compensation	0.97	0.95	0.99
Staff Welfare Expenses	0.21	0.14	0.24
Other Staff Costs – Total	8.31	10.80	11.28
Terminal benefits			
Terminal benefits	42.65	54.12	57.04
Terminal Benefits – Total	42.65	54.12	57.04
Provision For Pension Corpus	0.00	0.00	60.00
Total employee costs	224.41	219.54	290.68
Less Capitalisation	16.00	16.80	17.80
Net Employee Cost	208.41	202.74	272.88

9 Repairs & Maintenance Costs

1. As shown in Table 16, JSEB is expected to incur Rs 50.84 Crores and Rs 55.14 Crores in FY 05-06 and FY 06-07 respectively based on revised estimates and budget estimates of JSEB of the respective years.
2. R&M costs varies between 2.31% – 2.86% of Gross Fixed Assets, which is low, especially considering that the assets are at book value at the time at which it is procured.
3. JSEB submits to the Hon'ble Commission that it is important for JSEB to incur the R&M expenses as mentioned above in order to maintain and strengthen the system and quality of supply.
4. Keeping in mind the above, JSEB submits to the Hon'ble Commission to approve these costs.

Table 16: Repairs & Maintenance Costs

R&M Expenses	FY 04-05	FY 05-06	FY 06-07
(Rs. Crores)	Prov.	Rev. Est.	Projected
Plant & Machinery	20.15	28.40	31.23
Building	2.65	2.94	3.48
Civil Works	2.13	1.71	1.88
Hydraulic	0.40	0.59	0.67
Lines, cable & network	10.85	16.08	16.66
Vehicles	0.67	0.90	0.98
Furniture & Fixtures	0.06	0.06	0.07
Office equipments	0.08	0.16	0.16
Technical Fees	0.03	0.00	0.00
Total R&M Costs	37.03	50.84	55.14
R&M Costs as % of GFA	2.31%	2.86%	2.53%

10 Administration & General Costs

1. As shown in Table 17, A&G Costs for FY04-05 is Rs 29.20 Crores , while A&G Costs for FY05-06 and FY06-07 are estimated to be Rs 45.70 Crores and Rs 47.54 Crores respectively.
2. A&G expenses incurred in FY04-05 is Rs 29.20 Crores is still lower than Commission approved A&G cost for FY03-04 of Rs 30.27 Crores.
3. A&G Costs is conservatively estimated to increase at around 4.03% p.a. between FY 05-06 and FY 06-07, mainly due to inflationary effect (current inflation is ~ 4-5% p.a.) as well as increasing business requirements.
4. JSEB has been consistently making efforts on factors under its control to reduce the A&G Costs further, as a result of which JSEB is able to contain the increase in A&G costs at 4.03% p.a., inspite of inflation of ~4-5% p.a. and business expansion.
5. Considering the above aspects, JSEB submits to the Hon'ble Commission to approve the A&G costs, as these costs are essentially required to administer JSEB's operations.

Table 17: Administration & General Costs

Administration & General Costs	FY 04-05	FY 05-06	FY 06-07
(Rs. Crores)	Prov.	Rev. Est.	Proj
Rent	1.29	3.94	3.92
Insurance	1.06	1.09	0.59
Telephone, fax, Mobile	0.93	1.17	1.29
Postage, Telegram	0.20	0.22	0.26
Legal Charges	1.00	1.53	1.76
Audit Charges	0.50	1.85	1.10
Consultancy Charges/ Tech Fees	2.09	2.11	2.26
Conveyance Charges	0.09	0.16	0.20
Travelling Expenses	1.61	1.94	2.20
Vehicle Running (Light), Petrol & oil	1.55	1.52	1.73
Vehicle License & Registration	0.17	0.20	0.21
Fees and Subscription	0.11	0.35	0.42
Stores handling	0.07	0.11	0.13
Books & Periodicals	0.07	0.19	0.18
Printing & Stationary	1.64	1.70	1.73
Advertisement	1.52	0.90	0.52
Electricity & Water Charges	3.52	3.52	3.75
Entertainment	0.42	0.49	0.48
Pvt Security Guards/ Home Guard	2.12	11.28	12.83
Computer Agency	4.45	5.26	5.38
Freight & Other purchase related to expenses	0.97	0.99	1.08
Vehicle Running (Heavy), Diesel, Petrol, Oil	0.90	1.13	1.22
Miscellaneous Expenses	0.85	1.08	1.27
Bank Commission	0.06	0.17	0.16
Bill Distribution Expenses	0.26	0.30	0.32
Training	0.22	0.22	0.24
Pollution	0.19	0.20	0.23
Vehicle Hire Expenses	1.27	1.91	1.92
Rates & Taxes	0.06	0.18	0.18
Total A&G Costs	29.20	45.70	47.54
Less: A&G Expenses capitalised	2.17	2.34	2.51
Net A&G Costs	27.03	43.36	45.03

11 Interest Costs

1. Interest costs include interest on 33% of the BSEB loans to be transferred to JSEB, as part of the State Bifurcation as per Ministry of Power, Government of India Notification amounting to Rs. 267.88 Crores (on 33% of Loan), in addition to the interest on borrowings made after formation of JSEB, as shown in Table 18.
2. JSEB submits to the Hon'ble Commission that Government of Jharkhand/JSEB has appealed against the Ministry of Power Notification in the Supreme Court regarding the ratio of bifurcation of loans to JSEB of 33% and has appealed for limiting the bifurcation of loans to 25% (corresponding Interest amount is Rs. 202.94 crs) for JSEB, which is pending before the Court. JSEB submits to the Commission that the interest on such bifurcated loans would be trued up as and when the Court verdict on the issue is received. **Till such time, JSEB submits to the Commission to approve the ratio of 25% of loans of erstwhile composite BSEB.**
3. JSEB has taken Letter of Credit and is also using overdraft facility for making power purchase payments, as JSEB's revenues are inadequate to meet its power purchase obligations.
4. JSEB submits to the Hon'ble Commission to approve these interest costs, which have to be incurred on the loans taken by JSEB, including loans received on account of bifurcation of BSEB. JSEB submits to the Hon'ble Commission to approve the interest & finance charges.

Table 18: Interest Costs

Interest Costs	FY 04-05	FY 05-06	FY 06-07
(Rs. Crores)	Prov.	Prov.	Proj.
Generation Loans	3.10	4.52	16.51
Transmission Loans	15.66	24.75	28.53
Distribution Loans	137.80	205.71	211.00
Building Loans	0.31	0.31	0.31
APDRP	3.38	6.74	11.89
MNP	8.32	16.37	18.87
Power Purchase	34.57	44.14	46.64
Payment of Electrical dues	-	-	-
Loan from PFC (APDRP)	3.76	5.81	5.81
Others (for Power Purchase)	-	-	-
CPA	14.77	14.77	14.77
Interest on Working Capital Loan	-	-	12.93
Interest on Commercial Loans - Total	221.67	323.11	367.27
State Government loan (erstwhile BSEB)	202.94	202.94	202.94
Gross Interest	424.61	526.05	570.21
Less: Interest capitalised	4.75	5.13	5.67
Net Interest & Financing Costs	419.86	520.92	564.54

12 Depreciation

1. Depreciation for the FY05-06 and FY06-07 is detailed in Table 19.
2. JSEB submits to the Hon'ble Commission to approve the depreciation and other debits.

Table 19: Depreciation

Depreciation	FY 04-05	FY 05-06	FY 06-07
(Rs. Crores)	Prov.	Rev. Est.	Proj.
GFA - Opening Balance	1,439.77	1,602.08	1,775.08
Asset Additions during the year	162.32	172.99	408.28
GFA - Closing Balance	1,602.08	1,775.08	2,183.36
Depreciation for the year	73.62	85.54	97.93
Depreciation rate %	5.11%	5.34%	5.52%

13 Provision for Bad and Doubtful debt

JSEB proposes to have 2.50% of the revenue from sale of power during the FY FY06-07. In Orissa the Electricity Regulatory Commission had allowed 2.5% of the Gross revenue from sale of power in its earlier Tariff order. Gujarat Electricity Regulatory Commission had also allowed the provision for Bad and Doubtful debt. Some proposals are under consideration of Board for writing off the bad and doubtful debt in the FY06-07.

Table 20: Provision for Bad & Doubtful debts

Provision for Bad & Doubtful Debts	FY 06-07
Rs Crores	Proj.
Revenue from Sale of Power	1,298.48
Provision for B & D Debts as % of Revenue	2.50%
Provision for Bad & Doubtful Debts	32.46

14 Reasonable Return

1. Under Section 59 of the Electricity (Supply) Act 1948, the SEB has to earn a surplus of not less than 3% on the net fixed assets in service at the beginning of the year.
2. Reasonable return of 3% on the opening balance of Net Fixed Assets less consumer contribution is allowed to the State Electricity Boards, as per the provisions of the Electricity Supply Act, 1948. JSEB shall estimate the Reasonable return figure based on the equity post transfer scheme notification by the Government of Jharkhand. In the event of Transfer Scheme notification by the Government of Jharkhand during the process of Tariff order finalisation, the Hon'ble Commission is requested to consider the same for the purpose of Reasonable return calculation.
3. Reasonable return for JSEB is computed as Rs 14.59 Crores and Rs 16.75 Crores for the FY05-06 and FY06-07 as detailed in Table 21
4. JSEB submits to the Hon'ble Commission to approve the reasonable return as submitted.

Table 21: Reasonable Return

Reasonable Return	FY 04-05	FY 05-06	FY 06-07
(Rs. Crores)	Prov.	Rev. Est.	Proj.
Opening Balances			
Gross Fixed Assets	1,439.77	1,602.08	1,775.08
Less: Accumulated depreciation	953.15	1,038.69	1,136.62
Net Fixed Assets	486.62	563.40	638.46
Less: Consumer contribution	74.36	77.16	79.96
Net Fixed assets excl Consumer Contbn	412.26	486.23	558.49
Return: 3% on Opening NFA	12.37	14.59	16.75

15 Non-Tariff Income

1. Of the total Non-Tariff Income of Rs 445.85 Crores in FY04-05, Delayed Payment Surcharge leviable on Non-paying consumers amounts to Rs 426.00 Crores, which is not fully recoverable from Consumers, given that it is quite difficult to even recover 100% of principal bill dues.
2. By assuming 100% of delayed payment surcharge as part of Non-Tariff income deflates the annual revenue requirement from sale of power significantly, even though JSEB doesn't even realize 10% of these delayed payment surcharge levied on Non-paying consumers.
3. In order to realistically reflect JSEB's annual revenue requirement, it is important to realistically reflect the realizable delayed payment surcharge (DPS) during the year and non-tariff income.
4. Keeping in mind the above, JSEB submits to the Hon'ble Commission that JSEB estimates to recover 10% of DPS during the year, while the balance 90% of DPS would be carried over to the next financial year as receivables.
5. JSEB submits to the Hon'ble Commission to approve the Non-Tariff income, as shown in Table 22, keeping in mind the business reality as explained above and to truly reflect the annual revenue requirement for the year. JSEB submits to the Hon'ble Commission that JSEB would true up the amount realized from Delayed Payment Surcharge for the respective years, while filing the ARR & Tariff revision petition for next financial year.

Table 22: Non-Tariff Income

Non-Tariff income	FY 04-05	FY 05-06	FY 06-07
(Rs. Crores)	Prov.	Rev. Est.	Proj.
Delayed Payment Surcharge (DPS)	426.46	376.00	402.00
Realizable Delayed Payment Surcharge @ 10% of DPS	42.65	37.60	40.20
Sale of Water	2.56	2.81	3.09
Meter Rent	2.62	2.79	3.02
Sale of Tender Paper	0.44	0.51	0.54
Others	6.00	6.25	6.88
Miscellaneous Recoveries incl Sale of Scrap	7.77	5.00	10.00
Total Non-Tariff Income	62.03	54.96	63.73

16 Aggregate Revenue Requirement

1. Table 23 summarizes JSEB's Aggregate Revenue Requirement for the FY04-05, FY05-06 & FY06-07.
2. Aggregate Revenue Requirement for FY 06-07 is estimated to be **Rs 2470.62 Crores.**

Table 23: Aggregate Revenue Requirement

Aggregate Revenue Requirement	FY 04-05	FY 05-06	FY06-07
(Rs. Crores)	Prov.	Rev. Est.	Proj.
Costs			
Fuel	114.51	134.45	114.33
Power Purchase & UI Charges	1149.85	1281.20	1335.29
Employee	208.41	202.74	272.88
Repairs & Maintenance	37.03	50.84	55.14
Admin & General	27.03	43.36	45.03
Interest	419.86	520.92	564.54
Depreciation	73.62	85.54	97.93
Provision for Bad & Doubtful Debts	0.00	0.00	32.46
Total Costs	2030.31	2319.06	2517.60
Add: Reasonable Return	12.37	14.59	16.75
Less: Non-Tariff Income	62.03	54.96	63.73
Aggregate Revenue Requirement	1980.64	2278.68	2470.62

17 Disaggregated ARR filing for FY 2006-07

Currently JSEB owns and operates 970 MW (900 MW De-rated Capacity) of generation capacity that provides electricity to the consumers in the state of Jharkhand. The energy generated from the JSEB generating stations and power purchased from other sources like the Central Generating Stations (NTPC, NHPC), DVC, WBSEB, TVNL, etc. is evacuated through the transmission lines of JSEB to reach the consumers in its license area. Thus the distribution function of JSEB uses the power received from the generating stations and power purchased from other sources, uses the transmission network of the STU to transmit power to supply it to its consumers on distribution network.

