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MADHYA PRADESH ELECTRICITY REGULATORY COMMISSION
"Urja Bhawan", Shivaji Nagar, Bhopal - 462 016

RETAIL SUPPLY TARIFF ORDER 2007-08

Petition Nos. **111/06 (East Discom),**
112/06 (West Discom) and
115/06 (Central Discom)

PRESENT:

D. Roy Bardhan, Member

R. Natarajan, Member

IN THE MATTER OF:

Determination of Aggregate Revenue Requirement (ARR) and Retail Tariff for FY 2007-08 based on the Tariff Applications made by the Madhya Pradesh Poorva Kshetra Vidyut Vitaran Company, Madhya Pradesh Paschim Kshetra Vidyut Vitaran Company and Madhya Pradesh Madhya Kshetra Vidyut Vitaran Company

ORDER

(Passed on this 30th Day of March, 2007)

This order relates to the petition numbers 111/06, 112/06 and 115/06 filed respectively by Madhya Pradesh Poorva Kshetra Vidyut Vitaran Company, Madhya Pradesh Paschim Kshetra Vidyut Vitaran Company, Madhya Pradesh Madhya Kshetra Vidyut Vitaran Company (to be referred hereinafter as East, West and Central Discom respectively) before Madhya Pradesh Electricity Regulatory Commission (hereinafter referred to as MPERC or the Commission). These petitions have been filed as per the requirement of MPERC Regulations (Terms and Conditions for determination of tariff for distribution and retail supply of electricity and methods and principles for fixation of charges) Regulations, 2006.

1.1 The Commission had notified the MPERC (Terms and Condition for determination of Distribution Tariff) Regulations, 2005 (G-27 of 2005) on 5th December 2005, specifying the terms and conditions for determination of Multi-Year Tariff (FY 07 to FY 09) for the Distribution Licensees. These regulations were published in the MP Govt. Gazette on 23rd December 2005. The Distribution Licensees did not file their petitions in accordance with the referred regulations. The desired data was provided for FY07 only and no information for the remaining years of the tariff years FY08 and FY09 was provided. In the absence of the relevant information the Commission could determine the tariff for Distribution Licensees for FY07 only but directed the Distribution Licensees to file their subsequent petitions in October 2006 for multi-year tariff determination in accordance with the applicable regulations.

1.2 After the issuance of the above referred MYT regulations, the Ministry of Power notified its National Tariff Policy on 6th January 2006. The Policy in respect of **Multi-Year Tariff** states in the paragraph 5.3(h)(1):

"Section 61 of the Act states that the Appropriate Commission, for determining the terms and conditions for the determination of tariff, shall be guided inter alia, by multi-year tariff principles. The MYT framework is to be adopted for any tariff to be determined from April 1, 2006. The framework should feature a five-year control period. The initial control period may however be of three-year duration for transmission and distribution if deemed necessary by the Regulatory Commission…"

Some of the principles enunciated in the Commission's MYT regulations notified earlier required modification so that the regulations are consistent with the National Tariff Policy. However, as the Commission had already issued multi year tariff orders for Generation and Transmission Licensees, the Commission decided to consider the revisions in the next control period. The Commission also notes that no such change has been initiated by the CERC, which had issued multi year tariff orders for Generating Companies and Inter State Transmission Licensees. The Commission decided to consider the changes on account of the National Tariff Policy in the regulations applicable to Distribution Licensees since a MYT order has not been issued for them. Accordingly, the Commission has issued afresh the terms and conditions for determination of distribution tariff by publishing the Regulations (Terms and Conditions of determination of tariff for distribution and retail supply of electricity and methods and principles for fixation of charges) on 10th November 2006 in MP Govt. Gazette after completion of the process of consultations with Licensees and consumers. In addition to the other changes in the regulation, the Tariff Period was revised to 1st April 2007 to 31st March 2010.

1.3 In accordance with the Regulations notified by the Commission on 5th December 05 and also as per the revised regulations, the three Distribution Licensees were required to file multi-year tariff petitions by 31st October 06. Only East Discom could adhere to this date while West Discom filed its tariff petition on 4th November 06 and the Central Discom filed it on 7th November 06. Even though as per the Regulations, the Discoms were required to file tariff petition by indicating the tariff needed by them to meet the anticipated gap in revenue (if any); these petitions provided only details of the likely cost and the estimated revenue at existing tariffs. The petitions had no proposal for meeting the shortfall in the proposed revenue requirement. Even though the petitions were incomplete and could have been rejected on this ground, the Commission directed the Discoms to publish the details in newspapers for inviting comments from public so that valuable time is not wasted and the target date for implementing multi-year tariff could be met.

1.4 The Commission pointed out this shortcoming to the Distribution Licensees and gave the Licensees time till 4th December 2006 to submit their proposals for bridging the projected gap. The three Distribution Licensees submitted their tariff proposals for FY08 only. The Commission directed that the tariff proposals be published in newspapers for inviting comments /objections from the public.

1.5 Subsequent to submission of tariff proposals, the Discoms revised their submissions with higher revenue gap than that in the original submission. According to the Discoms, this revision was required to accommodate additional short term purchases of power expected for FY07. The Licensees have proposed to meet the increased shortfall in the aggregate revenue requirement through tariff revisions, efficiency gains, income from sale of surplus power and the creation of regulatory asset. The Commission asked the Licensees to provide the basis for computing the proposed efficiency gains and trading income but no such details have been provided. The request for inclusion of short-term power purchase cost incurred in FY07 has not been considered by the Commission in the absence of Audited Annual Accounts for FY07.

1.6 The Commission would like to point out that the Discoms have not filed the required data for approval of the additional short term power purchases as per the requirements of the MPERC (Power purchase and procurement process) Regulations, 2004, revision 1 of 2006 and desires that, at least, henceforth the Licensees fully comply with the provisions of these regulations to claim the additional cost in time.

Difficulties in issuance of MYT Order for Distribution Licensees

1.7 In accordance with the section 5.8.10 of the National Electricity Policy and section 5.3 (h)(2) of the National Tariff Policy the State Government notified, on 25th December 2006, the annual milestones to be achieved by the three Distribution Companies for distribution losses. The losses notified for the next five years are given in the table below:

Table 1: Losses (%)

Year	**East Discom**		**Central Discom**		**West Discom**	
	As notified by MPERC	As notified by GoMP	As notified by MPERC	As notified by GoMP	As notified by MPERC	As notified by GoMP
FY07	32.5	34.5	37.0	43.0	30.0	30.0
FY08	29.5	32.5	32.0	40.0	27.5	28.5
FY09	26.5	29.5	27.5	37.0	25.0	27.0
FY10	23.5	26.5	25.0	34.0	23.0	25.5
FY11	--	23.5	--	31.0	--	24.0

As seen from the table above, the State Government has substantially modified the loss reduction trajectory prescribed in the regulations for the three Distribution Companies. This modification would lead to increase in energy purchase requirement for the same amount of energy sale thereby increasing the power purchase cost. The Commission has calculated the revenue requirement for FY 08 based on the loss trajectory notified by the State Government.

1.8 The above referred provisions of the NEP and NTP are being reproduced below:

NEP

5.8.10 ………The State Government would prepare a Five Year Plan with annual milestones to bring down these losses expeditiously. Community participation, effective enforcement, incentives for entities, staff and consumers, and technological upgradation should form part of campaign efforts for reducing these losses……

NTP

5.3(h) (2)….In cases where the operations have been much below the norms for many previous years the initial starting point in determining the revenue requirement and the improvement trajectories should be recognized at "relaxed" levels and not the "desired" levels. Suitable benchmarking studies may be conducted to establish the "desired" performance standards. Separate studies may be required for each utility to assess the capital expenditure necessary to meet the minimum service standards.

The State Government along with the annual milestones is also required to prepare a plan for achieving these milestones. These plans should be prepared along the suggested lines. Further as per the NTP, the norms are to be established after conducting suitable benchmark studies. Separate studies are required to establish the capital expenditure necessary to meet the minimum service standards. None of the mentioned requirements have been fulfilled. The Commission expects that necessary plans and studies would be completed in time and submitted to it for its consideration. In the absence of the follow up action the Commission would be forced to revert back to the loss trajectory notified by it as a part of the regulations.

1.9 The Commission has notified the terms and conditions for determination of distribution and retail tariff under multi year framework. The advantages that it offers are well known and shall not be repeated here. The Commission has evolved the MYT framework in the context of situation prevailing in Madhya Pradesh. In the regulations the principles for truing up, cost determination, O&M norms and the loss reduction trajectory for the tariff period FY08 to FY10 have been prescribed. The Commission has also approved in principle the Capex plan for incorporation in the ARR for the tariff period. This framework provides Licensees the regulatory certainty for prediction of allowable cost and necessary incentives to the Licensees for economic and efficient operations. The framework also facilitates investments as it ensures recovery of cost of capital employed through interest and return on equity. The successful implementation of MYT framework would catalyse financially and technologically morbid Distribution Companies into vibrant ones.

1.10 For successful implementation of the framework all the stakeholders must fulfil their obligations. The Commission must stick to the notified regulations and should take a balanced view of the interest of all stakeholders. The Distribution Licensees should provide quality and reliable power and the consumer service as per the standards set by the Commission at the approved level of costs. The Commission, for the existing multi year framework, has specified a separate loss reduction trajectory for each Distribution Licensee and has in principle approved the capital expenditure proposed by the Distribution Licensees for achieving the approved loss reduction.

1.11 The loss trajectory prescribed by State Government is at variance with the one notified by the MPERC, it is essential to revisit the presently approved Capital expenditure plans of the Licensees. As explained in the subsequent sections of this order, the Distribution Licensees have proposed to deviate significantly from the approved capex plan and further, even at the time of issuing this order funding for significant portion of the approved capital expenditure plan has not been firmed up. It is difficult to believe that the proposed physical targets would be achieved, as these are not corroborated by the recent past achievements of the Licensees. The Licensees have not been realistic in preparing their Capital expenditure plan and seem to have been over ambitious in their projections.

1.12 The O&M norms were prescribed with the objective of incentivising 100% metering of consumers, and the expansion of the distribution network. The Licensees under RGGVY scheme have approached the Central Government for funding its Rural Electrification programme. Approval of the submitted rural electrification schemes (under RGGVY) is still awaited. The assets and liabilities created under these schemes would belong to the State Government. The Licensee would be responsible for commissioning and upkeep of the assets and for sale to such consumers. For the purpose of computing allowable O&M cost the Licensees have included the number and energy sale to rural consumers likely to benefit from this electrification programme. The numbers projected for claiming the O&M benefit seem incredulous and completely defy the past performance of the Licensees. For example the East Discom has projected that around 6 lakh consumers would be added in FY08 under this scheme, which is around 25% of its present consumer base. Further the RGGVY scheme provides for mandatory appointment of Franchisees, the progress on which has been very tardy. The Commission thus feels that the investments proposed by the Licensee for rural electrification may not be achieved within the next one year.

1.13 The State Government has twice extended the date for finalisation of the opening Balance Sheets of the five Companies notified on 31st May 2005 by six months each i.e. upto 31st May 2007 at present. Revision in the balance sheets is likely to affect the depreciation cost, interest cost and return on equity, which can be a significant amount. Implementation of the MYT will result in this genuine impact not getting captured in the tariff period. This may require a need for recalculation of annual revenue requirement during the tariff period.

1.14 The Discoms have been repeatedly representing before the Commission their inability to carry out the capital investments due to resource crunch. Hence, at this stage, the Commission is not confident that the investment proposals given by the Discoms in the petitions could be realistically implemented.

1.15 The Commission had convened a meeting of State Advisory Committee on 17.01.07 wherein the tariff petitions of the Distribution Licensees were discussed. The members of the Committee offered a number of suggestions on the petition. One of them was for restricting the tariff determination only to FY08 in the absence of credible information for the remaining two financial years of the Tariff Period.

1.16 For the reasons given in the above paragraphs, the Commission is not determining Aggregate Revenue Requirement for FY09 and FY10. The Commission is therefore restricting itself to the determination of ARR and tariff for FY08 only. However, the Commission wishes to emphasise that the framework of Multi-Year Tariff determination set out in the Commission's Regulations under section 61 shall remain valid for the remaining two financial years (FY 09 and FY 10) of the Tariff Period, and the determination of ARR for these years shall also be done as per this framework only.

Uniform Retail Tariffs across Discoms

1.17 While the tariff petitions of the Distribution Licensees were being reviewed, the Commission received a letter from the State Government, expressing their views on the subject of uniform retail tariffs across Discoms. The excerpts of this letter no. 8059/13/2006 dated 12th December 2006, addressed to the Commission, are reproduced hereunder:

"As a cardinal principle in determination of these tariffs, the Government of MP would like to ensure that the interest of all the consumers and the utilities in the State is protected and no consumer is put at a disadvantage because of the geographical location of his electricity connection. For this purpose, the Government of MP intends to ensure that:

- *At least in the foreseeable future, the tariffs for same category of consumers in the state must remain similar;*
- *At the same time, it also believes that no major differences should arise among the Discoms in terms of revenue gaps or surpluses, excepting for increase due to improved efficiency of operations;*
- *The Government intends to provide subsidy or any other form of financial assistance only to identified category (ies) of consumers as per Government's policy;*
- *While ensuring the aforesaid, it would in no way like the financial interest of any of the Discom(s) to be jeopardized; and*
- *However, there should also be adequate incentives available to the Discoms for efficiency enhancement.*

Given the aforesaid facts, the Government of M.P. advises the Commission to assist in achieving the objectives outlined above for current multi-year tariff determination also (for the control period 1st April 2007 to 31st March 2010), and provide recommendations to the Government under section 86(2) (iv) of the Electricity Act, 2003 if it considers that the Government should take any further action for achieving the said objectives. As an option for this purpose, the Commission may consider determining the bulk tariffs as differential at which the recently constituted MP

Tradeco can supply power to the three Discoms. However, the Commission is free to consider any other option that it may deem fit and advise the Government before hand for its views on the same before a final view on the retail tariffs is taken for three Discoms."

1.18 The Commission, vide its letter dated 19th December 2006, has responded to the above letter of the State Government stating that it has noted the advice and that it shall duly consider the same in the tariff determination process. However, the Commission pointed out that the tariff proposals submitted by the three Distribution Companies are different even for the same category of consumers and the Companies should have kept the advice of the State Government in mind while submitting the tariff proposals to the Commission. Subsequently, the Commission, vide its letter dated 31st January 2007, suggested three options to the State Government for ensuring uniform retail tariffs across Discoms for the same category of consumers. The first one being by determination of a differential Bulk Supply Tariff as suggested by GoMP, the second being through differential subsidy from GoMP to same category of consumers in the three Discoms and the third being through differential retail tariffs for subsidising consumers, while ensuring uniform tariffs for subsidised categories. The Commission also indicated its preferred approach (second option) to determine tariffs differentially, based on the cost structure of the Discoms, while proposing that the task of ensuring uniformity across Discoms may be achieved by the State Government by providing differential subsidy as may be necessary, to consumers of the same category in each Discom.

1.19 The State Government's suggestion to the Commission for determining differential bulk supply tariffs for supply of power by MP Tradeco to the Discoms cannot be implemented since the generating capacities of the MP Genco as well as the Central Generating Stations had been allocated to the three Discoms vide the State Government's notification dated 17th October 2006.

1.20 The mechanism of setting differential Bulk Supply tariffs will lead to efficiency gains achieved by efficient Discoms being passed on to the inefficient ones through increase in power purchase price of the efficient Discom. Pursuant to the letter of the Commission dated 31st January 2007, the Secretary (Energy) and Additional Secretary (Energy), GoMP had a meeting with the Commission, wherein the option of reallocation of existing and new generating capacities among the Distribution Companies and MP Tradeco for ensuring uniform retail tariffs across the State was discussed. Considering that the Discoms are in a transitory phase and are experiencing operational and financial problems, the Commission agreed for reallocation of the existing and new generating capacities among the three Discoms and the MP Tradeco. Accordingly, in consultation with the Commission, the State Government vide its new notification No. 1929/F.RS/XIII/2001 dated 14th March 2007 revised its earlier notification dated 17th October 2006. The Commission would like to mention that the allocation may have to be changed in future years as well depending upon the changes in consumer mix and load growth of the Discoms, if the State Government wishes to have uniform retail tariffs in future. However, it has to be pointed out that frequent changes in generating capacity allocation for achieving uniform retail tariff in the State would not be compatible with the essence of MYT framework and would pass on the benefits of efficiency gains of one or more Discom(s) to the inefficient Discom(s).

Procedural history

Submission of proposals by Licensees

1.21 The Commission has issued its Tariff Order for FY 06-07 on 31.03.06 for distribution and retail supply of electricity, which is applicable upto March 07. As already stated, the Licensees have filed their petition for Aggregate Revenue Requirement for the period from 1.4.07 to 31.3.10, and later also submitted the tariff proposals for FY 2007-2008.

Gist of petitions

1.22 The gist of the petitions submitted by the Licensees is given below:

Table 2: Snapshot of the petitions of Discoms

Discom	Financial year	Revenue income from sale of power (Rs. Cr.)	Non tariff income(Rs. Cr.)	Total revenue (Rs. Cr)	Total revenue requirement (Rs. Cr.)	Revenue gap (Rs. Cr)
East	FY 08	2357.0	54.76	2411.76	2677.80	(266.04)
	FY 09	2619.0	60.11	2679.11	3016.05	(336.94)
	FY 10	2772.0	64.58	2836.58	3227.18	(390.60)
West	FY 08	2992.0	75.0	3067.0	3380.0	(313.0)
	FY 09	3249.0	76.0	3325.0	3683.0	(358.0)
	FY 10	3469.0	76.0	3545.0	3954.0	(409.0)
Central	FY 08	2315.0	55.92	2370.92	2930.75*	(559.83)

Discom	Financial year	Revenue income from sale of power (Rs. Cr.)	Non tariff income(Rs. Cr.)	Total revenue (Rs. Cr)	Total revenue requirement (Rs. Cr.)	Revenue gap (Rs. Cr)
	FY 09	2543.0	60.97	2603.97	3164.26*	(560.29)
	FY 10	2732.0	66.49	2798.49	3347.61*	(549.12)

* A calculation mistake made by the Licensee has been corrected

1.23 The petition submitted for Aggregate Revenue Requirement by the Licensees were found incomplete, in terms of not containing key information, for example, network statistics in the previous years so as to make projections for future years and consequently work out O&M expenses. The petitions also did not contain any proposals for meeting the revenue gaps. The Licensees also did not submit any analytical study for estimation of un-metered sale on the basis of Distribution Transformer Metering (DTR metering) or otherwise.

Notification of tariff proposals for public information

1.24 The tariff proposals of the Licensees were published by the Commission in the newspapers on 13.12.06 for West Discom and on 17.12.06 for East and Central Discoms. The stakeholders were requested to submit their comments / suggestions / objections by 26.12.06.

Public Hearing

1.25 The Commission held a public hearing on the tariff petitions filed by the Discoms in the Conference Hall of the Commission. These hearings were conducted on 22.01.07 for East Discom, 24.01.07 for Central Discom and on 29.01.07 for the West Discom. The Commission also invited several Non-Government Organizations (NGOs) to take part in the process of tariff determination and represent interests of all consumers. The comments/objections/suggestions received during the hearings have been duly considered in this order.

State Advisory Committee

1.26 The Commission also held a meeting with the Members of the State Advisory Committee (SAC) on 17.01.07. The members have given some suggestions which have duly considered while determination of tariff for FY 07-08 in this Order. After hearing the Licensee's representatives on the above issues raised by the consumer associations or individual consumers/objectors and the members of the SAC, the Commission has decided to make modifications in the existing tariff rates and its structure, which are described in the detailed Order attached.

Estimated revenue from revised tariffs

1.27 The Commission has revised the retail supply tariffs for various categories which are annexed to this Order. The Commission has estimated the overall revenue requirement and the revenues accruing from the revised tariffs for FY 08 for the three Discoms. These are contained in the detailed order given Discom-wise.

1.28 The Commission is of the view that the Distribution Licensee must regularly review the progress of sales and estimates of revenue and in the event of any serious imbalance must approach the Commission for further appropriate directions.

Implementation of the Order

1.29 The Distribution Licensees must take immediate steps to implement the Order after giving seven (7) days public notice in the newspapers, in accordance with clause 1.30 of MPERC (Details to be furnished and fee payable by Licensee or Generating Company for determination of tariff and manner of making application) Regulations, 2004. The tariff determined by this Order shall remain in force till 31st March 2008, unless amended or modified by an Order of this Commission. The previous Tariff Order dated 31st March 2006 shall remain valid till the implementation of this Order.

1.30 The Commission has thus accepted the petitions of the Distribution Licensee with modifications and conditions, and has determined the retail tariffs and charges recoverable by the Licensee in the licensed area of supply during the FY 07-08 and further directs that this order be implemented along with directions given and conditions mentioned in the detailed order and schedules attached. It is further ordered that the Licensee is permitted to issue bills to consumers only in accordance with the provisions of this tariff order.

Ordered as above, read with attached retail supply tariff schedules. Detailed reasons and grounds are being issued separately.

(R. Natarajan) **Member (Econ.)**	**(D. Roy Bardhan)** **Member (Engg.)**

Dated: **30th March 2007**

Place: Bhopal

DETAILED REASONS AND GROUNDS ATTACHED WITH RETAIL SUPPLY TARIFF ORDER ISSUED BY MPERC ON 30TH March 2007 IN RESPECT OF PETITION NUMBER 111/06, 112/06 AND 115/06

Sri. O. S. Parihar (S.E.), Sri D.K. Gandotra and Sri Praveen Jain (Addl. E.E.) represented the East Discom

Sri Rajiv Bais (Company Secretary), Sri R. C. Somani and Sri Gopal Murthy (Deputy Director, Accounts) represented the West Discom.

Sri. R.C. Yadav (S.E.), Sri. K.W. Nashikkar (Addl. Director), Sri A.R. Verma (Addl. S.E), Sri P.K. Kamthan (J.D., Accounts) and Sri. U. Gaur (Deputy Director, Accounts) represented the Central Discom

Following is the detailed Order with grounds and reasons determining the tariff and charges recoverable during FY08 by the three Distribution Licensees. The detailed Order is divided into three sections, discussing the functional and financial performance of the three Distribution Licensees separately and includes a status report on the compliance of Commission's Directives as well as the response of the Licensees and Commission's observations on the suggestions and comments received from consumers on the tariff proposals.

A1: COMMISSION'S OBSERVATIONS REGARDING TRUE-UP FOR FY 05-06

1.1 The Commission had, in its Tariff Order for FY 06-07, stated that the Commission shall determine the ARR and the methodology for truing-up of the revenue gap, if any, for FY 05-06 after the Discoms submit their audited accounts for such year. The Discoms have indeed submitted their audited accounts for FY 05-06. However, in order to identify the true costs of the Distribution Company, the Commission opines that following must be available too:

(a) *The Audited Accounts of MP Genco for FY 05-06:* Unlike the MP Discoms and the MP Transco, the MP Genco has not provided to the Commission its audited accounts for FY 05-06. It is important to note that more than 75% of the total Discom ARR is composed of power purchase expenses. The audited accounts of the discoms include power purchase cost of energy supplied by MP Genco on the basis of tariff determined by the Commission for the various generating stations. In absence of MP Genco's audited accounts for FY 05-06, it is not possible to correctly verify the Discom's power purchase cost during FY 05-06.

(b) *The final opening balance sheets of all sector entities as on 31st May 05:* The Govt. of MP had **provisionally** notified the opening balance sheets of the Generating Company, the STU and the Distribution Companies vide notification no. 3679/FRS/18/13/2002 dated 31st May 05. At that time, the GoMP had stipulated that within 12 months, the provisional opening balance sheets shall be finalized. However, the State Govt. later extended the period of finalization of 12 months to 24 months. Hence, the opening balance sheets of all sector entities are now expected to be finalized by 31st May 07. The opening balance sheets contain important data such as the opening asset base, the opening equity and liabilities that the Companies have been vested with. This data influences all future calculations of depreciation, interest, Return on Equity, etc.

1.2 The Commission is thus of the view that unless the opening balance sheets are finalized and the audited accounts of MP Genco are made available to the Commission, it would be an interim exercise and would need further truing up as and when the above are furnished for truing up. However, as soon as these crucial data are made available, the Commission shall carry out the exercise of determination the ARR and revenue gap of the Licensee for FY 05-06 and this amount shall be adjusted in future. The Commission would like to point out here that on submission of audited balance sheet by the MP Transco for FY05-06, it carried out a prudence check and allowed an additional cost of Rs. 94.29 Crores, which has been apportioned to the three discoms based on the allocated capacity, to be recovered in FY 2007-08.

A2: AGGREGATE REVENUE REQUIREMENT FOR FY 08 OF MADHYA PRADESH POORVA KSHETRA VIDYUT VITARAN COMPANY LIMITED (EAST DISCOM)

Summary of Sales Forecast as proposed by the Licensee

2.1 The total sale of the East Discom during FY 08 is projected at 6,598 MUs. The sales in LT category is projected as 3,810 MUs (or 57.74% of total sales) and in HT category as 2,788 MUs (or 42.26 % of total sales).

Table 3: Projected Sales of the East Discom for FY 08

Consumer Category			Sales in MU – FY 08
L T CONSUMERS	LV 1	Domestic Light Fan and Power	1778
	LV 2	Non-Domestic Light Fan and Power	315
	LV 3	Water Works and Street Lights	125
	LV 4	LT Industrial	117
	LV 5	Agricultural Consumers	1475
		TOTAL (LT)	**3810**
H T CONSUMERS	HV 1	Railway Traction	408
	HV 2	Coal Mines	515
	HV 3	Industrial and Non Industrial	1100
	HV 4	Seasonal	4
	HV 5	HT Irrigation and Public Water Works	59
	HV 6	Township and Residential Colony	290
	HV 7	Bulk Supply to Exemptees	412
		TOTAL (HT)	**2788**
TOTAL LT + HT			**6598**

2.2 The sales forecast of 6598 MU of the Licensee is about 10.76% more than the revised estimates of FY 07 (which is 5957 MU). This forecast, as per Licensee's petition, is composed of 412 MU of un-metered agriculture sales. The Licensee has also forecast 50 MU of un-metered sales in domestic category. During discussions, the representatives of East Discom have stated that about 3,26,939 consumers of domestic category as of 30.9.06, predominantly in rural areas, are presently un-metered.

Energy balance and power purchase as proposed by the Licensee

2.3 Keeping in view the prevailing arrangement between MP Tradeco and the three Discoms, the Licensee claimed that they are not in a position to independently provide complete and updated information regarding station-wise generation availability and power purchase costs in the relevant formats (as per the Tariff Regulations). The Licensee has provided the information based on the interactions with MP Genco, MP Transco and MP Tradeco. In this regard, the Licensee has also claimed that they have taken guidance from Section 18 of the MPERC (Power Purchase and Procurement) Regulations 2004 Revision 1, 2006 (RG-19(I) of 2006) which states that

"The Distribution Licensee shall make long-term demand and supply availability assessments in consultation with any or all concerned including state sector Generating Companies, discoms, private Distribution Licensees, central sector Generating Companies and Transmission Companies/ Regional Electricity Board, National / Regional Load Dispatch Centers, Central Electricity Authority."

2.4 The Distribution Licensee claims that they have adopted tentative information from key sector participants for computation of power purchase cost for the purpose of arriving at revenue requirement. The Distribution Licensee requested the Commission to take due cognizance of this fact while computing allowable power purchase cost of the Licensee. It also requested the Commission to give opportunity to the Licensee to submit updated information, if such information is made available to the Distribution Licensee by MPGenco, MPTransco, and MPTradeco.

2.5 The Licensee has considered the % allocation of capacity (29.5646%) as per the Government's notification dated 18/10/2006. The East Discom has calculated the details related to the following items as per the above allocation:

- Monthly energy available from all sources
- Annual fixed charge payable to generators
- Estimated payment to generators on account of incentives, income tax, duties, etc.; and
- Estimated inter-state transmission charges to be paid.

Assessment Energy of Availability by the Discom

2.6 The Licensee has assessed the availability of energy from various sources based on discussions with Tradeco. Availability of energy from MPGenco is based on monthly forecast of generation by MPGenco for 2007-08. The Licensee has claimed that information on availability from Central Generating Stations (NTPC, NPC) was not available at the time of preparation of this filing the petition. "Actual generation" for the previous two years and first six months of the current year have been used as basis for estimating availability. The generation lost due to forced outages of Korba Unit 4 and Vindhyachal (Unit 4 and 6) during 2005-06 have been duly considered while estimating the energy availability from these stations.

2.7 Availability from new stations expected to be commissioned in 2006-07 and 2007-08 has also been considered.

2.8 The following table provides the annual availability from each of the sources while the monthly availability for FY 08 has been provided in Format F1-2 of the filings.

Table 4 - Energy Availability for East Discom for FY 08

Source-wise availability (MU)	2007-08 State	2007-08 East Discom
	MU	MU
NTPC		
NTPC-Korba	3242	959
NTPC-Vindyachal I	3097	916
NTPC-Vindyachal II	2377	703
NTPC-Vindyachal III	1146	339
NTPC-Kawas	282	84
NTPC-Gandhar	842	249
NTPC-Sipat	175	52
KAPP	467	138
TAPS	1072	317
Farakka	184	54
Talcher	128	38
Kahalgaon	81	24
Kahalgaon 2	476	141
NTPC-Total	**13571**	**4012**
Bilateral Power Purchase		
CHPS-Gandhi Sagar	171	51
CHPS-RP Sagar	186	55
CHPS-Jawahar Sagar	139	41
RSEB (Chambal,Satpura)	**497**	**147**
Rajghat HPS	45	13
DVC	770	228
MSEB(Pench)	209	62
LANCO (PTC)	0	0
Bilateral-Total	**1520**	**449**
Other Sources		
NHDC - Indira Sagar	2700	798
Sardar Sarovar	1700	503
Omkareswara HPS	1200	355
Others 1 (Wind & CPP)	0	0
Others 3 (UI)	**5600**	**1656**
MP Genco – Thermal		
AMARKANTAK PH-I	181	54
AMARKANTAK PH-II	941	278
AMARKANTAK PH-III	558	165
SATPURA PH-I	1871	553
SATPURA PH-II	2624	776
SATPURA PH-III	2647	783

Source-wise availability (MU)	2007-08 State	2007-08 East Discom
	MU	MU
SANJAY GANDHI PH-I	2464	729
SANJAY GANDHI PH-II	2617	774
BIRSINGHPUR	3241	958
MPGenco Thermal	**17145**	**5069**
MPGenco – Hydel		
Bansagar Tons HPS-Tons	936	277
Bansagar Tons HPS-Silpara	79	23
Bansagar Tons HPS-Devlond	79	23
Bansagar Tons HPS-Bansagar IV	79	23
Birsingpur HPS	45	13
Bargi HPS	503	149
Marhi Khera HPS	73	22
Mini-Micro HPS	0	0
MPGenco Hydel Total	**1794**	**530**
Total	**39629**	**11716**

Assessment of Power Purchase Cost (Fixed and Variable Cost) by the Discom

2.9 The Fixed costs and variable costs of MPGenco have been adopted by the Licensee as per the Multi-Year (FY 07 to FY 09) Tariff Order of the Commission for MP Genco. For existing Central Sector stations, Fixed Costs have been adopted as per CERC Orders for respective stations and variable costs (including FPA applicable at present) have been adopted as per the July 2006 bill.

2.10 For working out the cost of power purchase from the new stations of the Central Sector, the following methodology has been adopted by the Licensee:

(a) For Vindhyachal-III, variable cost has been estimated as per the July bill for infirm power.

(b) For Sipat-II and Kahalgaon –II-Phase-I, the tentative estimate provided by NTPC vide Letter No. 01:: CD:279: NNS dated 27-05-2004, has been used as the basis for determining the variable costs. The Licensee has stated that in order to reflect realistic levels of variable costs, the respective variable costs as provided in the letter have been increased @10% per annum from the base date of determination. The variable cost increase has been shown in the form of FPA charges.

(c) Fixed costs for all the above mentioned three stations (Vindhyachal-III, Sipat-II & Kahalgaon – II Phase (I)) have been estimated by converting the per unit fixed cost provided in the letter.

2.11 Fixed and variable costs for other new stations have been estimated based on discussions with Tradeco. The following table provides a summary of fixed and variable costs of each of the stations that have been considered for determining the power purchase cost. As stated earlier, the East Discom's share of fixed cost has been considered for its ARR purpose

Table 5 - Fixed & Variable Cost for East Discom for FY 08

	2007-08			
Source-wise availability	**Fixed Cost - State**	**Fixed Cost – East Discom**	**Variable Cost**	**FPA**
	Rs Cr	**Rs Cr**	**Rs/ kWh**	**Rs/ kWh**
NTPC				
NTPC-Korba	85.95	25.41	0.4731	0.0738
NTPC-Vindyachal I	98.17	29.02	0.7578	0.1928
NTPC-Vindyachal II	135.26	39.99	0.7333	0.1843
NTPC-Vindyachal III	181.86	53.77	0.8675	0.0000
NTPC-Kawas	61.20	18.09	1.0269	2.2567
NTPC-Gandhar	98.85	29.22	1.0210	0.3565
NTPC-Sipat	99.89	29.53	0.4123	0.1237
KAPP	0.00	0.00	2.0234	0.0122
TAPS	0.00	0.00	1.9526	0.0000
Farakka	7.49	2.21	0.9857	0.0838
Talcher	5.76	1.70	0.4110	0.1430
Kahalgaon	5.30	1.57	1.0748	0.1791
Kahalgaon 2	54.69	16.17	0.6884	0.2754
NTPC-Total	**834.44**	**246.70**		
Bilateral Power Purchase				
CHPS-Gandhi Sagar	10.86	3.21	0.00	
RSEB (Chambal,Satpura)	**10.86**	**3.21**	**0.00**	
Rajghat HPS	8.56	2.53	0.00	
DVC	0.00	0.00	2.54	
MSEB(Pench)	11.60	3.43	0.00	
LANCO (PTC)	0.00	0.00	0.00	
Bilateral-Total	**31.02**	**9.17**		
Other Sources				
NHDC - Indira Sagar	275.88	81.56	0.00	
Sardar Sarovar	0.00	0.00	0.95	
Omkareswara HPS	0.00	0.00	0.95	
Others 1 (Wind & CPP)	0.00	0.00	0.00	
Others 2 (Short-Term purchase)	0.00	3.50	0.00	
Others 3 (UI)	**275.88**	**81.56**		
MP Genco - Thermal				
AMARKANTAK PH-I AMARKANTAK PH-II	49.23	14.55	1.17	
AMARKANTAK PH-III	140.00	41.39	1.17	
SATPURA PH-I SATPURA PH-II SATPURA PH-III	207.29	61.28		

Source-wise availability	2007-08			
	Fixed Cost - State	Fixed Cost – East Discom	Variable Cost	FPA
	Rs Cr	Rs Cr	Rs/ kWh	Rs/ kWh
			1.34	
SANJAY GANDHI PH-I SANJAY GANDHI PH-II	303.70	89.79	1.02	
BIRSINGHPUR	320.00	94.61	1.02	
MPGenco Thermal	**1020.22**	**301.62**		
MPGenco – Hydel				
Bansagar Tons HPS-Tons Bansagar Tons HPS-Silpara Bansagar Tons HPS-Devlond Bansagar Tons HPS-Bansagar IV	92.92	27.47	0.00	
Birsingpur HPS	3.93	1.16	0.00	
Bargi HPS	9.68	2.86	0.00	
Marhi Khera HPS	0.00	0.00	0.00	
Mini-Micro HPS	0.00	0.00	0.00	
Hydel Total	**106.53**	**31.50**		
Total	**2268.09**	**670.55**		

Assessment of Other elements of power purchase cost

2.12 Other elements of power purchase costs such as incentive, income tax, ED & Cess etc, and other miscellaneous charges have been assumed at the level of actual expenditure on these accounts for the year 2005-06.

Table 6 - Other Charges for All Stations for FY 08

CGS Other Charges	(Disincentive) / Incentive	Income Tax	Any Other (ED,Cess etc.)	Total of Other Charges in Rs Crs
2007-08 Total (Proj)	38.79	49.75	84.00	**172.53**
MPPKVVCL Share				
2007-08 (Proj)	11.47	14.71	24.83	**51.01**

Inter-state Transmission Costs

2.13 The inter-state transmission cost has been estimated on the basis of the actual bills for September 2005 to August 2006. The total bill amount for this period comes to Rs 110.14 Crores for the sector and the same has been adopted for FY 08 by the Licensee. Rebates, etc. on short term power transmission have not been estimated as they are likely to be infirm in nature.