The aggregate revenue requirement of JSEB is being dis-aggregated functionally subject to availability of data on functional lines and based on certain assumptions that have been outlined in the subsequent sections of the document.

17.1 Assumptions used for allocation of Cost and the supporting Rationale

While some of the cost related to the individual functions like the cost of generation, etc. can be identified and allocated to the function directly, the allocation of some of the cost elements like the employee costs, administration and general expenses, etc. are not available and hence the same have been allocated to the individual functions based on certain assumptions which are as outlined below:

Table 24: Key assumptions for Functional dis-aggregation of cost

Sr. No.	Item	Assumptions
1	Employee cost	Based on number of employees
2	A&G cost	Based on number of employees
3	R&M cost	Functionally separated
4	Interest cost	Functionally separated. Interest on BSEB loan has been treated as "Regulatory Asset"
5	Depreciation	Depreciation for the FY06-07 has been calculated based on the minimum of depreciation % for the segregated entities for the FY03 and FY04.
6	Provision for Bad and Doubtful debt	Allocated to Distribution
7	Reasonable return	3% on the NFA has been considered
8	Income Tax	Income tax, if any, for the FY06-07 shall be trued up in the subsequent ARR and Tariff petition
9	Non-Tariff Income	Non-Tariff Income has been appropriately

Sr. No.	Item	Assumptions
		allocated to G-T-D. For example: DPS has been allocated to Distribution entity, Sale of water to Generation entity, etc.

17.2 Disaggregated ARR for FY06-07

The ARR for FY06-07 has been disaggregated based on the assumptions mentioned above. While the justification for the costs being estimated has been provided by JSEB in the preceding chapters, the cost elements have been dis-aggregated functionally and the details are provided in subsequent paragraphs.

17.2.1 Employee costs

The following table summarises the employee costs for the Generation, Transmission and Distribution function:

Table 25: Employee costs – G, T, D

EMPLOYEE COSTS Rs Crores	FY 06-07 (Projected)			
	Generation	Transmission	Distribution	Total
Salaries & Allowances				
Basic	26.09	7.82	42.68	76.59
Dearness Allowance	21.43	6.42	35.06	62.92
Overtimes	1.63	0.49	2.67	4.79
HRA	2.15	0.64	3.51	6.30
Pay Revision Arrears	1.31	0.39	2.15	3.86
Other Allowances	2.69	0.81	4.40	7.90
Salaries – Total	55.31	16.57	90.48	162.36
Other Staff Costs:				
Medical Expenses Reimbursement	0.88	0.26	1.44	2.59
Earned Leave encashment	2.53	0.76	4.14	7.42
Leave Travel Assistance	0.01	0.00	0.02	0.04
Payment – Workmen's compensation	0.34	0.10	0.55	0.99
Staff Welfare Expenses	0.08	0.02	0.13	0.24
Other Staff Costs – Total	3.84	1.15	6.28	11.28
Terminal benefits				
Terminal benefits	19.43	5.82	31.79	57.04
Terminal Benefits – Total	19.43	5.82	31.79	57.04
Provision For Pension Corpus	20.44	6.12	33.44	60.00
Total employee costs	99.02	29.67	161.99	290.68
Less Capitalisation	6.06	1.82	9.92	17.80
Net Employee Cost	92.96	27.85	152.07	272.88

17.2.2 Repairs & Maintenance (R&M) Costs

The following table summarises the R&M costs for the Generation, Transmission and Distribution function:

Table 26: Repairs & Maintenance Cost – G, T, D

R&M Expenses (Rs. Crores)	FY 06-07 (Projected)			
	Generation	Transmission	Distribution	Total
Plant & Machinery	24.79	1.50	4.95	31.23
Building	1.50	0.61	1.37	3.48
Civil Works	0.57	0.44	0.86	1.88
Hydraulic	0.67	0.00	0.00	0.67
Lines, cable & network	1.35	3.41	11.91	16.66
Vehicles	0.79	0.04	0.16	0.98
Furniture & Fixtures	0.02	0.01	0.03	0.07
Office equipments	0.04	0.02	0.10	0.16
Technical Fees	0.00	0.00	0.00	0.00
Total R&M Costs	29.73	6.04	19.37	55.14
R&M Costs as % of GFA	3.75%	2.02%	1.78%	2.53%

17.2.3 A&G costs

The following table summarises the A&G costs for the Generation, Transmission and Distribution function:

Table 27: Administration and General Expenses – G, T, D

Administration & General Costs (Rs. Crores)	FY 06-07 (Projected)			
	Generation	Transmission	Distribution	Total
Rent	1.34	0.40	2.19	3.92
Insurance	0.20	0.06	0.33	0.59
Telephone, fax, Mobile	0.44	0.13	0.72	1.29
Postage, Telegram	0.09	0.03	0.15	0.26
Legal Charges	0.60	0.18	0.98	1.76
Audit Charges	0.37	0.11	0.61	1.10
Consultancy Charges/ Tech Fees	0.77	0.23	1.26	2.26
Conveyance Charges	0.07	0.02	0.11	0.20
Travelling Expenses	0.75	0.22	1.22	2.20
Vehicle Running (Light), Petrol & oil	0.59	0.18	0.97	1.73
Vehicle License & Registration	0.07	0.02	0.12	0.21
Fees and Subscription	0.14	0.04	0.24	0.42
Stores handling	0.04	0.01	0.07	0.13
Books & Periodicals	0.06	0.02	0.10	0.18
Printing & Stationary	0.59	0.18	0.96	1.73
Advertisement	0.18	0.05	0.29	0.52
Electricity & Water Charges	1.28	0.38	2.09	3.75
Entertainment	0.17	0.05	0.27	0.48
Pvt Security Guards/ Home Guard	4.37	1.31	7.15	12.83
Computer Agency	1.83	0.55	3.00	5.38
Freight & Other purchase related to expenses	0.37	0.11	0.60	1.08
Vehicle Running (Heavy), Diesel, Petrol, Oil	0.41	0.12	0.68	1.22
Miscellaneous Expenses	0.43	0.13	0.71	1.27
Bank Commission	0.05	0.02	0.09	0.16
Bill Distribution Expenses	0.11	0.03	0.18	0.32
Training	0.08	0.02	0.13	0.24
Pollution	0.08	0.02	0.13	0.23
Vehicle Hire Expenses	0.66	0.20	1.07	1.92
Rates & Taxes	0.06	0.02	0.10	0.18
Total A&G Costs	16.20	4.85	26.50	47.54
Less: A&G Expenses capitalised	0.86	0.26	1.40	2.51
Net A&G Costs	15.34	4.60	25.10	45.03

17.2.4 Interest Cost

The following table summarises the Interest Cost allocation for the Generation, Transmission and Distribution function:

Table 28: Interest Cost Allocation – G, T, D

Interest Costs (Rs. Crores)	FY 06-07 (Projected)			
	Generation	Transmission	Distribution	Total
Generation Loans	16.51	-	-	16.51
Transmission Loans	-	28.53	-	28.53
Distribution Loans	-	-	211.00	211.00
Building Loans	-	-	0.31	0.31
APDRP	-	-	11.89	11.89
MNP	-	-	18.87	18.87
Power Purchase	-	-	46.64	46.64
Payment of Electrical dues	-	-	-	-
Loan from PFC (APDRP)	-	-	5.81	5.81
Others (for Power Purchase)	-	-	-	-
CPA	0.91	-	13.86	14.77
Interest on Working Capital Loan	8.13	2.30	2.50	12.93
Interest on Commercial Loans - Total	25.55	30.83	310.89	367.27
State Government loan (erstwhile BSEB)	-	-	202.94	202.94
Gross Interest	25.55	30.83	513.83	570.21
Less: Interest capitalised	0.39	0.48	4.80	5.67
Net Interest & Financing Costs	25.15	30.35	509.03	564.54

The current petition has allocated the interest on Composite BSEB loan in the distribution function and has been proposed to be treated as “Regulatory Asset”. Upon final ruling by the Hon’ble Supreme Court on the composite loan allocation and other outstanding issues with BSEB, the said loan and corresponding interest shall be disaggregated on functional basis and shall be submitted to the Hon’ble Commission in due course.

17.2.5 Depreciation

The following table summarises the Depreciation expense for the Generation, Transmission and Distribution function:

Table 29: Depreciation Expenses – G, T, D

Depreciation (Rs. Crores)	FY 06-07 (Projected)			
	Generation	Transmission	Distribution	Total
GFA - Opening Balance	751.66	193.99	829.42	1,775.08
Asset Additions during the year	41.87	104.69	261.72	408.28
GFA - Closing Balance	793.54	298.68	1,091.14	2,183.36
Depreciation for the year	21.63	14.56	61.75	97.93
Depreciation rate %	2.88%	7.50%	7.44%	5.52%

17.2.6 Provision for Bad & Doubtful Debts

The following table summarises the Provision for Bad & Doubtful Debts for Licensee:

Table 30: Provision for Bad and Doubtful Debts

Provision for Bad & Doubtful Debts	FY 06-07
Rs Crores	Proj.
Revenue from Sale of Power	1,298.48
Provision for B & D Debts as % of Revenue	2.50%
Provision for Bad & Doubtful Debts	32.46

17.2.7 Reasonable Return

The following table summarises the Reasonable Return that the Generation, Transmission and the Distribution function is eligible to earn:

Table 31: Reasonable Return – G, T, D

Reasonable Return	FY 06-07 (Projected)			
	Generation	Transmission	Distribution	Total
(Rs. Crores)				
Opening Balances				
Gross Fixed Assets	751.66	193.99	829.42	1,775.08
Less: Accumulated depreciation	569.53	113.67	453.42	1,136.62
Net Fixed Assets	182.13	80.32	376.01	638.46
Less: Consumer contribution	0.00	0.00	79.96	79.96
Net Fixed assets excl Cons. Contbn	182.13	80.32	296.04	558.49
Return: 3% on Opening NFA	5.46	2.41	8.88	16.75

17.2.8 Non-Tariff Income

The following table summarises the Non-tariff Income that the Generation, Transmission and the Distribution functions are likely to earn during the year:

Table 32: Non-Tariff Income – G, T, D

Non-Tariff income	FY 06-07 (Projected)			
	Generation	Transmission	Distribution	Total
(Rs. Crores)				
Delayed Payment Surcharge (DPS)	-	-	402.00	402.00
Realizable Delayed Payment Surcharge @ 10% of DPS	-	-	40.20	40.20
Sale of Water	3.09	-	-	3.09
Meter Rent	-	0.15	2.87	3.02
Sale of Tender Paper	0.22	0.05	0.27	0.54
Others	0.69	0.69	5.50	6.88
Miscellaneous Recoveries incl Sale of Scrap	8.00	1.00	1.00	10.00
Total Non-Tariff Income	11.99	1.89	49.84	63.73

17.2.9 Generation Cost (Fuel Cost)

JSEB owns one thermal generating station and one hydro Power Station. The operational details of the same have been provided in the chapter 6 of the ARR document. The following table summarises the generation cost that the Generation function of JSEB will incur in generating power. The same would be passed on to the Licensee as the variable component of the power purchase cost for own generation.

Table 33: Generation Cost

PATRATU TPS	Units	FY 04-05	FY 05-06	FY 06-07
		Prov.	Rev. Est.	Proj.
Assumptions				
Installed Capacity	MW	840	840	840
Derated Capacity (Usable)	MW	770	770	770
Plant Load Factor	%	11.0%	12.5%	10.5%
Auxiliary Consumption	%	19.8%	16.6%	16.0%
Station Heat Rate	Kcal/kWh	4,315	4,230	4,230
Sp. Oil Consumption	ml/kWh	37	26	25
Calorific Value of Coal	Kcal/kg	4,100	4,165	4,165
Calorific Value of Oil	Kcal/L	10,500	10,500	10,500
Coal Transit Loss	%	5.02%	4.00%	4.00%
Price of Coal - Landed Cost (Incl Transit Loss)	Rs/Tonne	849	965	965
Price of Oil	Rs/KL	17,270	22,919	24,065
Specific Coal Consumption	kg/kWh	0.96	0.96	0.96
Projections				
Gross Generation	MU	743.31	846.32	708.25
Auxiliary Consumption	MU	146.87	140.16	113.32
Net Generation	MU	596.45	706.17	594.93
Coal Consumption	Tonnes	710,967	811,904	680,698
Oil Consumption	KL	27,867	21,846	17,706
Coal Cost	Rs Cr.	60.38	78.38	65.71
Oil Cost	Rs Cr.	48.13	50.07	42.61
Total Fuel Cost	Rs Cr.	108.51	128.45	108.33
Other Expenses related to Generation	Rs. Cr.	6.00	6.00	6.00
Total Cost of Fuel	Rs. Cr.	114.51	134.45	114.33
Per unit Fuel Cost (on Gross Generation)	Rs/kWH	1.54	1.59	1.61
Per unit Fuel Cost (on Net Generation)	Rs/kWH	1.92	1.90	1.92

17.2.10 Power Purchase Cost from other sources

JSEB in addition to the energy available from the own generating stations, also purchases powers from external sources like DVC, NTPC, NHPC, TVNL, WBSEB, etc. Based on the estimated sales to the retail consumers as provided in the chapter 3 of the ARR document, the generation available from the own generating stations (chapter 6) and the Transmission and Distribution losses prevalent in the system, the quantum

of power purchase required is estimated and provided in chapter 6 of the ARR document. The following table summarises the power purchase cost that the Licensee will incur in purchasing power from external sources to meet its energy requirements. It is assumed that the Licensee would be directly responsible for purchasing the power from the external sources.

Table 34: Power Purchase Cost

Sources	(Rs. Crores)		
	FY 04-05 Prov.	FY 05-06 Rev. Est.	FY 06-07 Projection
NTPC			
Farakka	65.80	116.08	116.08
Kahalgaon	66.40	91.64	91.64
Talcher	39.47	48.98	48.98
NTPC - TOTAL	171.68	256.70	256.70
NHPC			
Rangit	7.00	12.54	12.54
Chukha	7.81	24.02	24.02
Kuruchi	0.00	0.00	0.00
NHPC - TOTAL	14.81	36.55	36.55
OTHER SOURCES			
DVC	599.06	710.47	710.47
TVNL	193.82	240.97	306.06
WBSEB	12.18	13.73	8.01
PTC & NVVN	31.90	0.00	0.00
Unscheduled Interchange	110.16	5.28	0.00
PGCIL	15.87	16.96	16.96
ERLDC	0.38	0.52	0.52
Other Sources - Total	963.37	987.95	1,042.03
Total PP Costs	1,149.85	1,281.20	1,335.29

Based on the above costs, the estimated Aggregate Revenue Requirements function-wise is as outlined in subsequent paragraphs.

17.3 Net Revenue Recoverable for Generation function

The generation entity of JSEB is responsible for generation of power and supplying the same to the Distribution function of JSEB. The entire cost related to generation of power is recoverable from the distribution function. Based on the various costs mentioned above, the Net Revenue Recoverable for Generation Function for the year FY 2006-07 is as given below:

Table 35: Summary of proposed Generation function ARR for FY06-07

Net Revenue Recoverable	FY 06-07
(Rs. Crores)	Proj.
Costs	
Fuel	114.33
Power Purchase & UI Charges	0.00
Employee	92.96
Repairs & Maintenance	29.73
Admin & General	15.34
Interest	25.15
Depreciation	21.63
Provision for Bad & Doubtful Debts	0.00
Total Costs	299.13
Add: Reasonable Return	5.46
Less: Non-Tariff Income	11.99
Net Revenue Recoverable	292.60

Further, the break-up between the fixed cost to be recovered and the variable cost is as shown below:

Table 36: Break-up of Fixed & Variable Cost

Net Revenue Recoverable	FY 06-07
(Rs. Crores)	Proj.
Energy Charges	114.33
Annual Fixed Charges	184.81
Gross Revenue Recoverable	299.13
Add: Reasonable Return	5.46
Less: Non-Tariff Income	11.99
Net Revenue Recoverable	292.60
Generation Tariff (Pooled Rate) (Rs./kWh)	3.96

Based on the above the net Revenue Recoverable for the generation function is Rs. 292.60 Crores, which has to be recovered from the Licensee as the entire generation is supplied to the Licensee. Based on the above the overall generation tariff based on the pooling of power for own generation (Thermal & Hydro Generation) works out to **Rs. 3.96/kWh** at the Generation Bus Bar.

17.4 Proposed ARR for State Transmission Utility

The STU caters to the requirements of the Licensee for transmitting power from the generation stations and the power purchased from other external sources of power into the distribution network. The expenses incurred by the Transmission function are typically of fixed nature and hence the tariff determined for the transmission function is typically a single part tariff in the form of capacity charges. In absence of any Transmission Supply agreement and exact allocation of capacity to the distribution function, the tariff chargeable to the distribution function can be determined based on the total energy transmitted through the transmission network. The tariff chargeable or the revenue recoverable by the Transmission function from the distribution function is computed based on the costs, which have been identified in the preceding paragraphs, is outlined below:

Table 37: Summary of proposed Transmission function ARR for FY06-07

Net Revenue Recoverable (Rs. Crores)	FY 06-07 Proj.
Costs	
Fuel	0.00
Power Purchase & UI Charges	0.00
Employee	27.85
Repairs & Maintenance	6.04
Admin & General	4.60
Interest	30.35
Depreciation	14.56
Provision for Bad & Doubtful Debts	0.00
Total Costs (Annual Fixed Charges)	83.39
Add: Reasonable Return	2.41
Less: Non-Tariff Income	1.89
Net Revenue Recoverable	83.91

As can be seen from above, the total net recoverable Revenue for the transmission function for FY 2006-07 is Rs. 83.91 Crores. In absence of the Transmission Supply Agreement between the transmission and distribution function, the above recoverable revenue is assumed to be recovered based on the energy handled by the transmission network. Based on the above, the Transmission Tariff in Rs. per unit is as follows:

Table 38: Proposed Transmission Tariff for FY06-07

Transmission Tariff	FY 06-07 Proj.
Total Revenue Recoverable (Rs. Crores)	83.91
Total Energy handled by Transmission System (MUs)	4135
Transmission Charges (Rs./kWh)	0.2029

It is proposed to the Hon'ble Commission to approve the Transmission charges as mentioned above plus the losses (6.10%). SLDC fees and charges are included in the Transmission charges.

17.5 Proposed ARR for Distribution function

The Licensee is responsible for the supply of power to retail consumers. It sources the power from the generation stations of JSEB and from external sources like DVC, NTPC, NHPC, TVNL, WBSEB, etc. Details regarding the quantum of power sourced by the Licensee from the different sources taking into consideration the estimated sales during FY 2006-07 and the losses existing in the system is provided in the chapter 3, 4, 5 and 6 of the ARR document.

Based on the above and other costs identified as attributable to the distribution function in the chapter 22, the following table summarises the proposed ARR for Distribution function for the FY06-07:

Table 39: Summary of proposed Distribution function ARR for FY06-07

Aggregate Revenue Requirement (Rs. Crores)	FY 06-07 Proj.
Costs	
Power Purchase Cost - Own Generation	292.60
Power Purchase from external Sources & UI Charges	1335.29
Transmission Charges	83.91
Employee	152.07
Repairs & Maintenance	19.37
Admin & General	25.10
Interest	509.03
Depreciation	61.75
Provision for Bad & Doubtful Debts	32.46
Total Costs	2511.58
Add: Reasonable Return	8.88
Less: Non-Tariff Income	49.84
Aggregate Revenue Requirement	2470.62

The above-mentioned Aggregate Revenue Requirement is proposed to be recovered from the consumers of the Licensee.

17.6 Proposed consolidated ARR for JSEB

Based on the above ARR of individual functions, the proposed consolidated ARR for JSEB for the FY06-07 is summarised below:

Table 40: Summary of proposed consolidated ARR for FY06-07

Aggregate Revenue Requirement	FY06-07
(Rs. Crores)	Proj.
Costs	
Fuel	114.33
Power Purchase & UI Charges	1335.29
Employee	272.88
Repairs & Maintenance	55.14
Admin & General	45.03
Interest	564.54
Depreciation	97.93
Provision for Bad & Doubtful Debts	32.46
Total Costs	2517.60
Add: Reasonable Return	16.75
Less: Non-Tariff Income	63.73
Aggregate Revenue Requirement	2470.62

18 Revenue from Sale of Power at Existing Tariffs

1. Revenue from sale of power for FY 05-06 is based on JSEB revised estimates, while sale of power revenue for FY 06-07 is determined based on the Energy sales estimated in Section 4 and category wise tariff approved by the Commission in its ARR & Tariff Order dated December 27, 2003. Detail computations to arrive at the Revenue at existing tariff are provided in the Annexure- 3 of this petition.
2. Sale of Power Revenue at existing tariff is estimated to be ~ Rs 1,111 Crores and ~ Rs 1,260 Crores (UI receivables not included) in FY 05-06 and FY 06-07 respectively (Net of rebate for HT Consumers), as shown below:

Table 41: Sale of Power Revenue at Existing Tariff

Revenue @ Existing Tariff	FY 04-05	FY 05-06	FY 06-07
(Rs Crores)	Prov.	Rev. Est.	Proj.
Domestic	93.65	123.22	149.73
Commercial	58.15	58.31	62.84
LT Industry	48.19	70.50	75.92
HT Industry	599.06	597.21	679.73
Traction	194.15	247.25	276.07
Agriculture	2.35	6.70	7.62
Public Lighting	3.75	7.68	7.86
TOTAL SALE OF POWER REVENUES	999.29	1,110.88	1,259.79

19 UI Receivables

During the FY06-07, JSEB estimates the sale of 400 Mus through UI at the rate of Rs. 2.87/u. For such UI receivables the additional power purchase from TVNL has been considered. This energy requirement is over and above the energy sales to consumers in the state of Jharkhand. The following table summarises the estimated UI receivables:

Table 42: UI Receivables

UI Charges receivable	Unit	FY06-07 (Proj)
Units Sold	Mus	400
Charge per unit	Rs/u	2.87
Gross UI Receivables	Rs Crs.	114.85
Power Purchase Cost (from TVNL)	Rs/u	1.90
Power Purchase Cost (from TVNL)	Rs Crs.	76.16
Net UI receivables	Rs Crs.	38.69

The UI receivables have been treated as revenue during the FY06-07 and accordingly the revenue gap has been calculated. The charge per unit has been estimated based on the figures for the period April 06 to July 06. Power purchase from TVNL is over and above the energy requirement from TVNL for the sale in the state.

20 Coverage of Revenue Gap

1. Table 43 summarizes the Revenue Gap at existing tariff at ~ Rs 774 Crores and ~ Rs 1162 Crores for FY 05-06 and FY 06-07 respectively.
2. The Honorable Commission in its Tariff Order dated December 27, 2003 has considered subsidy receivable from State Government towards subsidized categories of Rs 40 Crores. However, JSEB had not received any subsidy from Government. Therefore no subsidy has been shown for the FY2003-04 and FY 2004-05 in Table 43.
3. As depicted in Table 43, Revenue Gap of ~ Rs 1162 Cr in FY 06-07 is proposed to be covered through Additional Revenue from proposed tariff revision of Rs 220.47 Crores (Revenue at proposed tariff is summarized in Section 22.2 of this petition and covered in detail in Forms enclosed with this petition) and creation of Regulatory Asset of Rs 202.94 Crores to the extent of interest on loans inherited from BSEB as part of the state bifurcation, recoverable in future years.
4. Even after considering the above, JSEB is left with un-covered revenue gap of ~ Rs 739 Crores in FY 06-07. JSEB submits to the Hon'ble Commission to direct appropriate mechanism for JSEB to recover this un-covered gap either through additional tariff increase or additional subsidy from State Government or any other mechanism as the Hon'ble Commission deems fit, so that JSEB's Annual Revenue Requirement is fully covered.
5. In addition to the above, JSEB is also left with un-covered revenue gap of ~ Rs 778 Crores and ~ Rs 571 Crores in FY04-05 and FY05-06 respectively (as covered in detail in Section 21 of this report).
6. JSEB submits to the Hon'ble Commission to allow the true-up of increase in costs of FY03-04, FY04-05 and FY 05-06 (as covered in detail in Section 21 of this report) and direct suitable mechanism to recover these costs.