Table 7 - Inter State Transmission Charges for FY 08

Month/ Rs Cr	WR	ER	WRLDC/ULDC	Inter-Regional WR-ER	Inter-Regional WR-SR	Inter-Regional WR-NR	Total
Sep-05	8.37	0.90	0.00	0.00	0.00	0.00	9.27
Oct-05	8.70	0.83	0.00	0.00	0.00	0.00	9.53
Nov-05	8.56	0.78	0.00	0.00	0.00	0.00	9.35
Dec-05	8.63	0.49	0.00	0.00	0.00	0.00	9.12
Jan-06	8.46	0.23	0.00	0.00	0.00	0.00	8.69
Feb-06	8.46	0.22	0.00	0.00	0.00	0.00	8.68
Mar-06	9.09	0.22	0.00	0.00	0.00	0.00	9.31
Apr-06	9.00	0.24	0.00	0.00	0.00	0.00	9.24
May-06	9.23	0.23	0.00	0.00	0.00	0.00	9.46
Jun-06	9.22	0.25	0.00	0.00	0.00	0.00	9.47
Jul-06	7.80	0.25	0.00	0.24	0.14	0.73	9.15
Aug-06	7.71	0.25	0.00	0.29	0.08	0.54	8.87
Total	**103.24**	**4.88**	**0.00**	**0.53**	**0.22**	**1.27**	**110.14**
East Discom's Share	**30.52**	**1.44**	**0.00**	**0.16**	**0.06**	**0.37**	**32.56**

Merit Order Dispatch

2.14 The Licensee has adopted a merit order simulation on a monthly basis by matching monthly energy requirement with monthly availability based on the variable costs of various sources. The Licensee submits that while a monthly determination of cost provides an improved estimate over an annual determination of cost, the actual cost will defer based on the daily peaking requirements and variation between actual and projections. The Licensee prays that such deviations be passed on a regular basis through the FCA formula proposed which is also in line with the provision of the National Tariff Policy (Clause 5.3 (h) (4) and Clause 8.2.1 (1)):

"Uncontrollable costs should be recovered speedily to ensure that future consumers are not burdened with past costs. Uncontrollable costs would include (but not limited to) fuel costs, costs on account of inflation, taxes and cess, variations in power purchase unit costs including on account of hydro-thermal mix in case of adverse natural events."

and

"All power purchase costs need to be considered legitimate unless it is established that the merit order principle has been violated or power has been purchased at unreasonable rates."

2.15 The Licensee claims that the monthly requirement of energy is based on Licensee's own projection and tentative estimate of requirements of other discoms. The Licensee states that only the Commission has the knowledge of the total energy requirement planned by all the Discoms.

Table 8 - Energy Requirement and Average Cost of Power for FY 08

Sl. No.	Particulars		FY'08 MU	FY'08 Amount	FY'08 Rs/Kwh
1.	Central Sector	Korba	958.6	89.8	0.94
2.		Vindhyachal-I	915.8	139.2	1.52
3.		Vindhyachal-II	702.7	116.5	1.66
4.		Kawas	12.1	24.3	20.06
5.		Gandhar	96.7	43.8	4.53
6.		KAPP	138.1	28.6	2.07
7.		TAPPS 3&4	317.0	61.9	1.95
8.		Vindyachal III (unit I)	338.7	83.1	2.46
10.		Sipat	51.9	32.3	6.23
12.		**Total**	**3531.5**	**619.5**	**1.75**
13.	ER	Farrakka + Talcher +Kahalgaon-I and Kahalgaon-II	**246.3**	**44.91**	**1.82**
14.	Bilateral Purchases	J.Sagar, R.P.Sagar	**105.23**	**5.52**	**0.52**
15.	Other Sources	NHDC (Indira Sagar)	798.22	81.6	1.02
16.		JV-Sardar Sarovar	502.52	47.9	0.95
17.		CPP/Wind			
18.		Short term purchases	60.86	21.30	3.50
19.		New Hydel Stations (MadhiKheda & Bansagar IV, Omkareshwar)	399.85	33.85	0.85
20.		Total	**1,761.45**	**184.65**	1.05
21.	Short term Sales (Less)				
22.	Net Power Purchases		**5,644.45**	**854.55**	1.51
23.	Transmission Charges	Fixed Charges		32.56	
24.		Taxes			
25.		**Total**			
26.	Sub-total				
27.	MPGenco		**4846.18**	821.56	1.70
28.	**Total Power Purchase**		**10,490.63**	**1,708.67**	**1.6288**

2.16 It can be seen from Table 4 and Table 8 that there is a difference of 1225.37 MUs (11716 – 10491) between energy available and energy required. Though the Licensee has not explained the reason for this difference in its filing, but in subsequent submission the Licensee has indicated that, a part of this surplus will be used for trading power outside the state through which it is likely to earn Rs 76 Crore.

2.17 The total power purchase cost as estimated by the East Discom thus works out to Rs 1.6288 per Unit for 2007-08.

Commission's analysis

Sales forecast

2.18 The Commission recognizes that metering of a huge number of un-metered consumers is a challenging job and can be addressed only gradually. The Commission had a meeting with the CMDs of all three Discoms on 23rd February 2007 and, after a lot of deliberations, decided to revise the timeframe for metering of un-metered connections in domestic category and metering of DTRs for assessment of un-metered agriculture consumption. The roadmaps have been provided by the Licensees. As per the roadmaps, all un-metered connections in domestic category shall be metered by March 2010. The Licensees have further committed that all DTRs predominantly supplying to agriculture consumers (about 46262 nos. for East Discom) shall be metered by March 2009 under an ADB assisted program. The Commission is examining the proposal of the Licensee and after taking the views of all the stakeholders, will notify the fresh timeframe for achieving 100% metering. However, for FY08 the Commission has considered that there will be un-metered sales and has gone by the assessment of consumption for these categories.

2.19 Based on the submissions of the Licensee with regard to assessed consumption of un-metered consumers in domestic as well as agriculture categories, the Commission approves the following:

(a) Un-metered consumers in domestic category shall be billed on the basis of 77 units per consumer per month in urban areas, and 38 units per consumer per month in rural areas;

(b) Un-metered agriculture consumers in rural areas as notified by GoMP under the Electricity Act, 2003 shall be billed on the basis of 100 units per HP of sanctioned load per month for permanent connections and 130 units per HP of sanctioned load per month for temporary connections.

(c) Un-metered agriculture consumers in urban areas shall be billed on the basis of 130 units per HP of sanctioned load per month for permanent connections and 150 units per HP of sanctioned load per month for temporary connections.

2.20 Further, the Commission had a look at the sales forecast of all metered consumers and had compared the same with the past trends. The Commission had also taken note of Licensee's supporting submissions with regard to sales projections of various categories and considers the assumptions as reasonable. It is also to be noted that the quantum of power available to the State of MP in 2007-08 based on existing generation and planned capacity addition is more than sufficient to meet the sales requirement of the Licensee. Hence, the Commission considers it appropriate not to prune down the sales forecast of the Licensee. The quantum of power available, even after considering the T&D losses is enough to meet all forecast requirements of the consumers. The Commission thus approves the sales forecast of the Licensee as filed.

2.21 As per the regulations of the Commission issued under section 61 for Distribution and retail supply tariff determination, actual power sold by the Licensee during a year in question shall be grossed up for normative losses to compute allowable power purchase quantum during such year.

Energy Balance and Power Purchase

2.22 The State Government has come out with annual milestones for distribution losses for the period FY 07 to FY 11, which is shown in the following table. The Commission has computed the energy requirement of the Licensee on the basis of the GoMP's order dated 28th December 2006 on distribution losses . Therefore, the Commission has considered distribution loss to be 32.5% during the period FY2007-08 for East Discom.

Table 9: Distribution Losses (%) as per GoMP Letter Dated 28th December 2006

Year	East Discom
FY 2006-07	34.5%
FY 2007-08	32.5%
FY 2008-09	29.5%
FY 2009-10	26.5%
FY 2010-11	23.5%

2.23 The Inter state transmission losses have been computed as per the moving averages of the scheduled losses of the last 52 weeks. The losses for FY 08 have been computed as per the following table:

Table 10: Month wise Inter State Transmission Losses (%)

Month	East Discom
April	5.0%
May	4.9%
June	5.0%
July	5.3%
August	5.5%
September	5.1%
October	5.2%
November	5.2%
December	5.1%
January	5.1%
February	5.1%
March	5.2%

2.24 The Commission has considered the intra state transmission losses at 4.9% as per the transmission MYT Order.

2.25 The energy balance for FY08 is presented in the following table after considering the loss targets set by the GoMP

Table 11: Energy Balance for FY08

	Particulars	East
1	Total Energy Sales (MU)	6598
2	Distribution Loss (%)	32.5%
3	At T-D Interface (MU)	9775
4	Transmission Loss of MPPTCL (%)	4.90%
5	At MP Periphery	10278
6	External Losses (MU)	206
7	**Net Energy Requirement (MU)**	**10484**

2.26 The Commission, as per the Government of Madhya Pradesh Notification No. 1929/F.RS/4/XIII/2001 dated 14th March 2007, has considered energy allocation from existing stations for meeting Licensee’s requirements and also the capacities of new stations allocated to MP Tradeco. The Commission has also considered the GoMP Notification which state that, during energy deficit months, Licensees shall purchase power from MP Tradeco.

2.27 Station wise capacity allocation to East Discom considered by the Commission as per the GoMP Notification mentioned above is given in the following table:

Table 12: Station wise capacity allocation (%) to East Discom

Name of Power Station	East
MPPGCL - SH: Bargi	22.06%
MPPGCL - IS: Gandhi Sagar	22.06%
MPPGCL - IS: Pench	22.06%
MPPGCL - SH: Birsinghpur	22.06%
MPPGCL - SH: Bansagar Complex	22.06%
MPPGCL - IS: Rajghat	22.06%
ER: Talcher STPS	22.06%
Sardar Sarovar Project	22.06%
WR: Korba STPS	22.06%
JV: Indira Sagar (8x125 MW)	29.56%
MPPGCL - ST: Amarkantak Complex	29.56%
WR: Vindhyanchal STPS – I	29.56%
MPPGCL - ST: Sanjay Gandhi Complex	29.56%
MPPGCL - ST: Satpura Complex (Ph - II & III)	29.56%
MPPGCL - ST: Satpura Ph-1 (Inter State)	29.56%
ER: Farakka STPS	38.79%
WR: Vindhyanchal STPS – II	38.79%
WR: Vindhyanchal STPS - III (Unit-I)	38.79%
WR: Kakrapar APS	38.79%
WR: Gandhar GPP	38.79%
WR: Tarapur APS	38.79%
ER: Kahalgaon STPS	38.79%
MPPGCL - SH: Marhikheda	38.79%
WR: Kawas GPP	38.79%
Weighted Average	**29.56%**

2.28 While the GoMP has allocated 29.56% of 135.5 MW Ranapratap & Jawahar Sagar HEPs to the East Discom, the Commission has not considered the power available from these stations as they are located in Rajasthan. Similarly, even though the GoMP has allocated 29.56% of 187.5MW Satpura Phase-I to the East Discom, the Commission has considered the availability based on the total installed capacity of 312.5MW since the project is located within the state of Madhya Pradesh. This has resulted in the weighted average allocation becoming 29.56% as against 28.83% indicated in the GoMP notification. This is consistent with the stand taken earlier by the Commission.

2.29 The weighted average of allocation for East Discom as per the allocated and unallocated share from each station is 29.56%.

2.30 Central Generating Stations: The annual energy availability for FY 08 from existing Central Generating Stations has been considered as per the petitions filed by the Licensee.

2.31 MP Genco Stations: As stated earlier, the Licensees have shown the availability of energy from MPGenco based on monthly forecast of generation by MPGenco for 2007-08.

2.32 The Commission undertook an exercise to analyze monthly availability and requirement for FY 08. The analysis showed surplus or deficit in each of the months for the Licensee.

2.33 The month wise availability and requirement for the Licensee for FY 08 is given below:

Table 13 Month-wise Energy Requirement & Availability for FY2007-08 (In Million Units)

Month	East Discom				
	Energy Availability	Availability from intra-discom trading	Energy Req	Sale through intra -discom trading	(Deficit)/ Surplus
	A	B	C	D	E=(A+B)-(C+D)
April	747.3	0.60	847.2	0	(99.30)
May	764.2	10.80	829.8	0	(54.70)
June	684.8	0	787.4	0	(102.60)
July	676.8	6.30	754.3	0	(71.10)
Aug	851.6	40.80	839.6	0	52.80
Sept	860.6	0	798.3	0	62.30
Oct	962.4	0	914.2	0	48.10
Nov	902.5	0	956.8	0	(54.30)
Dec	886.0	0	981.2	0	(95.10)
Jan	847.5	0	999.8	0	(152.30)
Feb	743.4	0	909.9	0	(166.50)
Mar	782.6	0	865.8	0	(83.20)
Total	**9709.8**	**58.50**	**10484.2**	**0**	**(715.90)**

2.34 As can be seen from the above table, the Licensee is required to procure short term power of 879.10 MU in the months of April to July and November to March and will be having surplus of 163.20 MU from August to October. The procurement will be made from MP Tradeco at an average rate of Rs 1.84 per kWh as per the calculation shown in the following table.

Table 14 Rate of Short Term Purchase from MP Tradeco during FY2007-08

MP Tradeco Stations	MUs	Total Cost (Rs. Crs.)
Sipat	749.69	125.17
Kahalgaon STPS –II	699.28	145.59
Birsinghpur	3267.65	653.30
Amarkantak	686.21	150.29
Omkareshwar	1200.00	114.48
Vindhyanchal STPS-III (Unit-II)	746.66	156.89
Marhi Kheda (Unit – III)	27.68	9.38
Total	**7377.16**	**1355.09**
Avg. Rate (Rs. / Unit)		**1.84**

2.35 As the Commission has decided to have a uniform tariff in the State during FY08, the excess energy in a month with the Licensee will first be given to other Licensees of Madhya Pradesh who are having a shortfall in the same month. The Commission directs that the sale rate of the surplus energy to other Discoms within the State should be at the Monthly Pooled Cost of Power as given below:

Table 15 Monthly Pooled Cost of Power for Combined Discoms

	Month	MUs*	Rs. Crs.**	Rs./Kwh
1	April	2728.0	459	1.68
2	May	2647.9	461	1.74
3	June	2556.6	434	1.70
4	July	2444.1	391	1.60
5	August	2964.6	352	1.19
6	September	2957.2	378	1.28
7	October	3327.5	468	1.41
8	November	3354.7	525	1.56
9	December	3368.6	541	1.61
10	January	3267.2	533	1.63
11	February	3003.7	494	1.64
12	March	2869.9	475	1.65

*MUs include Total availability and Short Term Power purchase less energy sold through intra discom trading.

**Rs. Crs. Include Fixed Cost, Variable Cost, PGCIL Charges, Cost of short term power purchase less revenue from external sale.

2.36 Any excess energy remaining with the Licensee, as seen in the monthly availability and requirement table given above, after Intra state trading, shall then be used for external trading, at the Monthly Average Power Purchase Cost for those surplus stations arrived after running merit order. The rates thus allowed shall be as per the following table for East Discom.

Table 16 Monthly Average Cost of Power of Surplus Stations.

	Month	Surplus Energy (MU)	Total Cost (Rs. Crs.)	Rs./Kwh
1	April	-	-	-
2	May	-	-	-
3	June	-	-	-
4	July	-	-	-
5	August	52.77	12.93	2.45
6	September	62.32	14.51	2.33
7	October	48.12	11.81	2.45
8	November	-	-	-
9	December	-	-	-
10	January	-	-	-
11	February	-	-	-
12	March	-	-	-

2.37 For East Discom, sales on account of surplus energy during the months of August, September and October, after intra state trading is assessed at 163.20 MU for FY 08. The income arising out of sale of surplus energy shall be adjusted with the power purchase cost of the Distribution Licensee.

2.38 The station-wise availability of energy as estimated by the Distribution Licensee and as estimated by the Commission are shown in the following table:

Table 17: Station-wise Energy availability (in MU) for East Discom during FY08

		FY 08	
Sl. No.	Stations	Proposed by the Discom	As estimated by the Commission
1.	Central Sector (WR)	3755	3876
2.	Central Sector (ER)	257	131
3.	Bilateral purchases	449	164
4.	NHDC (Indira Sagar)	798	798
5.	Sardar Sarovar	503	375
6.	Omkareswara HPS	355	0
7.	New Hydel Stations	45	0
8.	MP Genco	5554	4365
9.	**Total**	**11716**	**9710**

2.39 Central Generating Stations (Western Region): Due to differential allocation as per GoMP Notification, the share available to the Licensee has increased.

2.40 Central Generating Stations (Eastern Region): The Licensee has considered Kahalgaon (Phase II) in its filing. As per the GoMP Notification the capacity of this station is now with MP Tradeco.

2.41 Bilateral Purchase: The reason for reduced quantum from bilateral purchase is the revised capacity allocation and also the Commission has not considered RP Sagar, Jawahar Sagar, DVC and Lanco as explained in earlier paragraphs.

2.42 Omkareswar HPS: As per the GoMP Notification, this station's capacity is with MP Tradeco.

2.43 MP Genco: The change in availability is due to revised capacity allocation by GoMP Notification.

Power Purchase Costs

Central Generating Stations - Western Region

2.44 NTPC's Stations in Western Region (Korba, VSTPS-1, VSTPS-II, VSTPS-III (Unit-I), Kawas and Gandhar): As stated earlier, the energy availability has been considered from the existing stations as submitted by the Licensees. The Commission has also approved the fixed and the variable cost for these stations after verifying the fixed and variable costs from the CERC orders for these stations. The stations for which latest CERC order is not available, the Licensee petition on the basis of July 2006 bill has been considered. For KAPP and TAPPS 3&4, single part tariff is payable and the Provisional tariff rates have been considered as per the notification of Department of Atomic Energy GoI in October 2006.

2.45 The Licensee had shown the allocation of share to MP for the Central stations as per the NTPC bills. The Commission has considered the allocation of MP share and consequently East Discom's share as per Government's Notification vide its letter dated 14th March 2007.

Table 18: Allocation from Central Generating Stations to MP and East Discom as per Govt. Notification for FY2008

						East Discom		
Sl. No.	Western Region CGS	Installed Capacity (MW)	State's Share (%)	Availability (MU)	Fixed Cost (Rs. Cr)	Share (%)	Availability (MU)	Fixed Cost (Rs. Crs.)
1.	KTPS	2100	21.38	3242	86	22.06	715	18.96
2.	VSTPS-I	1260	33.34	3097	98.2	29.56	916	29.03
3.	VSTPS-II	1000	30.12	2377	135.3	38.79	922	52.47
4.	VSTPS-III (Unit-	500	22.9	746.7	85	38.79	290	32.97

						East Discom		
Sl. No.	Western Region CGS	Installed Capacity (MW)	State's Share (%)	Availability (MU)	Fixed Cost (Rs. Cr)	Share (%)	Availability (MU)	Fixed Cost (Rs. Crs.)
	I)							
5.	KGPS	656.2	24.16	282.4	59	38.79	110	22.70
6.	GGPS	657.4	20.64	842	76	38.79	327	29.65
7.	KAPP	440	23.99	467		38.79	181	
8.	TAPP 3&4	540	18.64	1072		38.79	416	

2.46 The FPA charges have been computed on the basis of the October 2006 bill paid to these stations. The other charges including the Incentive and taxes have been computed by pro-rating the actual bills of the period April'06 to October'06, paid to the Central Generating Stations by the Licensees.

2.47 The Variable and Other Charges as allowed are given in the following table:

Table 19: Charges allowed for CGS in WR

	FY 08			
Western Region CGS	Variable (Rs/Kwh)	FPA Charges (Rs/Kwh)	Other Charges (Rs/Kwh)	Total Charges (Rs. cr)*
KTPS	0.50	0.15	0.11	73.75
VSTPS-I	0.80	0.23	0.26	147.34
VSTPS-II	0.78	0.22	0.18	160.53
VSTPS-III (Unit-I)	0.87	0	0.01	58.24
KGPS	1.09	2.86	0.12	67.29
GGPS	1.11	0.43	0.01	80.38
KAPP	2.04	0.0	0.01	37.21
TAPPS 3&4	2.65	0.0	0.00	110.51
Total				**735**

*Includes Fixed Charges as stated in table above

Central Generating Stations - Eastern Region

2.48 For determination of allowable costs from the plants in the eastern region the principle followed for power plants in the western region is being adopted. As stated earlier, the share in these plants have been considered as per the Government's notification dated 14th March 2007.

Table 20: Allocation from Central Generating Stations to MP as per Govt Notification

						East Discom		
Sl. No.	Eastern Region CGS	Installed Capacity (MW)	State's Share (%)	Availability (MU)	Fixed Cost (Rs. Cr)	Share (%)	Availability (MU)	Fixed Cost (Rs. Crs.)
1.	Farakka	1600	1.01	184.08	5.16	38.79	71	2.00
2.	Talcher	1000	1.01	128.1	4.03	22.06	28	0.89
3.	Kahalgaon	840	2.84	80.7	9	38.79	31	3.43
4.	**Total**						**131**	**6.32**

2.49 The Variable and Other charges as allowed are given in the following table:

Table 21: Charges allowed for CGS in ER

	FY 08			
Eastern Region CGS	Variable (Rs/Kwh)	FPA Charges (Rs/Kwh)	Other Charges (Rs/Kwh)	Total Charges (Rs. Cr)*
Farakka	1.04	0.35	0.01	12.03
Talcher	0.44	0.21	0.00	2.73
Kahalgaon	1.15	0.43	0.00	8.36
Total				**23**

*Includes Fixed Charges as stated in table above

Indira Sagar (NHDC) and Sardar Sarovar Projects

2.50 For FY'07, the Commission considered only the annual fixed charges approved by CERC by it order dated 1/5/2004 for Indira Sagar. The CERC vide this order had approved fixed annual charges at Rs. 241.41 Crore for seven machines. After all the eight machines had become operational, the Commission had allowed a proportionate increase in fixed cost with a further increase of 10% on the computed cost. The Commission thus allowed Rs. 300 Crore as Annual Fixed charges for FY 07.

2.51 The Licensee, in its filings, has given a flat rate of Rs. 275. 88 Crores for Indra Sagar for FY'08. However, the Commission analysed the actual bills paid in 2006 for verifying the charges payable for the station. The Annual Fixed Charge actually paid this year till October has been found to be much less than the allowed figure for FY 07. The Commission has thus revised the annual charges for the year FY 08 on the basis of the bills paid in the year FY 07 by pro-rating the capacity charge and the variable charge actually paid by the Licensees till October'06 for the year FY 07.

2.52 The design energy of this project has been approved at 2700 MUs for FY 08. The fixed cost has been computed as Rs 191.70 Crore and Variable charges at the least variable cost of the Western region @ 0.49 Rs./Kwh, which is of Sipat Ph II. The months in which Sipat Ph II is unavailable, the variable cost has been considered as per the next least variable cost, which is of Korba @ 0.50.

2.53 MPSEB for Sardar Sarovar Hydel Project has considered a provisional rate of Rs. 2.0 per unit. This rate is as per the provisional rate fixed by GoMP vide its letter dated 30th November 2005. As per section 62(1) of the Electricity Act, only appropriate Commission has the authority to determine rate of supply of power by a Generating Company to a Distribution Licensee. Further as per section 64(5) of the Electricity Act 2003 only the State Commission having jurisdiction in respect of the Licensee which intends to distribute electricity and make payment therefore is entitled to determine the generation tariff.

2.54 For FY2007-08, the Licensee in its filing has computed the power purchase cost from Sardar Sarovar Hydro station at Rs. 0.95/kWh. The power purchase cost assumed by the Distribution Licensee is as per the cost assumed by the Commission in its Tariff Order for FY2006-07. The Commission considers the assumptions made by the Licensee appropriate. However, the Commission is allowing an increase of Rs. 0.08/kWh in the provisional rate as a possible escalation of O&M cost. It would be pertinent to mention here that NVDA has filed a petition for provisionally determining tariff at Rs. 2.00 / kWh. The design energy of this project has been approved at 1700 MUs for the FY 08. The fixed cost has been computed as Rs 91.79 Crore and Variable charges at the least variable cost of the Western region @ 0.49 Rs./Kwh, which is of Sipat Ph II. The months, in which Sipat Ph II is unavailable, the variable cost has been considered as per the next least variable cost, which is of Korba @ 0.50.

2.55 Though the petition regarding fixing the tariff for Sardar Sarovar has already been filed, the Commission is yet to finalise the rate. The Commission shall consider the appropriate rate when the hearing process in this regard is complete.

Table 22: Allowed cost for Indira Sagar and Sardar Sarovar project

		FY 08		
Sl. No.	**Other Sources**	**Availability (MU)**	**Fixed Cost (Rs. Cr)**	**Total Charges (Rs. Cr)**
	Indira Sagar	2700	191.70	324
	Sardar Sarovar	1700	91.79	175.1

Inter-State Transmission Charges

2.56 The PGCIL charges to be paid by MP consist of charges to be paid for transmission system of WR and ER. The estimate of inter-state transmission cost for existing stations has been considered as per the methodology used by the Licensee, which is on the basis of the actual bills for September 2005 to August 2006 for eastern and western region.

2.57 The commission has computed the charges for VSTPS-III (Unit-I) on the basis of the Per MW charges paid to PGCIL for the Western Region for the existing stations. The per MW cost was then applied to the allocated capacity of the new station to get the charges.

Table 23 Inter State Transmission Charges for FY 08

Month/ Rs Cr	WR	ER	WRLDC/ULDC	Inter-Regional WR-ER	Inter-Regional WR-SR	Inter-Regional WR-NR	Total
Sep-05	8.37	0.9	0	0	0	0	9.27
Oct-05	8.7	0.83	0	0	0	0	9.53
Nov-05	8.56	0.78	0	0	0	0	9.35
Dec-05	8.63	0.49	0	0	0	0	9.12
Jan-06	8.46	0.23	0	0	0	0	8.69
Feb-06	8.46	0.22	0	0	0	0	8.68
Mar-06	9.09	0.22	0	0	0	0	9.31
Apr-06	9	0.24	0	0	0	0	9.24
May-06	9.23	0.23	0	0	0	0	9.46
Jun-06	9.22	0.25	0	0	0	0	9.47
Jul-06	7.8	0.25	0	0.24	0.14	0.73	9.15
Aug-06	7.71	0.25	0	0.29	0.08	0.54	8.87
Total	**103.24**	**4.88**	**0**	**0.53**	**0.22**	**1.27**	**110.14**
FY 08							
Existing Capacity (MW) (MP Share)	1,771.2	50.0					
Total Charges From Existing Stations (Rs. Cr.)	104.73	5.41					110.14
Cost Per MW (Rs. Cr)	0.059	0.11					
Additional Capacity from VSTPS-III (Unit-I)	114.3						
Charges from New Stations (Rs. Cr)	6.80	0					**6.80**
Total Transmission Charges (Rs. Cr)							**116.94**
Share of East Discom (Rs. Cr.)							**34.56**

2.58 The Taxes for the Inter state Transmission charges for FY 08 has been considered as per the FY 07 tariff order i.e. Rs 2.35 Crores. The share of East Discom is Rs. 0.69 Crores.

2.59 Based on the discussion above, the Power Purchase cost allowed by the MPERC to the East Discom for FY'08 is shown below:

Table 24: Commission's estimate of power purchase expenses for FY 08

(Amount in Rs. Cr)

Sl. No.	Particulars		FY'08		
			MU	Amount	Rs/Kwh
1.	Central Sector Western Region	Korba	715.40	73.75	1.03
2.		Vindhyachal-I	915.76	147.34	1.61
3.		Vindhyachal-II	921.96	160.53	1.74
4.		Kawas	109.56	67.29	6.14
5.		Gandhar	326.77	80.38	2.46
6.		KAPP	181.16	37.21	2.05
7.		TAPPS 3&4	415.91	110.51	2.66
8.		Vindyachal III (unit I)	289.63	58.24	2.01
9.		Total	**3876**	**735**	**1.90**
10.	ER	Farrakka + Talcher +Kahalgaon-I and Kahalgaon-II	131	23	1.77
11.	Bilateral Purchases	RSEB/ Others	164	7	0.42
12.	Other Sources	NHDC (Indira Sagar)	798	96	1.20
13.		JV-Sardar Sarovar	375	39	1.03
14.		CPP/Wind	Nil	0	0
15.		Total	**1173**	**134**	**1.15**
16.	MP Genco		4365	685	1.57
17.	Intra Discom Purchase		**58.51**	**7.84**	**1.34**
18.	Short Term Purchase (MP Tradeco)		**879.14**	**161.49**	**1.84**
19.	Intra Discom Sale (Less)		**0**	**0**	**0**
20.	External Sale (Less)		**163.21**	**39.26**	**2.41**
21.	Net Power Purchases		**10484**	**1714.70**	**1.64**
22.	Transmission Charges	Fixed Charges		34.56	
23.		Taxes		0.69	

Sl. No.	Particulars		FY'08		
			MU	Amount	Rs/Kwh
24.		**Total**		**35.25**	
25.	**Total Power Purchase***		**10484**	**1749.95**	**1.669**

* Includes PGCIL losses amounting to 205.96 MU

Network costs

2.60 In the following sections, the Commission has carried out an analysis of Licensee's capital expenditure plans, proposed capitalization of assets, forecast depreciation, interest and finance charges and Return on Equity. The Commission's decision regarding East Discom's submission on these costs for FY 08 is provided in the following paragraphs.

Capital expenditure Plans and Capitalization of assets

Licensee's submission

2.61 The Licensee has adopted the five-year investment plan submitted to the Commission with certain modifications.

2.62 The summary of revised investment plan as per the petition is presented below:

Table 25: Investment Plan as filed

Amount in Rs. Crore

Scheme	**FY 07**	**FY 08**
ND	0	0
JBIC	21.95	29.80
ST (N)	15	10
PSI	9.05	19.38
APDRP	45	0
ADB	74.81	0
RGGVY	**93.96**	**406.98**
PMGY	11.69	0
PFC- DTR metering	13.65	31.85
ADB-proposed	0	197.02
ERP project	0	11.75
New connections (Deposit)	7	8.05

Total (including RGGVY)	**292.11**	**714.83**

2.63 The Licensee has submitted that certain modifications have been made to the earlier investment plan submitted as part of the Business Plan, approved by the commission. These are, primarily:

- Revision of the phasing of the proposed new ADB scheme is based on the detailed project reports submitted to ADB
- Revision of the phasing of the investments of the RGGVY scheme based on the updated status of approvals for the various circle-level schemes
- Inclusion of capital expenditure for new connections funded through consumer contribution
- Inclusion of proposed ERP scheme from FY08 (through DFID) funding being undertaken to improve efficiency of the Licensee's MIS, billing and accounting processes.
- Revision of the proposed investment under the APDRP scheme for FY 07, 08 as decision on continuation of the scheme beyond 2006-07 is still awaited from the Government of India.

Capitalization Plan

2.64 The Licensee has submitted that it has inherited a CWIP of Rs.551.35 Crore as per the provisional opening balance sheet notified by GoMP dated 31st May 2005. The addition to CWIP in FY 06 as per the provisional accounts has been Rs. 55.82 Crore. However, details of CWIP amounting to Rs. 55.82 Crore are not submitted. For the projection period, the capitalization has been assumed as follows:

(a) Rs. 300 Crore out of the opening balance of Rs. 551.35 Crore as per the provisional opening balance sheet is estimated to be capitalized by FY 08.

(b) New investments every year have been assumed to get capitalized in two years in the ratio of 1:1.

(c) While the proposed investments under the RGGVY scheme have been stated in the investment plan, the assets and the corresponding liabilities have not been considered for the MYT projections. As per the terms and conditions of this scheme, the assets and liabilities belong to the State Government.

(d) Expenses capitalization has been assumed at 8% of the annual employee and A&G expenses.

2.65 The Licensee has also claimed in the petition that the following additions / expansion of the system shall be made during FY08:

Table 26: Physical details of network

Particulars	**FY 06**	**FY 07**	**FY 08**
33kV line (Ckt-km)	117	1881	627
11kVline (Ckt-km)	272	4122	11589
LT line (Ckt-km)	170	1139	6999
33/11kV Substation (No.)	33	0	0
Power transformers – Nos./ MVA	33/104	175/525	43/145
Distribution transformers – Nos. / MVA	1905/237	6200/238	20379/450

Commission's analysis of capital expenditure and capitalization

2.66 The Commission has specified the *"Guidelines for Capital Expenditure by the Licensees in MP"*. The Guidelines require, in short, the Licensees to submit to the Commission a five-year Business Plan containing physical and financial details of all investment schemes planned over the five-year horizon. Under the notified guidelines, the Licensee has filed a Business Plan to the Commission covering the five-year period FY 07 to FY 11, which has been approved by the Commission vide letter no. 2178 dated 31.08.06. The following table provides the investment plan of the Licensee approved as part of the business plan:

Table 27: Investment plan as approved under Licensee's Business Plan

Amount in Rs. Crore

Scheme	**FY-07**	**FY-08**	**FY-09**	**FY-10**	**FY-11**
ADB	74.81	150.74	186.76	140.00	112.00
APDRP	75.20	18.80	nil	nil	nil
REC	9.05	19.38	nil	nil	nil
JBIC	21.95	29.80	nil	nil	nil
RGGVY	70.00	310.00	280.00	220.00	nil
PMGY/MNP	11.69	nil	nil	nil	nil
STN	23.00	14.90	22.03	14.08	nil
PFC	13.65	31.85	nil	nil	nil
Total	**299.35**	**575.47**	**488.79**	**374.08**	**112.00**

2.67 In addition to the five year plan provisionally approved by the Commission, East Discom has submitted an additional project proposal of investment during FY 2008-2012 having project cost **Rs 838.37 crores including 594.30 crores already submitted by the Company in five year plan** provisionally approved by the Commission**.** Hence East Discom has sought approval for additional amount of **Rs 244.07 crores.** The fund of the additional proposal has been proposed to be tied up with ADB and the ADB has agreed to fund the project up to 70% of the project cost. Balance 30% is to be met from counter funding through PFC or some other funding agency.

2.68 As evident from above, the following differences exist between the approved investment plan and the plan filed by the Licensee in its tariff petition:

Table 28: Deviation of filed Investment Plan from approved Business Plan

Amount in Rs. Crore

Name of Scheme	**FY07**		**FY 08**	
	Filed in the petition	**Approved as per Business plan**	**Filed in the petition**	**Approved as per Business plan**
ST (N)	15	23	10	14.90
ND	0	0	0	0
APDRP	45	75.20	0	18.80
ADB	74.81	4.80	0	0
JBIC	21.95	21.95	29.80	29.80
RGGVY	93.96	70	406.98	310.00
ADB-II	0	0	197.02	197.02
PFC DTR metering	13.65	13.65	31.85	31.85
New connection deposit	7	0	8.05	0
PSI	9.05	0	19.38	0
PMGY	11.69	11.69	0	0
ERP project	0	0	11.75	0
Total excluding RGGVY (Rs. Crs.)	**198.15**	**150.29**	**307.85**	**292.37**

2.69 As shown in the table above, the Licensee in its petition has projected lower capital investments under APDRP and ST(N) schemes in FY 07, as compared to the provisions approved in business plan, which is acceptable as the Licensee is in better position to ascertain the capacity for execution of these schemes. More investment has been proposed in new connections, ERP and PSI schemes, which have not been envisaged under business plan and no details of such additional investment have been submitted in accordance with the Capex guidelines. The Licensee is mandated to file details of all such schemes, as required under the Capex Guidelines, which are not approved under the business plan.

2.70 The Commission does not intend to restrict investments by the Licensee and therefore allows the Licensee to invest as per Licensee's investment plan. The Licensee is also free to take up any new scheme during the course of FY 08, which is not envisaged now, provided the Licensee seeks Commission's approval for the scheme as required under Commission's capex guidelines.