Table 43: Revenue Gap

ARR, Revenue @ Existing Tariff, Revenue Gap (Rs. Crores)	FY 04-05 Prov.	FY 05-06 Rev. Est.	FY06-07 Proj
Annual Revenue Requirement	1,980.64	2,278.68	2,470.62
Partly Covered by			
Revenue @ Existing Tariff incl. UI receivables	999.29	1,110.88	1,298.48
GoJ Grant / Resource gap funding	-	393.48	10.00
Revenue @ Existing Tariff + UI Receivables + GoJ Grant/ Resource gap funding	999.29	1,504.36	1,308.48
Revenue Gap/(Surplus) at existing Tariff	981.35	774.33	1,162.14
Coverage of Revenue Gap (Rs Cr)			
Addl Revenue @ Proposed Tariff	-	-	220.47
Creation of Regulatory Asset (Interest on Loan bifurcation from BSEB)	202.94	202.94	202.94
Total Additional Resources	202.94	202.94	423.41
Uncovered Revenue Gap	778.41	571.39	738.73

21 Truing up of Costs

21.1 Truing up of FY 05-06 Costs

1. Of the total un-covered gap of ~ Rs 778 Crores, as mentioned in Table 43, JSEB submits to the Commission to approve truing-up of costs & subsidy of Rs 590.47 Crores, as explained below and summarized in Table 44. For the purpose of truing-up of costs in FY05-06, the costs incurred are compared with the Commission approved FY03-04 costs.
2. JSEB's power purchase cost for FY 05-06 is Rs 1281.20 Crores, as against Hon'ble Commission's approved power purchase cost of Rs 758.48 Crores. Increase in power purchase cost of Rs 522.72 Crores, mainly due to procurement of high cost power, which was only available to meet the energy requirement of the state. In order to maintain adequate supply to various categories of consumers, it was necessary for JSEB to procure such high cost power.
3. JSEB's interest costs estimated for FY 05-06 has been Rs 520.92 Crores, as against Hon'ble Commission's approved interest cost of Rs 33.98 Crores, the major reason for such increase is due to the interest on 33% of the loans taken by Composite BSEB (Pre-bifurcation of the state), which is being transferred to JSEB as per Ministry of Power Notification.
4. However, JSEB submits to the Hon'ble Commission that Government of Jharkhand/JSEB has appealed against the Ministry of Power Notification in the Supreme Court regarding the ratio of bifurcation of loans to JSEB of 33% and has appealed for limiting the bifurcation of loans to 25% for JSEB, which is pending before the Court. JSEB submits to the Hon'ble Commission that the interest on such bifurcated loans would be trued up once again as and when the Court verdict on the issue is received. **Till such time, JSEB submits to the Hon'ble Commission to consider the ratio of 25% of loans** of erstwhile composite BSEB for Interest portion.
5. Thus, as summarized in Table 44, JSEB submits to the Hon'ble Commission to allow truing-up of Rs 590.47 Crores in FY 05-06, which is suggested to be recovered as below:
 - a. Increase in Interest Cost of Rs 486.94 Crores may be converted as Regulatory Asset, on which interest @ 12% p.a. may be allowed till such time this amount is recoverable either from consumers or from Government or through efficiency improvements in later years.
 - b. Increase in other costs of Rs 103.53 Crores may be allowed to be recovered from Consumers through increase in tariffs or from

Government as Subsidy or such alternative mechanism as the Honorable Commission may deem fit.

Table 44: Truing up of FY05-06 Costs

Description	FY 03-04 JSERC Approved	FY 05-06 Rev. Est.	Difference
Costs			
Power Purchase	758.48	1,281.20	522.72
Fuel	126.06	134.45	8.39
Employee	166.84	202.74	35.90
Interest & Finance Charges	33.98	520.92	486.94
Total Costs	1,085.36	2,139.31	1,053.95
Add: Temporary Contingency	110.00	-	(110.00)
Less: Non-Tariff Income	336.04	54.96	-
Gross Total	859.32	2,084.35	943.95
Government Subsidy	40.00	393.48	(353.48)
True Up of Costs			590.47

21.2 Truing up of FY 04–05 Costs

1. Of the total un-covered gap of Rs 981.35 Crores, as mentioned in **Table 43**, JSEB submits to the Hon'ble Commission to approve truing-up of costs & subsidy of Rs 737.27 Crores, as explained below and summarized in Table 45. For the purpose of truing-up of costs in FY04-05, the actual costs incurred are compared with the Commission approved FY03-04 costs.
2. JSEB's actual power purchase cost for FY 04-05 is Rs 1,149.85 Crores, as against Commission approved power purchase cost of Rs 758.48 Crores. Increase in other costs including power purchase cost of Rs 391.37 Crores, mainly due to procurement of high cost power to meet the energy requirement of the state as well as increase in power tariffs by NTPC, NHPC and DVC. In order to maintain adequate supply to various categories of consumers, it was necessary for JSEB to procure such high cost power.
3. JSEB's interest costs incurred in FY 04-05 has been Rs 419.86 Crores, as against Commission approved interest cost of Rs 33.98 Crores in FY03-04, the reason for such increase is due to the interest on 33% of the loans taken by Composite BSEB (Pre-bifurcation of the state), which is being transferred to JSEB as per Ministry of Power Notification.
4. However, JSEB submits to the Hon'ble Commission that Government of Jharkhand/JSEB has appealed against the Ministry of Power Notification in the Supreme Court regarding the ratio of bifurcation of loans to JSEB of 33% and has appealed for limiting the bifurcation of loans to 25% for JSEB, which is pending before the Court. JSEB submits to the Hon'ble Commission that the interest on such bifurcated loans would be trued up once again as and when

the Court verdict on the issue is received. **Till such time, JSEB submits to the Hon'ble Commission to consider the ratio of 25% of loans** of erstwhile composite BSEB for Interest portion.

5. There has been increase in employee costs of Rs 41.57 Crores in FY04-05 in comparison to Commission's approved employee costs for FY03-04, mainly due to pay revision arrears as well as increase in Basic Increments and Dearness allowance, which are increases beyond the control of JSEB. Hence, JSEB submits to the Commission to true-up these costs and provide suitable mechanism for JSEB to recover such costs.
6. Thus, as summarized in Table 45, JSEB submits to the Commission to allow trueing-up of Rs 737.27 Crores in FY 04-05, which is suggested to be recovered as below:
 - a. Increase in Interest Cost of Rs 385.88 Crores may be converted as Regulatory Asset, on which interest @ 12% p.a. may be allowed till such time this amount is recoverable either from consumers or from Government or through efficiency improvements in later years.
 - b. Increase in other costs which includes Power Purchase Costs, employee costs, etc may be allowed to be recovered from Consumers through increase in tariffs or from Government as Subsidy or such alternative mechanism as the Honorable Commission may deem fit.
 - c. JSEB submits to the Hon'ble Commission to issue suitable directives for JSEB to recover Subsidy of Rs 40 Crores appropriately.

Table 45: Trueing up of FY04-05 Costs

Description	FY 03-04 JSERC Approved	FY 04-05 Prov.	Difference
Costs			
Power Purchase	758.48	1,149.85	391.37
Fuel	126.06	114.51	(11.55)
Employee	166.84	208.41	41.57
Interest & Finance Charges	33.98	419.86	385.88
Total Costs	1,085.36	1,892.63	807.27
Add: Temporary Contingency	110.00	-	(110.00)
Less: Non-Tariff Income	336.04	62.03	-
Gross Total	859.32	1,830.60	697.27
Government Subsidy	40.00	-	40.00
True Up of Costs			737.27

21.3 Truing up of FY 03-04 Costs

1. JSEB wishes to submit to the Hon'ble Commission to true up the cost for FY03-04.
2. JSEB submits to the Hon'ble Commission to allow truing-up of Rs 627.01 Crores in FY 03-04, which is suggested to be recovered as below:
 - a. Increase in Interest Cost of Rs 266.50 Crores may be converted as Regulatory Asset, on which interest @ 12% p.a. may be allowed till such time this amount is recoverable either from consumers or from Government or through efficiency improvements in later years.
 - b. Increase in other costs which includes Power Purchase Costs, employee costs, etc may be allowed to be recovered from Consumers through increase in tariffs or from Government as Subsidy or such alternative mechanism as the Honorable Commission may deem fit.
 - c. JSEB submits to the Hon'ble Commission to issue suitable directives for JSEB to recover Subsidy of Rs 40 Crores appropriately.

Table 46: Truing up of FY03-04 Costs

Description	FY 03-04 JSERC Approved	FY 03-04 Actuals	Difference
Costs			
Power Purchase Costs	758.48	908.07	149.59
Fuel	126.06	148.84	22.78
Employee	166.84	140.40	(26.44)
Interest & Finance Charges	33.98	300.48	266.50
Total Costs	792.46	1,497.80	412.44
Add: Temporary Contingency	110.00	-	(110.00)
Less: Non-Tariff Income	336.04	51.47	(284.57)
Gross Total	566.42	1,446.33	587.01
Government Subsidy	40.00		40.00
True Up of Costs			627.01

22 Tariff Revision Proposal for FY 06-07

1. Table 50 summarizes the existing and proposed tariff structure for various consumer categories. JSEB, as licensee, submits to the Commission to approve the tariff structure proposed in Table 50
2. JSEB proposed a nominal hike in the tariff inspite of substantial increase in the input costs and other expenses in the last three years including fuel cost. The average overall tariff hike is around 17%.
3. JSEB submits to the Hon'ble Commission to reduce the voltage rebates at 33kV level and 132kV level from 5% and 7.5% to 3% and 5% respectively. JSEB submits to the Hon'ble Commission that the State Electricity Regulatory Commission of some states has also approved the voltage rebate in the range of 3 to 5% as summarized in Table 47.

Table 47: Voltage Rebate Approved by SERCs in other states

States	Voltage Rebate approved by State Regulatory Commissions
Punjab (2004-05)	
33/66KV	3% on Energy Charges
132/220 KV	5% on Energy Charges
Assam (2005-06)	
25-50KVA	3% on Energy Charges
50-150KVA	3% on Energy Charges
150 & above	3% on Energy Charges
Gujarat	
33/66KVA	0.5% on Energy Charges
132 & Above	1% on Energy Charges

4. As it can be seen in Table 48, West Bengal State Electricity Regulatory Commission had allowed load factor rebate only to consumers having load factor more than 55%.

Table 48: Load factor Rebate Approved by WBERC & CSERC

WBERC

State	Financial Year	Load Factor above 55%
West Bengal	FY 05-06	10 paise/ KWh

Chhattisgarh State Electricity Regulatory Commission (CSERC)

Load Factor (LF)	Concession
(a) Consumption over 50% and up to 60% load factor on contract demand (CD)	2.5% concession on normal energy charges of additional energy consumption over and above 50% LF.
(b) Consumption over 60% and up to 70% load factor on contract demand.	5% concession on normal energy charges of additional energy consumption over and above 60% LF.
(c) Consumption over 70% load factor on contract demand	7.5% concession on normal energy charges of additional energy consumption over and above 70% LF.

5. Keeping in mind the above, JSEB submits to the Hon'ble Commission to revise the Load Factor rebates on energy charges as summarized in Table 49

Table 49: Proposed Load Factor Rebates for HTS, EHTS and HTSS Consumers

Consumer Load Factor (On Contract Demand)	Load Factor rebate
Upto 50%	NIL
Above 50%	For every 1 % increase in LF, rebate shall be 0.5% on Energy Charges on units consumed above Load Factor of 50%

JSEB clarifies that the LF% shall be considered in the following manner:

59.96% LF shall be treated as 60% and 60.49% LF shall also be treated as 60%. The LF% shall be rounded upto 2 decimal places for calculation.

6. JSEB submits to the Hon'ble Commission to revise the Time of Day Tariff structure for HT consumers
- Peak hours (6-10 hours, 18-22 hours): 125% of Normal Tariff
 - Off-Peak hours (22 hours – 6 hours): 75% of Normal Tariff
7. As depicted in Table 55, JSEB's Fixed costs constitutes 63% of total costs, while variable costs constitutes the balance 37% of total costs, while JSEB's revenue from proposed Fixed charges is estimated to be 35%, while revenue from proposed energy charges is estimated to be 65%, as depicted in Table 56

8. For DS metered consumers, a new tariff slab for consumption between 101-200 units has been introduced.
9. For DS HT Category, JSEB proposes to have minimum load to be 45 KVA at the transformer capacity of 63 KVA.
10. A new category Mixed Load-Non-Industrial HT category has been introduced. This will facilitate the mixed load (consisting of domestic and commercial) premises to shift to such category.
11. For Public Street lighting JSEB proposes to increase the minimum charges from Rs.100/100 watt to Rs 120/ 100 watt. In addition Rs. 60 would be charged for each additional 50 watt.
12. Kutir Jyoti Consumers: The tariff proposed for Consumers classified, as Kutir Jyoti has been kept low in line with the guidelines in National Electricity Policy. If the connected load of any such connection is found to be more than 100W, then such consumers shall cease to be covered under Kutir Jyoti category thereafter.
13. Tatkal Seva: In order to sort out the difficulties and encourage authorized electrical connection to all consumers, the Board proposes to grant new electrical connection within 7 days of application submitted to Assistant Electrical Engineer, Supply Sub-division. This scheme shall be known as “Tatkal Seva Scheme”. This scheme will be applicable for new electric connection where no extension of LT line is required. This scheme is also prevalent in some other states.
14. JSEB submits to the Hon'ble Commission to approve the fixed charges for all the categories of consumers as shown in Table 50.
15. As part of the Tariff Petition, JSEB submits the proposed Tariff Schedule alongwith proposed General Terms and Conditions of Supply to the Hon'ble Commission for approval.
16. Proposed changes in the tariff have been detailed in the Proposed Tariff Schedule.