2.71 With regard to determination of ARR for FY 08, the role of capital investments is to the extent of the works that are planned to be commissioned during the course of FY 07 and FY 08. The Gross Fixed Assets as at the end of FY 05-06 are available from Licensee's Audited Accounts, to which any further capitalisation during FY 07 and FY 08 shall get added. The depreciation and interest charges for FY 08 are influenced by the extent of capitalisation during FY 07 and FY 08. Therefore, it is necessary to consider Licensee's performance so far during the year FY06-07 with respect to completion of capital works. This is presented in table below:

Table 29: Licensee's progress of completion of capital works in FY 06-07

Amount in Rs Crore

Scheme	**FY 07 as approved in business plan**	**Progress reported by Licensee during FY 07 up to 30-09-2006**
ST (N)	23.00	8.4
ND	0	
APDRP	75.20	10.16
ADB	4.80	18.33
JBIC	21.95	
RGGVY	70.00	
PMGY/MNP	nil	0.86
REC	nil	1.63
HVDS	nil	3.6
Total	**194.95**	**42.98**

2.72 From the table above it can be seen that the financial progress during the initial six months period is about 22%. The physical progress achieved by the Distribution Licensee vis-a-vis the projected numbers for the same period is as given in the table below:

Table 30: Physical progress of completion of capital works in FY 06-07

Particulars	**FY 07 as filed in petition**	**Progress up to 31.10.2006**	**Progress in %**
33kV line (Ckt-km)	1881	161	8.54%
11kVline (Ckt-km)	4122	602	14.61%
LT line (Ckt-km)	1139	2.6	0.23%
33/11kV Substation (No.)	0		
Power transformers – Nos./ MVA	175/525	35 /MVA capacity not submitted separately	20%
Distribution transformers – Nos. / MVA	6200/238	936 /MVA capacity not submitted separately	15.10%
Total transformation capacity (MVA)	763	50.85	6.66%

2.73 The progress status shown above makes it apparent that the Licensee has fallen considerably short of the capital expenditure approved by the Commission, as part of the Business Plan, for FY07. Even if the existing progress is prorated for the remaining five months, the achievements shall be way below targets. Also, the Licensee has not been able to substantiate the above mentioned progress with the actual completion reports in respect of each scheme. Therefore, it is not clear as to whether the works completed so far in FY07 have been transferred from CWIP to Fixed Assets.

2.74 Licensee's audited accounts for FY06 provided to the Commission show the Gross Fixed Assets as at the end of FY06 as Rs. 1288.05 Crore, while the opening GFA as per the notified Balance Sheet of 31st May 05 stands at Rs. 1252.00 Crore. Hence during the ten month period from 1st June 05 to 31st March 06, the addition to GFA is only Rs. 36.05 Crore. For the purpose of determining the amount of possible capitalisation during FY 07 and further during FY 08, the Commission enquired from the Licensee about the budgeted capitalisation during FY 06, but the Licensee has not provided the same to the Commission.

2.75 Given the poor capitalisation rate of the Licensee during FY 06 and the very meagre progress against targets during FY 07, the Commission considers it best in consumer interest not to consider any addition to GFA in FY 07 and FY 08 for FY 08 tariff determination. The actual addition during FY 07, supported by Audited Accounts, shall be considered for FY 09 tariff determination. This is also expected to provide an incentive to the Licensee to expedite completion of pending capital works, maintain project completion reports and ensure timely submission of the same to the Commission.

2.76 The Commission wishes to emphasize that it is very much in favour of focussed investments in the distribution sector. In Commission's opinion, there is an urgent need for heavy investments for improvement of distribution network in the State. The National Electricity Policy and also the National Tariff Policy have considered investments in distribution network as a priority. APDRP and other schemes funded through ADB, PFC etc. could be major initiatives in this direction. Unfortunately in spite of getting priority attention, the Distribution Company's performance in this regard has been dismal and there seems to be lack of adequate inclination to implement schemes within stipulated time period. While this situation is leading to continuing high distribution losses, at the same time the Commission is constrained to take a view to allow only those investments in tariff, which the Distribution Companies have factually demonstrated through their submissions in this regard. At this moment, the GFA as reflected in the Licensee's Audited Accounts for FY 05-06 is the only documented and verified information that the Commission has of the asset base of the Licensee. Thus the Commission shall allow depreciation and interest charges for FY 08 only on the GFA as at the end of FY 05-06.

Operations and Maintenance Costs

Licensee submission

2.77 The Licensee has claimed O&M expenses on a normative basis as specified by the Commission in MPERC (Terms and conditions for Determination of Tariff for distribution and retail supply of electricity and methods and principles for fixation of charges) Regulations, 2006. The Licensee has considered the determinants of O&M expenses as average of closing balances of FY 07 and FY 08. The Licensee's claim for FY 08 is as under:

Table 31: O&M Expenses as claimed by the Licensee

	O&M charges	**FY08**
A	Metered consumers	2597594
	Multiplying Factor – A (Rs. Lakh / '000 consumers)	6.50
	O&M – A (Rs. Lakh)	**16884.36**
B	Additional pre-paid meters to be installed during the year	0.00
	Multiplying Factor – B (Rs. Lakh / meter)	0.50
	O&M – B (Rs. Lakh)	**0.00**
C	Metered Sales (MU)	5867.44
	Multiplying Factor – C (Rs. Lakh / MU)	2.35
	O&M – C (Rs. Lakh)	**13788.48**
D	HT Network Length (ckt-km)	76931

	O&M charges	**FY08**
	Multiplying Factor – D (Rs. Lakh / ’00 ckt-km)	16.00
	O&M – D (Rs. Lakh)	**12308.92**
E	Transformation Capacity (MVA)	3196
	Multiplying Factor – E (Rs. Lakh / MVA)	1.53
	O&M – E (Rs. Lakh)	**4890.03**
F	Items not covered in formulae (MPERC License fee, Taxes) (Rs. Crore)	**61.17**
	Total O&M (A+B+C+D+E+F) in Rs Crore claimed	**539.89**

*includes terminal benefits of Rs. 60.71 Crore

Commission’s analysis for O&M cost

2.78 In the section on asset capitalisation, the Commission has already elaborated its reasons for not considering any asset addition during FY 07 and FY 08 for the purpose of FY 08 tariff determination. While the Licensee is encouraged to improve upon its asset capitalisation rate, the benefit of the same shall be made available to the Licensee only in subsequent tariff years when true-up petitions are considered. The Commission considers this in the best interest of consumers, since this way the consumers do not have to pay, through tariffs, for future additions to asset base, which may or may not materialise to the extent allowed, given the past performance of the Licensee. Hence, the Commission has determined normative O&M expenses for FY 08 only on the ckt-km of HT lines and transformation capacity existing as at 31st March 2006. This data has been provided by the Licensee to the Commission.

2.79 The Commission’s approach stated in the preceding paragraph is further corroborated by the Licensee’s past performance with regard to creation of lines and transformers. This is presented in the table below:

Table 32: Licensee’s past performance with respect to creation of network assets

Particulars	**As on March 03**	**Addition during FY 03-04**	**Addition during FY 04-05**	**Addition during FY 05-06**	**Addition claimed during FY 06-07**	**Addition claimed during FY 07-08**
33kV line (Ckt-km)	10753	114	220	117	1881	627
11kV line (Ckt-km)	57862	1228	362	272	4122	11589
Power transformers – MVA capacity	2491	85	44	104	525	145

2.80 It is noted from the above table that the addition to lines and transformation capacity as projected by the Licensee for FY 07 and FY 08 is not in line with the same actually added during the previous years. In fact, by Licensee's own submission of progress of completion of works during FY 07, it is apparent that the projections made by the Licensee for FY 07 are highly exaggerated. This is presented in the table below:

Table 33: Licensee's progress of creation of network assets in FY 06-07

Particulars	Network addition claimed in ARR for FY 07	Actual Progress up to 31.10.2006 in all schemes operated by Company	Progress in %
33kV line (Ckt-km)	1881	161	**8.54%**
11kVline (Ckt-km)	4122	602	**14.61%**
Power transformers MVA	525	Not submitted	

2.81 With regard to the other two determinants of normative O&M expenses i.e. metered consumers and metered sales, the Commission, in order to maintain consistency, has adopted a similar approach for FY 08 determination; that is, these parameters are also considered only as at the end of FY 06 and no additions during FY 07 and FY 08 are considered for the purpose of O&M cost determination. This data was also provided by the Licensee to the Commission.

2.82 The Commission, however, wishes to emphasise that, although for the purpose of FY 08 ARR determination, the determinants of normative O&M expenses have been considered as at the end of FY 06 only, the normative expenses shall be recomputed at the end of the FY 08 based on actual additions during FY 07. The adjustment shall be considered at the time of truing up for FY2007-08.

2.83 Based on the above arguments, the normative O&M expenses allowed by the Commission to be recovered through tariffs for FY 08 are as below:

Table 34: O&M expenses as approved by the Commission for FY 08

Amount in Rs. Crore

	O&M expenses	**FY08**
A	Metered consumers	1718458
	Multiplying Factor – A (Rs. Lakh / '000 consumers)	6.50
	O&M – A (Rs. Lakh)	**11169.98**
B	Metered Sales (MU)	4147
	Multiplying Factor – C (Rs. Lakh / MU)	2.35
	O&M – C (Rs. Lakh)	**9745.45**
C	HT Network Length (ckt-km)	70928

	O&M expenses	**FY08**
	Multiplying Factor – D (Rs. Lakh / ’00 ckt-km)	16.00
	O&M – D (Rs. Lakh)	**11348.48**
D	Transformation Capacity (MVA)	2671
	Multiplying Factor – E (Rs. Lakh / MVA)	1.53
	O&M – E (Rs. Lakh)	**4086.63**
E	Items not covered in formulae (MPERC License fee, Taxes) (Rs. Crore)	**0.46**
	Total O&M (A+B+C+D+E) in Rs Crore allowed (net of capitalisation)	**363.96**

2.84 The Commission’s regulations provide for Terminal Benefits to be provided over and above the normative amount of O&M expenses. As at present, the terminal benefits are being taken care of by the MPPTCL in the absence of creation of a pension trust as envisaged in the GoMP Order dated 31st May 2005, no separate provision for Terminal Benefits has been considered in this Order for the Licensee.

Depreciation

Licensee’s submission:

2.85 The Licensee has submitted that it has inherited a GFA of Rs. 1251.52 Crore as per the notified opening balance sheet, which is subject to change on any subsequent notification by the GoMP. They have also claimed that in FY06, the addition to GFA has been to the tune of Rs. 7.57 Crore and the accumulated depreciation as on 31st March 2006 as per the provisional balance sheet is Rs. 842.20 Crore.

2.86 According to the Licensee, depreciation has been computed on the opening balance of GFA of depreciable assets as per the notified opening balance sheet. The percentage to which assets in each sub-category is depreciable has been computed as on 31st May 05 and has been estimated on the basis of year-wise asset addition data of MPSEB from 1985-86 to 2004-05. The percentage of depreciable assets (opening balance) obtained in this manner are shown in the table below:

Table 35: Percentage of depreciable assets as filed by the Licensee

Asset class	**FY07**	**FY08**
Land and Land Rights	100%	100%
Building and Civil Works	100%	100%
Hydraulic Works	100%	100%
Other Civil Works	100%	100%

Asset class	**FY07**	**FY08**
Plant and Machinery: ---		
Transformers	57%	65%
Batteries	80%	82%
Communication equipment	57%	57%
Others	57%	57%
Line and Cable Networks, etc.: ---		
Meters	42%	50%
Others	51%	59%
Vehicles	0%	23%
Furniture and Fixtures	22%	32%
Other Equipment	49%	59%
Any Other Items	100%	100%

Further, depreciation on asset added during each year thereafter has been computed on the basis on projected capitalization in each such year as presented in the section on capital expenditure of this Order. The total projected capitalization in each year has been distributed into different asset categories on the basis of the category wise break-up available as per the FY06 audited accounts of the Licensee. The depreciation has been claimed on the basis of rates notified by the Ministry of Power under notification S.O.265 (E) dated 27th March 1994.

2.87 The Licensee has claimed depreciation for a year on the opening balance of GFA for such year and has not claimed any depreciation on assets added during the year. The depreciation claimed by the Licensee for FY07 and FY08 is shown below:

Table 36: Depreciation claimed by the Licensee

Amount in Rs. Crore

Asset class	**FY07**	**FY08**
Land and Land Rights	0.00	0.00
Building and Civil Works	0.46	0.58
Hydraulic Works	0.33	0.40
Other Civil Works	0.08	0.10
Plant and Machinery: ---		
Transformers	0.00	0.00

Asset class	FY07	FY08
Batteries	0.13	0.16
Communication equipment	0.00	0.12
Others	12.25	16.06
Line and Cable Networks, etc.: --		
Meters	13.28	19.59
Others	27.80	40.08
Vehicles	0.00	0.29
Furniture and Fixtures	0.05	0.08
Other Equipment	0.32	0.48
Any Other Items	0.00	0.00
Total	**54.69**	**77.94**

2.88 The Licensee has not computed depreciation separately for wheeling and retail sale activities, and has claimed all depreciation for wheeling business alone.

Commission's analysis of depreciation claims:

2.89 The Commission has analysed the claims of the Licensee regarding depreciation and is happy to note that the Licensee has done an extensive analysis to determine the opening balance of depreciable assets as on 31st May 05. The data regarding year-wise and category wise asset addition to MPSEB asset base has been shared by the Licensee with the Commission. However, at the same time, the depreciable and fully depreciated assets as on 31st May 05, as worked out by the Licensee does not match with the accumulated depreciation as per the notified opening balance sheet. If this data is utilized, it shall be in conflict with the opening balance sheet.

2.90 For FY06, the Licensee has claimed an asset addition of Rs. 7.57 Crore; however as per the audited balance sheet submitted by the Licensee the addition has been of Rs. 36.05 Crore. The accounts also show a consumer contribution of Rs. 3.56 Crore towards cost of capital assets.

2.91 The Commission has dealt at length the reasons for not considering the cost projections done by the Licensee as these appear to be inflated and not in conformity with the past trend. In the past, both physical and financial asset capitalization achieved by the Licensee has been extremely low. The same is likely to be true for FY07 as well. The issue of asset capitalization has been dealt with in detail in the section on asset capitalization of this order. If the same rate is used for projecting asset addition during FY08, the addition is not likely to be substantial. Consequently deprecation for FY08 is not likely to deviate much from the depreciation available for FY06. For FY08 the Commission has therefore computed depreciation on the closing balance of assets existing as on 31st March 2006 and no projected asset additions have been considered. The Commission shall true up the allowed amount when the audited balance sheet for FY08 becomes available provided that the assets capitalized during FY07 and FY08 form a part of the schemes that have been duly approved by the Commission as per the Capex guidelines framed by it.

2.92 It could be seen from the table below that the Licensee has not shown any asset value against 'Transformers'. This has been clarified with the Licensee and the Licensee has submitted that the asset class 'others' includes transformers also and since both 'transformers' and 'others' have the same depreciation rate, the depreciation calculations remain unaffected.

2.93 The opening GFA and its split into various asset categories considered by the Commission for the purpose of computation of depreciation is as shown in the following table:

Table 37: Split of GFA as on 31st March 06 into various asset classes

Amount in Rs. Crore

Asset class	**FY08**
Land and Land Rights	2.02
Building and Civil Works	15.35
Hydraulic Works	9.67
Other Civil Works	2.75
Plant and Machinery: ---	
Transformers	0.00
Batteries	2.02
Communication Equipment	2.61
Others	285.50
Line and Cable Networks, etc.: ---	
Meters	251.67
Others	706.80
Vehicles	2.89
Furniture and Fixtures	1.63
Other Equipment	5.13
Any Other Items	0.00
Total	**1288.05**

2.94 The Commission's Regulations under section 61 prescribe that the depreciation should be computed using the rates notified by the CERC. The Licensee, in its filing for FY07, had computed depreciation based on these rates. However, in the current filing, the Licensee has computed depreciation for the period FY 07 to FY08 on the basis of MoP rates and has requested the Commission to allow the depreciation amount claimed by it. In order to buttress its claim for higher depreciation rates (MoP rates are higher than the rates allowed by CERC), the Licensee has referred to section 5.3 (c) of the National Tariff Policy that states that for distribution the Forum of Regulators shall evolve the depreciation rates. Further, the Policy also states these notified rates shall be applicable both for tariff and accounting purposes. The Licensee has also pointed out that as per AS-6 "Depreciation Accounting" issued by the ICAI if any change is made in the method of depreciation, retrospective computation of depreciation from the year of change would be required.

2.95 The National Tariff Policy recommends that the Forum of Regulators (FoR) shall evolve the depreciation rates suitable for distribution business. In this regard, the Commission wishes to quote a letter from the FoR Ref. No. 1/20(6)-2006-Tariff Policy / CERC dated 23rd June 2006 addressed to the Chairpersons of the SERCs, which states that the depreciation rates as fixed by the CERC shall also be applicable for distribution businesses. Also, the Regulations of the Commission issued earlier under section 61 of the EA 2003 on 5th December 2005 had also prescribed the rates as notified by CERC. The Commission, therefore, cannot accept the Licensee's claim and has recomputed depreciation based on CERC rates.

2.96 The Commission has computed depreciation on assets notified as a part of the transfer scheme of 31st May 2005 and on assets added during FY06 separately. For assets notified existing as on 1st June 2005 the Commission has provided depreciation for an asset category to the extent that the accumulated depreciation as on 31st March of each year does not exceed 90% of the historical cost of acquisition.

2.97 Based on the discussion above, the depreciation allowed by the Commission for FY08 is shown below:

Table 38: Depreciation allowed by the Commission for FY 08

Amount in Rs. Crore

Asset Details	**FY08**
Land and Land Rights	0.00
Building and Civil Works	0.28
Hydraulic Works	0.25
Other Civil Works	0.05
Plant and Machinery: ---	
Transformers	0.00
Batteries	0.36

Asset Details	**FY08**
Communication equipment	10.28
Others	0.00
Line and Cable Networks, etc.: ---	
Meters	15.10
Others	25.44
Vehicles	0.00
Furniture and Fixtures	0.10
Other Equipment	0.31
Any Other Items	0.00
Total	**52.17**

Interest and Finance Charges

Licensee's submission:

2.98 The interest and finance charges comprise of interest on project specific loans as per the opening Balance Sheet of 31st May 05 and the new loan drawals as per the investment plan provided by the Licensee for FY08, the interest charges on Consumer Security Deposits, the interest charges on working capital loans and the cost of raising finance from the lending agencies. With regard to new capital expenditure during FY08, the Licensee has provided a matching financing plan comprising of loan drawals, equity infusion and consumer contribution. The Licensee has also shown part funding of certain investments through 'untied funds' (i.e. if there is no committed funding available).

2.99 The summary of the capital expenditure plan for FY08 considered for interest computation as per the petition is given in the table below:

Table 39: Summary of filed capital expenditure plan

Amount in Rs. Crore

Scheme	**FY 07**	**FY 08**
JBIC	21.95	29.80
ST (N)	15	10
PSI	9.05	19.38
APDRP	45	0
ADB	74.81	0
RGGVY	**93.96**	**406.98**

Scheme	FY 07	FY 08
PMGY	11.69	0
PFC- DTR metering	13.65	31.85
ADB-proposed	0	197.02
ERP project	0	11.75
New connections (Deposit)	7	8.05
Total (including RGGVY)	**292.11**	**714.83**

2.100 The Licensee has computed interest separately on loans allocated to it by State Government in the transfer scheme notified on 31st March 2005. The opening and closing balances of these loans for FY08 have been determined by adjusting for the projected repayments.

2.101 The Licensee has claimed that the terms and conditions (such as rate of interest, term of repayment, moratorium period, etc.) of the loans allocated to it as per the notified Balance Sheet are as per the respective loan agreements and the conditions indicated by the State Government. The terms and conditions of the new loans have been considered as per the Loan agreement with the lending agency. With regard to untied funds, however, the terms and conditions have been assumed. The terms and conditions considered by the Distribution Licensee for new loans for computing interest cost is as given in the table below:

Table 40: Loan terms and conditions as filed

Source	Interest Rate (%)	Moratorium	Repayment period (years)
PFC Loans	10.25	2	8
REC-JBIC Loans	9.25	5	10
REC Loans	8.25	3	10
ADB Loans	10.5	5	15
JBIC	9.20	5	10
Other Market Borrowings for capex	10.0	1	7

2.102 The cost of raising finance and bank charges for FY07 have been estimated at Rs. 3 Crore and the same has been assumed for FY08. However, the basis for arriving at this figure has not been provided. The interest payable on Security Deposit has been computed by projecting total security deposit that the Licensee is entitled to as per the relevant regulation. The Licensee has considered security deposit of 3 months of the average demand for agricultural consumers, 1.5 months of the average demand for other consumers and the interest rate payable on this deposit has been considered at 6%.

2.103 The Licensee, in its petition, has not described the basis for capitalizing the interest cost (IDC) but from the working sheets provided by the Licensee it appears that the Licensee has worked out the debt component of average CWIP for each year and multiplied that by the weighted average cost of debt in each such year to work out IDC capitalized. With regard to expense capitalization, the Licensee has assumed it at 8% of the gross annual employee and A&G cost. No reasons have been provided in the petition for this assumption.

It must be pointed out here that the Licensee's financing plan does not provide any funding for IDC and expense capitalized. However, on analyzing the numbers it appears that the untied funds as projected by the Licensee shall be utilized for funding IDC and expenses capitalized.

2.104 The Distribution Licensee has computed the interest cost for the existing and new loans on the basis of the terms and conditions indicated above. The interest cost claimed by the Distribution Licensee is given in the table below:

Table 41: Interest and finance charges as claimed by the Licensee

Amount in Rs. Crore

Interest and finance charges (IFC)	**FY 07**	**FY 08**
IFC on New long term loans		
PFC	2.19	7.78
REC	0.37	1.55
ADB	1.92	11.09
JBIC	0.86	2.88
REC-JBIC	0.15	0.51
IFC on existing long term loans		
PFC	7.17	5.12
REC	0	11.63
ADB	6.49	6.32
GoMP – APDRP, NABARD, WC	12.30	10.64
IFC on existing Generic loans from MPSEB	27.22	24.19
Market borrowings for Working Capital	5.89	7.46
Other IFC		
Cost of raising finance and bank charges	3.00	3.00
Interest on consumer security deposit	17.78	19.15
Gross IFC	**85.34**	**111.32**
Less IFC Capitalised	**34.64**	**30.13**
Net Interest & Finance Charges	**50.71**	**81.19**

2.105 The Commission's Regulations on Terms and Conditions of Determination of Tariff for Distribution and Retail Supply of Electricity and Methods and Principles of fixation of charges, issued on 26th October 2006 allow interest charges of only those loans to be passed through the ARR for which the associated capital works have been completed and put to use.

2.106 The Commission has also given directions to the Licensee to maintain half-yearly accounts, get them audited and submit to the Commission. The Licensee has, however, till date only provided the annual accounts. The latest annual accounts provided to the Commission by the Licensee pertain to FY 05-06; while the accounts for the half year ended 30th September 06 have not been submitted by the Licensee. Although the Licensee has provided to the Commission its progress of completion of capital works till October 06, it has not been established whether the works completed have been capitalised or not. Therefore, the Commission is only certain of the capitalisation (GFA) as available from the final audited accounts of FY 05-06. Moreover, going by Licensee's performance with regard to capitalisation of on-going works in the past, the asset addition anticipated during FY 07 and FY 08 is marginal.

2.107 For all on-going works, the interest cost related to the loan funding such works is considered as Interest During Construction (IDC) which shall be capitalised and added to the project cost at the time of asset capitalisation. Such interest cost is not considered as a pass through in the ARR. The idea is that the consumer can only be made to bear the interest cost related to those assets, which the consumer is making use of. The asset which is under construction is not useful to the consumers, hence interest cost incurred by the Licensee during construction becomes a part of CWIP and is not allowed to be recovered through tariffs.

2.108 The Commission is aware that the Licensee shall complete some capital works during the course of FY 07 and FY 08, which shall be capitalised and added to the asset base. However, as explained in the section on capitalisation, the Licensee's past performance with respect to capitalisation of assets completely defies the projections that the Licensee has made for FY 07 and FY 08. The Commission thus considers it wise not to take a call on the possible capitalisation for FY 07 and FY 08, but consider the interest expenses attributable to such assets only when such assets are actually added to the asset base. This shall also serve as an incentive for the Licensee to expedite the completion of works and haul up its accounting practices to ensure quick and efficient transfer of assets from CWIP to GFA. At the same, this shall also act as an incentive for the Licensee to maintain half yearly accounts and submit the same to the Commission.

2.109 The Commission, therefore, for FY 08 is inclined to follow the same approach as adopted in the Tariff Order for FY 07 to work out the interest cost chargeable to revenue account. This involves allocation of debt and equity into GFA and CWIP as available from the FY 06 Audited Balance Sheet. This has been done in the following manner:

(a) Net addition to GFA during FY 05-06 is worked out after subtracting from total addition to GFA, the consumer contribution amount as available from the Balance Sheet.

(b) 30% of the net addition to GFA during FY 05-06 has been considered as funded through equity and added to the Equity allocated to GFA as on 31st May 05 as per the FY 07 Tariff Order.

(c) Balance of net addition to GFA is considered as having been funded through debt and added to the total debt allocated to GFA as on 31st May 05 as per the FY 07 Tariff Order.

(d) Debt repayments have then been subtracted from the total debt identified with completed assets as computed from above. Repayments have been worked out as pro-rata to total scheduled repayments during FY 05-06. Actual repayments have not been considered since there have been principal defaults by the Licensee during FY 05-06.

The allocation is presented in the tables below:

Table 42: Allocation as per the FY 07 Tariff Order:

Amount in Rs. Crore

S. No.	Source of funds	Amount as per notified balance sheet	Allocated to Fixed Assets	Allocated to Capital Works-in-Progress
1.	Equity	317	317	0
2.	Project specific loans	294	35	259
3.	MPSEB loan	252	0	252

Table 43: Computation of debt associated with completed works as at end of FY 06

S. No.	Particulars	Amount (Rs. Crore)
1.	Addition to GFA during FY 05-06	36.05
2.	Consumer Contribution during FY 05-06	3.56
3.	Net addition to GFA during FY 05-06	32.50
4.	30% of addition to net GFA (considered as funded through Equity)	9.75
5.	Balance addition to net GFA – funded through debt	22.75
6.	Debt associated with GFA as on 31st May 05 (from above table)	35.37
7.	Debt repayment	2.05
8.	**Total debt associated with GFA as on 31st Mar 06 (5+6-7)**	**56.07**

2.110 The interest cost can only be allowed on those loans which are identified as per the allocation as associated with completed works (GFA). The interest has been allowed on such debt at the weighted average interest rate of all loans as on 31st March 06. The weighted average interest rate as worked out for FY 05-06 for East Discom is 9.94% p.a. This is determined only on scheduled repayments, not considering actual interest and principal defaults during FY 05-06. Also, notional interest payment on REC loan has been considered for this purpose, even though there is a moratorium on interest payment on REC loan, since interest shall have to be paid after the moratorium period. This weighted average interest rate of 9.94% is less than the SBI Benchmark PLR of 11.50%, hence is allowed as such. The weighted average interest rate is then applied to the loans identified as associated with completed works as per the allocation mentioned above to determine the allowable interest cost to be passed through the ARR for FY 08. This is presented in the table below:

Table 44: Interest cost as allowed for FY 08

Amount in Rs. Crore

Particulars	**FY08**
Debt associated with capitalised assets	56.07
Weighted average rate of interest (%)	9.94%
Interest cost allowed through ARR	**5.57**

2.111 The cost of raising finance and bank charges for FY07 have been estimated by the Licensee at Rs. 3.00 Crore and the same has been assumed for FY08. The Licensee has not provided the basis for this computation. However, the Commission does not wish to discourage the Licensee from drawing new loans to carry out capital works during FY 07 and FY 08. The Commission thus allows Rs. 3.00 Crore as cost of raising finance for FY 08. The total interest and finance charges allowed for FY 08 are as under:

Table 45: Total interest and finance charges as allowed for FY 08

Amount in Rs. Crore

Particulars	**FY08**
Interest cost allowed	5.57
Finance charges allowed	3.00
Total Interest and finance charges allowed through ARR	**8.57**

Interest on Working capital

Licensee's submission

2.112 The interest cost has been computed separately for wheeling and retail activity at 12.25% of the working capital requirement determined in accordance with the provisions of the regulations of the Commission for determination of distribution of tariff. The details are as given in the table below:

Table 46: Interest on working capital loans as claimed for FY 08

Amount in Rs. Crore

Sl. No.	**Particulars**	**FY08**
	Wheeling Activity	

Sl. No.	Particulars	FY08
A)	1/6th of annual requirement of for previous year	15.93
B)	1/12th of O&M Expenses	44.99
C)	2 months of average wheeling charges	0
	Total Working Capital	60.92
	Rate of Interest (%)	12.25%
	Interest on Working Capital	7.46
	Retail Sale Activity	
A)	1/6th of annual revenue requirement of inventory for previous year	0
B)	Receivables equivalent to 2 months of average billing	392.8
Less	1/12th of the power purchase expenses	142.39
	Consumer Security Deposit	319.09
	Total Working Capital	-68.66
	Rate of Interest	12.25%
	Interest on Working Capital	**0.0**

Commission's analysis

2.113 For retail sale activity the Commission has considered the annual inventory requirement at 1% of the gross value of metering assets only as the end of FY 05-06, (which as per Table 37 is Rs. 251.67 Crore). Two months requirement of metering stores would thus work out to Rs. 0.42 Crore (1% of 251.67, pro-rated to 2 months). As per Table 37, the remaining value of Gross Block would thus be Rs. 1036.38 Crore as at the end of FY 06. One percent of this value pro-rated to two months would work out to Rs. 1.73 Crore. This has been considered as the inventory requirement for wheeling activity. The Consumer security Deposit has been considered as discussed in the section on interest on consumer security deposit. The values of other elements of working capital have been recomputed for the amount allowed by the Commission in the relevant sections of this order. The interest on working capital allowed by the Commission for wheeling and retail sale activity is given in the table below:

Table 47: Interest on working capital loans as approved for FY 08

Amount in Rs. Crore

Sl. No.	Particulars	FY08
	Wheeling Activity	
A)	1/6th of annual requirement of inventory for previous year	1.73
B)	1/12th of O&M Expenses	30.33
C)	2 months of average wheeling charges	0.00
	Total Working Capital	32.06

Sl. No.	Particulars	FY08
	Rate of Interest (%)	12.75%
	Interest on Working Capital – wheeling	**4.09**
	Retail Sale Activity	
A)	1/6th of annual revenue requirement of inventory for previous year	0.42
B)	Receivables equivalent to 2 months of average billing*	403.23
Less	1/12th of the power purchase expenses	145.83
	Consumer Security Deposit**	346.78
	Total Working Capital	(88.96)
	Rate of Interest	12.75%
	Interest on Working Capital – retail	**0.00**

*Calculated at approved tariffs of FY 08 contained in the relevant section of this Order
**Calculated based on revenues for FY 08 as worked out from approved sales forecast and approved tariffs for FY 08

Interest on Consumer Security Deposit

Licensee's submission

2.114 The interest payable on Security Deposit has been computed by projecting total security deposit that the Licensee is entitled to as per the relevant regulation. The Licensee considered security deposit of 3 months of the average demand for agricultural consumers, 1.5 months of the average demand for other consumers.

2.115 As per the Balance Sheet notified by the State Government on 31st May 2005, the consumer security deposit allocated to East Discom was Rs. 273 Crore. During FY06 the Licensee expects the consumer security deposit amount to further increase by around Rs. 15 Crore. The projected closing balances for FY08 are in line with the balance notified by the State Government. The interest payable has been worked out at 6% of the average of the opening and the closing balance of the relevant year. For FY08 the interest that has been claimed on projected deposit is as given in the table below:

Table 48: Interest on CSD as claimed for FY 08

Amount in Rs. Crore

Consumer Security Deposit	FY08
Projected Closing Balance	338
Average Balance	319
Interest Charges on CSD @ 6%	**19.15**

Commission's analysis

2.116 For FY08, the Commission has determined the CSD as per the provisions of MPERC (Consumer Security Deposit) Regulations 2005 and the projected revenue from each category of consumers for the approved tariff. Interest on CSD allowed for FY08 is as given in the table below:

Table 49: Interest on CSD as allowed for FY 08

Amount in Rs. Crore

Consumer Security Deposit	**FY08**
Consumer Security Deposit at FY 08 revenues	346.78
Interest Charges on CSD @ 6%	**20.81**

Return on Equity

2.117 The Licensee has claimed return at the rate 14% on equity projected to be employed in completed assets in FY08. For computing RoE, the Licensee has considered the entire closing balance of equity in FY06 as employed in completed and useful assets. Further, the Licensee has assumed that the entire equity inflow for each year thereafter for ST (N) schemes and ADB schemes will get capitalised during the same year. The Licensee has not provided any reason for this assumption. The equity amount considered eligible by the Licensee for return is given in the table below:

Table 50: Return on Equity as claimed for FY 08

Amount in Rs. Crore

Particulars	**FY08**
Share Capital	378.30
Capitalisation	461.17
Additional equity flow	23.72
Normative Equity	138.35
Equity eligible for Return	390.16
Return on Equity	**54.62**

2.118 The section on interest and finance charges explains clearly the process of identification of debt and equity with completed assets. This process results in the total equity identified with GFA as at the end of FY 05-06. This is presented in the table below. The Return on Equity as allowed for FY 08 ARR is then determined by applying the Commission specified rate of 14% on the total equity identified as allocated to GFA. The Commission is aware that during the course of FY 07 and FY 08, additional equity shall be infused into the distribution business for the purpose of creation of assets, which will increase the amount of equity allocated to completed assets. This, if supported by audited accounts, shall be accounted for in future aggregate revenue requirements of the Licensee.

Table 51: Return on Equity as allowed for FY 08

Amount in Rs. Crore

Source	**FY08**
30% of addition to net GFA identified as funded through equity (from table 43)	9.75
Closing balance of equity identified with GFA as on 31st May 05	317.00
Total Equity identified with GFA as on 31st Mar 06	326.75
RoE @14% allowed in ARR of FY 08	**45.74**

Other items of ARR

2.119 Apart from the components of expenses discussed above, there are certain other items, which form part of the Aggregate Revenue Requirement. These include provision for Bad Debts, other miscellaneous expenditure, any prior period expenses / credits and Other (Non-Tariff) Income. These are analyzed below:

Bad and doubtful debts

2.120 The Licensee has computed the amount under this head for FY08 as per the Commission's regulations i.e. at 1% of sales revenue. The revenues projected by the Licensee are at current tariffs. The Commission allows a provision for bad and doubtful debts at 1% of the sales revenues, where the revenues are worked out using the approved sales forecast and the final tariff rates as determined in the relevant section of this Order. The following table gives the amount of bad debts claimed by the Licensee and those approved by the Commission for FY08:

Table 52: Bad and Doubtful debts for FY08

Amount in Rs. Crore

Particulars	**FY 08**
Claimed by Licensee	23.57
1% of sales revenues at FY 08 approved tariffs	24.19
Allowed by Commission	**24.19**

Note: Sales revenue has been computed at tariff rates approved by the Commission for FY 08 in this Order.

2.121 It was stated in the Tariff Order for FY 07, the amount of bad debts actually written off for FY 07 shall be considered subject to a maximum of 1% of sales revenues and any excess / shortfall shall be adjusted in the ARR for FY 08. Similarly, any true-ups for bad debts actually written off shall be considered for FY 08 when the audited accounts of these years are made available by the Licensee to the Commission.

Other miscellaneous expenditure

2.122 The Licensee has not claimed any expenditure under this head for FY08. This is accepted by the Commission.

Other Income

2.123 The Licensee has claimed an amount of Rs. 54.76 Crore against this item for FY 08. This amount includes meter rent, recovery from theft of energy, miscellaneous receipts and interest on loans and advances to staff. Out of this, interest on loans and advances to staff, income from trading (other than electricity) and meter rent has been considered part of wheeling activity while other items are considered towards retail sale activity. The Licensee has not provided any basis for forecast of any item of Other Income. Also, the Licensee has not included any income from wheeling charges as part of Other Income for wheeling activity.

2.124 The Commission accepts the Licensee's forecast for all components of Other Income except Meter Rent, which has been recomputed on the basis of average (average of opening and closing balance) approved number of consumers for FY08 and the Commission's approved rates for meter rent. Also, since provision of meters is an activity associated with the Retail Supply activity of the Licensee, the Commission considers income from this source as Other Income for the Retail Supply activity and not the Wheeling activity as considered by the Licensee.

The Licensee has not considered any income from wheeling charges, which is accepted by the Commission. However, the actual income to the Licensee from wheeling charges during FY08 could be higher depending upon the actual number of open access consumers, which shall be adjusted in subsequent years.

2.125 The amount thus allowed by the Commission as Other Income for FY08 shall be as follows:

Table 53: Other Income for Wheeling activity

Amount in Rs. Crore

Particulars	**FY 08**
Claimed by the Licensee	30.20
Allowed by the Commission	**6.11**

Table 54: Other Income for Retail Sale activity

Amount in Rs. Crore

Particulars	**FY 08**
Claimed by the Licensee	24.56
Allowed by the Commission:--	
Meter Rent	26.82
Total of other items	24.56
Allowed by the Commission	**51.38**

Segregation of approved ARR between Wheeling and Retail Sale activities

2.126 The Commission's Regulations under section 61 notified on 26th October 2006 state that the Distribution Licensees should file the Aggregate Revenue Requirement in three parts, viz. for power purchase activity, for wheeling (distribution) activity and for retail sale activity. The Regulations clearly listed out the items of fixed costs (i.e. other than power purchase) that should be included into wheeling and retail sale activities.