Table 50: Existing & Proposed Tariff Structure

Consumer Categories	Fixed/ Demand Charges			Energy Charges		Minimum Charges		
	Unit	Existing	Proposed	Existing	Proposed	Unit	Existing	Proposed
				(Rs/U)				
Domestic								
Kutir Jyoti (UnMetered)-KJ1 (under Existing tariff-DS-1(a))	Rs/Conn	27	50					
Kutir Jyoti (Metered)-KJ2 (under Existing tariff-DS-1(a))	Rs/Conn	0	0	1.00	1.00			
DS-I (b), <= 1 KW (Un-Metered) (under existing tariff <=2 KW)	Rs/Conn	65	120					
DS-I (c), <= 1 KW (Metered) (under existing tariff <=2 KW)	Rs/Conn	0	0	1.00	1.20			
DS-II (<= 4 KW)								
0 – 100 units	Rs/Conn	20	60	1.35	1.50			
101-200 units	Rs/Conn	20	60	1.35	2.00			
201 & Above units	Rs/Conn	20	60	1.70	2.50			
DS - III, > 4 KW upto 75 KW (Under existing category DS- III, > 4 KW upto 75 KW)	Rs/Conn	40	100	1.70	2.50			
DS – HT (Proposed to be for > = 45 KVA)-Optional	Rs/kVA	30	45	1.50	2.40			
Non-Domestic								
NDS-I-Rural (<= 1kW) (Un-metered)(Under existing category-NDS-I – Rural (<= 2kW) (Un-metered))	Rs/kW	110	150					
NDS-I-Rural (<= 1kW) (Metered) (Under existing category-NDS-I – Rural (<= 2kW) (Metered))	Rs/Month	-	50	1.25	2.50			
NDS-II- (<= 4 KW) Urban (Under existing category-NDS-II-Urban (up to 75 KW) (Metered))	Rs/kW	100	150	3.60	4.25			
NDS-III (> 4 KW to 75 KW) (Under existing category-NDS-II (up to 75 kW))	Rs/kW	100	150	3.60	4.25			
Mixed Load-Non-Industrial HT (For Load >= 75 KVA)	Rs/ KVA		200		3.00			
Domestic								
Agriculture - IAS 1 (Un-Metered)	Rs/HP	50	60					
Agriculture - IAS 2 (Un-Metered)	Rs/HP	200	250					
Agriculture - IAS 1 (Metered)	Rs/HP	0	0	0.50	0.60			
Agriculture - IAS 2 (Metered)	Rs/HP	0	0	0.75	1.00			
LT Industry								
LTIS	Rs/HP	60	100	3.50	4.00			
HT Industry								
HTS – I	Rs/kVA	140	200	4.00	4.00	Rs/kVA	250	400
HTS – II	Rs/kVA	140	200	4.00	4.00	Rs/kVA	250	810
EHTS	Rs/kVA	140	200	4.00	4.00	Rs/kVA	400	810
HTSS (Induction Furnace)	Rs/kVA	300	350	2.50	2.50	Rs/kVA	400	960

Consumer Categories	Fixed/ Demand Charges			Energy Charges		Minimum Charges		
	Unit	Existing	Proposed	Existing	Proposed	Unit	Existing	Proposed
Railway Traction								
RTS -1	Rs/kVA	140	200	4.30	4.50			
RTS -2	Rs/kVA	140	200	4.30	4.50			
Public Street Lighting								
Public Street Lighting -1 (Metered)	Rs/Conn	20	40	3.50	4.00			
Public Street Lighting -2 (UnMetered)	Rs/100 Watt	100	120	0.00	0.00			
Bulk Supply								
Rural Electric Co-op (Bulk Supply)	Rs/kVA	0	0	0.70	1.25			
Military Engg Services (Bulk Supply)	Rs/kVA	150	180	2.50	3.50			

22.1 Indicative Tariff Comparison with Other States

- Table 51 and Table 52 summarize the Fixed/Demand Charges and Energy Charges charged by utilities in other states for major consumer categories vis-à-vis the tariff structure proposed by JSEB in this petition. In some states the tariff has been marginally revised during the FY05-06.

Table 51: Tariff Comparison with Other States (Fixed/Demand Charges)

Consumer Category	Fixed / Demand Charges Rs. Kw/ HP/ KVA												
	Unit	Jharkhand	W B	Orissa	UP	Gujarat	Rajasthan	Delhi	Haryana	Assam	AP	TN	Karnataka
Domestic (Rural & Urban)													
0-30	Rs/Conn	20	0	0									
31- 50	Rs/Conn	20	0	0			80	10	0	15 -30	0	0	20
51-100	Rs/Conn	20	0	0			80	10	0	15 -30	0	0	20
101- 200	Rs/Conn	20	0	0			80	10	0	15 -30	0	5	20
201- 720	Rs/Conn	20	0	0			80	10	0	15 -30	0	5	20
721-1440	Rs/Conn	20	0	0			80	10	0	15 -30	0	5	20
1441- 2160	Rs/Conn	20	0	0			80	10	0	15 -30	0	5	20
2161-2880	Rs/Conn	20	0	0			80	10	0	15 -30	0	5	20
> 2880	Rs/Conn	40	0	0			80	10	0	15 -30	0	5	20
PI Note: Assam & Karnataka Domestic Fixed Charges are RS/ KW/ month													
Non Domestic (Rural & Urban)													
0-100	Rs/KW	0	0	0	80	78.75	40	20	0	110	0	30	35
101 –200	Rs/KW	0	0	0	80	78.75	40	20	0	110	0	30	35
201-1440	Rs/KW	0	0	0	80	78.75	40	20	0	110	0	30	35
> 1440	Rs/KW	100	0	0	80	78.75	40	20	0	110	0	30	35
LT Industry (Rural & Urban)													
0-50 HP	Rs/HP	60	10	0						30-40	37	30	25-30
50- 110 HP	Rs/HP	60	10	0						30-40	37	30	40-100
110-125 HP	Rs/HP		10	0						30-40	37	30	40-100
125 HP & above	Rs/HP		10	200						30-40	37	30	40-100
PI Note: Tamil Nadu is Rs/ connection/ month, Assam is Rs/ KW / month													
HT Industry													
0 - 500 KVA	Rs/KVA	140	180	200	180	89.25	90	150	0	100-140	195	30	180
501 - 1000 KVA	Rs/KVA	140	180	200	170	126	90	150	0	100-140	195	30	180
> 1000 KVA	Rs/KVA	140	180	200	165	189	90	150	0	100-140	195	30	180
Induction Furnace/PIU	Rs/KVA	300	180	200									
Railway Traction													
RTS-I (25 KV)	Rs/KVA	140	180	200						145	0		180
RTS-2 (132 KV)	Rs/KVA	140	180	200						145	0		180
Agriculture													
IAS (Private)	Rs/HP	0			75	140	140	0	104		43.7	20.83	20
IAS (Govt)	Rs/HP	0											
Supply at LT	Rs/KW			0						30			
Supply at HT	Rs/KW			30									

Table 52: Tariff Comparison with Other States (Energy Charges)

Energy Charges (Rs/Unit)	Jharkhand	W B	Orissa	UP	Gujarat	Rajasthan	Delhi	Haryana	Assam	AP	TN	Karnataka
A) Domestic												
0-50	1.35	2.16	1.40	1.90	2.70	1.95	1.75	2.63	2.75	1.45	1.10-1.30	1.85
51-75	1.35	2.16	1.40	2.45	3.00	3.50	1.75	3.63	2.75	2.80	2.60	2.90
76-100	1.35	2.43	1.40	2.45	3.00	3.50	1.75	3.63	2.75	2.80	2.60	2.90
101-120	1.35	2.43	1.40	2.45	3.00	3.50	1.75	3.63	2.75	3.05	3.50	3.60
121-150	1.35	2.43	2.30	3.00	3.60	3.50	2.35	3.63	3.60	3.05	3.50	3.60
151-200	1.35	2.89	2.30	3.00	3.60	3.50	2.35	3.63	3.60	3.05	3.50	3.60
201-240	1.35	2.89	2.30	3.00	3.60	3.50	2.35	3.63	3.60	4.75	3.50	4.10
241-300	1.70	2.89	3.10	3.00	4.10	3.50	3.25	3.63	4.30	4.75	3.50	4.10
301-450	1.70	3.33	3.10	3.00	4.70	3.50	3.85	4.28	4.30	5.50	4.75	4.35-4.60
451-900	1.70	3.52	3.10	3.00	4.70	3.50	3.85	4.28	4.30	5.50	4.75	4.35-4.61
901-1500	1.70	5.59	3.10	3.00	4.70	3.50	3.85	4.28	4.30	5.50	4.75	4.35-4.62
> 1500	1.70	5.77	3.10	3.00	4.70	3.50	3.85	4.28	4.30	5.50	4.75	4.61
B) Non Domestic												
NDS I (<2 KW)												
0-50	1.25	2.88	3.20	3.90	3.60	4.50	4.45	4.28	4.30	3.95	5.30	4.55
51-100	1.25	2.88	3.20	3.90	4.20	4.50	4.45	4.28	4.30	6.25	5.30	5.50
101-180	1.25	2.88	4.10	3.90	4.70	4.90	4.45	4.28	4.30	6.25	5.80	5.50
181-300	1.25	3.97	4.10	3.90	4.70	4.90	4.45	4.28	4.30	6.25	5.80	5.50
301-450	1.25	4.22	4.50	3.90	4.70	4.90	4.45	4.28	4.30	6.25	5.80	5.50
451-900	1.25	4.62	4.50	3.90	4.70	4.90	4.45	4.28	4.30	6.25	5.80	5.50
901-1350	1.25	5.47	4.50	3.90	4.70	4.90	4.45	4.28	4.30	6.25	5.80	5.50
> 1350	1.25	5.47	4.50	3.90	4.70	4.90	4.45	4.28	4.30	6.25	5.80	5.50
NDS II (2 kW - 75 KW)												
0-50	3.60	2.93	3.20	3.90	3.60	4.50	4.45	4.28	4.30	3.95	5.30	4.55
51-100	3.60	2.93	3.20	3.90	4.20	4.50	4.45	4.28	4.30	6.25	5.30	5.50
101-150	3.60	4.02	4.10	3.90	4.70	4.90	4.45	4.28	4.30	6.25	5.80	5.50
151-180	3.60	4.02	4.10	3.90	4.70	4.90	4.45	4.28	4.30	6.25	5.80	5.50
181-300	3.60	4.22	4.10	3.90	4.70	4.90	4.45	4.28	4.30	6.25	5.80	5.50
301-450	3.60	4.62	4.50	3.90	4.70	4.90	4.45	4.28	4.30	6.25	5.80	5.50
451-900	3.60	5.47	4.50	3.90	4.70	4.90	4.45	4.28	4.30	6.25	5.80	5.50
> 900	3.60	5.47	4.50	3.90	4.70	4.90	4.45	4.28	4.30	6.25	5.80	5.50
C) LT Industry												
LTS-1 (Rural)												
0-500	3.50	2.80	3.20	3.90	3.50	3.50	4.45	4.28	2.15	3.75	4.00	3.10
501-2000	3.50	3.90	3.20	3.90	3.75	3.50	4.45	4.28	2.15	3.75	4.00	3.60-3.85
2001-3500	3.50	4.10	3.20	3.90	3.75	3.50	4.45	4.28	2.15	3.75	4.00	3.60-3.85
> 3500	3.50	4.10	3.20	3.90	3.75	3.50	4.45	4.28	2.15	3.75	4.00	3.60-3.85
LTS-2 (Urban)												
0-500	3.50	2.95	3.20	3.90	3.50	3.50	4.45	4.28	2.35	3.75	4.00	3.10
500-2000	3.50	4.05	3.20	3.90	3.75	3.50	4.45	4.28	2.35	3.75	4.00	3.60-3.85
2001-3500	3.50	4.30	3.20	3.90	3.75	3.50	4.45	4.28	2.35	3.75	4.00	3.60-3.85
> 3500	3.50	4.30	3.20	3.90	3.75	3.50	4.45	4.28	2.35	3.75	4.00	3.60-3.85
D) HT Industry												
0 - 500 KVA	4.00	3.70	3.00	3.50	3.80	4.01	3.75	4.09	3.55	3.25-3.40	4.70	3.60-4.10
501 - 1000 KVA	4.00	3.58	3.00	3.35	3.80	4.01	3.75	4.09	3.55	3.25-3.40	4.70	3.60-4.10
> 1000 KVA	4.00	3.44	3.00	3.25	4.00	4.01	3.75	4.09	3.55	3.25-3.40	4.70	3.60-4.10
Induction furnace/PIU	2.50		2.90									
PI Note: For Orissa Energy changes are different for consumers having load between 0-50 KVA, 50 -150 KVA												
E) Railway Traction												
RTS-I (25 KV)	4.30	3.57	3.00	3.35	4.55				3.95	4.40	4.70	3.6
RTS-2 (132 KV)	4.30	3.27	2.90	3.25	4.55				3.95	4.40	4.70	3.6
F) Agriculture												
IAS (Private)	0.50			0.75	0.50	1.10	1.10	0.65				0.40
IAS (Govt)	0.75											

Energy Charges (Rs/Unit)	Jharkhand	W B	Orissa	UP	Gujarat	Rajasthan	Delhi	Haryana	Assam	AP	TN	Karnataka
Supply at LT			1.10						2.15			
Supply at HT			1.00						3.15			

22.2 Revenue from Sale of Power at Proposed Tariffs and UI receivables

1. Revenue from sale of power at proposed tariff for FY 06-07 is determined based on the Energy sales estimated in Section 4 and category wise tariff proposed by the board in this petition. Detail computations to arrive at the Revenue at proposed tariff are provided in this petition.
2. Estimated UI receivables have also been included as part of the Gross Revenue.
3. Sale of Power Revenue at proposed tariff for FY 06-07 is estimated to be Rs 1,480 Crores, the details of which is provided in Table 53

Table 53: Revenue from Sale of Power at Proposed Tariff

Revenue from Sale of Power @ Proposed Tariff (Rs. Crores)	FY 06-07 Projections
Domestic	229.70
Commercial	84.22
LT Industry	109.22
HT Industry #	742.69
Railway Traction	295.61
Agriculture	9.38
Public Lighting	9.43
TOTAL SALE OF POWER REVENUE	1,480.26

Net of Rebate to HT Consumers

22.3 Average Cost of Supply & Realization

Table 54 summarizes Average Cost of supply and category wise average realization.