2.127 The Licensee has complied with the Commission's regulations to the extent that they have filed the ARR segregated among expenses for power purchase, wheeling and retail sale activities. The Licensee has only considered normative interest on working capital, provision for bad debts and interest on consumer security deposits into retail sale activity. All other items have been considered entirely as part of wheeling activity.

2.128 For the present tariff exercise, the Commission accepts the Licensee's method of allocating costs into wheeling and retail sale activities. However, the Commission directs the Licensee to carry out an extensive study across a representative sample of its distribution centers, RAOs, etc. to develop the allocation ratios for segregation of each expense item (excluding power purchase) into wheeling and retail sale activity. The results of this study should be presented to the Commission by the Licensee within six months of this Tariff Order. This is, however, only a stop gap arrangement. The Commission desires that the Licensee undertakes a full accounting segregation for booking expenses separately under wheeling activity and retail sale activity. The Licensee should get back to the Commission, within a month of issue of this Tariff Order, with the probable time-lines for this activity.

2.129 For the purpose of this Tariff Order, therefore, the Commission allocates the fixed costs (i.e. other than power purchase) in the following manner:

Wheeling activity shall include:

(a) O&M expenses

(b) Depreciation

(c) Interest on project loans

(d) Interest on working capital loans – for normative working capital for wheeling activity

(e) Return on Equity

(f) Other miscellaneous expenses

(g) Less: Other Income as computed in previous section

Retail sale activity shall include:

(h) Interest on working capital loans – for normative working capital for retail sale activity

(i) Interest on Consumer Security Deposits

(j) Bad and Doubtful debts

(k) Less: Other Income as computed in previous section

2.130 On the basis of above, the ARR for FY 08 for wheeling and retail sale activity for the East Discom is approved as under:

Table 55: Allowed ARR for FY 08 segregated among wheeling and retail sale activities

Particulars	**Amount in Rs. crs. approved for FY 08**
Power Purchase expenses	1749.88
Transmission charges (MP Transco)	218.83
Wheeling activity:	
O&M expenditure	363.96
Depreciation	52.17
Interest and Finance Charges on Project Loans	8.57
Interest on Working Capital	4.09
Return on Equity	45.74
Other expenses	0.00
Less: Other Income	6.11

Particulars	**Amount in Rs. crs. approved for FY 08**
Sub-Total Wheeling ARR for FY 08 as approved	***470.24***
Retail Sale activity	
Interest on Working Capital	0.00
Bad and Doubtful Debts	24.19
Interest on Consumer Security Deposit	20.81
Less: Other Income	51.38
Sub-Total Retail ARR for FY 08 as approved	***(6.38)***
Grand Total FY 07-08 ARR as approved	**2430.82**

Revenue Gap at existing tariffs

2.131 The revenues at existing tariffs have been worked out by the Commission using this sales forecast. The revenue gap is worked out using these revenues and the approved ARR as shown in the table above. The sales revenues and the revenue gap at existing tariffs are presented in table below. The revenue gap as filed by the Licensees is also reproduced for ready reference:

Table 56: Revenue gap with approved ARR for FY 08 at existing tariffs

(Amount in Rs. Crore)

Particulars	**Amount**
Revenue gap as filed by the Licensee	(266.12)
Revenues at existing tariffs as worked out by the Commission	2413.38
Approved ARR for FY 08 (with interest on CSD, bad debts, etc. worked out at revenues from current tariffs)	2430.70
Revenue Gap for FY 08 at existing tariffs	**(17.32)**

2.132 The Licensees had proposed to bridge the gap of Rs 266.12 Crs, as projected by them, partly by means of tariff hike and efficiency gains and partly by means of creation of regulatory asset. However the revised revenue gap as determined by the Commission is only 17.32 Crs, as given above. The Commission has therefore made suitable modifications to the tariff proposals to meet the total revenue gap indicated above and there seems to be no requirement for creation of any regulatory asset for FY 08.

2.133 The expected revenues from revised tariffs for the Distribution Licensee is shown in the table below:

Table 57: Revenue from revised tariffs

(Amount in Rs. Crore)

Particulars	Amount
Revenue gap as filed by the Licensee	(266.12)
Expected Revenues at approved tariffs for FY 08	2419.35
Approved ARR for FY 08	2430.82
Revenue (Gap)/surplus at approved FY 08 tariffs	**(11.47)**

2.134 From the table above, it is clear that there is a marginal gap left over with the Licensee. This, however, is a fall-out of maintaining uniform tariffs in the State. As the revenue gap left-over is only marginal, the position shall be reviewed while truing up for FY 08.

2.135 The consumer category-wise revenues at approved FY 08 tariffs (contained in the Tariff schedule in this Order), as worked out by the Commission are presented below:

Table 58: Consumer category-wise revenues at FY 08 tariffs

Consumer Category	Sales (MU)	Revenues (Rs. Crore)
Low Tension		
Domestic Light Fan and Power	1778	584.63
Non-Domestic Light Fan and Power	315	172.11
Water Works and Street Lights	125	41.24
LT Industry*	217	88.09
Agricultural Consumers	1375	321.27
TOTAL (LT)	**3810**	**1207.35**
High Tension		
Railway Traction	408	187.86
Coal Mines	515	274.0
Industrial and Non Industrial	1100	507.34
Seasonal	4	2.44
HT Irrigation and Public Water Works	59	19.33
Township and Residential Colony	290	100.84
Bulk Supply to Exemptees	412	120.20

Consumer Category	Sales (MU)	Revenues (Rs. Crore)
Total HT	**2788**	**1212.01**
Grand Total (LT + HT)	**6598**	**2419.35**

* LT Industrial category includes sale Agro related use in rural areas (LV 5.2) which was earlier included in Agriculture category.

A3: AGGREGATE REVENUE REQUIREMENT FOR FY 08 OF MADHYA PRADESH PASHCHIM KSHETRA VIDYUT VITARAN COMPANY LIMITED (WEST DISCOM)

Summary of Sales Forecast as proposed by the Licensee

3.1 The total sale of the West Discom during FY 08 is projected at 8,909 MUs. The sales in LT category is projected as 6,017 MUs (or 67.54% of total sales) and in HT category as 2,892 MUs (or 32.46 % of total sales).

Table 59: Projected Sales of the West Discom for FY 08

Consumer Category			Sales in MU - FY'08
L T CONSUMERS	LV 1	Domestic Light Fan and Power	1707
	LV 2	Non-Domestic Light Fan and Power	419
	LV 3	Water Works and Street Lights	141
	LV 4	LT Industrial	344
	LV 5	Agricultural Consumers	3407
		TOTAL (LT)	**6017**
H T CONSUMERS	HV 1	Railway Traction	313
	HV 2	Coal Mines	0.00
	HV 3	Industrial and Non Industrial	2142
	HV 4	Seasonal	11
	HV 5	HT Irrigation and Public Water Works	212
	HV 6	Township and Residential Colony	0.00
	HV 7	Bulk Supply to Exemptees	213
		TOTAL (HT)	**2892**
TOTAL LT + HT			**8909**

3.2 The sales forecast of 8909 MU of the Licensee is about 12.39% more than the revised estimates of FY 07 (which is 7927 MU). This forecast, as per Licensee's petition, is composed of 1350 MU of un-metered agriculture sales. The Licensee has not forecast any un-metered sales in domestic category.

3.3 During discussions, the representatives of West Discom have stated that about 55,226 consumers of domestic category as on 30.9.06 predominantly in rural areas, are presently getting un-metered supply. However, the Licensee, in its filings, has not projected any sales for un-metered domestic category, but the consumption of this category also has been considered as metered sales.

Energy balance and power purchase as proposed by the Licensee

3.4 Keeping in view the prevailing arrangement between MP Tradeco and the three Discoms, the Licensee claimed that they are not in a position to independently provide complete and updated information regarding station-wise generation availability and power purchase costs in the relevant formats (as per the Tariff Regulations). The Licensee has provided the information based on the interactions with MP Genco, MP Transco and MP Tradeco. In this regard, the Licensee has also claimed that they have taken guidance from Section 18 of the MPERC (Power Purchase and Procurement) Regulations 2004 Revision 1, 2006 (RG-19(I) of 2006) which states that

"The Distribution Licensee shall make long-term demand and supply availability assessments in consultation with any or all concerned including state sector Generating Companies, discoms, private Distribution Licensees, central sector Generating Companies and Transmission Companies/ Regional Electricity Board, National / Regional Load Dispatch Centers, Central Electricity Authority."

3.5 The Distribution Licensee claims that they have adopted tentative information from key sector participants for computation of power purchase cost for the purpose of arriving at revenue requirement. The Distribution Licensee requested the Commission to take due cognizance of this fact while computing allowable power purchase cost of the Licensee. It also requested the Commission to give opportunity to the Licensee to submit updated information, if such information is made available to the Distribution Licensee by MPGenco, MPTransco, and MPTradeco.

3.6 The Licensee has considered the % allocation of capacity (29.5646%) as per the Government's notification dated 18/10/2006. The West Discom has calculated the details related to the following items as per the above allocation:

- Monthly energy available from all sources
- Annual fixed charge payable to generators
- Estimated payment to generators on account of incentives, income tax, duties, etc.; and
- Estimated inter-state transmission charges to be paid.

Assessment of Energy Availability by the Discom

3.7 The Licensee has assessed the availability of energy from various sources based on discussions with Tradeco. Availability of energy from MPGenco is based on monthly forecast of generation by MPGenco for 2007-08. The Licensee has claimed that information on availability from Central Generating Stations (NTPC, NPC) was not available at the time of filing the petition. "Actual generation" for the previous two years and first six months of the current year. The generation lost due to forced outages of Korba Unit 4 and Vindhyachal (Unit 4 and 6) during 2005-06 have been duly considered while estimating the energy availability from these stations.

3.8 Availability from new stations expected to be commissioned in 2006-07 and 2007-08 has also been considered.

3.9 The following table provides the annual availability from each of the sources while the monthly availability has been provided in Format F1-2 (an additional format).

Table 60: Energy Availability for West Discom for FY 08

Source-wise availability (MU)	2007-08 State	2007-08 West Discom
	MU	MU
NTPC		
NTPC-Korba	3140	1191
NTPC-Vindyachal I	2948	1118
NTPC-Vindyachal II	2182	828
NTPC-Vindyachal III	1146	435
NTPC-Kawas	282	107
NTPC-Gandhar	842	320
NTPC-Sipat	175	67
KAPP	467	177
TAPS	1072	407
Farakka	184	70
Talcher	128	49
Kahalgaon	81	31
Kahalgaon 2	476	181
NTPC-Total	**13125**	**4979**
Bilateral Power Purchase		
CHPS-Gandhi Sagar	171	65
CHPS-RP Sagar	186	71
CHPS-Jawahar Sagar	139	53
RSEB (Chambal,Satpura)	497	188
Rajghat HPS	45	17
DVC	770	292
MSEB(Pench)	209	79
LANCO (PTC)	0	0
Bilateral-Total	**1520**	**577**
Other Sources		
NHDC - Indira Sagar	2700	1024
Sardar Sarovar	1700	645
Omkareswara HPS	1200	455
Others 1 (Wind & CPP)	0	0
Short term purchases	0	0
Others 3 (UI)	**5600**	**2125**
MP Genco – Thermal		
AMARKANTAK PH-I	181	69
AMARKANTAK PH-II	941	357
AMARKANTAK PH-III	558	212
SATPURA PH-I	1871	710
SATPURA PH-II	2624	996
SATPURA PH-III	2647	1004
SANJAY GANDHI PH-I	2464	935

Source-wise availability (MU)	2007-08 State	2007-08 West Discom
	MU	MU
SANJAY GANDHI PH-II	2617	993
BIRSINGHPUR	3241	1230
MPGenco Thermal	**17145**	**6505**
MPGenco – Hydel	0	0
Bansagar Tons HPS-Tons	936	355
Bansagar Tons HPS-Silpara	79	30
Bansagar Tons HPS-Devlond	79	30
Bansagar Tons HPS-Bansagar IV	79	30
Birsingpur HPS	45	17
Bargi HPS	503	191
Marhi Khera HPS	73	28
Mini-Micro HPS	0	0
MPGenco Hydel Total	**1794**	**681**
Total	**39180**	**14916**

Assessment of Power Purchase Cost (Fixed and Variable Cost) by the Discom

3.10 The Fixed costs and variable costs of MPGenco for FY 08 have been adopted by the Licensee as per the Multi-Year (FY 07 to FY 09) Tariff Order of the Commission. For existing Central Sector stations, Fixed Costs have been adopted as per CERC Orders for respective stations and variable costs (including FPA applicable at present) have been adopted as per the July 2006 bill.

3.11 For working out the cost of power purchase from the new stations of the Central Sector, the following methodology has been adopted by the Licensee:

(a) For Vindhyachal-III, variable cost has been estimated as per the July bill for infirm power.

(b) For Sipat-II and Kahalgaon –II-Phase-I, the tentative estimate provided by NTPC vide Letter No. 01:: CD:279: NNS dated 27-05-2004, has been used as the basis for determining the variable costs. The Licensee has stated that in order to reflect realistic levels of variable costs, the respective variable costs as provided in the letter have been increased @10% per annum from the base date of determination. The variable cost increase has been shown in the form of FPA charges.

(c) Fixed costs for all the above mentioned three stations (Vindhyachal-III, Sipat-II & Kahalgaon – II Phase (I)) have been estimated by converting the per unit fixed cost provided in the letter.

3.12 Fixed and variable costs for other new stations have been estimated based on discussions with Tradeco. The following table provides a summary of fixed and variable costs of each of the stations that have been considered for determining the power purchase cost. As stated earlier, the MPPKVVCL share of fixed cost has been considered for its ARR purpose.

Table 61: Fixed & Variable Cost for West Discom for FY 08

	2007-08			
Source-wise availability	**Fixed Cost - State**	**Fixed Cost – West Discom**	**Variable Cost**	**FPA**
	Rs Cr	**Rs Cr**	**Rs/ kWh**	**Rs/ kWh**
NTPC				
NTPC-Korba	85.95	32.61	0.47	0.07
NTPC-Vindyachal I	98.17	37.25	0.76	0.19
NTPC-Vindyachal II	135.26	51.32	0.73	0.18
NTPC-Vindyachal III	181.86	69	0.87	0.00
NTPC-Kawas	61.2	23.22	1.03	2.26
NTPC-Gandhar	98.85	37.50	1.02	0.36
NTPC-Sipat	99.89	37.90	0.41	0.12
KAPP	0.00	0.00	2.02	0.01
TAPS	0.00	0.00	1.95	0.00
Farakka	7.49	2.84	0.99	0.08
Talcher	5.76	2.18	0.41	0.14
Kahalgaon	5.3	2.01	1.07	0.18
Kahalgaon 2	54.69	20.75	0.69	0.28
NTPC-Total	**834.44**	**316.59**		
Bilateral Power Purchase				
CHPS-Gandhi Sagar,	10.86	4.12	0.00	
RSEB (Chambal,Satpura)	10.86	4.12	0.00	
Rajghat HPS	8.56	3.25	0.00	
DVC	0.00	0.00	2.54	
MSEB(Pench)	11.6	4.4	0.00	
LANCO (PTC)	0.00	0.00	0.00	
Bilateral-Total	**31.02**	**11.77**		
Other Sources				
NHDC - Indira Sagar	275.88	104.67	0.00	
Sardar Sarovar	0.00	0.00	0.95	
Omkareswara HPS	0.00	0.00	0.95	
Others 1 (Wind & CPP)	0.00	0.00	0.00	
Others 2 (Short-Term purchase)	0.00	0.00	0.00	
Others 3 (UI)	**275.88**	**104.67**		
MP Genco – Thermal				
AMARKANTAK PH-I & II	49.23	18.68	1.17	
AMARKANTAK PH-III	140	53.12	1.17	
SATPURA PH-I, PH-II & PH-III	207.29	78.65	1.34	
SANJAY GANDHI PH-I & PH-II	303.7	115.23	1.02	
BIRSINGHPUR	320	121.41	1.02	
MPGenco Thermal	**1020.22**	**387.08**		
MPGenco – Hydel				
Bansagar Complex	92.92	35.25	0.00	

Source-wise availability	2007-08			
	Fixed Cost - State	Fixed Cost – West Discom	Variable Cost	FPA
	Rs Cr	Rs Cr	Rs/ kWh	Rs/ kWh
Birsingpur HPS	3.93	1.49	0.00	
Bargi HPS	9.68	3.67	0.00	
Marhi Khera HPS	0.00	0.00	0.00	
Mini-Micro HPS	0.00	0.00	0.00	
Hydel Total	**106.53**	**40.42**		
Total	**2268.09**	**860.53**		

Assessment of Other elements of power purchase cost

3.13 Other elements of power purchase costs such as incentive, income tax, ED & Cess etc, and other miscellaneous charges have been assumed at the level of actual expenditure on these accounts for the year 2005-06.

Table 62: Other Charges for All Stations for FY 08

CGS Other Charges	(Disincentive) / Incentive	Income Tax	Any Other (ED,Cess etc.)	Total of Other Charges in Rs Crs
2007-08 Total (Proj)	38.79	49.75	84	172.53
MPPKVVCL Share				
2007-08 (Proj)	14.72	18.9	31.9	65.46

Inter-state Transmission Costs

3.14 The inter-state transmission cost has been estimated on the basis of the actual bills for September 2005 to August 2006. The total bill amount for this period comes to Rs 110.14 Crores for the sector and the same has been adopted for FY 08. Rebates, etc. on short term power transmission have not been estimated as they are likely to be infirm in nature.

Table 63: Inter State Transmission Charges for FY 08

Month/ Rs Cr	WR	ER	WRLDC/ULDC	Inter-Regional WR-ER	Inter-Regional WR-SR	Inter-Regional WR-NR	Total
Sep-05	8.37	0.9	0.00	0.00	0.00	0.00	9.27
Oct-05	8.7	0.83	0.00	0.00	0.00	0.00	9.53
Nov-05	8.56	0.78	0.00	0.00	0.00	0.00	9.35
Dec-05	8.63	0.49	0.00	0.00	0.00	0.00	9.12
Jan-06	8.46	0.23	0.00	0.00	0.00	0.00	8.69
Feb-06	8.46	0.22	0.00	0.00	0.00	0.00	8.68
Mar-06	9.09	0.22	0.00	0.00	0.00	0.00	9.31
Apr-06	9.0	0.24	0.00	0.00	0.00	0.00	9.24
May-06	9.23	0.23	0.00	0.00	0.00	0.00	9.46
Jun-06	9.22	0.25	0.00	0.00	0.00	0.00	9.47
Jul-06	7.8	0.25	0.00	0.24	0.14	0.73	9.15
Aug-06	7.71	0.25	0.00	0.29	0.08	0.54	8.87

Month/ Rs Cr	WR	ER	WRLDC/ULDC	Inter-Regional WR-ER	Inter-Regional WR-SR	Inter-Regional WR-NR	Total
Total	103.24	4.88	0.00	0.53	0.22	1.27	110.14
West Discom's Share	39.17	1.85	0.00	0.2	0.08	0.48	41.79

Merit Order Dispatch

3.15 The Licensee has adopted a merit order simulation on a monthly basis by matching monthly energy requirement with monthly availability based on the variable costs of various sources. The Licensee submits that while a monthly determination of cost provides an improved estimate over an annual determination of cost, the actual cost will differ based on the daily peaking requirements and variation between actual and projections. The Licensee prays that such deviations be passed on a regular basis through the FCA formula proposed which is also in line with the provision of the National Tariff Policy (Clause 5.3 (h) (4) and Clause 8.2.1 (1)):

"Uncontrollable costs should be recovered speedily to ensure that future consumers are not burdened with past costs. Uncontrollable costs would include (but not limited to) fuel costs, costs on account of inflation, taxes and cess, variations in power purchase unit costs including on account of hydro-thermal mix in case of adverse natural events."

and

"All power purchase costs need to be considered legitimate unless it is established that the merit order principle has been violated or power has been purchased at unreasonable rates."

3.16 The Licensee claims that the monthly requirement of energy is based on Licensee's own projection and tentative estimate of requirements of other discoms. The Licensee states that only the Commission has the knowledge of the total energy requirement planned by all the Discoms.

Power Purchase Proposed by Licensee for FY 08

Table 64: Energy Requirement and Average Cost of Power for FY 08

Sl. No.	Particulars		FY'08		
			MU	Amount	Rs/Kwh
1.	Central Sector	Korba	1191.5	113.11	0.95
2.		Vindhyachal-I	1118.3	173.19	1.55
3.		Vindhyachal-II	827.9	142.69	1.72
4.		Kawas	25.7	34.55	13.44
5.		Gandhar	179.8	63.86	3.55
6.		KAPP	177.2	36.66	2.07
7.		TAPPS 3&4	406.8	79.43	1.95
8.		Vindyachal III (unit I)	434.6	106.71	2.46
10.		Sipat	66.6	41.47	6.23
12.		Total	**4428.3**	**791.7**	**1.79**
13.	ER	Farrakka + Talcher +Kahalgaon-I and Kahalgaon-II	**323.5**	**58.47**	**1.81**

Sl. No.	Particulars		FY'08 MU	FY'08 Amount	FY'08 Rs/Kwh
14.	Bilateral Purchases	J.Sagar, R.P.Sagar	**185.29**	**19.48**	**1.05**
15.	Other Sources	NHDC (Indira Sagar)	1,024.37	104.67	**1.02**
16.		JV-Sardar Sarovar	644.89	61.52	**0.95**
17.		CPP/Wind			
18.		Short term purchases	50.24	17.58	**3.50**
19.		New Hydel Stations (MadhiKheda & Bansagar IV, Omkareshwar)	513.13	43.43	**0.85**
20.		Total	**2,232.64**	**227.21**	**1.02**
21.	Short term Sales (Less)				
22.	Net Power Purchases		**7,169.75**	**1,097.19**	**1.53**
23.	Transmission Charges	Fixed Charges		41.79	
24.		Taxes			
25.		**Total**			
26.	Sub-total				
27.	MPGenco		6586.02	1103.02	
28.	**Total Power Purchase**		**13,755.77**	**2,242**	**1.6299**

3.17 It can be seen from Table 60 and Table 64 that there is a difference of 1160.23 MUs (14916 – 13756) between energy available and energy required. Though the Licensee has not explained the reason for this difference in its filing, but in subsequent submission the Licensee has indicated that, a part of this surplus will be used for trading power outside the state through which it is likely to earn Rs 91 Crore.

3.18 The total power purchase cost as estimated by the West Discom thus works out to Rs. 2242 Crore or Rs 1.6299 per Unit for 2007-08.

Commission's analysis

Sales forecast

3.19 The Commission recognizes that metering of a huge number of un-metered consumers is a challenging job and can be addressed only gradually. The Commission had a meeting with the CMDs of all three Discoms on 23rd February 2007 and, after a lot of deliberations, decided to revise the timeframe for metering of un-metered connections in domestic category and metering of DTRs for assessment of un-metered agriculture consumption. The roadmaps have been provided by the Licensees. As per the roadmaps, all un-metered connections in domestic category shall be metered by Dec. 2008. The Licensees have further committed that all DTRs predominantly supplying to agriculture consumers (about 23000 nos. for West Discom) shall be metered by March 2011 under an ADB assisted program. The Commission is examining the proposal of the Licensee and after taking the views of all the stakeholders, will notify the fresh timeframe for achieving 100% metering. However, for FY08 the Commission has considered that there will be un-metered sales and has gone by the assessment of consumption for these categories.

3.20 Based on the submissions of the Licensee with regard to assessed consumption of un-metered consumers in domestic as well as agriculture categories, the Commission approves the following:

(a) Un-metered consumers in domestic category shall be billed on the basis of 77 units per consumer per month in urban areas, and 38 units per consumer per month in rural areas;

(b) Un-metered agriculture consumers in rural areas as notified by GoMP under the Electricity Act, 2003 shall be billed on the basis of 100 units per HP of sanctioned load per month for permanent connections and 130 units per HP of sanctioned load per month for temporary connections.

(c) Un-metered agriculture consumers in urban areas shall be billed on the basis of 130 units per HP of sanctioned load per month for permanent connections and 150 units per HP of sanctioned load per month for temporary connections.

3.21 Unlike the other two Discoms, who have used 100 units per HP per month as the basis for assessment of sales to un-metered permanent agriculture consumers in FY 08, the data provided by the West Discom shows that the Licensee has instead used 170 units per HP per month to assess consumption of this category of consumers. If the same is worked out on the billing basis given above, the sales forecast of these consumers reduces by about 562 MU from what has been forecast by the Licensee. The Licensee has submitted before the Commission that the basis of assessment of consumption of these consumers can be 100 units per HP of sanctioned load per month, which the Commission finds acceptable based on restricted hours of supply of electricity. It is therefore necessary to prune down the assessed consumption forecast of these consumers by 562 MU. This will result in reduction of power purchase quantum as well as revenues. The Commission, however strongly advocates installation of meters on distribution transformers supplying electricity to predominantly agriculture consumers immediately and to conduct a sample survey during the busy as well as lean seasons of the year so as to estimate the trend of consumption.

3.22 It is also to be noted that the quantum of power available to the State of MP in 2007-08 based on existing generation and planned capacity addition is more than sufficient to meet the sales requirement of the Licensee. The quantum of power available, even after considering the T&D losses is enough to meet all forecast requirements of the consumers.

3.23 Based on the discussion above, the Commission approves the sales forecast of the Licensee as filed, albeit with a reduction of 562 MUs as explained in para 3.21 in the sales projected to un-metered permanent agriculture consumers. The final approved sales forecast for FY 08 in as under:

Table 65: Projected Sales of the West Discom for FY 08

Consumer Category			Sales in MU - FY'08 as approved
L T CONSUMERS	LV 1	Domestic Light Fan and Power	1707
	LV 2	Non-Domestic Light Fan and Power	419
	LV 3	Water Works and Street Lights	141
	LV 4	LT Industrial*	409
	LV 5	Agricultural Consumers	2780
		TOTAL (LT)	**5456**
H T CONSUMERS	HV 1	Railway Traction	313
	HV 2	Coal Mines	0
	HV 3	Industrial and Non Industrial	2142
	HV 4	Seasonal	11
	HV 5	HT Irrigation and Public Water Works	212
	HV 6	Township and Residential Colony	0
	HV 7	Bulk Supply to Exemptees	213
		TOTAL (HT)	**2892**
TOTAL LT + HT			**8347**

* LT Industrial category includes sale Agro related use in rural areas (LV 5.2) which was earlier included in Agriculture category.

3.24 As per the regulations of the Commission issued under section 61 for distribution and retail supply tariff determination, actual power sold by the Licensee during a year in question shall be grossed up for normative losses to compute allowable power purchase quantum during such year.

Energy Balance and Power Purchase

3.25 The state government has come out with annual milestones for distribution losses for the period FY 07 to FY 11, which is shown in the following table. The Commission has computed the energy requirement of the Licensee on the basis of the GoMP's order dated 28th December 2006 on distribution losses. Therefore, the Commission has considered distribution loss to be 28.5% during the period FY2007-08 for West Discom.

Table 66: Distribution Losses (%) as per GoMP Letter Dated 28th December 2006

Year	West Discom
FY 2006-07	30.0%
FY 2007-08	28.5%
FY 2008-09	27.0%
FY 2009-10	25.5%
FY 2010-11	24.0%

3.26 The Inter state transmission losses have been computed as per the moving averages of the scheduled losses of the last 52 weeks. The losses for FY 08 have been computed as per the following table:

Table 67: Month wise Inter State Transmission Losses (%)

Month	WestDiscom
April	5.1%
May	5.0%
June	5.1%
July	5.4%
August	5.5%
September	5.2%
October	5.3%
November	5.3%
December	5.2%
January	5.2%
February	5.3%
March	5.2%

3.27 The Commission has considered the intra state transmission losses at 4.9% as per the transmission MYT Order.

3.28 The energy balance for FY08 is presented in the following table after considering the loss targets set by the GoMP.

Table 68: Energy Balance for FY08

	Particulars	West Discom
1	Total Energy Sales (MU)	8347
2	Distribution Loss (%)	28.5%

	Particulars	West Discom
3	At T-D Interface (MU)	11674
4	Transmission Loss of MPPTCL (%)	4.90%
5	At MP Periphery	12276
6	External Losses (MU)	264
7	**Net Energy Requirement (MU)**	**12540**

3.29 The Commission, as per the Government of Madhya Pradesh Notification No. 1929/F.RS/4/XIII/2001 dated 14th March 2007, has considered energy allocation from existing stations for meeting Licensee's requirements and also the capacities of new station allocated to MP Tradeco. The Commission has also considered the GoMP notification which states that, during energy deficit months, Licensees shall purchase power from MP Tradeco.

3.30 Station wise capacity allocation to West Discom considered by the Commission as per the GoMP Notification mentioned above is given in the following table:

Table 69: Station wise capacity allocation (%) to West Discom

Name of Power Station	West Discom
MPPGCL - SH: Bargi	30.44%
MPPGCL - IS: Gandhi Sagar	30.44%
MPPGCL - IS: Pench	30.44%
MPPGCL - SH: Birsinghpur	30.44%
MPPGCL - SH: Bansagar Complex	30.44%
MPPGCL - IS: Rajghat	30.44%
ER: Talcher STPS	30.44%
Sardar Sarovar Project	30.44%
WR: Korba STPS	30.44%
JV: Indira Sagar (8x125 MW)	37.94%
MPPGCL - ST: Amarkantak Complex	37.94%
WR: Vindhyanchal STPS – I	37.94%
MPPGCL - ST: Sanjay Gandhi Complex	37.94%
MPPGCL - ST: Satpura Complex (Ph - II & III)	37.94%
MPPGCL - ST: Satpura Ph-1 (Inter State)	37.94%
ER: Farakka STPS	47.17%
WR: Vindhyanchal STPS – II	47.17%
WR: Vindhyanchal STPS - III (Unit-I)	47.17%
WR: Kakrapar APS	47.17%
WR: Gandhar GPP	47.17%
WR: Tarapur APS	47.17%
ER: Kahalgaon STPS	47.17%
MPPGCL - SH: Marhikheda	47.17%
WR: Kawas GPP	47.17%
Weighted Average	**37.94%**

3.31 While the GoMP has allocated 37.94% of 135.5 MW Ranapratap & Jawahar Sagar HEPs to the West Discom, the Commission has not considered the power available from these stations as they are located in Rajasthan. Similarly, even though the GoMP has allocated 37.94% of 187.5MW Satpura Phase-I to the West Discom, the Commission has considered the availability based on the total installed capacity of 312.5MW since the project is located within the state of Madhya Pradesh. This has resulted in the weighted average allocation becoming 37.94% as against 37.21% indicated in the GoMP notification. This is consistent with the stand taken earlier by the Commission.

3.32 Central Generating Stations: The annual energy availability for FY 08 from existing Central Generating Stations has been considered as per the petitions filed by the Licensee.

3.33 MP Genco Stations: As stated earlier, the Licensees have shown the availability of energy from MPGenco based on monthly forecast of generation by MPGenco for 2007-08.

3.34 The Commission undertook an exercise to analyze monthly availability and requirement for FY 08. The analysis showed surplus or deficit in each of the months for the Licensee.

3.35 The month wise availability and requirement for the Licensee for FY 08 is given below:

Table 70: Month-wise Energy Requirement & Availability for FY2007-08 (In Million Units)

Month	West Discom				
	Energy Availability	Availability from intra-discom trading	Energy Req	Sale through intra - discom trading	(Deficit)/ Surplus
	A	B	C	D	E=(A +B)-(C+D)
April	953.3	0	951.6	1.7	0
May	974.0	0	938.7	35.3	0
June	873.7	0	901.1	0	(27.3)
July	869.4	0	855.3	14.1	0
Aug	1103.7	0	928.3	5.2	170.2
Sept	1108.3	0	925.7	0	182.7
Oct	1241.1	0	1178.1	0	63.0
Nov	1162.3	0	1314.2	0	(151.9)
Dec	1136.7	0	1267.3	0	(130.5)
Jan	1085.7	0	1169.4	0	(83.7)
Feb	951.9	0	1070.1	0	(118.2)
Mar	1000.4	0	1040.5	0	(40.0)
Total	**12460.7**	**0**	**12540.3**	**56.3**	**(135.9)**

3.36 As can be seen from the above table, the Licensee is required to procure power of 551.6 MU in the months of June and November to March and will be having surplus of 415.9 MU from August to October. The procurement will be made from MP Tradeco at an average rate of Rs 1.84 per kWh as per the calculation shown in the following table.

Table 71: Rate of Short Term Purchase from MP Tradeco during FY2007-08

MP Tradeco Stations	MUs	Total Cost (Rs. Crs.)
Sipat	749.69	125.17
Kahalgaon STPS –II	699.28	145.59
Birsinghpur	3267.65	653.30
Amarkantak	686.21	150.29
Omkareshwar	1200.00	114.48
Vindhyanchal STPS-III (Unit-II)	746.66	156.89
Marhi Kheda (Unit III)	27.68	9.38
Total	**7377.16**	**1355.09**
Avg. Rate (Rs. / Unit)		**1.84**

3.37 As the Commission has decided to have a uniform tariff in the state during FY08, the excess energy in a month with the Licensee will first be given to other Licensees of Madhya Pradesh who are having a shortfall in the same month. The Commission directs that the sale rate of the surplus energy to other Discoms within the state should be at the Monthly Pooled Cost of Power as given below:

Table 72: Monthly Pooled Cost of Power for Combined Discoms

	Month	MUs*	Rs. Crs.**	Rs./Kwh
1	April	2728.0	459	1.68
2	May	2647.9	461	1.74
3	June	2556.6	434	1.70
4	July	2444.1	391	1.60
5	August	2964.6	352	1.19
6	September	2957.2	378	1.28
7	October	3327.5	468	1.41
8	November	3354.7	525	1.56
9	December	3368.6	541	1.61
10	January	3267.2	533	1.63
11	February	3003.7	494	1.64
12	March	2869.9	475	1.65

*MUs include Total availability and Short Term Power purchase less energy sold through intra discom trading.

**Rs. Crs. Include Fixed Cost, Variable Cost, PGCIL Charges, Cost of short term power purchase Less revenue from external sale.

3.38 Any excess energy remaining with the Licensee, as seen in the monthly availability and requirement table given above, after Intra state trading, shall then be used for external trading, at the Monthly Average Power Purchase Cost for those surplus stations arrived after running merit order. The rates thus allowed shall be as per the following table for West Discom.

Table 73: Monthly Average Cost of Power of Surplus Stations

	Month	Surplus Energy (MU)	Total Cost (Rs. Crs.)	Rs. / kWh
1	April	-	-	-
2	May	-	-	-
3	June	-	-	-
4	July	-	-	-
5	August	170.17	33.31	1.96
6	September	182.67	35.39	1.94
7	October	63.02	15.11	2.40
8	November	-	-	-
9	December	-	-	-
10	January	-	-	-
11	February	-	-	-
12	March	-	-	-

3.39 For West Discom, sales on account of surplus energy during the months of August, September and October after intra state trading is assessed at 415.87 MU for FY 08. The sales arising out of surplus energy shall be adjusted with the power purchase cost of the Distribution Licensee.

3.40 The station-wise availability of energy as estimated by the Distribution Licensee and as estimated by the Commission are shown in the following table:

Table 74: Station-wise Energy availability (in MU) for West Discom during FY08

		FY 08	
Sl. No.	Stations	Proposed by the Discom	As estimated by the Commission
10.	Central Sector (WR)	4819	4892
11.	Central Sector (ER)	330	164
12.	Bilateral purchases	577	227
13.	NHDC (Indira Sagar)	1024	1024
14.	Sardar Sarovar	645	517
15.	Omkareswara HPS	455	0
16.	New Hydel Stations	58	0
17.	MP Genco	7128	5637

		FY 08	
Sl. No.	Stations	Proposed by the Discom	As estimated by the Commission
18.	**Total**	**15036**	**12461**

3.41 Central Generating Stations (Western Region): Due to differential allocation as per GoMP Notification, the share available to the Licensee has increased.

3.42 Central Generating Stations (Eastern Region): The Licensee has considered Kahalgaon (Phase II) in its filing. As per the GoMP Notification the capacity of this station is now with MP Tradeco.

3.43 Bilateral Purchase: The reason for reduced quantum from bilateral purchase is the revised capacity allocation and also the Commission has not considered RP Sagar, Jawahar Sagar, DVC and Lanco as explained in earlier paragraphs.

3.44 Omkareswar HPS: As per the GoMP Notification, this station's capacity is with MP Tradeco.

3.45 MP Genco: The change in availability is due to revised capacity allocation by GoMP Notification.

Power Purchase Costs

Central Generating Stations - Western Region

3.46 NTPC's Stations in Western Region (Korba, VSTPS-1, VSTPS-II, VSTPS-III (Unit-I), Kawas and Gandhar): As stated earlier, the energy availability has been considered from the existing stations as submitted by the Licensees. The Commission has also approved the fixed and the variable cost for these stations after verifying the fixed and variable costs from the CERC orders for these stations. The stations for which latest CERC order is not available, the Licensee petition on the basis of July 2006 bill has been considered. For KAPP and TAPPS 3&4, single part tariff is payable and the Provisional tariff rates have been considered as per the notification of Department of Atomic Energy GoI in October 2006.