Table 54: FY06-07 Average Cost of Supply & Realization

Average Realization & Cost of Supply (Rs/Unit)	Existing	Proposed
Average ARR of JSEB	6.47	6.47
Average Realisation	3.40	3.97
GoJ Grant / Resource gap funding	0.03	0.03
Regulatory Asset	0.53	0.53
Revenue Gap	2.51	1.93
Category wise Avg Realisation		
Domestic	1.24	1.91
Commercial	3.69	4.95
Agriculture	1.18	1.46
LT Industry (LTS)	6.37	9.17
HT Industry (HTS)	4.28	4.67
Railway Traction	4.97	5.32
Public Street Lighting	0.93	1.12

**: Average realisation of LT Industry is high due to very low load factor/consumption (less than 5% on an average).*

Average ARR of JSEB as mentioned in the above table also includes the Interest on GoB loan. However, without GoB interest it is ~ Rs. 5.94/u.

22.4 Cost Recovery: Fixed & Energy

1. Table 55 depicts the distribution of JSEB's cost elements into Fixed and Variable costs. As can be seen, 100% of fuel costs and over 75% of power purchase costs are variable in nature, linked to the energy generated/purchased, while the other cost elements are relatively fixed in nature.
2. JSEB's fixed cost constitutes 64% of total costs, while variable costs constitute the balance 36% of total costs.
3. JSEB's proposed revenue recovery through Fixed Charges would be around 34% of total revenues, while 66% of revenues would be through Energy charges in FY 06-07, as depicted in Table 56.
4. JSEB submits to the Hon'ble Commission that the Fixed/Demand Charges would be gradually increased in future years so that the revenue from fixed

charges would recover the fixed costs in full, while the revenue from energy charges would recover the variable costs.

Table 55: Cost Distribution: Fixed & Variable

Cost Distribution (Rs Crores)	FY 06-07 - Proposed Two Part Tariff		
	Fixed	Variable	Total
Fuel		114.33	114.33
Power Purchase	493.31	841.97	1,335.29
Employee	272.88		272.88
R&M	55.14		55.14
A&G	45.03		45.03
Interest	564.54		564.54
Depreciation	97.93		97.93
Provision for Bad & Doubtful Debts	32.46		32.46
Reasonable Return	16.75		16.75
Less: Non-Tariff Income		63.73	63.73
Annual Revenue Requirement	1,578.05	892.57	2,470.62
ARR (% Composition)	63.87%	36.13%	100%

Table 56: Costs & Revenue Recovery: Fixed: Variable

Revenue Recovery (Fixed: Variable) from an Average Consumer	FY 06-07 Proposed Two Part Tariff		
	Fixed	Variable/Energy	Total
Overall Costs	64%	36%	100%
Overall Revenue	34%	66%	100%
Domestic	36%	64%	100%
Commercial	27%	73%	100%
LT Supply	56%	44%	100%
HT Supply	30%	70%	100%
Agriculture	100%	0%	100%
Railway Traction	27%	73%	100%

22.5 Cross Subsidy Calculation

1. Following table summarizes the Cross Subsidy Calculation based on Average Cost of Supply vis a vis Average Realisation for all the customer category.

Table 57: Cross Subsidy Calculation

Category	Avg. Cost of Supply (Rs./kWh)	Realisation (Rs./kWh)		Cross Subsidy (Rs./kWh)		% Avg. Cost of Supply	
		ET	PT	ET	PT	ET	PT
Domestic	6.47	1.24	1.91	5.22	4.56	19%	29%
Commercial	6.47	3.69	4.95	2.77	1.52	57%	77%
LT Industry	6.47	1.18	1.46	5.28	5.01	18%	23%
HT Industry	6.47	6.37	9.17	0.09	(2.70)	99%	142%
Traction	6.47	4.28	4.67	2.18	1.79	66%	72%
Agriculture	6.47	4.97	5.32	1.50	1.15	77%	82%
Public Lighting	6.47	0.93	1.12	5.53	5.35	14%	17%
Total	6.47	3.40	3.97	3.07	2.49	53%	61%

ET: Existing Tariff, PT: Proposed Tariff

- It can be observed from the above table that almost all the customer categories have the tariff lesser than the average cost of supply. For LTIS, per unit tariff is high because of the very low Load factor as compared to other states.

23 JSEB'S Response To Commission Directives

23.1 Directive 1: Sales Estimates and Projections

JSEB is of view that JSEB needs to undertake a detailed study for load research and demand forecast in order to correctly workout its short term and long term peak energy requirements. The study should also compile information on the demand from various consumer categories at different times of the day as well as on consumption of energy during various intervals.

JSEB Response:

JSEB would like to submit that the Board or the Licensee after unbundling shall appoint a consultant for conducting a detailed study for load research and demand forecast in order to correctly workout its short term and long term peak energy requirements. The key areas identified for this purpose are:

- § Study of the daily Load curve of the state during the year
- § Category-wise demand forecast for the state, which will include forecasting of demand from existing and new consumers, unmet demand and latent demand of the system
- § Potential impact of demand side management and energy conservation measures on energy consumption in the state

Consultants shall study the JSEB system and conduct the load research and demand forecast.

23.2 Directive 2: Circle level Category wise Consumption

The Board is directed to submit in the next petition correct estimates for category wise actual consumption for period FY02, FY03 and FY04. The Board is directed to estimate circle wise consumption by different categories including un-metered category. The Board is also directed that in the next tariff petition they have to furnish circle-wise number of hours of supply to various categories of consumers.

JSEB Response:

JSEB submits to the Hon'ble Commission that the Board is submitting herewith-category wise actual energy consumption for FY01-02, FY02-03 and FY 03-04 in Section 25 of this Petition. The information on circle level category of consumption, feederwise no of hours of supply, No of hours of supply to HT and 33 KV consumers is attached as an annexure in Volume II of this Petition.

JSEB does not have the system to segregate number of hours of supply to various categories of consumers because of the mixed load from a single feeder.

23.3 Directive 3: Metering Plan

The Board is directed to submit an action plan by March 2004 for complete metering by the end of June 10, 2005.

JSEB Response:

The Section 55 of Electricity Act, 2003 provides that no licensee shall supply electricity after expiry of two years from the appointed date, except through installation of a correct meter in accordance with the regulations to be made in this behalf by the Central Electricity Authority. The section also provides that the State Commission may, by notification extend the said period of two years for a class or classes of persons or to specific areas.

The section also provides that the CEA may direct the installation of meters at appropriate locations by a generating company or a licensee for proper accounting and audit in the generation, transmission and distribution or trading of electricity.

In the context of compliance of the provisions of Section 55 of the Electricity Act, 2003 as desired by the Hon'ble Commission, JSEB would like to submit that the following key aspects are relevant:

- § Need for installation of correct meters as per the regulations of the Authority within two years of date of notification, viz by June 9, 2003;
- § Extension in the above period for any class or area requires appropriate notification by the State Commission (in this case, the Hon'ble Commission);
- § Need for compliance with any directions of CEA by any generating company or licensee on appropriate meters for energy accounting and Audit.

JSEB submits to the Hon'ble Commission that JSEB under the active guidance of the Hon'ble Commission has been undertaking metering of all categories of its consumers except rural domestic and agriculture consumers. JSEB would like to submit that these meters are as per the regulations of the CEA and thus, JSEB is in compliance with this provision of section 55 of the Electricity Act, 2003 except for supply relating to rural domestic and agriculture consumers.

JSEB submits that the process of metering of the rural domestic and agriculture consumers needs significant preparation and time, keeping in mind the socio-political aspects of the issue. It is further submitted that there is reluctance among agriculture consumers to allow the installation of meters on individual Pumpsets.

Given the above, JSEB submits that after the process of an appropriate action plan, it would take a period of 2 years to ensure the installation of such a metering. JSEB does recognize the fact that there is need for metering of all consumers, including the rural domestic and agriculture consumers. However, given the ground reality, JSEB requests the Honourable Commission to provide an extension of 2 years for correct metering of rural domestic and agriculture

consumers in the state. JSEB submits that it would keep the Commission informed of the progress in this regard in a periodic manner.

JSEB would like to inform the Hon'ble Commission that based on the guidance of the Commission, the Board has considered the need for the appropriate metering at various feeders and boundary limits between various disaggregated entities, and has accordingly metered the following feeders and consumer categories

§ 220 / 132 / 33 KV Feeders:

Electronic meters have been installed on all 220 / 132 Feeders.

In case of 33 KV feeders, 245 feeders have been provided with electronic meters out of around 276 feeders. Rest of the metering will be completed by March 07.

§ 11 KV Feeders:

Out of around 547 feeders in JSEB's area of operations, Electronic Tri-vector meters have been installed on 479 number of 11kV feeders. Rest of the metering is likely to be completed by the end of March 07.

§ HT supply Industrial Consumers:

Electronic meters have been installed on nearly 80% of HT consumers.

§ LT Supply Industrial Consumers (LTS 1 & 2):

Electronic meters have been installed for 3326 consumers till June 2006. For rest the installation is under process.

§ Three Phase Domestic & Commercial Consumers:

Nearly 60% consumers have been provided with electronic meters. JSEB proposes to complete the process of installation by end of March 2007.

§ Single Phase Domestic & Commercial Consumers:

Around 20% of the consumers have been provided with electronic meters under these categories. Given that there are substantial cost implications for the replacement of existing meters by electronic meters, the remaining electro-mechanical meters are targeted for replacement in a phased manner by the end of 10th Five Year Plan i.e. by March 2007.

JSEB would also like to submit that Board has procured 850 HT Trivector meters, 10,000 LT Trivector meters, 20,000 Whole Current meters and 1,10,000 Single Phase meters. Meter installation is under progress.

23.4 Directive 4: Kutir Jyoti Connections

The Board is directed to undertake strict measures to check power (in Kutir Jyoti category) withdrawal against connected load for existing single point connections. And then bring all such consumers in the next domestic category where the permissible load is upto 2 KWs.

JSEB Response:

JSEB would like to bring in the notice of Hon'ble Commission that the instructions have been issued to the field officers for quarterly checking of connected load of the consumers under Kutir Jyoti Category. JSEB would pursue this matter vigorously and shift such Kutir Jyoti consumers having connected load higher than 100 watts to Domestic Category.

23.5 Directive 5: T & D Loss Reduction

The Commission directs that the Board to formulate a task force for supervising the T&D loss in the state. The task forces should report to the Commission quarterly about the various efforts that has been undertaken to reduce these losses with its results.

JSEB Response:

The level of T&D losses affects the overall financial performance of the Board and JSEB has been giving high priority to energy accounting and audit to reduce the level of T&D losses. JSEB would like to submit that that it would set up a special committee at various locations in its area of operations for such an important task. Feeder metering at 33kv and 11 KV substations have been done. Out of total ~ 16000 DTRs, metering has been done on ~ 13200 meters.

Anti Power Theft (APT) cell has been formed in JSEB under Superintending Engineer and in Area Board it is under Executive Engineer. Energy Accounting cell under SE has been established.

In the FY05-06 the number of FIRs, which have been filed, was 872 as against 735 in FY04-05. It has also been observed that the consumption figure of HTSS (Induction furnace) in March 06 was 291 units per KVA as against 241 units in April 05. One of the reasons for such increase may be attributed to the enhanced raids and inspections.

JSEB would also like to submit to the Commission that the Board has taken various initiatives to reduce T&D losses, some of them being plan to invite tenders from consultants/agencies for Consumer indexing, Spot billing, surveillance of service connection wires, metering arrangement status of meters with seal conditions etc. Distribution franchisee in some select areas is also under consideration by the Board.

23.6 Directive 6: Energy Audit and T & D Losses

The Board is directed to undertake a proper energy audit of its system and provide a voltage-wise break up of technical and commercial losses in the next petition. The Board is also directed to provide a circle wise break up of its T & D losses in the next petition.

JSEB Response:

JSEB would like to submit that the issue of energy accounting and audit has been a priority element of the various measures being undertaken by JSEB. JSEB would like to state that the process of energy accounting would be an ongoing process. In order to substantiate our viewpoint, we would seek to respectfully submit the rationale based on the following:

Approach to Energy Accounting/Audit:

In order to outline the approach that has been adopted by JSEB, JSEB would like to outline that the key objectives of undertaking energy accounting/audit include:

A: Improving Generating Station Efficiencies:

- Defining component-level efficiency norms.
- Updating performance norms in line with statutory requirements
- Defining and maintaining unit-level performance records.

B: Improving Transmission and distribution efficiencies

- Defining component-level normative efficiencies;
- Measuring actual efficiencies reported under varying operating conditions;
- Developing a reference database to be used for studying performance curves;
- Providing early-warning signals to planning activities;

C: Monitoring conformance with metering requirements

- Defining voltage-level wise metering requirements
- Monitoring actual metering arrangements vis-à-vis prescribed norms

D: Preparation of Energy flow diagram

- Defining network topology and linkages;
- Energy import / export / generation / consumption at various voltage levels

E: Energy balancing

- Energy input and output
- Measuring actual efficiencies reported under varying operating conditions.
- Developing a reference database to be used for studying performance curves.

F: Estimation of non-metered consumption

- Defining the algorithm for estimating category-wise, non-metered consumption.
- Validating estimated unmetered consumption based on indirect results

G: Trend analysis and forecasting

- Defining the trend-analysis model and statistical guidelines.
- Identifying trend elements, seasonal elements and random elements.
- Correlation and regression analysis between pre-defined parameters such as time, HT-LT sales ratio, system units per circuit km of network, etc.

H: MIS reports

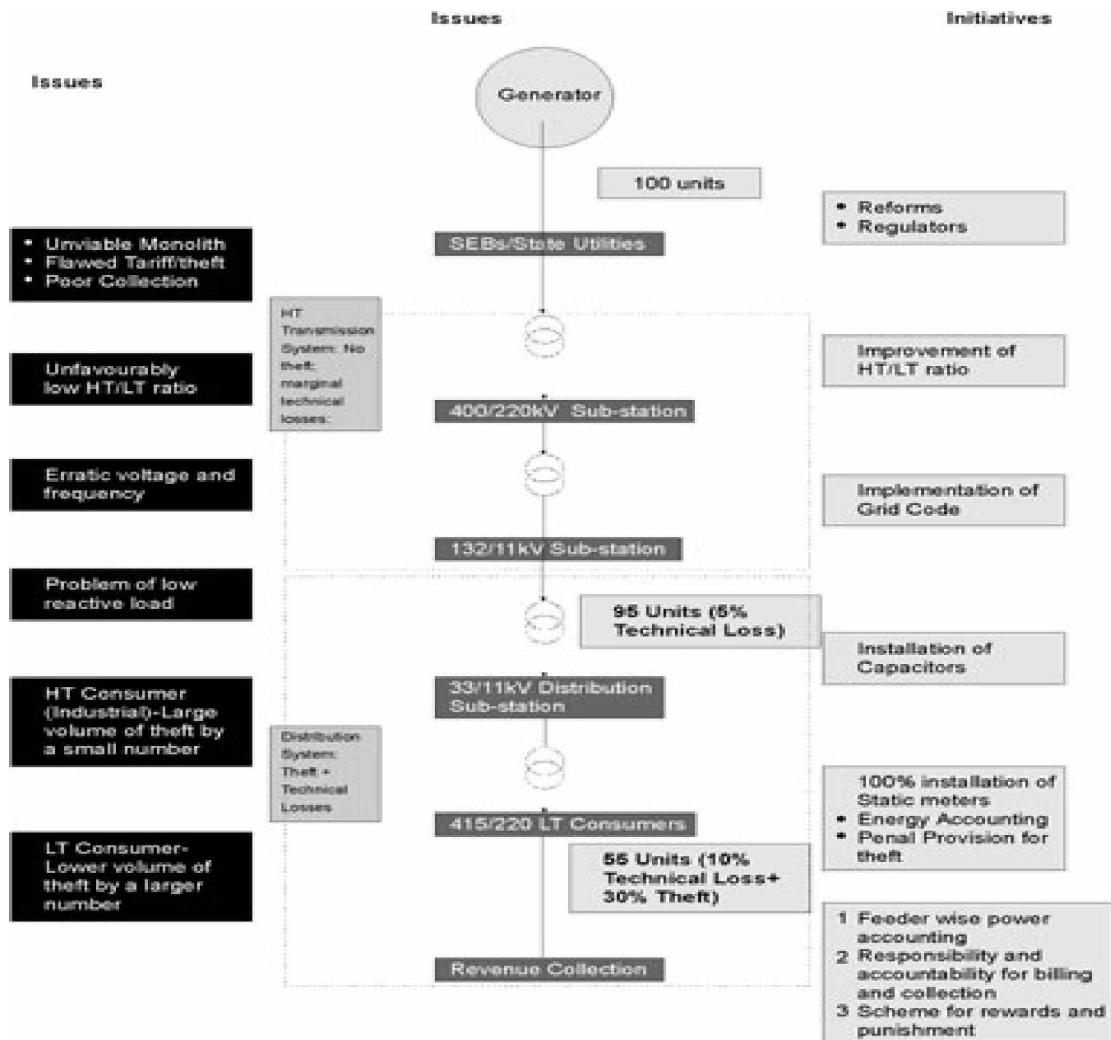
- Fuel-consumption reports;
- Energy-consumption reports;
- Equipment-performance reports;
- Metering arrangements adequacy reports;

- Non-metered energy consumption;
- Trend analysis in various energy accounting sub-domains.

While it is recognized that all the elements outlined have their own importance, JSEB would like to submit that the energy accounting approach needs appropriate prioritization of these elements. In the context of JSEB, the following elements have been prioritized:

- Improving Transmission and distribution efficiencies
- Monitoring conformance with metering requirements
- Estimation of non-metered consumption

Once these elements get addressed, other elements as felt appropriate could be undertaken. In order to implement the above-prioritized elements, JSEB had undertaken a review of the key areas of focus in energy accounting, as identified by CEA in its paper on Distribution Reforms upto 2012. The key elements as identified by CEA are pictorially shown below:



Based on the above, the following are the implementation measures that arise for the purpose of Energy Accounting:

- Installation of meters at the interface points;
- Feeder-wise energy accounting;
- Fixing of responsibility and accountability

Installation of Meters at Interface Points

As outlined in the metering plan, JSEB has made progress in the metering of the interface points as detailed in Response to Directives of Energy Audit and T&D losses.

Feeder wise Energy Accounting

JSEB has started Feeder wise accounting of energy in some of its 33kV/11kV feeders since June 2004. JSEB would like to submit to the Commission that it would take some time to stabilize this process of energy accounting on monthly basis, including energy accounting at Distribution Transformer levels for better energy monitoring and initiate appropriate corrective actions. Tendering process is underway for consumer indexing/ spot billing and computerization, etc.

Fixing of Accountability & Responsibility

JSEB has fixed the responsibility of accounting for the energy sent out from each 11kV feeder to the respective Junior engineers (designated as Feeder Manager) of the respective areas for which the 11kV feeder is supplying power.

23.7 Directive 7: Un-metered Consumption

The Board is directed to undertake a study to measure un-metered consumption and provide the results in the next petition.

JSEB Response:

JSEB has taken initiatives to measure un-metered consumption in JSEB's area of operations. JSEB is submitting the study of a select rural feeder along with the petition.

In addition to above JSEB would like to submit to the Hon'ble Commission that the Board is in the process of appointing consultants for undertaking a study to measure un-metered consumption in certain divisions of Jharkhand, so that the Board's initiative to measure un-metered consumption will get a pace. Brief scope of work would involve installation of sample meters on un-metered consumers, measuring the energy and hours of supply to these consumers over a period of 1 year in order to capture the seasonal variations in consumption as well as establish normative hours of supply and energy consumption, which would enable estimation of energy consumption by such un-metered consumers in the state with reasonable accuracy.

23.8 Directive 8: Performance of PTPS

Board is directed to undertake measures in terms of economic scheduling of working units in order to reduce SHR from its existing level and increase the PLF to its optimal level. The Board is directed to account separately the consumption in the nearby areas of PTPS and estimate auxiliary consumption net of this level.

JSEB Response:

JSEB has signed an agreement with NTPC on 30-08-2005 under Partners in Excellence Program of Ministry of Power, Government of India.

Currently seven engineers of NTPC have been deputed for two years to improve the performance of PTPS. It has been observed that with the effort of NTPC and PTPS the generation level has been increased in the FY06 as compared to FY05. However, the fire in Unit No 9 and 10 has affected the total generation from PTPS during the FY06-07.

There are certain steps being undertaken by PTPS to improve the performance. These are:

- § Adoption of best practices of NTPC
- § R&M/LE of BHEL units in progress
- § Comprehensive overhauling of running units no 2,6,9 &10
- § Restoration of Shut down units in phases
- § Replacement of HP Heater for Unit No 9 and 10 is under consideration during the proposed capital overhaul.
- § Maintenance of work of existing cooling tower to increase cooling efficiency, which will be done in long term major overhauling.
- § Station Heat Rate
 - There is a proposal for replacement of HP heater of units no 9 and 10 in short term and long term maintenance to improve the boiler efficiency.
 - Control of flue gas temperature by cleaning/ replacement of Air preheater will be done during the overhauling
 - Steam leakage from Boiler/ Turbine is expected to be reduced after overhauling
 - Regular cleaning of condenser tubes shall be undertaken
 - LP Heater/ HP Heater shall be put in service after the major overhauling of the units

§ Improvement in PLF:

- Steps are being taken to bring down the trippings by quality maintenance and operating the units adopting best practices. Action on "Trip Committee recommendation" is being undertaken.
- R&M of equipment is proposed to be done, thereby reducing partial loading
- Analysis of each forced outages by a Tripping analysis committee and too implement the recommendations of the same

It had also been observed that Auxiliary consumption had reduced in the second half of FY05-06. For further improvement in the system, unit wise instruments for reduction in Auxiliary consumption, coal consumption and oil consumption shall be procured. The Board has requested NTPC to provide the specification details for the same. Proposal has also been made to install energy meters in colony and powerhouse. PTPS shall also undertake certain steps to reduce the auxiliary consumption:

- § Reduce the idle running of the equipments
- § Improvement of availability of critical equipments like ID Fans, PA Fans, Bowl mills feeders, boiler feed pumps, CW pumps, etc.

Reduction in Specific Consumption of Oil

- § Improvement of the milling system performance to avoid consumption of FO/LDO
- § To operate the units above technical minimum load without oil support.

Ash disposal

- § Desein has been appointed as consultant for installation of dry ash utilisation system and SILO.
- § Flue gas conditioning system in the running boilers will be installed to reduce stack emission level to 100 mg/Cu NM.
- § JSEB shall also organise seminar/ workshop at PTPS for wider publication of fly ash utilisation.

JSEB is in the process of renovation & modernisation/life extension program of some of the PTPS units on rotation basis and is expected to improve its performance on key parameters like PLF, Station Heat Rate, Auxiliary Consumption and Specific Oil consumption significantly during the current financial year for some of its units, which are currently under R&M.

JSEB requests the Hon'ble Commission to provide time till March 2007 to install meters and measure the consumption in the nearby areas of PTPS to enable accurate determination of Auxiliary Consumption of PTPS net of such consumption in the nearby surrounding areas of PTPS and the consumption would be accounted separately.

23.9 Directive 9: Fuel Consumption and fuel cost

The Hon'ble Commission notes that there is a transit loss of 15% while transporting the coal to the power plant. Given that PTPS is situated in a Pithead, such a level of transit loss is very high and is indicative of poor supervision on part of the board. The Commission directs the board to step up its supervision to reduce the transit loss.

JSEB Response:

JSEB wishes to submit that transit loss is not to the extent of 15% and the same had been between 4-6% during the last 10 years.

JSEB submits that there is need for a re-consideration on the directive provided by the Hon'ble Commission on the issue of Coal transit Losses. JSEB would like to explain that the reasons for such high loss: -

- Difference in weighment scales at loading and unloading point: There can be coal difference on account of difference in weighment scales used at different points.
- Loss in Transit due to in transit due to theft, pilferage, etc: These losses relates to losses that result due to the inefficiencies in the transport system of coal. Given the nature of such losses, it can be considered that they are a function of the distance traversed by coal, in some ways, the longer the coal takes to reach destination, the higher the possibility of such losses, both in terms of probability and in terms of quantum. Given their nature, these losses are expected to be controllable.
- Natural Phenomena during transportation of coal: There is expected element of loss in weight of coal on account of evaporation, windage and seepage of fine coal through wagons. These losses are also a function of nature of carriage with open wagons being more susceptible to losses.

During the FY04-05 the transit loss had been ~ 4% and in the current year it is expected to be same.