3.47 The Licensee had shown the allocation of share to MP for the Central stations as per the NTPC bills. The Commission has considered the allocation of MP share and consequently West Discom's share as per Government's Notification dated 14th March 07.

Table 75: Allocation from Central Generating Stations to MP and West Discom as per Govt. Notification for FY2008

						West Discom		
Sl. No.	Western Region CGS	Installed Capacity (MW)	State's Share (%)	Availability (MU)	Fixed Cost (Rs. Cr)	Share (%)	Availability (MU)	Fixed Cost (Rs. Crs.)
9.	KTPS	2100	21.38	3242	86	30.44	987	26.16
10.	VSTPS-I	1260	33.34	3097	98.2	37.94	1175	37.25
11.	VSTPS-II	1000	30.12	2377	135.3	47.17	1121	63.80
12.	VSTPS-III (Unit-I)	500	22.9	746.7	85	47.17	352	40.08
13.	KGPS	656.2	24.16	282.4	59	47.17	133	27.60
14.	GGPS	657.4	20.64	842	76	47.17	397	36.06
15.	KAPP	440	23.99	467	0.0	47.17	220	0
16.	TAPP 3&4	540	18.64	1072	0.0	47.17	506	0

3.48 The FPA charges have been computed on the basis of the October 2006 bill paid to these stations. The other charges including the Incentive and taxes have been computed by pro-rating the actual bills of the period April'06 to October'06, paid to the Central Generating Stations by the Licensees.

3.49 The Variable and Other Charges as allowed are given in the following table:

Table 76: Charges allowed for CGS in WR

	FY 08			
Western Region CGS	Variable (Rs/Kwh)	FPA Charges (Rs/Kwh)	Other Charges (Rs/Kwh)	Total Charges (Rs. cr)*
KTPS	0.50	0.15	0.11	101.74
VSTPS-I	0.80	0.23	0.26	189.09
VSTPS-II	0.78	0.22	0.18	195.19
VSTPS-III (Unit-I)	0.87	0	0.01	70.81
KGPS	1.09	2.86	0.12	81.82
GGPS	1.11	0.43	0.01	97.74
KAPP	2.04	0.0	0.01	45.25
TAPPS 3&4	2.65	0.0	0.00	134.37
Total				**916**

Central Generating Stations - Eastern Region

3.50 For determination of allowable costs from the plants in the eastern region the principle followed for power plants in the western region is being adopted. As stated earlier, the share in these plants have been considered as per the Government's notification dated 14th March 07.

Table 77: Allocation from Central Generating Stations to MP as per Govt Notification

						West Discom		
Sl. No.	Eastern Region CGS	Installed Capacity (MW)	State's Share (%)	Availability (MU)	Fixed Cost (Rs. Cr)	Share (%)	Availability (MU)	Fixed Cost (Rs. Crs.)
5.	Farakka	1600	1.01	184.08	5.16	47.17	87	2.43
6.	Talcher	1000	1.01	128.1	4.03	30.44	39	1.23
7.	Kahalgaon	840	2.84	80.7	9	47.17	38	4.17
	Total						**164**	**7.83**

3.51 The Variable and Other charges as allowed are given in the following table:

Table 78: Charges allowed for CGS in ER

	FY 08			
Eastern Region CGS	Variable (Rs/Kwh)	FPA Charges (Rs/Kwh)	Other Charges (Rs/Kwh)	Total Charges (Rs. Cr)*
Farakka	1.04	0.35	0.01	14.63
Talcher	0.44	0.21	0.00	3.76
Kahalgaon	1.15	0.43	0.00	10.16
Total				**29**

*Includes Fixed Charges as stated in table above

Indira Sagar (NHDC) and Sardar Sarovar Projects

3.52 For FY'07, the Commission considered only the annual fixed charges approved by CERC by it order dated 1/5/2004 for Indira Sagar. The CERC vide this order had approved fixed annual charges at Rs. 241.41 Crore for seven machines. After all the eight machines had become operational, the Commission had allowed a proportionate increase in fixed cost with a further increase of 10% on the computed cost. The Commission thus allowed Rs. 300 Crore as Annual Fixed charges for FY 07.

3.53 The Licensee, in its filings, has given a flat rate of Rs. 275. 88 Crores for Indira Sagar for FY'08. However, the Commission analysed the actual bills paid in 2006 for verifying the charges payable for the station. The Annual Fixed Charge actually paid this year till October has been found to be much less than the allowed figure for FY 07. The Commission has thus revised the annual charges for the year FY 08 on the basis of the bills paid in the year FY 07 by pro-rating the capacity charge and the variable charge actually paid by the Licensees till October'06 for the year FY 07.

3.54 The design energy of this project has been approved at 2700 MUs for FY 08. The fixed cost has been computed as Rs 191.70 Crore and Variable charges at the least variable cost of the Western region @ 0.49 Rs./Kwh, which is of Sipat Ph II. The months in which Sipat Ph II is unavailable, the variable cost has been considered as per the next least variable cost, which is of Korba @ 0.50.

3.55 MPSEB for Sardar Sarovar Hydel Project has considered a provisional rate of Rs. 2.0 per unit. This rate is as per the provisional rate fixed by GoMP vide its letter dated 30th November 2005. As per section 62(1) of the Electricity Act, only appropriate Commission has the authority to determine rate of supply of power by a Generating Company to a Distribution Licensee. Further as per section 64(5) of the Electricity Act 2003 only the State Commission having jurisdiction in respect of the Licensee which intends to distribute electricity and make payment therefore is entitled to determine the generation tariff.

3.56 For FY2007-08, the Licensee in its filing has computed the power purchase cost from Sardar Sarovar Hydro station at Rs. 0.95/kWh. The power purchase cost assumed by the Distribution Licensee is as per the cost assumed by the Commission in its Tariff Order for FY2006-07. The Commission considers the assumptions made by the Licensee appropriate. However, the Commission is allowing an increase of Rs. 0.08/kWh in the provisional rate as a possible escalation of O&M cost. It would be pertinent to mention here that NVDA has filed a petition for provisionally determining tariff at Rs. 2.00 / kWh. The design energy of this project has been approved at 1700 MUs for the FY 08. The fixed cost has been computed as Rs 91.79 Crore and Variable charges at the least variable cost of the Western region @ 0.49 Rs./Kwh, which is of Sipat Ph II. The months, in which Sipat Ph II is unavailable, the variable cost has been considered as per the next least variable cost, which is of Korba @ 0.50.

3.57 Though the petition regarding fixing the tariff for Sardar Sarovar has already been filed, the Commission is yet to finalise the rate. The Commission shall consider the appropriate rate when the hearing process in this regard is complete.

Table 79: Allowed cost for Indira Sagar and Sardar Sarovar project

		FY 08		
Sl. No.	**Other Sources**	**Availability (MU)**	**Fixed Cost (Rs. Cr)**	**Total Charges (Rs. Cr)**
	Indira Sagar	2700	191.70	324
	Sardar Sarovar	1700	91.79	175.1

Inter-State Transmission Charges

3.58 The PGCIL charges to be paid by MP consist of charges to be paid for transmission system of WR and ER. The estimate of inter-state transmission cost for existing stations has been considered as per the methodology used by the Licensee, which is on the basis of the actual bills for September 2005 to August 2006 for eastern and western region.

3.59 The commission has computed the charges for VSTPS-III (Unit-I) on the basis of the Per MW charges paid to PGCIL for the Western Region for the existing stations. The per MW cost was then applied to the allocated capacity of the new station to get the charges.

Table 80: Inter State Transmission Charges for FY 08

Month/ Rs Cr	WR	ER	WRLDC/ULDC	Inter-Regional WR-ER	Inter-Regional WR-SR	Inter-Regional WR-NR	Total
Sep-05	8.37	0.9	0	0	0	0	9.27
Oct-05	8.7	0.83	0	0	0	0	9.53
Nov-05	8.56	0.78	0	0	0	0	9.35
Dec-05	8.63	0.49	0	0	0	0	9.12
Jan-06	8.46	0.23	0	0	0	0	8.69
Feb-06	8.46	0.22	0	0	0	0	8.68
Mar-06	9.09	0.22	0	0	0	0	9.31
Apr-06	9	0.24	0	0	0	0	9.24
May-06	9.23	0.23	0	0	0	0	9.46
Jun-06	9.22	0.25	0	0	0	0	9.47
Jul-06	7.8	0.25	0	0.24	0.14	0.73	9.15
Aug-06	7.71	0.25	0	0.29	0.08	0.54	8.87
Total	**103.24**	**4.88**	**0**	**0.53**	**0.22**	**1.27**	**110.14**
FY 08							
Existing Capacity (MW) (MP Share)	1,771.2	50.0					
Total Charges From Existing Stations (Rs. Cr.)	104.73	5.41					110.14
Cost Per MW (Rs. Cr)	0.059	0.11					
Additional Capacity from VSTPS-III (Unit-I)	114.3						
Charges from New Stations (Rs. Cr)	6.80	0					**6.80**
Total Transmission Charges (Rs. Cr)							**116.94**
Share of West Discom (Rs. Cr.)							**44.35**

3.60 The Taxes for the Inter state Transmission charges for FY 08 has been considered as per the FY 07 tariff order i.e. Rs 2.35 Crores. The share of West Discom is Rs. 0.89 Crores.

3.61 Based on the discussion above, the Power Purchase cost allowed by the MPERC for FY'08 is shown below:

Table 81: Commission's estimate of power purchase expenses for FY 08

(Amount in Rs. Crore)

Sl. No.	Particulars		FY'08		
			MU	Amount	Rs/Kwh
1.	Central Sector	Korba	986.98	101.74	1.03

Sl. No.	Particulars		FY'08 MU	FY'08 Amount	FY'08 Rs/Kwh
2.	Western Region	Vindhyachal-I	1175.21	189.09	1.61
3.		Vindhyachal-II	1121.05	195.19	1.74
4.		Kawas	133.22	81.82	6.14
5.		Gandhar	397.33	97.74	2.46
6.		KAPP	220.28	45.25	2.05
7.		TAPPS 3&4	505.72	134.37	2.66
8.		Vindyachal III (unit I)	352.17	70.81	2.01
9.		Total	**4892**	**916**	**1.87**
10.	ER	Farrakka + Talcher +Kahalgaon-I and Kahalgaon-II	164	29	1.74
11.	Bilateral Purchases	RSEB/ Others	227	9	0.42
12.	Other Sources	NHDC (Indira Sagar)	1024	123	1.20
13.		JV-Sardar Sarovar	517	53	1.03
14.		CPP/Wind**	Nil	0	0
15.		Total	**1542**	**176**	**1.14**
16.	MP Genco		5637	881	1.56
17.	Short Term Purchase (MP Tradeco)		**551.73**	**101.35**	**1.84**
18.	Intra Discom Sale (Less)		**(56.28)**	**(9.31)**	**1.62**
19.	External Sale (Less)		**(415.87)**	**(83.81)**	**2.02**
20.	Net Power Purchases		**12540.3**	**2019.49**	**1.61**
21.	Transmission Charges		44.35		
22.			0.89		
23.			**45.24**		
24.	**Total Power Purchase***		**12540.3**	**2064.73**	**1.646**

*Includes PGCIL losses amounting to 264.31 MU

** The Licensee has not indicated the amount of energy to be purchased for Non-Conventional Energy sources. The information available with the Commssion indicates that currently energy is being purchased from wind generators and this is likely to continue in FY2007-08 as well. The Commission shall consider energy purchased from such sources at the time of truing up for FY 2007-08.

Network costs

3.62 In the following sections, the Commission has carried out an analysis of Licensee's capital expenditure plans, proposed capitalization of assets, forecast depreciation, interest and finance charges and Return on Equity. The Commission's decision regarding West Discom's submission on these costs for FY 08 is provided in the following paragraphs.

Capital expenditure Plans and Capitalization of assets

Licensee's submission

3.63 The Licensee has adopted the five-year investment plan submitted to the Commission with certain modifications. The various schemes proposed in the investment plan are aimed at achieving the following objectives:

- Capacity Building
- System strengthening
- Voltage improvement
- Loss Reduction
- Consumer Service
- Reliability of service
- Rural Electrification

3.64 The summary of the investment plan as per the petition is presented below:

Table 82: Investment Plan as filed

(Amount in Rs. Crore)

Scheme	**FY 07**	**FY 08**
ND	25.78	27.97
JBIC	34.61	32.15
ST (N)	26.93	29.93
PSI	0.00	0.00
APDRP	186.75	80.04
ADB	40.29	0.00
RGGVY	**34.06**	**67.15**
PMGY	0.00	0.00
PFC- Capacitor Banks	0.00	15.00
ADB-II	0	181
Contributory schemes	25	25
Total (Excluding RGGVY)	**339.36**	**391.09**

3.65 The Licensee has submitted that certain modifications have been made to the earlier investment plan submitted as part of the Business Plan, approved by the commission. These are, primarily:

- Revision of the phasing of the proposed new ADB scheme is based on the detailed project reports submitted to ADB
- Revision of the phasing of the investments of the RGGVY scheme based on the updated status of approvals for the various circle-level schemes
- Revision of the proposed investment under the APDRP scheme for FY 07 and FY 08 as decision of the GoI on continuation of the scheme beyond FY 07 is still awaited.

Capitalization Plan

3.66 The Licensee has submitted that it has inherited a CWIP of Rs.705 Crore as per the provisional opening balance sheet notified by GoMP dated 31st May 2005. The addition to CWIP in FY 06 as per the audited accounts has been Rs. 91.49 Crore. However, details of CWIP amounting to Rs. 91.49 Crore have not been submitted. For the projection period, the capitalization has been assumed as follows:

- Opening CWIP as per provisional balance sheet of 31.03.2006 is estimated to get capitalized equally in five years.
- New investments every year have been assumed to be get capitalized in five years.
- While the proposed investments under the RGGVY scheme have been stated in the investment plan, the assets and the corresponding liabilities have not been considered for the MYT projections. As per the terms and conditions of this scheme, the assets and liabilities belong to the State Government.
- Expenses capitalization has been assumed at 4% of the annual employee and A&G expenses.

3.67 The Licensee has also claimed in the petition that the following additions / expansion of the system shall be made during FY08:

Table 83: Physical details of network

	FY 06	**FY 07**	**FY 08**
33kV line (Ckt-km)	351	2332	924
11kVline (Ckt-km)	926	4354	4590
LT line (Ckt-km)	851	971	1115
33/11kV Substation (No.)	18	245	74
Power transformers – Nos./ MVA	52/235	245/950	74/287

	FY 06	FY 07	FY 08
Distribution transformers – Nos. / MVA	1891/296	20326/1916	4769/450

Commission's analysis of capital expenditure and capitalization

3.68 The Commission has specified the *"Guidelines for Capital Expenditure by the Licensees in MP"*. The Guidelines require, in short, the Licensees to submit to the Commission a five-year Business Plan containing physical and financial details of all investment schemes planned over the five-year horizon. Under the notified guidelines, the Licensee has filed a Business Plan to the Commission covering the five-year period FY07 to FY11, which has been approved by the Commission vide letter no. 2178 dated 31.08.06. The following table provides the investment plan of the Licensee approved as part of the business plan:

Table 84: Investment plan as approved under Licensee's Business Plan

Amount in Rs. Crore

Scheme	**FY07**	**FY08**
ST (N)	27	29
ND	26	28
APDRP	267	0
ADB	40	0
JBIC	35	32
RGGVY	34	34
Total	**428**	**123**

3.69 As evident from above, the following differences exist between the approved investment plan and the plan filed by the Licensee in its tariff petition:

Table 85: Deviation of filed Investment Plan from approved Business Plan

Amount in Rs. Crore

Name of Scheme	**FY07**		**FY 08**	
	Filed in the petition	**Approved as per Business plan**	**Filed in the petition**	**Approved as per Business plan**
ST (N)	26.93	27	29.93	29
ND	25.78	26	27.97	28
APDRP	186.75	267	80.04	0
ADB	40.29	40	0	0
JBIC	34.61	35	32.15	32
RGGVY	34.06	34	67.15	34

Name of Scheme	FY07		FY 08	
	Filed in the petition	Approved as per Business plan	Filed in the petition	Approved as per Business plan
ADB-II	0	Not filed for approval	181	Not filed for approval
PFC	0	Not filed for approval	15	Not filed for approval
Contributory schemes	25	Not filed for approval	25	Not filed for approval
Total excluding RGGVY (Rs. Crs.)	339.36	395	391.09	89

3.70 As shown in the table above, the Licensee in its petition has projected lower capital investments under APDRP scheme in FY07. In FY08 it has projected an investment to the tune of Rs. 80 crores while no investment was approved in the business plan. However, overall provisions of business plan for APDRP scheme for FY07 matches with the investment proposed in the petition for FY07 and FY08 combined together and therefore it can be inferred that investment proposed under business plan for FY07 will now be carried out in two years viz. FY07 & FY08. Thus the proposal for APDRP under the petition is acceptable. In addition to the schemes in the Business Plan, the Licensee has also proposed investment under ADB II, PFC – Capacitor Banks and Contributory schemes. The Licensee has submitted the details of ADB-II and PFC-Capacitor Banks with the Commission, which are being processed by the Commission.

3.71 The Commission does not intend to restrict investments by the Licensee and therefore allows the Licensee to invest as per Licensee’s investment plan. The Licensee is also free to take up any new scheme during the course of FY 08, which is not envisaged now, provided the Licensee seeks Commission’s approval for the scheme as required under Commission’s capex guidelines.

3.72 With regard to determination of ARR for FY 08, the role of capital investments is to the extent of the works that are planned to be commissioned during the course of FY 07 and FY 08. The Gross Fixed Assets as at the end of FY 05-06 are available from Licensee’s Audited Accounts, to which any further capitalisation during FY 07 and FY 08 shall get added. The depreciation and interest charges for FY 08 are influenced by the extent of capitalisation during FY 07 and FY 08. Therefore, it is necessary to consider Licensee’s performance so far during the year FY06-07 with respect to completion of capital works. This is presented in table below:

Table 86: Licensee’s progress of completion of capital works in FY 06-07

Amount in Rs. Crore

Scheme	FY 07 as approved in business plan	Progress reported by Licensee during FY 07 up to 31-10-2006
ST (N)	27	3.36

Scheme	FY 07 as approved in business plan	Progress reported by Licensee during FY 07 up to 31-10-2006
ND	26	2.19
APDRP	267	24.69
ADB	40	13.61
JBIC	35	0
RGGVY	34	0
Total	**428**	**43.85**

3.73 From the table above it can be seen that the financial progress during the initial seven month period of FY 06-07 is only around 10% as against the approved Business Plan of the Licensee. The physical progress achieved by the Licensee vis-a-vis the projected numbers for the same period is as given in the table below:

Table 87: Physical progress of completion of capital works in FY 06-07

Particulars	FY 07	Progress up to 31.10.2006	Progress in %
33kV line (Ckt-km)	2332	275.5	12
11kVline (Ckt-km)	4354	224	5
LT line (Ckt-km)	971	8.58	1
33/11kV Substation (No.)	245	7	3
Power transformers – Nos./ MVA	245/950	6/Not submitted	2/ Not submitted
Distribution transformers – Nos. / MVA	20326/1916	686/ Not submitted	3/ Not submitted

3.74 The progress status shown above makes it apparent that the Licensee has fallen considerably short of the capital expenditure approved by the Commission, as part of the Business Plan, for FY07. Even if the existing progress is prorated for the remaining five months, the achievements shall be way below targets. Also, the Licensee has not been able to substantiate the above mentioned progress with the actual completion reports in respect of each scheme. Therefore, it is not clear as to whether the works completed so far in FY07 have been transferred from CWIP to Fixed Assets.

3.75 Licensee's audited accounts for FY06 provided to the Commission show the Gross Fixed Assets as at the end of FY06 as Rs. 1553.35 Crore, while the opening GFA as per the notified Balance Sheet of 31st May 05 stands at Rs. 1499.42 Crore. Hence during the ten month period from 1st June 05 to 31st March 06, the addition to GFA is only Rs. 53.93 Crore. For the purpose of determining the amount of possible capitalisation during FY 07 and further during FY 08, the Commission enquired from the Licensee about the budgeted capitalisation during FY 06, but the Licensee has not provided the same to the Commission.

3.76 Given the poor capitalisation rate of the Licensee during FY 06 and the very meagre progress against targets during FY 07, the Commission considers it best in consumer interest not to consider any addition to GFA in FY 07 and FY 08 for FY 08 tariff determination. The actual addition during FY 07, supported by Audited Accounts, shall be considered for FY 09 tariff determination. This is also expected to provide an incentive to the Licensee to expedite completion of pending capital works, maintain project completion reports and ensure timely submission of the same to the Commission.

3.77 The Commission wishes to emphasize that it is very much in favour of focussed investments in the distribution sector. In Commission's opinion, there is an urgent need for heavy investments for improvement of distribution network in the State. The National Electricity Policy and also the National Tariff Policy have considered investments in distribution network as a priority. APDRP and other schemes funded through ADB, PFC etc. could be major initiatives in this direction. Unfortunately in spite of getting priority attention, the Distribution Company's performance in this regard has been dismal and there seems to be lack of adequate inclination to implement schemes within stipulated time period. While this situation is leading to continuing high distribution losses, at the same time the Commission is constrained to take a view to allow only those investments in tariff, which the Distribution Companies have factually demonstrated through their submissions in this regard. At this moment, the GFA as reflected in the Licensee's Audited Accounts for FY 05-06 is the only documented and verified information that the Commission has of the asset base of the Licensee. Thus the Commission shall allow depreciation and interest charges for FY 08 only on the GFA as at the end of FY 05-06.

Operations and Maintenance Costs

Licensee's submission

3.78 The Licensee has claimed O&M expenses on a normative basis as specified by the Commission in MPERC (Terms and conditions for Determination of Tariff for distribution and retail supply of electricity and methods and principles for fixation of charges) Regulations, 2006. The Licensee has considered the determinants of O&M expenses as average of closing balances of FY 07 and FY 08. The Licensee's claim for FY 08 is as under:

Table 88: O&M Expenses as claimed by the Licensee

	O&M charges	FY08
A	Metered consumers (average of FY 07 and FY 08)	2384168
	Multiplying Factor – A (Rs. Lakh / '000 consumers)	6.5
	O&M – A (Rs. Lakh)	**15497**
B	Additional pre-paid meters to be installed during the year	0.00
	Multiplying Factor – B (Rs. Lakh / meter)	0.50
	O&M – B (Rs. Lakh)	**0.00**
C	Metered Sales (MU) (Average of FY 07 and FY 08)	6398
	Multiplying Factor – C (Rs. Lakh / MU)	2.35
	O&M – C (Rs. Lakh)	**15034.00**
D	HT Network Length (ckt-km) (Average of FY 07 and FY 08)	70529
	Multiplying Factor – D (Rs. Lakh / '00 ckt-km)	16.00
	O&M – D (Rs. Lakh)	**11285**
E	Transformation Capacity (MVA) (Average of FY 07 and FY 08)	5152
	Multiplying Factor – E (Rs. Lakh / MVA)	1.53
	O&M – E (Rs. Lakh)	**7882**
F	Items not covered in formulae *(MPERC License fee, Taxes) (Rs. Crore)	0.00
	Total O&M (A+B+C+D+E+F) in Rs Crore claimed	**496.98**

Commission's analysis for O&M cost

3.1 In the section on asset capitalisation, the Commission has already elaborated its reasons for not considering any asset addition during FY 07 and FY 08 for the purpose of FY 08 tariff determination. While the Licensee is encouraged to improve upon its asset capitalisation rate, the benefit of the same shall be made available to the Licensee only in subsequent tariff years when the truing up petitions are considered. The Commission considers this in the best interest of consumers, since this way the consumers do not have to pay, through tariffs, for future additions to asset base, which may or may not materialise to the extent allowed, given the past performance of the Licensee. Hence, the Commission has determined normative O&M expenses for FY 08 only on the ckt-km of HT lines and transformation capacity existing as at 31st March 2006. This data has been provided by the Licensee to the Commission.

3.2 The Commission's approach stated in the preceding paragraph is further corroborated by the Licensee's past performance with regard to creation of lines and transformers. This is presented in the table below:

Table 89: Licensee's past performance with respect to creation of network assets

Particulars	As on March 03	Addition during FY 03-04	Addition During FY 04-05	Additions During FY 05-06	Additions claimed during FY 06-07	Additions claimed during FY 07-08
33kV line (Ckt-km)	**10024**	**322**	**593**	**572**	**2332**	**924**
11kV line (Ckt-km)	**50452**	**599**	**1735**	**883**	**4354**	**4590**
Power transformers MVA capacity	**4341**	**355**	**403**	**132**	**950**	**287**

3.3 It is noted from the above table that the addition to lines and transformation capacity as projected by the Licensee for FY 07 and FY 08 are not in line with the same actually added during the previous years. In fact, by Licensee's own submission of progress of completion of works during FY 07, it is apparent that the projections made by the Licensee for FY 07 are highly exaggerated. This is presented in the table below:

Table 90: Licensee's progress of creation of network assets in FY 06-07

Particulars	Network addition claimed in ARR for FY 07	Actual Progress up to 31.10.2006 in all schemes operated by Company	Progress in %
33kV line (Ckt-km)	2332	275.5	**11.81%**
11kV line (Ckt-km)	4354	224	**5.14%**
Power transformers MVA	950	Not submitted	

3.4 With regard to the other two determinants of normative O&M expenses i.e. metered consumers and metered sales, the Commission, in order to maintain consistency, has adopted a similar approach for FY 08 determination; that is, these parameters are also considered only as at the end of FY 06 and no additions during FY 07 and FY 08 are considered for the purpose of O&M cost determination. This data was also provided by the Licensee to the Commission.

3.5 The Commission, however, wishes to emphasise that, although for the purpose of FY 08 ARR determination, the determinants of normative O&M expenses have been considered as at the end of FY 06 only, the normative expenses shall be recomputed at the end of the FY 08 based on actual additions during FY 07. The adjustment shall be considered at the time of truing up for FY2007-08.

3.6 Based on the above arguments, the normative O&M expenses allowed by the Commission to be recovered through tariffs for FY 08 are as below:

Table 91: O&M expenses as approved by the Commission for FY 08

Amount in Rs. Crore

	O&M expenses	**FY08**

	O&M expenses	**FY08**
A	Metered consumers	2274808
	Multiplying Factor – A (Rs. Lakh / '000 consumers)	6.50
	O&M – A (Rs. Lakh)	**14786.25**
B	Metered Sales (MU)	5606
	Multiplying Factor – C (Rs. Lakh / MU)	2.35
	O&M – C (Rs. Lakh)	**13174.10**
C	HT Network Length (ckt-km)	62999
	Multiplying Factor – D (Rs. Lakh / '00 ckt-km)	16.00
	O&M – D (Rs. Lakh)	**10079.84**
D	Transformation Capacity (MVA)	4876
	Multiplying Factor – E (Rs. Lakh / MVA)	1.53
	O&M – E (Rs. Lakh)	**7460.28**
E	Items not covered in formulae (MPERC License fee, Taxes) (Rs. Crore)	**0.69**
	Total O&M (A+B+C+D+E) in Rs Crore allowed (net of capitalisation)	**455.69**

Depreciation

Licensee's submission:

3.7 The Licensee has submitted that it has inherited a GFA of Rs. 1499.42 Crore as per the notified opening balance sheet, which is subject to change on any subsequent notification by the GoMP. They have also claimed that in FY06, the addition to GFA has been to the tune of Rs. 53.93 Crore and the accumulated depreciation as on 31st March 2006 is Rs. 922.85 Crore.

3.8 The Licensee has computed the depreciation on opening balance of GFA of depreciable assets as per the notified opening balance sheet. The percentage to which assets in each sub-category have depreciated has been computed as on 31st May 05. This has been estimated on the basis of year-wise asset addition data of MPSEB from the year 1985-86 to 2004-05. The percentage of fully depreciated assets (opening balance) as provided by the Licensee are shown in the table below:

Table 92: Percentage of fully depreciated assets as filed by the Licensee

Asset class	**FY07**	**FY08**

Asset class	FY07	FY08
Land and Land Rights	0%	0%
Building and Civil Works	1%	1%
Hydraulic Works	26%	26%
Other Civil Works	13%	13%
Plant and Machinery: ---		
Transformers	60%	60%
Batteries	97%	97%
Switchgear, Control and Protection	43%	43%
Others	45%	45%
Line and Cable Networks, etc.: ---		
Meters	23%	23%
Others	70%	70%
Vehicles	100%	100%
Furniture and Fixtures	72%	72%
Other Equipment	34%	34%
Any Other Items	0%	0%

Further, depreciation on asset added during each year thereafter has been computed on the basis of projected capitalization in each such year as presented in the section on capital expenditure of this Order. The total projected capitalization in each year has been distributed into different asset categories on the basis of the category wise break-up available as per the FY06 audited accounts of the Licensee. The depreciation has been claimed on the basis of rates notified by the Ministry of Power under notification S.O.265 (E) dated 27th March 1994.

3.9 The Licensees have claimed depreciation for a year on the opening balance of GFA for such year and has not claimed any depreciation on assets added during such year. The depreciation claimed by the Licensee for FY07 and FY08 is shown below:

Table 93: Depreciation claimed by the Licensee

Amount in Rs. Crore

Asset class	FY07	FY08
Land and Land Rights	0.00	0.00
Building and Civil Works	0.86	1.03

Asset class	**FY07**	**FY08**
Hydraulic Works	0.16	0.16
Other Civil Works	0.08	0.08
Plant and Machinery: ---		
Transformers	13.45	19.46
Batteries	0.00	0.00
Switchgear, Control and Protection	2.14	2.89
Others	0.19	0.49
Line and Cable Networks, etc.: ---		
Meters	31.95	33.48
Others	16.31	25.71
Vehicles	0.00	0.00
Furniture and Fixtures	0.07	0.07
Other Equipment	0.32	0.32
Any Other Items	0.00	0.37
Total	**65.52**	**84.05**

3.10 The Licensee has also allocated the total depreciation claimed into wheeling and retail sale activities on the basis of identification of assets employed in each activity.

Commission's analysis of depreciation claims:

3.11 The Commission has analysed the claims of the Licensee regarding depreciation and is happy to note that the Licensee has done an extensive analysis to determine the opening balance of depreciable assets as on 31st May 05. The data regarding year-wise and category wise asset addition to MPSEB asset base has been shared by the Licensee with the Commission. However, at the same time, the depreciable and fully depreciated assets as on 31st May 05, as worked out by the Licensee does not match with the accumulated depreciation as per the notified opening balance sheet. If this data is utilized, it shall be in conflict with the opening balance sheet.

3.12 Further, during FY06, the Licensee has claimed an asset addition of Rs. 53.93 Crore, which is corroborated by the Audited Accounts for FY06 submitted by the Licensee. The accounts also show a consumer contribution of Rs. 3.48 Crore towards cost of capital assets, which have been considered under Capital Reserve. The Auditors, however, have pointed out this fact and have commented that the consumer contribution should have been deducted from the Gross Fixed Assets.

3.13 The Commission has dealt at length the reasons for not considering the cost projections done by the Licensee as these appear to be inflated and not in conformity with the past trend. In the past both physical and financial asset capitalization achieved by the Licensee has been extremely low. The same is likely to be true for FY07 as well. The issue of asset capitalization has been dealt with in detail in the section on asset capitalization of this order. If the same rate is used for projecting asset addition during FY08, the addition is not likely to be substantial. Consequently deprecation for FY08 is not likely to deviate much from the depreciation available for FY06. For FY08 the Commission has therefore computed depreciation on the closing balance of assets existing as on 31st March 2006 and no projected asset additions have been considered. The Commission shall true up the allowed amount when the audited balance sheet for FY08 becomes available provided that the assets capitalized during FY07 and FY08 form a part of the schemes that have been duly approved by the Commission as per the Capex guidelines framed by it.

3.14 The opening GFA and its split into various asset categories considered by the Commission for the purpose of computation of depreciation is as shown in the following table:

Table 94: Split of GFA as on 31st March 06 into various asset classes

Amount in Rs. Crore

Asset class	**FY08**
Land and Land Rights	4.14
Building and Civil Works	28.57
Hydraulic Works	6.77
Other Civil Works	3.03
Plant and Machinery: ---	
Transformers	411.01
Batteries	0.20
Switchgear, Control and Protection	49.46
Others	4.39
Line and Cable Networks, etc.: ---	
Meters	326.67
Others	705.18
Vehicles	5.37
Furniture and Fixtures	1.95
Other Equipment	3.16

Asset class	FY08
Any Other Items	0.00
Total	**1549.88**

3.15 The Commission's Regulations under section 61 prescribe that the depreciation should be computed using the rates as fixed by the CERC and as amended from time to time. The Licensee, in its filing for FY07, had computed depreciation based on these rates. However, in the current filing, the Licensee has computed depreciation for FY07 and FY08 on the basis of MoP rates and has requested the Commission to allow depreciation on MoP rates. In order to buttress its claim for higher depreciation rates (MoP rates are higher than the rates allowed by CERC), the Licensee has referred to section 5.3 (c) of the National Tariff Policy, which states that for distribution the depreciation rates shall be evolved by the Forum of Regulators. Further, the Policy also states these notified rates shall be applicable both for tariff and accounting purposes. The Licensee has also pointed out that as per AS-6 "Depreciation Accounting" issued by the ICAI if any change is made in the method of depreciation, retrospective computation of depreciation from the year of change would be required.

3.16 The National Tariff Policy recommends that the Forum of Regulators (FoR) shall evolve the depreciation rates suitable for distribution business. In this regard, the Commission wishes to quote a letter from the FoR Ref. No. 1/20(6)-2006-Tariff Policy / CERC dated 23rd June 2006 addressed to the Chairpersons of the SERCs, which states that the depreciation rates as fixed by the CERC shall also be applicable for distribution businesses. The Commission, therefore, does not accept the Licensee's claim and has computed depreciation based on CERC rates. Also, the erstwhile Regulations of the Commission issued under section 61 of the EA 2003 on 5th December 2005 had also prescribed the same rates as prescribed by CERC.

3.17 The Commission has computed depreciation on assets notified as a part of the transfer scheme of 31st May 2005 and on assets added during FY06 separately. For assets notified existing as on 1st June 2005 the Commission has provided depreciation for an asset category to the extent that the accumulated depreciation as on 31st March of each year does not exceed 90% of the historical cost of acquisition.

3.18 Based on the discussion above, the depreciation allowed by the Commission for FY08 is shown below:

Table 95: Depreciation allowed by the Commission for FY 08

Amount in Rs. Crore

Asset class	FY08
Land and Land Rights	0.00
Building and Civil Works	0.52
Hydraulic Works	0.17

Asset class	**FY08**
Other Civil Works	0.05
Plant and Machinery: ---	
Transformers	14.31
Batteries	0.00
Switchgear, Control and Protection	2.85
Others	0.25
Line and Cable Networks, etc.: ---	
Meters	19.50
Others	24.96
Vehicles	0.00
Furniture and Fixtures	0.11
Other Equipment	0.23
Any Other Items	0.00
Total	**62.96**

3.19 With regard to segregation of allowed depreciation between wheeling and retail sale activities, the Commission's approach and final decision are contained in the relevant section of this Order.

Interest and Finance Charges

Licensee's submission:

3.20 The interest and finance charges comprise interest on loans as per the opening Balance Sheet of 31st May 05, additional loans drawn during FY06, new loans proposed to be drawn as per the investment plan provided by the Licensee for FY08, the interest charges on Consumer Security Deposits, the interest charges on working capital loans and the cost of raising of new loans from lending agencies. With regard to new capital expenditure during FY08, the Licensee has not provided a fully matching financing plan as part of it has been shown to be funded through 'untied funds' (i.e. there is no committed funding available).

3.21 The summary of the capital expenditure plan for FY08 considered by the Licensee for interest computation as per the petition is given in the table below:

Table 96: Summary of filed capital expenditure plan

Amount in Rs. Crore

Scheme	**FY 07**	**FY 08**
ND	25.78	27.97
JBIC	34.61	32.15
ST (N)	26.93	29.93
APDRP	186.75	80.04
ADB	40.29	0.00
PFC- Capacitor Banks	0.00	15.00
ADB-II	0.00	181
Contributory schemes	25.00	25.00
Total	**339.36**	**391.09**

3.22 For computing the interest liability the average of opening and closing balances of the loans for FY08 have been considered. The closing balances have been determined by adjusting the opening balances for the projected principal repayments.

3.23 The Licensee has claimed that the terms and conditions (such as rate of interest, term of repayment, moratorium period, etc.) of the loans allocated to it as per the notified Balance Sheet are as per the respective loan agreements and the conditions indicated by the State Government. The terms and conditions of the new loans have been considered as per the Loan agreement with the lending agency. With regard to untied funds, however, the terms and conditions have been assumed. The terms and conditions considered by the Distribution Licensee for new loans for computing interest cost is as given in the table below:

Table 97: Loan terms and conditions as filed

Source	**Interest Rate (%)**	**Moratorium**	**No. of annual installments**
State Govt. Loans	10.5	0	7
PFC Loans	10.75	3	8
REC Loans	9.25	5	10
ADB Loans	10.5	5	15
JBIC	8.2	5	10
PFC-Capacitor Banks	10.5	3	12
Other Market Borrowings for capex (Untied)	10.5	3	7

3.24 The cost of raising finance and bank charges for FY07 have been estimated at Rs. 3 Crore and the same has been assumed for FY08. However, the basis for arriving at this figure in FY07 has not been provided. The interest on security deposit has been computed at 6% of the security amount projected on the basis of number of months of approved security deposit and average monthly estimated revenue from various categories of consumers.

3.25 The Licensee, in its petition, has not described the basis for capitalizing the interest cost but from the working sheets provided by the Licensee it appears that 50% of the interest cost of the existing and new loans utilised for funding capital expenditure has been considered as interest capitalized. With regard to expense capitalized, the Licensee has escalated the value of this item available from the FY06 Audited Accounts by 5% each year upto FY08.

It must be pointed out here that the Licensee's financing plan does not provide any funding for IDC and expense capitalized. However, on analyzing the numbers it appears that the untied funds as projected by the Licensee would be utilized for funding IDC and expenses capitalized.

3.26 The Distribution Licensee has computed the interest cost for the existing and new loans on the basis of the terms and conditions indicated above. The interest cost claimed by the Distribution Licensee is given in the table below:

Table 98: Interest and finance charges as claimed by the Licensee

Amount in Rs. Crore

Interest and finance charges (IFC)	**FY07**	**FY08**
IFC on New long term loans		
State Govt. Loans – APDRP	7.35	16.81
PFC	0.33	2.13
REC	0.24	0.70
ADB	0.8	5.20
JBIC	1.21	3.53
IFC on existing long term loans		
PFC	10.60	8.03
REC	0	6.04
ADB	5.93	5.80
GoMP – APDRP	7.67	6.45
IFC on existing Generic loans from MPSEB	55.57	47.42
Other mkt borrowings for rev. deficit	3.19	4.11
Other mkt borrowings for Working Capital	16.37	31.90
Mkt borrowings for capex (Untied)	6.66	21.98
Other IFC		
Cost of raising finance and bank charges	3.00	3.00
Interest on consumer security deposit	15.83	17.07

Interest and finance charges (IFC)	FY07	FY08
Penal Interest Charges	0	0
Lease Rentals	0	0
Penalty charges for delayed payment for power purchase	0	0
Gross IFC	**134.74**	**180.98**
Less IFC Capitalised	**48.18**	**62.45**
Net Interest & Finance Charges	**86.56**	**118.53**

Commission's Analysis

3.27 The Commission's Regulations on Terms and Conditions of Determination of Tariff for Distribution and Retail Supply of Electricity and Methods and Principles of fixation of charges, issued on 26th October 2006 allow interest charges of only those loans to be passed through the ARR for which the associated capital works have been completed and put to use.

3.28 The Commission has also given directions to the Licensee to maintain half-yearly accounts, get them audited and submit to the Commission. The Licensee has, however, till date only provided the annual accounts. The latest annual accounts provided to the Commission by the Licensee pertain to FY 05-06, while the accounts for the half year ended 30th September 06 have not been submitted by the Licensee. Although the Licensee has provided to the Commission its progress of completion of capital works till October 06, it has not been established whether the works completed have been capitalised or not. Therefore, the Commission is only certain of the capitalisation (GFA) as available from the final audited accounts of FY 05-06. Moreover, going by Licensee's performance with regard to capitalisation of on-going works in the past, the asset addition anticipated during FY 07 and FY 08 is marginal.

3.29 For all on-going works, the interest cost related to the loan funding such works is considered as Interest During Construction (IDC) which shall be capitalised and added to the project cost at the time of asset capitalisation. Such interest cost is not considered as a pass through in the ARR. The idea is that the consumer can only be made to bear the interest cost related to those assets, which the consumer is making use of. The asset which is under construction is not useful to the consumers, hence interest cost incurred by the Licensee during construction becomes a part of CWIP and is not allowed to be recovered through tariffs.

3.30 The Commission is aware that the Licensee shall complete some capital works during the course of FY 07 and FY 08, which shall be capitalised and added to the asset base. However, as explained in the section on capitalisation, the Licensee's past performance with respect to capitalisation of assets completely defies the projections that the Licensee has made for FY 07 and FY 08. The Commission thus considers it prudent not to take a call on the possible capitalisation for FY 07 and FY 08, but consider the interest expenses attributable to such assets only when such assets are actually added to the asset base. This shall also serve as an incentive for the Licensee to expedite the completion of works and tone up its accounting practices to ensure quick and efficient transfer of assets from CWIP to GFA. This shall also act as an incentive for the Licensee to maintain half yearly accounts and submit the same to the Commission.

3.31 The Commission, therefore, for FY 08 is inclined to follow the same approach as adopted in the Tariff Order for FY 07 to work out the interest cost chargeable to revenue account. This involves allocation of debt and equity into GFA and CWIP as available from the FY 06 Audited Balance Sheet. This has been done in the following manner:

(a) Net addition to GFA during FY 05-06 is worked after subtracting from total addition to GFA, the consumer contribution amount as available from the Balance Sheet

(b) 30% of the net addition to GFA during FY 05-06 has been considered as funded through equity and added to the Equity allocated to GFA as on 31st May 05 as per the FY 07 Tariff Order.

(c) Balance of net addition to GFA is considered as having been funded through debt and added to the total debt allocated to GFA as on 31st May 05 as per the FY 07 Tariff Order.

(d) Debt repayments have then been subtracted from the total debt identified with completed assets as computed from above. Repayments have been worked out as pro-rata to total scheduled repayments during FY 05-06. Actual repayments have not been considered since there have been principal defaults by the Licensee during FY 05-06.

The allocation is presented in the tables below:

Table 99: Allocation as per FY 07 Tariff Order:

Amount in Rs. Crore

S. No.	Source of funds	Amount as per notified opening balance sheet	Allocated to Fixed Assets	Allocated to Capital Works-in-Progress
1.	Equity	533.00	449.70	83.30
2.	Project specific loans	258.00	130.30	127.70
3.	MPSEB loan	494.00	0.00	494.00

Table 100: Computation of debt associated with completed works as at end of FY 06

S. No.	Particulars	Amount (Rs. Crore)
1.	Addition to GFA during FY 05-06	53.93

S. No.	Particulars	Amount (Rs. Crore)
2.	Consumer Contribution during FY 05-06	3.48
3.	Net addition to GFA during FY 05-06	50.45
4.	30% of addition to net GFA (considered as funded through Equity)	15.14
5.	Balance addition to net GFA – funded through debt	35.31
6.	Debt associated with GFA as on 31st May 05 (from above table)	129.91
7.	Debt repayment	4.41
8.	**Total debt associated with GFA as on 31st Mar 06 (5+6-7)**	**160.82**

3.32 The interest cost can only be allowed on those loans which are identified as per the allocation as associated with completed works (GFA). In the absence of such identification by the Licensee, the interest has been allowed on debt identified as associated with capital works as above, at the weighted average interest rate of all loans as on 31st March 06. The weighted average interest rate as worked out for FY 05-06 for West Discom is 10.62% p.a. This is determined based on scheduled repayments, not considering actual interest and principal defaults during FY 05-06. Also, notional interest payment on REC loan has been considered for this purpose even though there is a moratorium on interest payment on REC loan, since interest shall have to be paid after the moratorium period. This weighted average interest rate of 10.62% is less than the SBI Benchmark PLR of 11.50%, hence is allowed as such. The weighted average interest rate is then applied to the loans identified as associated with completed works as per the allocation mentioned above to determine the allowable interest cost to be passed through the ARR for FY 08. This is presented in the table below:

Table 101: Interest cost as allowed for FY 08

Amount in Rs. Crore

Particulars	FY08
Debt associated with capitalised assets	160.82
Weighted average rate of interest (%)	10.62%
Interest cost allowed through ARR	**17.09**

3.33 The cost of raising finance and bank charges for FY07 have been estimated by the Licensee at Rs. 3 Crore and the same has been assumed for FY08. The Licensee has not provided the basis for this computation. However, the Commission does not wish to discourage the Licensee from drawing new loans to carry out capital works during FY 07 and FY 08. The Commission thus allows Rs. 3 Crore as cost of raising finance for FY 08. The total interest and finance charges allowed for FY 08 are as under:

Table 102: Total interest and finance charges as allowed for FY 08

Amount in Rs. Crore

Particulars	FY08
Interest cost allowed	17.09
Finance charges allowed	3.00
Total Interest and finance charges allowed through ARR	**20.09**

Interest on Working capital

Licensee's submission

3.34 The interest cost has been computed separately for wheeling and retail activity at 12.75% of the working capital requirement determined in accordance with the provisions of the regulations of the Commission for determination of distribution of tariff. The details are as given in the table below:

Table 103: Interest on working capital loans as claimed for FY 08

Amount in Rs. Crore

Sl. No.	Particulars	FY08
	Wheeling Activity	
A)	1/6th of annual requirement of inventory for previous year	1.5
B)	1/12th of O&M Expenses	41.4
C)	2 months of average wheeling charges	0.00
	Total Working Capital	**42.9**
	Rate of Interest	12.75%
	Interest on Working Capital	**5.5**
	Retail Sale Activity	
A)	1/6th of annual requirement of inventory for previous year	1.8
B)	Receivables equivalent to 2 months of average billing	577.1
Less	1/12th of the power purchase expenses	207.1
	Consumer Security Deposit	293.0
	Total Working Capital	**78.8**
	Rate of Interest	12.75%
	Interest on Working Capital	**10.10**

Commission's analysis

3.35 For retail sale activity the Commission has considered the annual inventory requirement at 1% of the gross value of metering assets only as the end of FY 05-06, (which as per Table 94 is Rs. 326.67 Crore). Two months requirement of metering stores would thus work out to Rs. 0.54 Crore (1% of 326.67, pro-rated to 2 months). As per Table 94, the remaining value of Gross Block would thus be Rs. 1223.21 Crore as at the end of FY 06. One percent of this value pro-rated to two months would work out to Rs. 2.04 Crore. This has been considered as the inventory requirement for wheeling activity. The Consumer security Deposit has been considered as discussed in the section on interest on consumer security deposit. The values of other elements of working capital have been recomputed for the amount allowed by the Commission in the relevant sections of this order. The interest on working capital allowed by the Commission for wheeling and retail sale activity is given in the table below:

Table 104: Interest on working capital loans as approved for FY 08

Amount in Rs. Crore

Sl. No.	Particulars	FY08
	Wheeling Activity	
A)	1/6th of annual requirement of inventory for previous year	2.04
B)	1/12th of O&M Expenses	37.97
C)	2 months of average wheeling charges	0.00
	Total Working Capital	40.01
	Rate of Interest	12.75%
	Interest on Working Capital – wheeling activity	**5.10**
	Retail Sale Activity	
A)	1/6th of annual requirement of inventory for previous year	0.54
B)	Receivables equivalent to 2 months of average billing*	490.05
Less	1/12th of the power purchase expenses	172.06
	Consumer Security Deposit**	453.71
	Total Working Capital	(135.18)
	Rate of Interest	12.75%
	Interest on Working Capital – Retail sale activity	**0.00**

*Calculated at approved tariffs of FY 08 contained in the retail tariff schedules

**Calculated based on revenues for FY 08 as worked out from approved sales forecast and approved tariffs for FY 08

Interest on Consumer Security Deposit

Licensee's submission

3.36 The interest payable on Security Deposit has been computed by projecting total security deposit that the Licensee is entitled to as per the relevant regulation. The Licensee has considered security deposit of 3 months of the average demand for agricultural consumers, 1.5 months of the average demand for all other consumers.

3.37 The Licensee's audited accounts for FY06 show that, as at 31st March 06, there is a difference of Rs. 181.98 Crore between the security deposit amount as per the consumer ledger and that included in the notified opening balance sheet of 31st May 05. This difference has been subtracted from the projected security deposit worked out as explained in the above paragraph. The interest has been worked out at 6% on the average of the opening and the closing balance of this adjusted balance. For FY08 the interest that has been claimed on projected deposit is as given in the table below:

Table 105: Interest on CSD as claimed for FY 08

Amount in Rs. Crore

Consumer Security Deposit	**FY08**
As per BS and regulation	475.00
Adjustment for difference in financial & consumer ledger	181.98
CSD for computation purpose	293.02
Interest Charges on CSD @ 6%	**17.07**

Commission's analysis

3.38 The Licensee has not provided any explanation for the difference in the amount of CSD in financial and consumer ledgers. The Licensee, in its audited Balance Sheet for FY06, has considered CSD at Rs. 433.68 Crore. The Commission, for the computation of interest, on CSD has considered the number that is reflected in the duly audited Balance Sheet of FY06 and therefore the adjustment done by the Licensee is not being recognized. For FY08, the CSD has been determined as per the provisions of MPERC (Consumer Security Deposit) Regulations 2005 and the projected revenue from each category of consumers. Interest on CSD allowed for FY08 is as given in the table below:

Table 106: Interest on CSD as allowed for FY 08

Amount in Rs. Crore

Consumer Security Deposit	**FY08**
Consumer Security Deposit at FY 08 revenues	453.71
Interest Charges on CSD @ 6%	**27.22**

Return on Equity

3.39 The Licensee has claimed return at the rate of 14% on equity projected to be employed in completed assets in FY08. The projection has been done taking into account the balance as on 31st March 2006 and entire equity inflow for the year for Sub-Transmission Normal ST (N) schemes and counter-part funding for ADB loans by GoMP. The equity amount considered eligible by the Licensee for return is given in the table below:

Table 107: Return on Equity as claimed for FY 08

Amount in Rs. Crore

Particulars	**FY08**
Share Capital (A)	570
Capitalisation (B)	333
Additional equity flow	67
Normative Equity	100
Equity for Return	638
Return on Equity claimed	**89**

3.40 The section on interest and finance charges explains clearly the process of identification of debt and equity with completed assets. This process results in the total equity identified with GFA as at the end of FY 05-06. This is presented in the table below. The Return on Equity as allowed for FY 08 ARR is then determined by applying the Commission specified rate of 14% on the total equity identified as allocated to GFA. The Commission is aware that during the course of FY 07 and FY 08, additional equity shall be infused into the distribution business for the purpose of creation of assets, which will increase the amount of equity allocated to completed assets. This, if supported by audited accounts, shall be accounted for in future aggregate revenue requirements of the Licensee.

Table 108: Return on Equity as allowed for FY 08

Amount in Rs. Crore

Source	**FY08**
30% of addition to net GFA identified as funded through equity (from table 100)	15.14
Closing balance of equity identified with GFA as on 31st May 05	449.83
Total Equity identified with GFA as on 31st Mar 06	464.96
RoE @14% allowed in ARR of FY 08	**65.09**

Other items of ARR

3.41 Apart from the components of expenses discussed above, there are certain other items, which form part of the Aggregate Revenue Requirement. These include provision for Bad Debts, other miscellaneous expenditure, any prior period expenses / credits and Other (Non-Tariff) Income. These are analyzed below:

Bad and doubtful debts

3.42 With regard to provision for Bad Debts, the Commission has tested the Licensee's claim vis-à-vis the maximum provision permissible as per the Commission's regulations under section 61 of the Act, which state that the maximum bad and doubtful debts permitted to the Distribution Licensee are 1% of the sales revenues. The following table gives the amount of bad debts claimed by the Licensee and those approved by the Commission for FY08:

Table 109: Bad and Doubtful debts for FY08

Amount in Rs. Crore

Particulars	**FY 08**
Claimed by Licensee	69.26
1% of sales revenues	29.40
Allowed by Commission	**29.40**

Note: Sales revenue has been computed at tariff rates approved by the Commission for FY 08 in this Order.

3.43 It was stated in the Tariff Order for FY07, the amount of bad debts actually written off for FY07 shall be considered subject to a maximum of 1% of sales revenues and any excess / shortfall shall be adjusted in the ARR for FY08. Similarly, any true-ups for bad debts actually written off shall be considered for FY08 when the Licensee makes available audited accounts of these years to the Commission.

Other miscellaneous expenditure

3.44 The Licensee has claimed miscellaneous expenditure including prior period debits/credits, past losses written off, etc. This amounts to Rs. 1.51 Crore for FY 08. The Commission allows this amount to be included in FY 08 ARR.

Other Income

3.45 The Licensee has projected an income of Rs. 75.19 Crore from this item for FY08. This income is on account of meter rent, recovery from theft of energy and interest on loans and advances to staff. Interest on loans and advances to staff have been distributed between wheeling activity and retail sale activity on a ratio of 76:24, while all other items are considered fully towards retail sale activity. The Licensee has computed meter rent on the basis of rentals specified by the Commission for each consumer category in the relevant regulations for the projected number of consumers in such category in FY08. With regard to projections for recovery from theft of energy, the Licensee has claimed an amount of Rs. 50 Crore against this item in FY08. No explanations have been offered in the petition to justify this claim. The Licensee has not included any income from wheeling charges as part of Other Income for wheeling activity.

3.46 The Commission has recomputed the meter rental on the basis of average (average of opening and closing balance) approved number of consumers for FY08. With regard to recovery from theft of electricity, the Licensee's Audited Accounts for FY 06 do not show any amount against this item. The Commission, however, realizes that the Licensee is in the best position to forecast this item depending on loss reduction efforts to be put in by the Licensee, and therefore allows Rs. 50 Crore as Other Income from this activity for FY08.

Further, the Commission allows interest on loans and advances as projected by the Licensee as Other Income by the Commission. However, with regard to income from wheeling charges, the actual revenue to the Licensee as per the Audited Accounts for FY06 is Rs. 0.148 Crore. The same amount is included as income from wheeling charges for FY08. However, the actual income to the Licensee from wheeling charges during FY08 could be higher depending upon the actual number of open access consumers, which shall be adjusted in subsequent years.

3.47 The amount thus allowed by the Commission as Other Income for FY08 shall be as follows:

Table 110: Other Income for Wheeling activity

Amount in Rs. Crore

Particulars	**FY 08**
Claimed by the Licensee	1.87
Allowed by the Commission*	**2.02**

*Includes Rs. 0.15 Crore towards income from wheeling charges as explained above

Table 111: Other Income for Retail Sale activity

Amount in Rs. Crore

Particulars	**FY 08**
Claimed by the Licensee	73.32
Allowed by the Commission: ---	
Meter Rent	41.64
Total of all other items	50.59
Total as allowed by the Commission	**92.23**

Segregation of approved ARR between Wheeling and Retail Sale activities

3.48 The Commission's Regulations under section 61 notified on 26th October 2006 state that the Distribution Licensees should file the Aggregate Revenue Requirement in three parts, viz. for power purchase activity, for wheeling (distribution) activity and for retail sale activity. The Regulations clearly listed out the items of fixed costs (i.e. other than power purchase) that should be included into wheeling and retail sale activities.

3.49 The Licensee has complied with the Commission's regulations to the extent that they have filed the ARR segregated among expenses for power purchase, wheeling and retail sale activities. West Discom claims to have conducted a study across two distribution centers to determine the proportion of costs, such as O&M associated with wheeling activity and retail sale activity. For other cost items, they claim to have used allocation ratios to the extent the expenses could be identified as being associated predominantly with one activity or other.

3.50 The Commission lauds the efforts of the West Discom to determine separately the expenses attributable to wheeling activity and retail sale activity. However, in absence of a representative data set, the Commission does not wish to use the allocation ratios as adopted by West Discom for segregation of expenses. The Commission directs the Licensee to carry out an extensive study across a representative sample of its distribution centers, RAOs, etc. to develop the allocation ratios for segregation of each expense item (excluding power purchase) into wheeling and retail sale activity. The results of this study should be presented to the Commission by the Licensee within six months of this Tariff Order. This is, however, only a stop gap arrangement. The Commission desires that the Licensee undertakes a full accounting segregation for booking expenses separately under wheeling activity and retail sale activity. The Licensee should get back to the Commission, within a month of issue of this Tariff Order, with the probable time-lines for this activity.

3.51 For the purpose of this Tariff Order, therefore, the Commission allocates the fixed costs (i.e. other than power purchase) in the following manner:

Wheeling activity shall include:

(a) O&M expenses

(b) Depreciation

(c) Interest on project loans

(d) Interest on working capital loans – for normative working capital for wheeling activity

(e) Return on Equity

(f) Other miscellaneous expenses

(g) Less: Other Income as computed in previous section

Retail sale activity shall include:

(h) Interest on working capital loans – for normative working capital for retail sale activity

(i) Interest on Consumer Security Deposits

(j) Bad and Doubtful debts

(k) Less: Other Income as computed in previous section

3.52 On the basis of above, the ARR for FY 08 for wheeling and retail sale activity for the West Discom is approved as under:

Table 112: Allowed ARR for FY 08 segregated among wheeling and retail sale activities

Particulars	**Amount in Rs. crs. approved for FY 08**
Power Purchase expenses	2064.73
Transmission charges (MP Transco)	279.79
Wheeling activity:	
O&M expenditure	455.69
Depreciation	62.96
Interest and Finance Charges on Project Loans	20.09
Interest on Working Capital	5.10

Particulars	**Amount in Rs. crs. approved for FY 08**
Return on Equity	65.09
Other expenses	1.51
Less: Other Income	2.02
Sub-Total Wheeling ARR for FY 08 as approved	***608.36***
Retail Sale activity	
Interest on Working Capital	0.00
Bad and Doubtful Debts	29.40
Interest on Consumer Security Deposit	27.22
Less: Other Income	92.23
Sub-Total Retail ARR for FY 08 as approved	***(35.60)***
Grand Total FY 07-08 ARR as approved	**2917.35**

Revenue Gap at existing tariffs

3.53 The revenues at existing tariffs have been worked out by the Commission using this sales forecast. The revenue gap is worked out using these revenues and the approved ARR as shown in the table above. The sales revenues and the revenue gap at existing tariffs are presented in table below. The revenue gap as filed by the Licensees is also reproduced for ready reference:

Table 113: Revenue gap with approved ARR for FY 08 at existing tariffs

(Amount in Rs. Crore)

Particulars	**Amount**
Revenue gap as filed by the Licensee	(313.0)
Revenues at existing tariffs as worked out by the Commission	2933.08
Approved ARR for FY 08 (with interest on CSD, Bad Debts, etc. worked out at revenues from current tariffs)	2917.15
Revenue Gap for FY 08 at existing tariffs	**(15.93)**

3.54 The Licensees had proposed to bridge the gap of Rs 313.0 Crs, as projected by them, partly by means of tariff hike and efficiency gains and partly by means of creation of regulatory asset. However the revenue gap is only 15.93 Crs, as determined above. The Commission has therefore made suitable modifications to the tariff proposals to meet the total revenue gap indicated above.

3.55 The expected revenues from revised tariffs for the distribution Licensee is shown in table below:

Table 114 : Revenue from revised tariffs

(Amount in Rs. Crore)

Particulars	Amount
Revenue gap as filed by the Licensee	(313.0)
Expected Revenues at approved tariffs for FY 08	2940.31
Approved ARR for FY 08	2917.35
Revenue (Gap)/surplus at approved FY 08 tariffs	**22.96**

3.56 From the table above, it is clear that there is a marginal surplus left over with the Licensee. This, however, is a fall-out of maintaining uniform tariffs in the State. The position shall be reviewed while truing up for FY 08.

3.57 The consumer category-wise revenues at approved FY 08 tariffs (contained in the Tariff schedule in this Order), as worked out by the Commission are presented below:

Table 115: Consumer category-wise revenues at approved FY 08 tariffs

Consumer Category	Sales (MU)	Revenues (Rs. Crore)
Low Tension		
Domestic Light Fan and Power	1707	576.35
Non-Domestic Light Fan and Power	419	229.62
Water Works and Street Lights	141	47.0
LT Industrial	409	187.36
Agricultural Consumers	2780	667.56
TOTAL (LT)	**5456**	**1707.88**
High Tension		
Railway Traction	313	144.05
Coal Mines	0	0.00
Industrial and Non Industrial	2142	957.77
Seasonal	11	6.71
HT Irrigation and Public Water Works	212	64.73
Township and Residential Colony	0	0.00
Bulk Supply to Exemptees	213	59.17
Total HT	**2892**	**1232.43**
Grand Total (LT + HT)	**8347**	**2940.31**

A4: AGGREGATE REVENUE REQUIREMENT OF MADHYA PRADESH MADHYA KSHETRA VIDYUT VITARAN COMPANY LIMITED (CENTRAL DISCOM) FOR FY 08

Summary of Sales Forecast as proposed by the Licensee

4.1 The total sale of the Central Discom during FY 08 is projected at 6,504 MUs. The sales in LT category is projected as 4,398 MUs (or 67.63% of total sales) and in HT category as 2,105 MUs (or 32.37 % of total sales).

Table 116: Projected Sales of the Central Discom for FY 08

Consumer Category			Sales in MU – FY 08
L T CONSUMERS	LV 1	Domestic Light Fan and Power	1779
	LV 2	Non-Domestic Light Fan and Power	436
	LV 3	Water Works and Street Lights	123
	LV 4	LT Industrial	162
	LV 5	Agricultural Consumers	1898
		TOTAL (LT)	**4398**
H T CONSUMERS	HV 1	Railway Traction	694
	HV 2	Coal Mines	38
	HV 3	Industrial and Non Industrial	1133
	HV 4	Seasonal	2
	HV 5	HT Irrigation and Public Water Works	91
	HV 6	Township and Residential Colony	148
	HV 7	Bulk Supply to Exemptees	0
		TOTAL (HT)	**2105**
TOTAL LT + HT			**6504**

4.2 The sales forecast of 6504 MU of the Licensee is about 13.63% more than the revised estimates of FY 07 (which is 5724 MU). This forecast, as per Licensee's petition, is composed of 376 MU of un-metered agriculture sales. The Licensee has not forecast any un-metered sales in domestic category.

4.3 During discussions, the representatives of Central Discom have also stated that about 65,452 consumers of domestic category as on 30.9.06 predominantly in rural areas, are presently getting un-metered supply. The Licensee, in its filings, has not projected any sales for un-metered domestic category, but the consumption of this category also has been considered as metered sales.

Energy balance and power purchase as proposed by the Licensee

4.4 Keeping in view the prevailing arrangement between MP Tradeco and the three Discoms, the Licensee claimed that they are not in a position to independently provide complete and updated information regarding station-wise generation availability and power purchase costs in the relevant formats (as per the aforementioned Tariff Regulations). The Licensee has provided the information based on the interactions with MP Genco, MP Transco and MP Tradeco. In this regard, the Licensee has also claimed that they have taken guidance from Section 18 of the MPERC (Power Purchase and Procurement) Regulations 2004 Revision 1, 2006 (RG-19(I) of 2006) which states that

"The Distribution Licensee shall make long-term demand and supply availability assessments in consultation with any or all concerned including state sector Generating Companies, discoms, private Distribution Licensees, central sector Generating Companies and Transmission Companies/ Regional Electricity Board, National / Regional Load Dispatch Centers, Central Electricity Authority."

4.5 The Distribution Licensee claims that they have adopted tentative information from key sector participants for computation of power purchase cost for the purpose of arriving at revenue requirement. The Distribution Licensee requested the Commission to take due cognizance of this fact while computing allowable power purchase cost of the Licensee. It also requested the Commission to give opportunity to the Licensee to submit updated information, if such information is made available to the Distribution Licensee by MPGenco, MPTransco, and MPTradeco.

4.6 The Licensee has considered the % allocation of capacity (32.52%) as per the Government's notification vide letter dated 18/10/2006. The central discom has calculated details related to the following items as per the above allocation:

- Monthly energy available from all sources
- Annual fixed charge payable to generators
- Estimated payment to generators on account of incentives, income tax, duties, etc.; and
- Estimated inter-state transmission charges to be paid.

Assessment of Energy Availability by the Discom

4.7 The Licensee has assessed the availability of energy from various sources based on discussions with Tradeco. Availability of energy from MPGenco is based on monthly forecast of generation by MPGenco for 2007-08. The Licensee has claimed that information on availability from Central Generating Stations (NTPC, NPC) was not available at the time of filing the petition. "Actual generation" for the previous two years and first six months of the current year. The generation lost due to forced outages of Korba Unit 4 and Vindhyachal (Unit 4 and 6) during 2005-06 have been duly considered while estimating the energy availability from these stations.

4.8 Availability from new stations expected to be commissioned in 2006-07 and 2007-08 has also been considered.

4.9 The following table provides the annual availability from each of the sources while the monthly availability has been provided in Format F1-2 (an additional format).

Table 117 Energy Availability for Central Discom for FY 08

Source-wise availability (MU)	2007-08 State	2007-08 Central Discom
	MU	MU
NTPC		
NTPC-Korba	3242	1054
NTPC-Vindyachal I	3097	1007
NTPC-Vindyachal II	2377	772
NTPC-Vindyachal III	1146	372
NTPC-Kawas	282	92
NTPC-Gandhar	842	274
NTPC-Sipat	175	57
KAPP	467	152
TAPS	1072	348
Farakka	184	60
Talcher	128	42
Kahalgaon	81	26
Kahalgaon 2	476	155
NTPC-Total	**13571**	**4410**
Bilateral Power Purchase		
CHPS-Gandhi Sagar	171	56
CHPS-RP Sagar	186	61
CHPS-Jawahar Sagar	139	45
RSEB (Chambal,Satpura)	497	161
Rajghat HPS	45	14
DVC	770	250
MSEB(Pench)	209	68
LANCO (PTC)	0	0
Bilateral-Total	**1520**	**494**
Other Sources	2700	877
NHDC - Indira Sagar	1700	552
Sardar Sarovar	1200	390
Omkareswara HPS	0	0
Others 1 (Wind & CPP)	0	0
Others 3 (UI)	**5600**	**1820**
MP Genco – Thermal		
AMARKANTAK PH-I	181	59
AMARKANTAK PH-II	941	306
AMARKANTAK PH-III	558	181
SATPURA PH-I	1871	608
SATPURA PH-II	2624	853
SATPURA PH-III	2647	860
SANJAY GANDHI PH-I	2464	801

Source-wise availability (MU)	2007-08 State	2007-08 Central Discom
	MU	MU
SANJAY GANDHI PH-II	2617	850
BIRSINGHPUR	3241	1053
MPGenco Thermal	**17145**	**5571**
MPGenco – Hydel		
Bansagar Tons HPS-Tons	936	304
Bansagar Tons HPS-Silpara	79	26
Bansagar Tons HPS-Devlond	79	26
Bansagar Tons HPS-Bansagar IV	79	26
Birsingpur HPS	45	14
Bargi HPS	503	163
Marhi Khera HPS	73	24
Mini-Micro HPS	0	0
MPGenco Hydel Total	**1794**	**583**
Total	**39629**	**12877**

Assessment of Power Purchase Cost (Fixed and Variable Cost) by the Discom

4.10 The Fixed costs and variable costs of MPGenco for FY 08 have been adopted by the Licensee as per the Multi-Year (FY 07 to FY 09) Tariff Order of the Commission. For existing Central Sector stations, Fixed Costs have been adopted as per CERC Orders for respective stations and variable costs (including FPA applicable at present) have been adopted as per the July 2006 bill.

4.11 For working out the cost of power purchase from the new stations of the Central Sector, the following methodology has been adopted by the Licensee:

(a) For Vindhyachal-III, variable cost has been estimated as per the July bill for infirm power.

(b) For Sipat-II and Kahalgaon –II-Phase-I, the tentative estimate provided by NTPC vide Letter No. 01:: CD:279: NNS dated 27-05-2004, has been used as the basis for determining the variable costs. The Licensee has stated that in order to reflect realistic levels of variable costs, the respective variable costs as provided in the letter have been increased @10% per annum from the base date of determination. The variable cost increase has been shown in the form of FPA charges.

(c) Fixed costs for all the above mentioned three stations (Vindhyachal-III, Sipat-II & Kahalgaon – II Phase (I)) have been estimated by converting the per unit fixed cost provided in the letter.

4.12 Fixed and variable costs for other new stations have been estimated based on discussions with Tradeco. The following table provides a summary of fixed and variable costs of each of the stations that have been considered for determining the power purchase cost. As stated earlier, the MPMKVVCL share of fixed cost has been considered for its ARR purpose.

Table 118 Fixed & Variable Cost for Central Discom for FY 08

	2007-08			
Source-wise availability	**Fixed Cost - State**	**Fixed Cost- Central Discom**	**Variable Cost**	**FPA**
	Rs Cr	**Rs Cr**	**Rs/ kWh**	**Rs/ kWh**
NTPC				
NTPC-Korba	85.95	27.93	0.4731	0.0738
NTPC-Vindyachal I	98.17	31.9	0.7578	0.1928
NTPC-Vindyachal II	135.26	43.95	0.7333	0.1843
NTPC-Vindyachal III	181.86	59.1	0.8675	0
NTPC-Kawas	61.2	19.89	1.0269	2.2567
NTPC-Gandhar	98.85	32.12	1.021	0.3565
NTPC-Sipat	99.89	32.46	0.4123	0.1237
KAPP	0	0	2.0234	0.0122
TAPS	0	0	1.9526	0
Farakka	7.49	2.43	0.9857	0.0838
Talcher	5.76	1.87	0.411	0.143
Kahalgaon	5.3	1.72	1.0748	0.1791
Kahalgaon 2	54.69	17.77	0.6884	0.2754
NTPC-Total	**834.44**	**271.15**		
Bilateral Power Purchase				
CHPS-Gandhi Sagar	10.86	3.53	0	
RSEB (Chambal,Satpura)	10.86	3.53	0	
Rajghat HPS	8.56	2.78	0	
DVC	0	0	2.54	
MSEB(Pench)	11.6	3.77	0	
LANCO (PTC)	0	0	0	
Bilateral-Total	**31.02**	**10.08**		
Other Sources				
NHDC - Indira Sagar	275.88	89.65	0	
Sardar Sarovar	0	0	0.95	
Omkareswara HPS	0	0	0.95	
Others 1 (Wind & CPP)	0	0	0	
Others 2 (Short-Term purchase)	0	0	0	
Others 3 (UI)	**275.88**	**89.65**		
MP Genco – Thermal				
AMARKANTAK PH-I	49.23	16	1.17	
AMARKANTAK PH-II				
AMARKANTAK PH-III	140	45.49	1.17	
SATPURA PH-I	207.29	67.36		
SATPURA PH-II				
SATPURA PH-III				

	2007-08			
Source-wise availability	**Fixed Cost - State**	**Fixed Cost- Central Discom**	**Variable Cost**	**FPA**
	Rs Cr	**Rs Cr**	**Rs/ kWh**	**Rs/ kWh**
			1.34	
SANJAY GANDHI PH-I SANJAY GANDHI PH-II	303.7	98.69	1.02	
BIRSINGHPUR	320	103.98	1.02	
MPGenco Thermal	**1020.22**	**331.52**		
MPGenco – Hydel	0	0	0	0
Bansagar Tons HPS-Tons Bansagar Tons HPS-Silpara Bansagar Tons HPS-Devlond Bansagar Tons HPS-Bansagar IV	92.92	30.19	0	92.92
Birsingpur HPS	3.93	1.28	0	3.93
Bargi HPS	9.68	3.15	0	9.68
Marhi Khera HPS	0	0	0	0
Mini-Micro HPS	0	0	0	0
Hydel Total	**106.53**	**34.62**		**106.53**
Total	**2268.09**	**737.01**		

Assessment of Other elements of power purchase cost

4.13 Other elements of power purchase costs such as incentive, income tax, ED & Cess etc, and other miscellaneous charges have been assumed at the level of actual expenditure on these accounts for the year 2005-06.

Table 119 Other Charges for All Stations for FY 08

CGS Other Charges	(Disincentive) / Incentive	Income Tax	Any Other (ED,Cess etc.)	Total of Other Charges in Rs Crs
2007-08 Total (Proj)	38.79	49.75	84	**172.53**
MPMKVVCL Share				
2007-08 (Proj)	12.6	16.16	27.29	**56.06**

Inter-state Transmission Costs

4.14 The inter-state transmission cost has been estimated on the basis of the actual bills for September 2005 to August 2006. The total bill amount for this period comes to Rs 110.14 Crores for the sector and the same has been adopted for FY 08. Rebates, etc. on short term power transmission have not been estimated as they are likely to be infirm in nature.