Extent of Scope available to JSEB

S. No	Nature of Transit Losses	Possible Measures to control losses	Agency who can control the losses	Key Constraints
1	Due to Natural Phenomena	Covered wagons?	Railways & JSEB	Cost economics
2	Weighment Errors	Increased frequency of calibration Average of	Coal India	Increased cost and administrative difficulties Unacceptable to

S. No	Nature of Transit Losses	Possible Measures to control losses	Agency who can control the losses	Key Constraints
		weighment	Coal India and JSEB	Coal India
3	Loss in Transit due to theft etc	Enforceable Transport agreement with liability	Railways	Railways unwilling to discuss issue

Clearly, as outlined above, the scope available to JSEB to reduce coal transit losses is limited as the reasons why they occur are due to the other entities in the transaction, viz, Coal India and Indian Railways. However, JSEB would endeavour to reduce the coal transit loss to the maximum extent possible through better monitoring and management of coal supply.

23.10 Directive 10: Fuel Management System

The Board is directed to undertake appropriate measures with proper fuel management system in place to improve the efficiency of plant and submit an action plan in this regard within one month from the date of issue of this order.

JSEB Response:

JSEB would like to submit to the Hon'ble Commission that the Board wishes to appoint consultant for developing the Fuel Management System. An action plan has also been drawn under supervision of M/S NTPC for the R&M of CHP.

23.11 Directive 11 and 12: Power Evacuation from TVNL

The Board is directed to undertake the necessary capital and R & M expenditure to augment its transmission capacity for evacuating 100% power from TVNL Station, and an action plan in this regard should be submitted to the commission within one month from the date of issue of this order.

JSEB Response:

JSEB wishes to submit the following measures to strengthen Transmission system

- § There is a planning to construct 400 KV Double Circuit TTPS Ranchi Transmission lines to be terminated in 400/220 KV Grid substation PGCIL Ranchi. 2 nos of 400 KV bays in 400/220 KV Grid will be provided this work by PGCIL.
- § Construction of 220 KV TTPS Haldia (Ranchi) Double Ckt Transmission line by JSEB. DPR is under development
- § Construction of 220 KV Double Ckt TTPS Govindpur Transmission line. DPR is under preparation.

- § Work in Progress: Restoration of 400 KV TTPS-PTPS Transmission line from present 220 KV voltage level to 400 KV voltage level by strengthening TTPS, PTPS and Biharsharif end Transmission system.

23.12 Directive 13: Standards of Performance

The Board is directed to prepare and submit to the Commission a proposal on a set of standards of performance along with penalties for non-adherence to these. The petition should include the condition for minimum hours of supply that the Board has to supply.

JSEB Response:

JSEB submits that Standard of Performance is already notified by the Hon'ble Commission.

23.13 Directive 14: Minimum Charges

The Board is directed to provide details of the Minimum charges collected from different categories of consumers and prepare a schedule of rational demand charge, which may replace this minimum charge. The Board is also directed to provide details on the category wise number of consumers who pay only the minimum charges.

JSEB Response:

JSEB submits the number of consumers having Monthly Minimum Charges along with the petition, which is attached as an annexure in Volume II of this Petition.

23.14 Directive 15: Supply to BPL family in Urban Slums

In the pocket of urban areas, there are houses of population Below Poverty Line (BPL). The Commission observes that the Board should extend supply to these consumers at single point as in case of 'Kutir Jyoti'. For this purpose the Board may approach the Commission after obtaining the "Slum area declaration" from the concerned authority.

JSEB Response:

Slum areas need to be notified by the Government. As and when JSEB shall receive such notification, Board shall undertake the necessary action as directed by the Hon'ble Commission.

23.15 Directive 15: Non-Conventional Energy in Rural Areas

The Board is directed to submit in 3 months their plan of action and strategy for rural electrification through promotion of non-conventional sources of energy. The Board is also directed to coordinate with JREDA (Jharkhand Renewable

Energy Development Agency) in this regard for successful implementation of various initiatives.

JSEB Response:

In compliance to the Commission's directive in this regard, JSEB had written a letter to JREDA requesting them to prepare plan of action and strategy for rural electrification through promotion of non-conventional sources of energy vide JSEB's letter No. 112/RE dated January 31, 2005. JSEB has also sent list of villages/ tolas, which are remote for grid connectivity. JREDA has also taken certain steps for electrification of such villages/ tolas.

23.16 Directive 16: Auditing of Accounts

The Board is also directed to get its accounts for FY02 & FY03 duly audited and submit the same by March 2004.

JSEB Response:

JSEB submits to the Commission that the Provisional Accounts for the FY 2001-02 has already been completed and approved by the Board. After getting the approval from the Board, it has been submitted to the CAG for final audit. In addition to this, Annual Accounts for the year 2002-03 and 2003-04 has been approved by the Board. The books of accounts will get audited and submitted to the Hon'ble Commission in due course. The finalisation of the accounts has been delayed because of the pending issues between BSEB and JSEB.

23.17 Directive 17: Government Dues

The Board is directed to step up its collection those remaining outstanding against the government organizations.

JSEB Response:

JSEB submits to Hon'ble Commission that JSEB is pursuing the matter vigorously with various government organisations. Proactive intervention by the Hon'ble Commission would be quite helpful in this regard. Government Departments are yet to comply with the directives of the Hon'ble High Court.

23.18 Directive 18: Quality of Service

The Board is directed to submit a proposal on improving the Quality of Service identifying various performance indicators in this regard.

JSEB Response:

JSEB is taking all efforts to improve the Quality of supply and service to its consumers within the limited funds and resources it has in its disposal. JSEB has taken initiatives in appointing agencies for spot billing of consumers. Consumer complaint redressal mechanism is already under operation. APDRP scheme is under implementation. Change of conductors and transformers are

being done. Underground cabling has also been taken up in select cities of Jharkhand.

23.19 Directive 20: Voltage wise costs

The Board is directed that in the next tariff petition the Board should submit the voltage wise costs so that the tariff rationalization process can be pursued further more effectively. (Sec.5.3)

JSEB Response:

The Commission will appreciate that the determination of the cost-of-service, particularly on a voltage-wise basis would require substantial efforts for putting in place the appropriate infrastructure and conducting studies thereafter. Extensive field studies would also be required to obtain credible and consistent results. The entire study has to be structured appropriately to make it meaningful and representative. It is expected that such a study would take 10 - 12 months to provide the desired outcome. Since the Board is expected to be unbundled and it is felt that a study of this kind would be give more meaningful results when they are carried out for the disaggregated entity(ies). The Board seeks Commission's concurrence to conduct such study after the notification of the transfer scheme related to JSEB unbundling.

24 Waiver

1. This ARR & Tariff Revision Petition covers most of the requirements specified by the Hon'ble Commission. JSEB has endeavored to comply with the extensive information requirements prescribed by the Commission.
2. JSEB submits to the Hon'ble Commission that it has been formed few years earlier and it is in the process of strengthening its information collation, compilation, processing & analysis systems. As a result of which, JSEB is not in a position to provide detail information as required by the Hon'ble Commission in its prescribed formats. However, JSEB has submitted herein the details of its revenue and costs in the enclosed formats, which enables determination of Annual Revenue Requirement and tariff revision. JSEB submits to the Hon'ble Commission to consider the same for evaluation of this petition.
3. JSEB condone any inadvertent omissions/ errors/ shortcomings and permit the Petitioner to add/ change/ modify/ alter this filing and make further submissions as may be required at a future date.
4. JSEB submits to the Hon'ble Commission that it would submit necessary additional information required by the Hon'ble Commission during the processing of this petition.

25 Annexure 1: Consumer Category wise Energy Sales: FY02, FY03 & FY04

Energy Sales (MU) - A/cs	FY 01-02	FY 02-03	FY 03-04
Domestic	422	548	639
Non Domestic	123	130	133
Low Tension Industry	102	104	111
High Tension Industry	1,192	1,141	1,190
Agriculture - IAS -I (Un-metered)	28	38	40
Agriculture - IAS -II (Un-metered)	6	7	5
Public Street Lighting (Un-metered)	30	38	42
Railway Traction	305	335	309
Total	2,208	2,340	2,470

26 Annexure 2: Category wise Number of Consumers for the FY05-06 and FY06-07

Category Wise No of Consumers	FY 05-06	FY 06-07
Domestic Total Consumers (incl unmetered)		
Domestic		
DS-II, < = 4 KW -Total	532640	609532
DS- III, Above 4 KW	22160	25356
DS HT		
Domestic - Total	554800	634888
Non Domestic		
NDS-I, <= 2 KW	45009	49479
NDS-II, >2 KW to 75 KW	6534	7182
Non Domestic - Total	51543	56662
Low Tension - Total	7992	8540
High Tension Service		
HTS-I	784	810
HTS-II	42	45
EHTS	2	3
HT Special	51	55
High Tension - Total	879	913
Traction		
RTS-I	8	9
RTS-II	5	5
RTS - Total	13	13
Total - Metered	615227	701016
UNMETERED CATEGORIES		
DS-I (a), Kutir Jyoti	115000	126940
Ds-I (b), <= 2 KW	196076	229043
NDS-I unmetered	20812	22880
Street Light Service Unmetered	745	773
IAS - I Unmetered	9758	10688
Agriculture - IAS - II (Unmetered)	176	186
Total - Unmetered	342567	390509
Total - Within State	957794	1091525

27 Annexure 3: Consumer Category wise sales for the FY05-06 and FY06-07

Energy Sales (MU)	FY 05-06	FY06-07
METERED SALES		
Domestic		
DS-II, <= 4 KW -Total	643	783
DS- III, Above 4 KW	49	60
DS HT		
Domestic - Total	692	843
Non Domestic		
NDS-I, <= 2 KW	118	127
NDS-II, >2 KW to 75 KW	16	17
Non Domestic - Total	134	144
Low Tension - Total	116	119
High Tension Service		
HTS-I	683	745
HTS-II	481	525
EHTS	22	24
HT Special	299	327
High Tension - Total	1485	1621
Traction		
RTS-I	252	265
RTS-II	277	291
RTS - Total	530	556
Total - Metered	2956	3283
UNMETERED CATEGORIES		
DS-I (a), Kutir Jyoti (Unmetered)	28	34
DS-I (b), <= 2 KW	270	329
NDS-I unmetered	25	26
Street Light Service Unmetered	80	84
Agriculture - IAS - II (Unmetered)	7	7
IAS - I Unmetered	52	57
Total - Unmetered	462	538
Total - Within State	3418	3821

28 List of Formats Enclosed

Sl. No.	Form No.	Description
1	Form 2.1	Aggregate Revenue Requirement and Revenue Gap
2	Form 2.2	Energy Availability Summary
3	Form 2.3	Patratu TPS – Technical & Commercial details
4	Form 2.4	Sikidiri Hydel Station – Technical & Commercial details
5	Form 2.5	Cost of Fuel & Power Purchase for FY 03-04
6	Form 2.6	Cost of Fuel & Power Purchase for FY 04-05
7	Form 2.7	Cost of Fuel & Power Purchase for FY 05-06
8	Form 2.7a	Cost of Fuel & Power Purchase for FY 06-07
9	Form 2.8	Employee Costs
10	Form 2.9	Administration & General Costs
11	Form 2.10	Repairs & Maintenance Costs
12	Form 2.11	Interest & Finance Charges
13	Form 2.12	Non-Tariff Income

29 Prayer

1. State Transmission Utility and the Licensee requests the Hon'ble Commission to:
 - a. Approve the Aggregate Revenue Requirement as well as the Tariff Revision Proposal for the State Transmission Utility and Licensee for the FY06-07;
 - b. Approve the Aggregate Revenue Requirement of Generation function of JSEB for the FY06-07;
 - c. Allow the remaining provisions for tariff as per proposed Tariff Schedule;
 - d. Approve the proposed General Terms and Conditions of Supply;
 - e. And pass such other and further orders as are deemed fit and proper in the facts and circumstances of the case.

BY THE APPLICANT THROUGH

August 31, 2006

Chief Engineer (Commercial & Revenue)

Jharkhand State Electricity Board,
Ranchi

**BEFORE THE JHARKHAND STATE ELECTRICITY REGULATORY
COMMISSION, RANCHI**

Filing No.....

Case No.....

IN THE MATTER OF: An Application for approval of Aggregate Revenue Requirement and fixation of the Retail Supply Tariff under Section 62 and 86 of the Electricity Act, 2003.

AND

IN THE MATTER OF State Transmission Utility and Licensee (Jharkhand State Electricity Board)
Ranchi

Affidavit verifying the Application

1. I, M. A. Khan, son of Late Mohd. Israil Khan, aged 58 years, residing at Risaldar Nagar, Doranda-Ranchi, do solemnly affirm and state as follows:
2. I am the Chief Engineer (Commercial & Revenue) of JSEB, the applicant in the above matter, and am duly authorized by the said applicant to make this affidavit on its behalf.
3. The statements made above in this petition as well as the evidential and other documents submitted along with this petition are true to my knowledge and based on record and information made available to me and I believe them to be true.

I Solemnly affirm, this on 31st August 2006 that the contents of above affidavit are true to my knowledge & no part of it is false and no material has been concealed therefrom.

Ranchi

Date: August 31, 2006

Chief Engineer (Commercial &
Revenue)
Jharkhand State Electricity Board
Ranchi