Table 120 Inter State Transmission Charges for FY 08

Month/ Rs Cr	WR	ER	WRLDC/ULDC	Inter-Regional WR-ER	Inter-Regional WR-SR	Inter-Regional WR-NR	Total
Sep-05	8.37	0.9	0	0	0	0	9.27
Oct-05	8.7	0.83	0	0	0	0	9.53
Nov-05	8.56	0.78	0	0	0	0	9.35
Dec-05	8.63	0.49	0	0	0	0	9.12
Jan-06	8.46	0.23	0	0	0	0	8.69
Feb-06	8.46	0.22	0	0	0	0	8.68
Mar-06	9.09	0.22	0	0	0	0	9.31
Apr-06	9	0.24	0	0	0	0	9.24
May-06	9.23	0.23	0	0	0	0	9.46
Jun-06	9.22	0.25	0	0	0	0	9.47
Jul-06	7.8	0.25	0	0.24	0.14	0.73	9.15
Aug-06	7.71	0.25	0	0.29	0.08	0.54	8.87
Total	103.24	4.88	0	0.53	0.22	1.27	110.14
Central Discom's Share							**35.79**

Merit Order Dispatch

4.15 The Licensee has adopted a merit order simulation on a monthly basis by matching monthly energy requirement with monthly availability based on the variable costs of various sources. The Licensee submits that while a monthly determination of cost provides an improved estimate over an annual determination of cost, the actual cost will differ based on the daily peaking requirements and variation between actual and projections. The Licensee prays that such deviations be passed on a regular basis through the FCA formula proposed which is also in line with the provision of the National Tariff Policy (Clause 5.3 (h) (4) and Clause 8.2.1 (1)):

"Uncontrollable costs should be recovered speedily to ensure that future consumers are not burdened with past costs. Uncontrollable costs would include (but not limited to) fuel costs, costs on account of inflation, taxes and cess, variations in power purchase unit costs including on account of hydro-thermal mix in case of adverse natural events."

and

"All power purchase costs need to be considered legitimate unless it is established that the merit order principle has been violated or power has been purchased at unreasonable rates."

4.16 The Licensee claims that the monthly requirement of energy is based on Licensee's own projection and tentative estimate of requirements of other discoms. The Licensee states that only the Commission has the knowledge of the total energy requirement planned by all the Discoms.

Table 121 Energy Requirement and Average Cost of Power for FY 08

Sl. No.	Particulars		FY'08		
			MU	Amount	Rs/Kwh
1.	Central Sector	Korba	1053.6	98.69	0.94
2.		Vindhyachal-I	1006.5	152.96	1.52
3.		Vindhyachal-II	772.3	128.02	1.66
4.		Kawas	12.4	26.44	21.31
5.		Gandhar	99.2	47.15	4.75
6.		KAPP	151.8	31.4	2.07
7.		TAPPS 3&4	348.4	68.03	1.95
8.		Vindyachal III (unit I)	372.3	91.39	2.46
10.		Sipat	57	35.52	6.23
12.		Total	**3873.5**	**679.6**	1.75
13.	ER	Farrakka + Talcher +Kahalgaon-I and Kahalgaon-II	**270.7**	**49.36**	**1.82**
14.	Bilateral Purchases	J.Sagar, R.P.Sagar	**132.13**	**6.72**	**0.51**
15.	Other Sources	NHDC (Indira Sagar)	877.34	89.65	1.02
16.		JV-Sardar Sarovar	552.33	52.69	0.95
17.		CPP/Wind			
18.		Short term purchases	55.86	19.55	3.5
19.		New Hydel Stations (MadhiKheda & Bansagar IV, Omkareshwar)	439.48	37.2	0.85
20.		Total	**1925.01**	**199.09**	**1.03**
21.	Short term Sales (Less)		0	0	0
22.	Net Power Purchases		**6201.34**	**934.77**	**1.51**
23.	Transmission Charges	Fixed Charges		35.79	
24.		Taxes			
25.		**Total**			
26.	Sub-total				
27.	MPGenco		5341.56	910.05	**1.70**
28.	**Total Power Purchase**		**11542.9**	**1880.61**	**1.6292**

4.17 It can be seen from Table 117 and Table 121 that there is a difference of 1334 MUs (12877 – 11543) between energy available and energy required. Though the Licensee has not explained the reason for this difference in its filing, but in subsequent submission the Licensee has indicated that, a part of this surplus will be used for trading power outside the state through which it is likely to earn Rs 114 Crore.

4.18 The total power purchase cost as estimated by the Central Discom thus works out to Rs. 1880.61 Crore or Rs. 1.6292 per Unit for 2007-08

Commission's analysis

Sales forecast

4.19 The Commission recognizes that metering of a huge number of un-metered consumers is a challenging job and can be addressed only gradually. The Commission had a meeting with the CMDs of all three Discoms on 23rd February 2007 and, after a lot of deliberations, decided to revise the timeframe for metering of un-metered connections in domestic category and metering of DTRs for assessment of un-metered agriculture consumption. The roadmaps have been provided by the Licensees. As per the roadmaps, all un-metered connections in domestic category shall be metered by Dec. 2008. The Licensees have further committed that all DTRs predominantly supplying to agriculture consumers (about 57000 nos. for Central Discom) shall be metered by March 2011 under an ADB assisted program. The Commission is examining the proposal of the Licensee and after taking the views of all the stakeholders, will notify the fresh timeframe for achieving 100% metering. However, for FY08 the Commission has considered that there will be un-metered sales and has gone by the assessment of consumption for these categories.

4.20 Based on the submissions of the Licensee with regard to assessed consumption of un-metered consumers in domestic as well as agriculture categories, the Commission approves the following:

(a) Un-metered consumers in domestic category shall be billed on the basis of 77 units per consumer per month in urban areas, and 38 units per consumer per month in rural areas;

(b) Un-metered agriculture consumers in rural areas as notified by GoMP under the Electricity Act, 2003 shall be billed on the basis of 100 units per HP of sanctioned load per month for permanent connections and 130 units per HP of sanctioned load per month for temporary connections.

(c) Un-metered agriculture consumers in urban areas shall be billed on the basis of 130 units per HP of sanctioned load per month for permanent connections and 150 units per HP of sanctioned load per month for temporary connections.

4.21 Further, the Commission had a look at the sales forecast of all metered consumers and had compared the same with the past trends. The Commission had also taken note of Licensee's supporting submissions with regard to sales projections of various categories and considers the assumptions as reasonable. It is also to be noted that the quantum of power available to the State of MP in 2007-08 based on existing generation and planned capacity addition is more than sufficient to meet the sales requirement of the Licensee. The quantum of power available, even after considering the T&D losses is enough to meet all forecast requirements of the consumers.

4.22 As per the regulations of the Commission issued under section 61 for distribution and retail supply tariff determination, actual power sold by the Licensee during a year in question shall be grossed up for normative losses to compute allowable power purchase quantum during such year.

Energy Balance and Power Purchase

4.23 The state government has come out with annual milestones for distribution losses for the period FY 07 to FY 11, which is shown in the following table. The Commission has computed the energy requirement of the Licensee on the basis of the GoMP's order dated 28th December 2006 on distribution losses. Therefore, the Commission has considered distribution loss to be 40% during the period FY2007-08 for Central Discom.

Table 122: Distribution Losses (%) as per GoMP Letter Dated 28th December 2006

Year	Central Discom
FY 2006-07	**43%**
FY 2007-08	**40%**
FY 2008-09	**37%**
FY 2009-10	**34%**
FY 2010-11	**31%**

4.24 The Inter state transmission losses have been computed as per the moving averages of the scheduled losses of the last 52 weeks. The losses for FY 08 have been computed as per the following table:

Table 123: Month wise Inter State Transmission Losses (%) for Central Discom

Month	Central Discom
April	**6.3%**
May	**6.5%**
June	**6.7%**
July	**6.5%**
August	**6.2%**
September	**6.9%**
October	**6.6%**
November	**6.6%**
December	**6.7%**
January	**6.6%**
February	**6.6%**
March	**6.3%**

4.25 The Commission has considered the intra state transmission losses at 4.9% as per the transmission MYT Order.

4.26 The energy balance for FY08 is presented in the following table after considering the loss targets set by the GoMP.

Table 124: Energy Balance for FY08

	Particulars	Central
1	Total Energy Sales (MU)	6503
2	Distribution Loss (%)	40%
3	At T-D Interface (MU)	10839
4	Transmission Loss of MPPTCL (%)	4.90%
5	At MP Periphery	11397.6
6	External Losses (MU)	226.4
7	**Net Energy Requirement (MU)**	**11623.9**

4.27 The Commission, as per the Government of Madhya Pradesh Notification No. 1929/F.RS/4/XIII/2001 dated 14th March 2007, has considered energy allocation from existing stations for meeting Licensee's requirements and also the capacities of new station allocated to MP Tradeco. The Commission has also considered the GoMP notification which states that, during energy deficit months, Licensees shall purchase power from MP Tradeco.

4.28 Station wise capacity allocation to Central Discom considered by the Commission as per the GoMP Notification as mentioned above is given in the following table:

Table 125: Station wise capacity allocation (%) to Central Discom

Name of Power Station	CENTRAL
MPPGCL - SH: Bargi	47.49%
MPPGCL - IS: Gandhi Sagar	47.49%
MPPGCL - IS: Pench	47.49%
MPPGCL - SH: Birsinghpur	47.49%
MPPGCL - SH: Bansagar Complex	47.49%
MPPGCL - IS: Rajghat	47.49%
ER: Talcher STPS	47.49%
Sardar Sarovar Project	47.49%
WR: Korba STPS	47.49%
JV: Indira Sagar (8x125 MW)	32.49%
MPPGCL - ST: Amarkantak Complex	32.49%
WR: Vindhyanchal STPS - I	32.49%
MPPGCL - ST: Sanjay Gandhi Complex	32.49%
MPPGCL - ST: Satpura Complex (Ph - II & III)	32.49%
MPPGCL - ST: Satpura Ph-1 (Inter State)	32.49%
ER: Farakka STPS	14.04%
WR: Vindhyanchal STPS - II	14.04%
WR: Vindhyanchal STPS - III (Unit-I)	14.04%
WR: Kakrapar APS	14.04%
WR: Gandhar GPP	14.04%
WR: Tarapur APS	14.04%
ER: Kahalgaon STPS	14.04%
MPPGCL - SH: Marhikheda	14.04%
WR: Kawas GPP	14.04%
Weighted Average	**32.49%**

4.29 While the GoMP has allocated 32.49% of 135.5 MW Ranapratap & Jawahar Sagar HEPs to the Central Discom, the Commission has not considered the power available from these stations as they are located in Rajasthan. Similarly, even though the GoMP has allocated 32.49% of 187.5MW Satpura Phase-I to the Central Discom, the Commission has considered the availability based on the total installed capacity of 312.5MW since the project is located within the state of Madhya Pradesh. This has resulted in the weighted average allocation becoming 32.49% as against 33.96%, indicated in the GoMP notification. This is consistent with the stand taken earlier by the Commission.

4.30 The weighted average of allocation for Central Discom as per the allocated and unallocated share from each station is 32.49%.

4.31 Central Generating Stations: The annual energy availability for FY 08 from existing Central Generating Stations has been considered as per the petitions filed by the Licensee.

4.32 MP Genco Stations: As stated earlier, the Licensees have shown the availability of energy from MPGenco based on monthly forecast of generation by MPGenco for 2007-08.

4.33 The Commission undertook an exercise to analyze monthly availability and requirement of Central Discom for FY 08. The analysis showed surplus or deficit in each of the months for the Licensee.

4.34 The month wise availability and requirement for the Licensee for FY 08 is given below.

Table 126 Month-wise Energy Requirement & Availability for FY2007-08 (In Million Units)

Month			Central Discom		
	Energy Availability	Availability from intra-discom trading	Energy Required	Sale through intra -discom trading	(Deficit)/ Surplus
	A	B	C	D	E=(A +B)-(C+D)
April	759.8	1.1	930.9	0	(170.1)
May	766.3	24.5	914.7	0	(123.9)
June	697.1	0	868.2	0	(171.0)
July	753.1	7.8	848.5	0	(87.6)
Aug	1054.1	0	890.7	35.6	127.8
Sept	988.3	0	886.9	0	101.3
Oct	1124.0	0	994.8	0	129.3
Nov	1037.4	0	1083.7	0	(46.2)
Dec	970.5	0	1120.2	0	(149.7)
Jan	910.2	0	1098.0	0	(187.8)
Feb	794.0	0	1023.7	0	(229.7)

Mar	817.4	0	963.6	0	(146.3)
Total	**10672.1**	**33.4**	**11623.9**	**35.6**	**(954.0)**

4.35 As can be seen from the above table, though the Licensee is required to procure short term power of 1312.41 MUs in the months of April to July and November to March and will be having surplus of 358.4 MU from August to October. The procurement will be made from MP Tradeco at an average rate of Rs 1.84 / kWh as per the calculation shown in the following table.

Table 127 Rate of Short Term Purchase from MP Tradeco during FY2007-08

MP Tradeco Stations	MUs	Total Cost (Rs. Crs.)
Sipat	749.69	125.17
Kahalgaon STPS –II	699.28	145.59
Birsinghpur	3267.65	653.30
Amarkantak	686.21	150.29
Omkareshwar	1200.00	114.48
Vindhyanchal STPS-III (Unit-II)	746.66	156.89
Marhi Kheda (Unit – III)	**27.68**	**9.38**
Total	**7377.16**	**1355.09**
Avg. Rate (Rs. / Unit)		**1.84**

4.36 As the Commission has decided to have a uniform tariff in the state during FY08, the excess energy in a month with the Licensee will first be given to other Licensees of Madhya Pradesh who are having a shortfall in the same month. The Commission directs that the sale rate of the surplus energy to other Discoms within the state should be at the Monthly Pooled Cost of Power as given below:

Table 128 Monthly Pooled Cost of Power for Combined Discoms

	Month	MUs*	Rs. Crs.**	Rs./Kwh
1	April	2728.0	459	1.68
2	May	2647.9	461	1.74
3	June	2556.6	434	1.70
4	July	2444.1	391	1.60
5	August	2964.6	352	1.19
6	September	2957.2	378	1.28
7	October	3327.5	468	1.41
8	November	3354.7	525	1.56
9	December	3368.6	541	1.61
10	January	3267.2	533	1.63
11	February	3003.7	494	1.64
12	March	2869.9	475	1.65

*MUs include Total availability and Short Term Power purchase less energy sold through intra discom trading.

**Rs. Crs. Include Fixed Cost, Variable Cost, PGCIL Charges, Cost of short term power purchase less revenue from external sale.

4.37 Any excess energy remaining with the Licensee, as seen in the monthly availability and requirement table given above, after Intra state trading, shall then be used for external trading, at the Monthly Average Power Purchase Cost for those surplus stations arrived after running merit order. The rates thus allowed shall be as per the following table for Central Discom.

Table 129 Monthly Average Cost of Power of Surplus Stations

	Month	Surplus Energy (MU)	Total Cost (Rs. Crs.)	Rs. kWh
1	April			-
2	May			-
3	June			-
4	July			-
5	August	127.78	22.72	1.78
6	September	101.34	18.33	1.81
7	October	129.25	22.84	1.77
8	November			-
9	December			-
10	January			-
11	February			-
12	March			-

4.38 For Central Discom, sales on account of surplus energy during the months of August, September and October after intra state trading is assessed at 358.38 MU for FY 08. The income arising out of sales of surplus energy shall be adjusted with the power purchase cost of the Distribution Licensee.

4.39 The station-wise availability of energy as estimated by the Distribution Licensee and as estimated by the Commission are shown in the following table:

Table 130: Station-wise Energy availability (in MU) for Central Discom during FY08

		FY 08	
Sl. No.	Stations	Proposed by the Discom	As estimated by the Commission
19.	Central Sector (WR)	4127	3359
20.	Central Sector (ER)	282	98
21.	Bilateral purchases	494	353
22.	NHDC (Indira Sagar)	877	877
23.	Sardar Sarovar	552	807
24.	Omkareswara HPS	390	0
25.	New Hydel Stations	50	0
26.	MP Genco	6105	5177
27.	**Total**	**12877**	**10672**

4.40 Central Generating Stations (Western Region): Due to differential allocation as per GoMP Notification, the share available to the Licensee has decreased.

4.41 Central Generating Stations (Eastern Region): The Licensee has considered Kahalgaon (Phase II) in its filing. As per the GoMP Notification the capacity of this station is now with MP Tradeco.

4.42 Bilateral Purchase: The reason for reduced quantum from bilateral purchase is the revised capacity allocation and also the Commission has not considered RP Sagar, Jawahar Sagar, DVC and Lanco as explained in earlier paragraphs.

4.43 Omkareswar HPS: As per the GoMP Notification, this station's capacity is with MP Tradeco.

4.44 MP Genco: The change in availability is due to revised capacity allocation by GoMP Notification.

Power Purchase Costs

Central Generating Stations - Western Region

4.45 NTPC's Stations in Western Region (Korba, VSTPS-1, VSTPS-II, VSTPS-III (Unit-I), Kawas and Gandhar): As stated earlier, the energy availability has been considered from the existing stations as submitted by the Licensees. The Commission has also approved the fixed and the variable cost for these stations after verifying the fixed and variable costs from the CERC orders for these stations. The stations for which latest CERC order is not available, the Licensee petition on the basis of July 2006 bill has been considered. For KAPP and TAPPS 3&4, single part tariff is payable and the Provisional tariff rates have been considered as per the notification of Department of Atomic Energy GoI in October 2006.

4.46 The Licensee had shown the allocation of share to MP for the Central stations as per the NTPC bills. The Commission has considered the allocation of MP share and consequently Central Discom's share as per Government's Notification dated 14th March 07.

Table 131: Allocation from Central Generating Stations to MP and Central Discom as per Govt. Notification for FY2008

						Central Discom		
Sl. No.	Western Region CGS	Installed Capacity (MW)	State's Share (%)	Availability (MU)	Fixed Cost (Rs. Cr)	Share (%)	Availability (MU)	Fixed Cost (Rs. Crs.)
17.	KTPS	2100	21.38	3242	86	47.49	1540	40.8
18.	VSTPS-I	1260	33.34	3097	98.2	32.49	1007	32
19.	VSTPS-II	1000	30.12	2377	135.3	14.04	334	19
20.	VSTPS-III (Unit-	500	22.9	746.7	85	14.04	105	12

						Central Discom		
Sl. No.	Western Region CGS	Installed Capacity (MW)	State's Share (%)	Availability (MU)	Fixed Cost (Rs. Cr)	Share (%)	Availability (MU)	Fixed Cost (Rs. Crs.)
	I)							
21.	KGPS	656.2	24.16	282.4	59	14.04	40	8
22.	GGPS	657.4	20.64	842	76	14.04	118	11
23.	KAPP	440	23.99	467	0.0	14.04	66	0
24.	TAPP 3&4	540	18.64	1072	0.0	14.04	151	0

4.47 The FPA charges have been computed on the basis of the October 2006 bill paid to these stations. The other charges including the Incentive and taxes have been computed by pro-rating the actual bills of the period April'06 to October'06, paid to the Central Generating Stations by the Licensees.

4.48 The Variable and Other Charges as allowed are given in the following table:

Table 132: Charges allowed for CGS in WR

	FY 08			
Western Region CGS	Variable (Rs/Kwh)	FPA Charges (Rs/Kwh)	Other Charges (Rs/Kwh)	Total Charges (Rs. cr)*
KTPS	0.50	0.15	0.11	158.7
VSTPS-I	0.80	0.23	0.26	161.9
VSTPS-II	0.78	0.22	0.18	58.12
VSTPS-III (Unit-I)	0.87	0	0.01	21.09
KGPS	1.09	2.86	0.12	24.36
GGPS	1.11	0.43	0.01	29.10
KAPP	2.04	0.0	0.01	13.47
TAPPS 3&4	2.65	0.0	0.00	40.01
Total				**506.8**

Central Generating Stations - Eastern Region

4.49 For determination of allowable costs from the plants in the eastern region the principle followed for power plants in the western region is being adopted. As stated earlier, the share in these plants have been considered as per the Government's notification dated 14th March 07.

Table 133: Allocation from Central Generating Stations to MP as per Govt Notification

						Central Discom		
Sl. No.	Eastern Region CGS	Installed Capacity (MW)	State's Share (%)	Availability (MU)	Fixed Cost (Rs. Cr)	Share (%)	Availability (MU)	Fixed Cost (Rs. Crs.)
1.	Farakka	1600	1.01	184.08	5.16	14.04	26	0.7
2.	Talcher	1000	1.01	128.1	4.03	47.49	61	1.9
3.	Kahalgaon	840	2.84	80.7	9	14.04	11	1.2
4.	**Total**						**98**	**3.9**

4.50 The Variable and Other charges as allowed are given in the following table:

Table 134: Charges allowed for CGS in ER

	FY 08			
Eastern Region CGS	Variable (Rs/Kwh)	FPA Charges (Rs/Kwh)	Other Charges (Rs/Kwh)	Total Charges (Rs. Cr)*
Farakka	1.04	0.35	0.01	4.36
Talcher	0.44	0.21	0.00	5.87
Kahalgaon	1.15	0.43	0.00	3.03
Total				**13**

*Includes Fixed Charges as stated in table above

Indira Sagar (NHDC) and Sardar Sarovar Projects

4.51 For FY'07, the Commission considered only the annual fixed charges approved by CERC by it order dated 1/5/2004 for Indira Sagar. The CERC vide this order had approved fixed annual charges at Rs. 241.41 Crore for seven machines. After all the eight machines had become operational, the Commission had allowed a proportionate increase in fixed cost with a further increase of 10% on the computed cost. The Commission thus allowed Rs. 300 Crore as Annual Fixed charges for FY 07.

4.52 The Licensee, in its filings, has given a flat rate of Rs. 275. 88 Crores for Indra Sagar for FY'08. However, the Commission analysed the actual bills paid in 2006 for verifying the charges payable for the station. The Annual Fixed Charge actually paid this year till October has been found to be much less than the allowed figure for FY 07. The Commission has thus revised the annual charges for the year FY 08 on the basis of the bills paid in the year FY 07 by pro-rating the capacity charge and the variable charge actually paid by the Licensees till October'06 for the year FY 07.

4.53 The design energy of this project has been approved at 2700 MUs for FY 08. The fixed cost has been computed as Rs 191.70 Crore and Variable charges at the least variable cost of the Western region @ 0.49 Rs./Kwh, which is of Sipat Ph II. The months in which Sipat Ph II is unavailable, the variable cost has been considered as per the next least variable cost, which is of Korba @ 0.50.

4.54 MPSEB for Sardar Sarovar Hydel Project has considered a provisional rate of Rs. 2.0 per unit. This rate is as per the provisional rate fixed by GoMP vide its letter dated 30th November 2005. As per section 62(1) of the Electricity Act, only appropriate Commission has the authority to determine rate of supply of power by a Generating Company to a Distribution Licensee. Further as per section 64(5) of the Electricity Act 2003 only the State Commission having jurisdiction in respect of the Licensee which intends to distribute electricity and make payment therefore is entitled to determine the generation tariff.

4.55 For FY2007-08, the Licensee in its filing has computed the power purchase cost from Sardar Sarovar Hydro station at Rs. 0.95/kWh. The power purchase cost assumed by the Distribution Licensee is as per the cost assumed by the Commission in its Tariff Order for FY2006-07. The Commission considers the assumptions made by the Licensee appropriate. However, the Commission is allowing an increase of Rs. 0.08/kWh in the provisional rate as a possible escalation of O&M cost. It would be pertinent to mention here that NVDA has filed a petition for provisionally determining tariff at Rs. 2.00 / kWh. The design energy of this project has been approved at 1700 MUs for the FY 08. The fixed cost has been computed as Rs 91.79 Crore and Variable charges at the least variable cost of the Western region @ 0.49 Rs./Kwh, which is of Sipat Ph II. The months, in which Sipat Ph II is unavailable, the variable cost has been considered as per the next least variable cost, which is of Korba @ 0.50.

4.56 Though the petition regarding fixing the tariff for Sardar Sarovar has already been filed, the Commission is yet to finalise the rate. The Commission shall consider the appropriate rate when the hearing process in this regard is complete.

Table 135: Allowed cost for Indira Sagar and Sardar Sarovar project

		FY 08		
Sl. No.	**Other Sources**	**Availability (MU)**	**Fixed Cost (Rs. Cr)**	**Total Charges (Rs. Cr)**
	Indira Sagar	2700	191.70	324
	Sardar Sarovar	1700	91.79	175.1

Inter-State Transmission Charges

4.57 The PGCIL charges to be paid by MP consist of charges to be paid for transmission system of WR and ER. The estimate of inter-state transmission cost for existing stations has been considered as per the methodology used by the Licensee, which is on the basis of the actual bills for September 2005 to August 2006 for eastern and western region.

4.58 The commission has computed the charges for VSTPS-III (Unit-I) on the basis of the Per MW charges paid to PGCIL for the Western Region for the existing stations. Theper MW cost was then applied to the allocated capacity of the new station to get the charges.

Table 136 Inter State Transmission Charges for FY 08

Month/ Rs Cr	WR	ER	WRLDC/ULDC	Inter-Regional WR-ER	Inter-Regional WR-SR	Inter-Regional WR-NR	Total
Sep-05	8.37	0.9	0	0	0	0	9.27
Oct-05	8.7	0.83	0	0	0	0	9.53
Nov-05	8.56	0.78	0	0	0	0	9.35
Dec-05	8.63	0.49	0	0	0	0	9.12
Jan-06	8.46	0.23	0	0	0	0	8.69
Feb-06	8.46	0.22	0	0	0	0	8.68
Mar-06	9.09	0.22	0	0	0	0	9.31
Apr-06	9	0.24	0	0	0	0	9.24
May-06	9.23	0.23	0	0	0	0	9.46
Jun-06	9.22	0.25	0	0	0	0	9.47
Jul-06	7.8	0.25	0	0.24	0.14	0.73	9.15
Aug-06	7.71	0.25	0	0.29	0.08	0.54	8.87
Total	**103.24**	**4.88**	**0**	**0.53**	**0.22**	**1.27**	**110.14**
FY 08							
Existing Capacity (MW) (MP Share)	1,771.2	50.0					
Total Charges From Existing Stations (Rs. Cr.)	104.73	5.41					110.14
Cost Per MW (Rs. Cr)	0.059	0.11					
Additional Capacity from VSTPS-III (Unit-I)	114.3						
Charges from New Stations (Rs. Cr)	6.80	0					**6.80**
Total Transmission Charges (Rs. Cr)							**116.94**
Share of Central Discom (Rs. Cr.)							**37.98**

4.59 The Taxes for the Inter state Transmission charges for FY 08 has been considered as per the FY 07 tariff order i.e. Rs 2.35 Crores. The share of Central Discom is Rs. 0.76 Crores.

4.60 Based on the discussion above, the Power Purchase cost allowed by the MPERC for FY'08 is shown below:

Table 137: Commission's estimate of power purchase expenses for FY 08

(Amount in Rs. Cr)

Sl. No.	Particulars		FY'08		
			MU	Amount	Rs/Kwh
1.	Central Sector	Korba	1539.9	158.74	1.03

Sl. No.	Particulars		FY'08		
			MU	Amount	Rs/Kwh
2.	Western Region	Vindhyachal-I	1006.52	161.94	1.61
3.		Vindhyachal-II	333.80	58.12	1.74
4.		Kawas	39.67	24.36	6.14
5.		Gandhar	118.31	29.10	2.46
6.		KAPP	65.59	13.47	2.05
7.		TAPPS 3&4	150.58	40.01	2.66
8.		Vindyachal III (unit I)	104.86	21.09	2.01
9.		Total	**3359**	**507**	**1.51**
10.	ER	Farrakka + Talcher +Kahalgaon-I and Kahalgaon-II	98	13	1.35
11.	Bilateral Purchases	RSEB/ Others	353	15	0.42
12.	Other Sources	NHDC (Indira Sagar)	877.34	105.28	1.20
13.		JV-Sardar Sarovar	807.29	83.15	1.03
14.		CPP/Wind	Nil	0	0
15.		Total	**1685**	**188**	**1.12**
16.	MP Genco		5177	774	1.50
17.	Intra Discom Purchase		**33.36**	**5.69**	**1.71**
18.	Short Term Purchase (MP Tradeco)		**1312.41**	**241.07**	**1.84**
19.	Intra Discom Sale (Less)		**35.58**	**4.23**	**1.19**
20.	External Sale (Less)		**358.38**	**63.88**	**1.78**
21.	Net Power Purchases		**11624**	**1676.23**	**1.44**
22.	Transmission Charges		37.98		
23.			0.76		
24.			**38.75**		
25.	**Total Power Purchase***		**11624**	**1714.97**	**1.475**

* Includes PGCIL losses amounting to 226.38 MU

Network costs

4.61 In the following sections, the Commission has carried out an analysis of Licensee's capital expenditure plans, proposed capitalization of assets, forecast depreciation, interest and finance charges and Return on Equity. The Commission's decision regarding Central Discom's submission on these costs for FY 08 is provided in the following paragraphs.

Capital expenditure Plans and Capitalization of assets

Licensee's submission

4.62 The Licensee has adopted the five year investment plan submitted to the Commission with certain modifications. The various schemes proposed in the investment plan are aimed at achieving the following objectives:

- Capacity Building
- System strengthening
- Voltage improvement
- Loss Reduction
- Consumer Service
- Reliability of service
- Rural Electrification

4.63 The summary of the investment plan as per the petition is presented below:

Table 138: Investment Plan as filed

Rs. in Crore

Scheme	**FY 07**	**FY 08**
ND (Normal Development)	10.32	12.00
JBIC (Japan Bank for International Cooperation)	30.70	19.21
ST (N) (Sub-Transmission Normal)	19.32	21.00
PSI (Power System Improvement)	3.69	0.00
APDRP (Accelerated Power Development and Reform Program)	80.19	15.55
ADB (Asian Development Bank)	59.52	0.00
RGGVY (Rajiv Gandhi Gramin Vidyutikaran Yojana)	120.28	250.39
PMGY (Pradhan Mantri Gramin Yojana)	1.40	0.00
ADB – II (Second phase of ADB funded scheme)	0.00	41.56
Total (Rs. Crore)	**325.42**	**359.71***

***A totaling mistake in the petition has been corrected**

4.64 The Licensee has submitted that certain modifications have been made to the investment plan submitted earlier as part of the Business Plan, approved by the Commission. These are, primarily:

- Revision of the phasing of the proposed new ADB scheme is based on the detailed project reports submitted to ADB
- Revision of the phasing of the investments of the RGGVY scheme based on the updated status of approvals for the various circle-level schemes
- Revision of the proposed investment under the APDRP scheme for FY 07 and FY08 as decision on continuation of the scheme beyond FY07 is still awaited from the Government of India.

Capitalization Plan

4.65 The Licensee has submitted that it has inherited a CWIP of Rs. 461 Crore as per the provisional opening balance sheet notified by GoMP dated 31st May 2005. The addition to CWIP in FY06 as per the audited accounts has been Rs. 78.44 Crore. However, details of CWIP amounting to Rs. 78.44 Crore have not been submitted. For the projection period, the capitalization has been assumed as follows:

- Opening CWIP as per provisional balance sheet of FY 06 (from 1st June 05 to 31 March'2006) is estimated to get capitalized equally in five years.
- New investments every year have been assumed to get capitalized in five years.
- While the proposed investments under the RGGVY scheme have been stated in the investment plan, the assets and the corresponding liabilities have not been considered for the MYT projections. As per the terms and conditions of this scheme, the assets and liabilities belong to the State Government.
- Expenses capitalization has been assumed at 4% of the annual employee and A&G expenses.

4.66 The Licensee has also claimed in the petition that the following additions / expansion in the distribution system shall be made during FY08:

Table 139: Physical details of network

Particulars	FY06 Actual	FY07 Estimated	FY08 Projected
33kV line (Ckt-km)	183.21	368.5	255.0
11kVline (Ckt-km)	238.28	4687.0	4476.0
LT line (Ckt-km)	397.42	1100.0	1170.0
33/11kV Substation (No.)	0	29	22
Power transformers – Nos./ MVA	32 / 149.6	30 / 94.5	14 / 44.1

Particulars	FY06 Actual	FY07 Estimated	FY08 Projected
Distribution transformers – Nos. / MVA	3013 / 315.8	8788 / 553.6	8755 / 551.6

Commission's analysis of capital expenditure and capitalization

4.67 The Commission has specified the *"Guidelines for Capital Expenditure by the Licensees in MP"*. The Guidelines require the Licensees to submit to the Commission a five-year Business Plan containing physical and financial details of all investment schemes planned over the five-year horizon. Under the notified guidelines, the Licensee has filed a Business Plan to the Commission covering the five-year period FY07 to FY11, which has been approved by the Commission vide letter no. 2178 dated 31.08.06. The following table provides the investment plan of the Licensee approved as part of the business plan:

Table 140: Investment plan as approved under Licensee's Business Plan

Amount in Rs. Crore

Scheme	FY07	FY08
JBIC (Japan Bank for international Cooperation)	30.70	19.21
Normal Development (internal resources)	38.22	26.75
STN – Internal Resources	44.63	32.25
PSI – Internal Resources	3.69	3.12
APDRP (Accelerated Power Development and Reform Program)	81.42	0.00
ADB (Asian Development Bank)	59.52	0.00
RGGVY (Rajiv Gandhi Gramin Vidyutikaran Yojana)	120.28	250.39
PMGY (Pradhan Mantri Gramodaya Yojana)	0.17	0.00
Total	**378.63**	**331.70**

4.68 The following differences exist between the approved investment plan and the plan filed by the Licensee in its tariff petition:

Table 141: Deviation of filed Investment Plan from approved Business Plan

Rs. in Crore

Name of Scheme	FY07		FY 08	
	Filed in the petition	Approved as per Business plan	Filed in the petition	Approved as per Business plan
ND	10.32	38.22	12.00	26.75

Name of Scheme	FY07		FY 08	
	Filed in the petition	Approved as per Business plan	Filed in the petition	Approved as per Business plan
JBIC	30.70	30.70	19.21	19.21
ST (N)	19.32	44.62	21.00	32.24
PSI	3.69	3.68	0.00	3.12
APDRP	80.19	81.42	15.55	0.00
ADB	59.52	59.52	0.00	0.00
RGGVY	120.28	120.28	250.39	250.39
PMGY	1.40	0.17	0.00	0.00
ADB – II	0.00	Not filed in Business plan	41.56	Not filed in Business plan
Total	**325.42**	**378.63**	**359.71**	**331.71**

4.69 As shown in the table above, the Licensee in its petition has projected lower capital investments under schemes: ND, ST (N) and PSI. These schemes are proposed to be funded through internal resources of the Licensee. The Commission therefore has no objection in accepting lower Capex since the Licensee is in best position to anticipate the availability of surplus resources from its operations. It is also evident that the Licensee has projected excess investment against APDRP amounting to Rs. 14.32 Crore (80.19 + 15.55 – 81.42) for FY08 vis-à-vis the investment projected in the Business Plan. In addition to the schemes in the Business Plan, the Licensee has also proposed investment under ADB II. The Licensee has submitted the details of ADB-II scheme with the Commission, which are being processed by the Commission.

4.70 The Commission does not intend to restrict investments by the Licensee and therefore allows the Licensee to invest as per Licensee’s investment plan. The Licensee is also free to take up any new scheme during the course of FY 08, which is not envisaged now, provided the Licensee seeks Commission’s approval for the scheme as required under Commission’s capex guidelines.

4.71 With regard to determination of ARR for FY 08, the role of capital investments is to the extent of the works that are planned to be commissioned during the course of FY 07 and FY 08. The Gross Fixed Assets as at the end of FY 05-06 are available from Licensee’s Audited Accounts, to which any further capitalisation during FY 07 and FY 08 shall get added. The depreciation and interest charges for FY 08 are influenced by the extent of capitalisation during FY 07 and FY 08. Therefore, it is necessary to consider Licensee’s performance so far during the year FY06-07 with respect to completion of capital works. This is presented in table below:

Table 142: Licensee's progress of completion of capital works in FY 06-07

Rs in Crore

Scheme	FY07 As approved in business plan	Progress reported by Licensee during FY 07 up to 31-10-2006 for ADB and APDRP and up to 30.09.2006 for other schemes
ND	38.22	3.31
JBIC	30.70	00.00
ST (N)	44.62	00.00
PSI	3.68	Not submitted
APDRP	81.42	15.59
ADB	59.52	17.43
RGGVY	120.28	00.00
PMGY	0.17	00.00
ADB – II	00.00	00.00
Total	**378.63**	**36.33**

4.72 From the table above it can be seen that the financial progress during the initial seven month period of FY 06-07 is only around 10% as against the approved Business Plan of the Licensee. The physical progress achieved by the Licensee vis-a-vis the projected numbers for the same period is as given in the table below:

Table 143: Physical progress of completion of capital works in FY 06-07

Particulars	FY 07	Progress up to 31.09.2006	Progress in %
33kV line (Ckt-km)	368.5	42.23	11.50
11kVline (Ckt-km)	4687.0	66.89	14.27
LT line (Ckt-km)	1100.0	2.90	0.30
33/11kV Substation (No.)	29	7	24
Power transformers – Nos./ MVA	30 / 94.5	7/Not submitted	23/ Not submitted
Distribution transformers – Nos. / MVA	8788 / 553.6	577/ Not submitted	7/ Not submitted

4.73 The progress status shown above makes it apparent that the Licensee has fallen considerably short of the capital expenditure approved by the Commission, as part of the Business Plan, for FY07. Even if the existing progress is prorated for the remaining five months, the achievements shall be way below targets. Also, the Licensee has not been able to substantiate the above mentioned progress with the actual completion reports in respect of each scheme. Therefore, it is not clear as to whether the works completed so far in FY07 have been transferred from CWIP to Fixed Assets.

4.74 Licensee's audited accounts for FY06 provided to the Commission show the Gross Fixed Assets as at the end of FY06 as Rs. 1303.08 Crore, while the opening GFA as per the notified Balance Sheet of 31st May 05 stands at Rs. 1281.00 Crore. Hence during the ten month period from 1st June 05 to 31st March 06, the addition to GFA is only Rs. 22.08 Crore. For the purpose of determining the amount of possible capitalisation during FY 07 and further during FY 08, the Commission enquired from the Licensee about the budgeted capitalisation during FY 06, but the Licensee has not provided the same to the Commission.

4.75 Given the poor capitalisation rate of the Licensee during FY 06 and the very meagre progress against targets during FY 07, the Commission considers it best in consumer interest not to consider any addition to GFA in FY 07 and FY 08 for FY 08 tariff determination. The actual addition during FY 07, supported by Audited Accounts, shall be considered for FY 09 tariff determination. This is also expected to provide an incentive to the Licensee to expedite completion of pending capital works, maintain project completion reports and ensure timely submission of the same to the Commission.

4.76 The Commission wishes to emphasize that it is very much in favour of focussed investments in the distribution sector. In Commission's opinion, there is an urgent need for heavy investments for improvement of distribution network in the State. The National Electricity Policy and also the National Tariff Policy have considered investments in distribution network as a priority. APDRP and other schemes funded through ADB, PFC etc. could be major initiatives in this direction. Unfortunately in spite of getting priority attention, the Distribution Company's performance in this regard has been dismal and there seems to be lack of adequate inclination to implement schemes within stipulated time period. While this situation is leading to continuing high distribution losses, at the same time the Commission is constrained to take a view to allow only those investments in tariff, which the distribution Companies have factually demonstrated through their submissions in this regard. At this moment, the GFA as reflected in the Licensee's Audited Accounts for FY 05-06 is the only documented and verified information that the Commission has of the asset base of the Licensee. Thus the Commission shall allow depreciation and interest charges for FY 08 only on the GFA as at the end of FY 05-06.

Operations and Maintenance Costs

Licensee submission

4.77 The Licensee has claimed O&M expenses on a normative basis as specified by the Commission in MPERC (Terms and conditions for Determination of Tariff for distribution and retail supply of electricity and methods and principles for fixation of charges) Regulations, 2006. The Licensee has considered the determinants of O&M expenses as average of closing balances of FY 07 and FY 08. The Licensee's claim for FY 08 is as under:

Table 144: O&M Expenses as claimed by the Licensee

	O&M charges	**FY08**
A	Metered consumers	1978449
	Multiplying Factor – A (Rs. Lakh / '000 consumers)	6.50
	O&M – A (Rs. Lakh)	**12859.92**
B	Additional pre-paid meters to be installed during the year	0.00
	Multiplying Factor – B (Rs. Lakh / meter)	0.50
	O&M – B (Rs. Lakh)	**0.00**
C	Metered Sales (MU)	6128
	Multiplying Factor – C (Rs. Lakh / MU)	2.35
	O&M – C (Rs. Lakh)	**14400.45**
D	HT Network Length (ckt-km)	72934
	Multiplying Factor – D (Rs. Lakh / '00 ckt-km)	16.00
	O&M – D (Rs. Lakh)	**11669.38**
E	Transformation Capacity (MVA)	4153
	Multiplying Factor – E (Rs. Lakh / MVA)	1.53
	O&M – E (Rs. Lakh)	**6354.24**
F	Items not covered in formulae (MPERC License fee, Taxes) (Rs. Crore)	**64.20**
	Total O&M (A+B+C+D+E+F) in Rs Crore claimed	**517.04**

*includes terminal benefits of Rs. 63.62 Crore

Commission's analysis for O&M cost

4.78 In the section on asset capitalisation, the Commission has already elaborated its reasons for not considering any asset addition during FY 07 and FY 08 for the purpose of FY 08 tariff determination. While the Licensee is encouraged to improve upon its asset capitalisation rate, the benefit of the same shall be made available to the Licensee only in subsequent tariff years when true-up petitions are considered. The Commission considers this in the best interest of consumers, since this way the consumers do not have to pay, through tariffs, for future additions to asset base, which may or may not materialise to the extent allowed, given the past performance of the Licensee. Hence, the Commission has determined normative O&M expenses for FY 08 only on the ckt-km of HT lines and transformation capacity existing as at 31st March 2006. This data has been provided by the Licensee to the Commission.

4.79 The Commission's approach stated in the preceding paragraph is further corroborated by the Licensee's past performance with regard to creation of lines and transformers. This is presented in the table below:

Table 145: Licensee's past performance with respect to creation of network assets

Particulars	As on March 03	Addition during FY 03-04	Addition during FY 04-05	Addition during FY 05-06	Addition claimed during FY 06-07	Addition claimed during FY 07-08
HT line (Ckt-km)	61021	444	1368	421	5182	4503
Power transformers – MVA capacity	3005	220	316	249	536	204

4.80 It is noted from the above table that the addition to lines and transformation capacity as projected by the Licensee for FY 07 and FY 08 is not in line with the same actually added during the previous years. In fact, by Licensee's own submission of progress of completion of works during FY 07, it is apparent that the projections made by the Licensee for FY 07 are highly exaggerated. This is presented in the table below:

Table 146: Licensee's progress of creation of network assets in FY 06-07

Particulars	Network addition claimed in ARR for FY 07	Actual Progress up to 31.10.2006 in all schemes operated by Company	Progress in %
33kV line (Ckt-km)	5182	109	**2.10%**
Power transformers MVA	525	Not submitted	

4.81 With regard to the other two determinants of normative O&M expenses i.e. metered consumers and metered sales, the Commission, in order to maintain consistency, has adopted a similar approach for FY 08 determination; that is, these parameters are also considered only as at the end of FY 06 and no additions during FY 07 and FY 08 are considered for the purpose of O&M cost determination. This data was also provided by the Licensee to the Commission.

4.82 The Commission, however, wishes to emphasise that, although for the purpose of FY 08 ARR determination, the determinants of normative O&M expenses have been considered as at the end of FY 06 only, the normative expenses shall be recomputed at the end of the FY 08 based on actual additions during FY 07. The adjustment shall be considered at the time of truing up for FY2007-08.

4.83 Based on the above arguments, the normative O&M expenses allowed by the Commission to be recovered through tariffs for FY 08 are as below:

Table 147: O&M expenses as approved by the Commission for FY 08

Amount in Rs. Crore

	O&M expenses	**FY08**
A	Metered consumers	1446670
	Multiplying Factor – A (Rs. Lakh / '000 consumers)	6.50
	O&M – A (Rs. Lakh)	**9403.36**
B	Metered Sales (MU)	3689
	Multiplying Factor – C (Rs. Lakh / MU)	2.35
	O&M – C (Rs. Lakh)	**8669.15**
C	HT Network Length (ckt-km)	63249
	Multiplying Factor – D (Rs. Lakh / '00 ckt-km)	16.00
	O&M – D (Rs. Lakh)	**10119.82**
D	Transformation Capacity (MVA)	3415
	Multiplying Factor – E (Rs. Lakh / MVA)	1.53
	O&M – E (Rs. Lakh)	**5224.95**
E	Items not covered in formulae (MPERC License fee, Taxes) (Rs. Crore)	**0.59**
	Total O&M (A+B+C+D+E) in Rs Crore allowed (net of capitalisation)	**334.76**

4.84 The Commission's regulations provide for Terminal Benefits to be provided over and above the normative amount of O&M expenses. As at present, the terminal benefits are being taken care of by the MPPTCL in the absence of creation of a pension trust as envisaged in the GoMP Order dated 31st May 2005, no separate provision for Terminal Benefits has been considered in this Order for the Licensee.

Depreciation

Licensee's submission:

4.85 The Licensee has submitted that it has inherited a GFA of Rs. 1281 Crore as per the notified opening balance sheet, which is subject to change on any subsequent notification by the GoMP. They have also claimed that in FY06, the addition to GFA has been to the tune of Rs. 20.32 Crore and the accumulated depreciation as on 31st March 2006 as per the provisional balance sheet is Rs. 881.75 Crore.

4.86 The Licensee has submitted that an exercise to split the notified opening balance of GFA into depreciated and depreciable assets is being initiated at all RAUs and that the Licensee would be in a position to provide this information if such need arises. In supplementary information submitted subsequent to the filing the Licensee has provided the percentage of depreciable assets. Further, depreciation on assets added during each year thereafter has been computed by the Licensee on the basis on projected capitalization in each such year as presented in the section on capital expenditure of this Order. The total projected capitalization in each year has been distributed into different asset categories on the basis of the break-up available as per the FY06 provisional accounts of the Licensee. The depreciation has been claimed on the basis of rates notified by the Ministry of Power under notification S.O.265 (E) dated 27th March 1994.

4.87 The Licensee has claimed depreciation for a year on the opening balance of GFA for such year and has not claimed any depreciation on assets added during the year. The depreciation claimed by the Licensee for FY07 and FY08 is shown below:

Table 148: Depreciation as claimed by the Licensee

Amount in Rs. Crore

Asset class	**FY 07**	**FY08**
Land and Land Rights	0.00	0.00
Building and Civil Works	0.50	0.06
Hydraulic Works	0.00	0.09
Other Civil Works	0.03	0.04
Plant and Machinery: ---		
Transformers	33.55	34.42
Batteries	0.02	0.66
Communication equipment	0.06	0.62
Others	0.00	2.86
Line and Cable Networks, etc.: --		
Meters	26.29	29.78

Asset class	FY 07	FY08
Others	47.97	54.54
Vehicles	0.00	1.27
Furniture and Fixtures	0.17	0.19
Other Equipment	0.34	0.42
Any Other Items	0.00	0.00
Total	**108.93**	**124.95***

* A calculation mistake in the petition has been corrected

4.88 The Licensee has not computed depreciation separately for wheeling and retail sale activities, and has claimed all depreciation for wheeling business alone.

Commission's analysis of depreciation claims:

4.89 The Commission has analysed the claims of the Licensee regarding depreciation and was disappointed to note that unlike the other two Distribution Companies, the Licensee had not initially provided the opening balance of depreciable assets as on 31st May 05 to the Commission. The Licensee when directed by the Commission submitted the same as given in the table below. For computing the allowable depreciation the Commission has used the percentage of depreciable assets as submitted by the Licensee.

Table 149: Percentage of depreciable assets as employed by the Commission

Asset Class	Depreciable % as on 31st May 05
Land & Land rights	0%
Building and Civil Works	0%
Hydraulic Works	0%
Other Civil Works	0%
Plant & Machinery	
Transformers	41%
Batteries	18%
Switchgear, control & protection	48%
Others	48%
Line Cable Networks, etc.	
Meters	69%
Others	46%
Vehicles	99%
Furniture and Fixtures	78%

Asset Class	Depreciable % as on 31st May 05
Office Equipment	54%
Any other items	0%

4.90 However, the depreciable and fully depreciated assets as on 31st May 05, as worked out by the Licensee do not match with the accumulated depreciation as per the notified opening balance sheet. If this data is utilized, it shall be in conflict with the opening balance sheet.

4.91 For FY06, the Licensee has claimed an asset addition of Rs. 20.32 Crore, however as per the audited balance sheet submitted by the Licensee the addition has been of Rs. 8.76 Crore only. The accounts also show a consumer contribution of Rs. 5.44 Crore towards cost of capital assets.

4.92 The Commission has dealt at length the reasons for not considering the cost projections done by the Licensee as these appear to be inflated and not in conformity with the past trend. In the past, both physical and financial asset capitalization achieved by the Licensee has been extremely low. The same is likely to be true for FY07 as well. The issue of asset capitalization has been dealt with in detail in the section on asset capitalization of this order. If the same rate is used for projecting asset addition during FY08, the addition is not likely to be substantial. Consequently deprecation for FY08 is not likely to deviate much from the depreciation available for FY06. For FY08 the Commission has therefore computed depreciation on the closing balance of assets existing as on 31st March 2006 and no projected asset additions have been considered. The Commission shall true up the allowed amount when the audited balance sheet for FY08 becomes available provided that the assets capitalized during FY07 and FY08 form a part of the schemes that have been duly approved by the Commission as per the Capex guidelines framed by it.

4.93 The opening GFA and its split into various asset categories considered by the Commission for the purpose of computation of depreciation is as shown in the following table:

Table 150: Split of GFA as on 31st March 06 into various asset classes

Amount in Rs. Crore

Asset class	FY08
Land and Land Rights	3.77
Building and Civil Works	16.53
Hydraulic Works	1.15
Other Civil Works	0.88
Plant and Machinery: ---	
Transformers	416.21

Asset class	**FY08**
Batteries	0.30
Communication Equipment	0.72
Others	21.52
Line and Cable Networks, etc.: ---	
Meters	206.13
Others	612.66
Vehicles	3.34
Furniture and Fixtures	1.31
Other Equipment	2.65
Any Other Items	2.59
Total	**1289.76**

4.94 The Commission's Regulations under section 61 prescribe that the depreciation should be computed using the rates as fixed by the CERC and as amended from time to time. The Licensee, in its filing for FY07, had computed depreciation based on these rates. However, in the current filing, the Licensee has computed depreciation for FY07 and FY08 on the basis of MoP rates and has requested the Commission to allow the depreciation on MoP rates. In order to buttress its claim for higher depreciation rates (MoP rates are higher than the rates allowed by CERC), the Licensee has referred to section 5.3 (c) of the National Tariff Policy that states that for distribution the Forum of Regulators shall evolve the depreciation rates. Further, the Policy also states these notified rates shall be applicable both for tariff and accounting purposes. The Licensee has also pointed out that as per AS-6 "Depreciation Accounting" issued by the ICAI if any change is made in the method of depreciation, retrospective computation of depreciation from the year of change would be required.

4.95 The National Tariff Policy recommends that the Forum of Regulators (FoR) shall evolve the depreciation rates suitable for distribution business. In this regard, the Commission wishes to quote a letter from the FoR Ref. No. 1/20(6)-2006-Tariff Policy / CERC dated 23rd June 2006 addressed to the Chairpersons of the SERCs, which states that the depreciation rates as fixed by the CERC shall also be applicable for distribution businesses. The Commission, therefore, does not accept the Licensee's claim and has computed depreciation based on CERC rates. Also, the erstwhile Regulations of the Commission issued under section 61 of the EA 2003 on 5th December 2005 had also prescribed the same rates as prescribed by CERC.

4.96 The Commission has computed depreciation on assets notified as a part of the transfer scheme of 31st May 2005 and on assets added during FY06 separately. For assets notified existing as on 1st June 2005 the Commission has provided depreciation for an asset category to the extent that the accumulated depreciation as on 31st March of each year does not exceed 90% of the historical cost of acquisition.

4.97 Based on the discussion above, the depreciation allowed by the Commission for FY08 is shown below:

Table 151: Depreciation allowed by the Commission for FY 08

Amount in Rs. Crore

Asset class	**FY08**
Land and Land Rights	0.00
Building and Civil Works	0.30
Hydraulic Works	0.00
Other Civil Works	0.02
Plant and Machinery: ---	
Transformers	14.98
Batteries	0.00
Communication Equipment	0.00
Others	0.00
Line and Cable Networks, etc.: ---	
Meters	12.37
Others	22.06
Vehicles	0.00
Furniture and Fixtures	0.08
Other Equipment	0.16
Any Other Items	0.00
Total	**49.96**

4.98 With regard to segregation of allowed depreciation between wheeling and retail sale activities, the Commission's approach and final decision are contained in the relevant section of this Order.

Interest and Finance Charges

Licensee's submission:

4.99 The interest and finance charges comprise of interest on project specific loans as per the opening Balance Sheet of 31st May 05 and the new loan drawals as per the investment plan provided by the Licensee for FY08, the interest charges on Consumer Security Deposits, the interest charges on working capital loans and the cost of raising finance from the lending agencies. With regard to new capital expenditure during FY08, the Licensee has provided a matching financing plan comprising of loan drawals, equity infusion and consumer contribution.

4.100 The Licensee has also shown part funding of ADB-I scheme through 'untied funds' (i.e. if there is no committed funding available). In addition, the loan drawals as projected by the Licensee include large amounts under the head "other market borrowings for capital expenditure" for FY08. However, the application of these funds has not been made explicit in the capital expenditure plan of the Licensee.

4.101 The summary of the capital expenditure plan for FY08 considered by the Licensee for interest computation as per the petition is given in the table below:

Table 152: Summary of filed capital expenditure plan

Amount in Rs. Crore

Scheme	**FY 07**	**FY 08**
ND	10.32	12.00
JBIC	30.70	19.21
ST(N)	19.32	21.00
PSI	3.69	0.00
APDRP	80.19	15.55
ADB	59.52	0.00
RGGVY	120.28	250.39
PMGY	1.40	0.00
ADB – II	0.00	41.56
Total	**325.42**	**359.71**

4.102 The Licensee has computed interest separately on loans allocated to it by State Government in the transfer scheme notified on 31st March 2005. The opening and closing balances of these loans for FY08 have been determined by adjusting for the projected repayments.

4.103 The Licensee has claimed that the terms and conditions (such as rate of interest, term of repayment, moratorium period, etc.) of the loans allocated to it as per the notified Balance Sheet are as per the respective loan agreements and the conditions indicated by the State Government. The terms and conditions of the new loans have been considered as per the Loan agreement with the lending agency. With regard to untied funds, however, the terms and conditions have been assumed. The terms and conditions considered by the Distribution Licensee for new loans for computing interest cost is as given in the table below:

Table 153: Loan terms and conditions as filed

Source	**Interest Rate (%)**	**Moratorium**	**Repayment term**
PFC Loans	9.25	2	8
REC Loans	8.25	3	10
ADB Loans	10.5	5	15
JBIC	9.20	5	15
Other Market Borrowings for capex (Untied)	10.5	1	7

4.104 The cost of raising finance and bank charges for each FY08 has been projected for existing loans at the rate 2% of the gross interest cost of these loans. The Licensee has not projected any finance charges for new loans. The basis for these assumptions has not been provided. The interest payable on Security Deposit has been computed by projecting total security deposit that the Licensee is entitled to as per the relevant regulation. The Licensee has considered security deposit of 3 months of the average demand for agricultural consumers, 1.5 months of the average demand for other consumers and the interest rate payable on this deposit has been considered at 6%.

4.105 The Licensee, in its petition, has considered interest capitalization at the rate 40% of the interest cost of all loans considered during FY08, inclusive of finance charges. With regard to expense capitalized, the Licensee has assumed it as 4% of gross annual employee and A&G cost. No reasons have been offered by the Licensee in the petition for this assumption.

It must be pointed out here that the Licensee's financing plan does not provide any funding for IDC and expense capitalized. However, on analyzing the numbers it appears that the untied funds as projected by the Licensee would be utilized for funding IDC and expenses capitalized.

4.106 The Distribution Licensee has computed the interest cost for the existing and new loans on the basis of the terms and conditions indicated above. The interest cost claimed by the Distribution Licensee is given in the table below:

Table 154: Interest and finance charges as claimed by the Licensee

Amount in Rs. Crore

Interest and finance charges (IFC)	**FY 07**	**FY 08**
IFC on New long term loans		
PFC	0.93	2.03
REC	1.87	4.19
ADB	2.19	5.90
JBIC	1.17	3.08
IFC on existing long term loans		
PFC	5.73	4.17
REC	0	7.63
ADB	6.32	6.16
GoMP – APDRP	4.39	3.76
IFC on existing Generic loans from MPSEB	34.77	30.34
Other mkt borrowings for rev. deficit	0	0
Other mkt borrowings for Working Capital	8.75	7.41
Mkt borrowings for capex (Untied)	6.40	13.95
Other IFC		
Cost of raising finance and bank charges	1.02	1.04
Interest on consumer security deposit	18.29	20.06
Penal Interest Charges	0	0
Lease Rentals	0	0
Penalty charges for delayed payment for power purchase	0	0
Gross IFC	**88.23**	**108.42**
Less IFC Capitalised	**25.92**	**32.90**
Net Interest & Finance Charges	**62.31**	**75.52**

Commission's Analysis

4.107 The Commission's Regulations on Terms and Conditions of Determination of Tariff for Distribution and Retail Supply of Electricity and Methods and Principles of fixation of charges, issued on 26th October 2006 allow interest charges of only those loans to be passed through the ARR for which the associated capital works have been completed and put to use.

4.108 The Commission has also given directions to the Licensee to maintain half-yearly accounts, get them audited and submit to the Commission. The Licensee has, however, till date only provided the annual accounts. The latest annual accounts provided to the Commission by the Licensee pertain to FY 05-06, while the accounts for the half year ended 30th September 06 have not been submitted by the Licensee. Although the Licensee has provided to the Commission its progress of completion of capital works till October 06, it has not been established whether the works completed have been capitalised or not. Therefore, the Commission is only certain of the capitalisation (GFA) as available from the final audited accounts of FY 05-06. Moreover, going by Licensee's performance with regard to capitalisation of on-going works in the past, the asset addition anticipated during FY 07 and FY 08 is marginal.

4.109 For all on-going works, the interest cost related to the loan funding of such works is considered as Interest During Construction (IDC) which shall be capitalised and added to the project cost at the time of asset capitalisation. Such interest cost is not considered as a pass through in the ARR. The idea is that the consumer can only be made to bear the interest cost related to those assets, which the consumer is making use of. The asset which is under construction is not useful to the consumers, hence interest cost incurred by the Licensee during construction becomes a part of CWIP and is not allowed to be recovered through tariffs.

4.110 The Commission is aware that the Licensee shall complete some capital works during the course of FY 07 and FY 08, which shall be capitalised and added to the asset base. However, as explained in the section on capitalisation, the Licensee's past performance with respect to capitalisation of assets completely defies the projections that the Licensee has made for FY 07 and FY 08. The Commission thus considers it prudent not to consider the possible capitalisation for FY 07 and FY 08, but consider the interest expenses attributable to such assets only when such assets are actually added to the asset base. This shall also serve as an incentive for the Licensee to expedite the completion of works and tone up its accounting practices to ensure quick and efficient transfer of assets from CWIP to GFA. At the same, this shall also act as an incentive for the Licensee to maintain half yearly accounts and submit the same to the Commission.

4.111 The Commission, therefore, for FY 08 is inclined to follow the same approach as adopted in the Tariff Order for FY 07 to work out the interest cost chargeable to revenue account. This involves allocation of debt and equity into GFA and CWIP as available from the FY 06 Audited Balance Sheet. This has been done in the following manner:

(a) Net addition to GFA during FY 05-06 is worked after subtracting from total addition to GFA, the consumer contribution amount as available from the Balance Sheet

(b) 30% of the net addition to GFA during FY 05-06 has been considered as funded through equity and added to the Equity allocated to GFA as on 31st May 05 as per the FY 07 Tariff Order.

(c) Balance of net addition to GFA is considered as having been funded through debt and added to the total debt allocated to GFA as on 31st May 05 as per the FY 07 Tariff Order.

(d) Debt repayments have then been subtracted from the total debt identified with completed assets as computed from above. Repayments have been worked out as pro-rata to total scheduled repayments during FY 05-06. Actual repayments have not been considered since there have been principal defaults by the Licensee during FY 05-06.

The allocation is presented in the tables below:

Table 155: Allocation as per FY 07 Tariff Order:

Amount in Rs. Crore

S. No.	Source of funds	Amount as per notified balance sheet	Allocated to Fixed Assets	Allocated to Capital Works-in-Progress
1.	Equity	316	316	0
2.	Project specific loans	220	75	145
3.	MPSEB loan	316	0	316

Table 156: Computation of debt associated with completed works as at end of FY 06:

S. No.	Particulars	Amount (Rs. Crore)
1.	Addition to GFA during FY 05-06	22.08
2.	Consumer Contribution during FY 05-06	5.55
3.	Net addition to GFA during FY 05-06	16.53
4.	30% of addition to net GFA (considered as funded through Equity)	4.96
5.	Balance addition to net GFA – funded through debt	11.57
6.	Debt associated with GFA as on 31st May 05 (from above table)	74.97
7.	Debt repayment	5.91
8.	**Total debt associated with GFA as on 31st Mar 06 (5+6-7)**	**80.62**

4.112 The interest cost can only be allowed on those loans which are identified as per the allocation as associated with completed works (GFA). The interest has been allowed on such debt at the weighted average interest rate of all loans as on 31st March 06. The weighted average interest rate as worked out for FY 05-06 for Central Discom is 10.35% p.a. This is determined based on scheduled repayments, not considering actual interest and principal defaults during FY 05-06. Also, notional interest payment on REC loan has been considered for this purpose, even though there is a moratorium on interest payment on REC loan, since interest shall have to be paid after the moratorium period. This weighted average interest rate of 10.35% is less than the SBI Benchmark PLR of 11.50%, hence is allowed as such. The weighted average interest rate is then applied to the loans identified as associated with completed works as per the allocation mentioned above to determine the allowable interest cost to be passed through the ARR for FY 08. This is presented in the table below:

Table 157: Interest cost as allowed for FY 08

Amount in Rs. Crore

Particulars	**FY08**
Debt associated with capitalised assets	80.62
Weighted average rate of interest (%)	10.35%
Interest cost allowed through ARR	**8.34**

4.113 The cost of raising finance and bank charges have been estimated by the Licensee at 2% of interest cost of existing loans projected to be incurred during a financial year. This, as estimated by Licensee works out to Rs. 1.04 Crore for FY 08. The Licensee has not provided the basis for this assumption. However, the Commission does not wish to discourage the Licensee from drawing new loans to carry out capital works during FY 07 and FY 08. The Commission thus allows Rs. 1.04 Crore as cost of raising finance for FY 08. The total interest and finance charges allowed for FY 08 are as under:

Table 158: Total interest and finance charges as allowed for FY 08

Amount in Rs. Crore

Particulars	**FY08**
Interest cost allowed	8.34
Finance charges allowed	1.04
Total Interest and finance charges allowed through ARR	**9.38**

Interest on Working capital

Licensee's submission

4.114 The interest cost has been computed separately for wheeling and retail activity at 12.50% of the working capital requirement determined in accordance with the provisions of the regulations of the Commission for determination of distribution of tariff. The details are as given in the table below:

Table 159: Interest on working capital loans as claimed for FY 08

Amount in Rs. Crore

Sl. No.	**Particulars**	**FY08**
	Wheeling Activity	
A)	$1/6^{th}$ of annual requirement of for previous year	5.81
B)	$1/12^{th}$ of O&M Expenses	43.09
C)	2 months of average wheeling charges	0.00

Sl. No.	Particulars	FY08
	Total Working Capital	48.90
	Rate of Interest (%)	12.5
	Interest on Working Capital	6.11
	Retail Sale Activity	
A)	1/6th of annual revenue requirement of inventory for previous year	0.00
B)	Receivables equivalent to 2 months of average billing	397.76
Less	1/12th of the power purchase expenses	173.51
	Consumer Security Deposit	334.32
	Total Working Capital	-110.06
	Rate of Interest	12.5%
	Interest on Working Capital	**0.00**

Commission's analysis

4.115 For retail sale activity the Commission has considered the annual inventory requirement at 1% of the gross value of metering assets only as the end of FY 05-06, (which as per Table 151 is Rs. 206.13 Crore). Two months requirement of metering stores would thus work out to Rs. 0.34 Crore (1% of 206.13, pro-rated to 2 months). As per Table 151, the remaining value of Gross Block would thus be Rs. 1083.63 Crore as at the end of FY 06. One percent of this value pro-rated to two months would work out to Rs. 1.81 Crore. This has been considered as the inventory requirement for wheeling activity. The Consumer security Deposit has been considered as discussed in the section on interest on consumer security deposit. The values of other elements of working capital have been recomputed for the amount allowed by the Commission in the relevant sections of this order. The interest on working capital allowed by the Commission for wheeling and retail sale activity is given in the table below:

Table 160: Interest on working capital loans as approved for FY 08

Amount in Rs. Crore

Sl. No.	Particulars	FY08
	Wheeling Activity	
A)	1/6th of annual requirement of inventory for previous year	1.81
B)	1/12th of O&M Expenses	27.90
C)	2 months of average wheeling charges	0.00
	Total Working Capital	29.71
	Rate of Interest (%)	12.75%
	Interest on Working Capital - wheeling	**3.79**

Sl. No.	Particulars	FY08
	Retail Sale Activity	
A)	1/6th of annual revenue requirement of inventory for previous year	0.34
B)	Receivables equivalent to 2 months of average billing*	393.06
Less	1/12th of the power purchase expenses	142.91
	Consumer Security Deposit**	349.97
	Total Working Capital	(99.48)
	Rate of Interest	12.75%
	Interest on Working Capital - retail	**0.00**

*Calculated at approved tariffs of FY 08 contained in the relevant section of this Order
**Calculated based on revenues for FY 08 as worked out from approved sales forecast and approved tariffs for FY 08

Interest on Consumer Security Deposit

Licensee's submission

4.116 The interest payable on Security Deposit has been computed by projecting total security deposit that the Licensee is entitled to as per the relevant regulation. The Licensee considered security deposit of 3 months of the average demand for agricultural consumers, 1.5 months of the average demand for other consumers.

4.117 As per the Balance Sheet notified by the State Government on 31st May 2005, the consumer security deposit allocated to Central Discom was Rs. 278 Crore. During FY06 the Licensee expects the consumer security deposit amount to further increase by around Rs. 20 Crore. The projected closing balances for FY08 are in line with the balance notified by the State Government. The interest has been worked out at 6% of the closing balance of the relevant year. For FY08 the interest that has been claimed on projected consumer deposit is as given in the table below:

Table 161: Interest on CSD as claimed for FY 08

Amount in Rs. Crore

Consumer Security Deposit	FY08
Projected Closing Balance	334.32
Interest Charges on CSD @ 6%	**20.06**

Commission's analysis

4.118 For FY08, the Commission has determined the CSD as per the provisions of MPERC (Consumer Security Deposit) Regulations 2005 and the projected revenue from each category of consumers for the approved tariff. Interest on CSD has been allowed on the average of the opening and the closing balance of FY08 is as given in the table below:

Table 162: Interest on CSD as allowed for FY 08

Amount in Rs. Crore

Consumer Security Deposit	**FY08**
Consumer Security Deposit at FY 08 revenues	349.97
Interest Charges on CSD @ 6%	**21.00**

Return on Equity

4.119 The Licensee has claimed return at the rate of 14% on equity projected to be employed in completed assets in FY08. For computing RoE, the Licensee has considered the entire closing balance of equity in FY06 as employed in completed and useful assets. Further, the Licensee has assumed that the entire equity inflow for each year thereafter for ST(N) schemes will get capitalised during the same year. The Licensee has not provided any reason for this assumption. The equity amount considered eligible by the Licensee for return is given in the table below:

Table 163: Return on Equity as claimed for FY 08

Amount in Rs. Crore

Particulars	**FY08**
Share Capital	393.19
Capitalisation	160.30
Additional equity flow	21.00
Normative Equity	48.09
Equity eligible for Return	403.69
Return on Equity	**56.52**

4.120 The section on interest and finance charges explains clearly the process of identification of debt and equity with completed assets. This process results in the total equity identified with GFA as at the end of FY 05-06. This is presented in the table below. The Return on Equity as allowed for FY 08 ARR is then determined by applying the Commission specified rate of 14% on the total equity identified as allocated to GFA. The Commission is aware that during the course of FY 07 and FY 08, additional equity shall be infused into the distribution business for the purpose of creation of assets, which will increase the amount of equity allocated to completed assets. This, if supported by audited accounts, shall be accounted for in future aggregate revenue requirements of the Licensee.

Table 164: Return on Equity as allowed for FY 08

Amount in Rs. Crore

Source	**FY08**
30% of addition to net GFA identified as funded through equity (from table 157)	4.96
Closing balance of equity identified with GFA as on 31st May 05	316.00
Total Equity identified with GFA as on 31st Mar 06	320.96
RoE @14% allowed in ARR of FY 08	**44.93**

Other items of ARR

4.121 Apart from the components of expenses discussed above, there are certain other items, which form part of the Aggregate Revenue Requirement. These include provision for Bad Debts, other miscellaneous expenditure, any prior period expenses / credits and Other (Non-Tariff) Income. These are analyzed below:

Bad and doubtful debts

4.122 The Licensee has claimed Rs. 67.81 Crore in FY 08. This amount is included in the ARR for Retail Sale activity as well as the Wheeling activity. This appears to be an inadvertent double claim by the Licensee against the same cost item. The Commission thus allows bad debts as an item of ARR only for the Retail Sale activity of the Licensee.

4.123 With regard to provision for Bad Debts, the Commission has tested the Licensee's claim vis-à-vis the maximum provision permissible as per the Commission's regulations under section 61 of the Act, which state that the maximum bad and doubtful debts permitted to the Distribution Licensee are 1% of the sales revenues. The following table gives the amount of bad debts claimed by the Licensee and those approved by the Commission for FY08:

Table 165: Bad and Doubtful debts for the FY08

Amount in Rs. Crore

Particulars	**FY 08**
Claimed by Licensee	67.81
1% of sales revenues	23.58
Allowed by Commission	**23.58**

Note: Sales revenue has been computed at tariff rates approved by the Commission for FY 08 in this Order.

4.124 It was stated in the Tariff Order for FY 07, the amount of bad debts actually written off for FY 07 shall be considered subject to a maximum of 1% of sales revenues and any excess / shortfall shall be adjusted in the ARR for FY 08. Similarly, any true-ups for bad debts actually written off shall be considered for FY 08 when the Licensee makes available audited accounts of these years to the Commission.

Other miscellaneous expenditure

4.125 As explained in the previous section, the Licensee has included the entire provision for bad and doubtful debts as other miscellaneous expenditure and has in the process claimed this amount twice. Other than this, no other expenditure is forecast by the Licensee. The Commission thus allows no expenditure under this head for FY08.

Other Income

4.126 The Licensee has claimed an amount of Rs. 55.91 Crore for FY 08. This amount includes, inter alia, meter rent, recovery from theft of energy and miscellaneous charges from consumers. The Licensee has considered the entire income from meter rent as Other Income for wheeling activity. For the purpose of forecasting income from these charges and recoveries for FY08, the Licensee has simply escalated the actual amount against these heads as available from the provisional accounts for FY 06 by an escalation factor (ranging from 8% to 10% for various items).

4.127 The Commission accepts the Licensee’s forecast for all components of Other Income except Meter Rent, which has been recomputed on the basis of average (average of opening and closing balance) approved number of consumers for FY08 and the Commission’s approved rates for meter rent. Also, since provision of meters is an activity associated with the Retail Supply activity of the Licensee, the Commission considers income from this source as Other Income for the Retail Supply activity and not the Wheeling activity as considered by the Licensee.

The Licensee has not considered any income from wheeling charges, which is accepted by the Commission. However, the actual income to the Licensee from wheeling charges during FY08 could be higher depending upon the actual number of open access consumers, which shall be adjusted in subsequent years.

4.128 The amount thus allowed by the Commission as Other Income for FY08 shall be as follows:

Table 166: Other Income for Wheeling activity

Amount in Rs. Crore

Particulars	**FY 08**
Claimed by the Licensee	25.58
Allowed by the Commission	**11.10**

Table 167: Other Income for Retail sale activity

Amount in Rs. Crore

Particulars	**FY 08**
Claimed by the Licensee	30.34
Allowed by the Commission :---	
Meter Rent	26.05
Total of all other items	30.34
Total as allowed by the Commission	**56.39**

Segregation of approved ARR between Wheeling and Retail Sale activities

4.129 The Commission's Regulations under section 61 notified on 26th October 2006 state that the Distribution Licensees should file the Aggregate Revenue Requirement in three parts, viz. for power purchase activity, for wheeling (distribution) activity and for retail sale activity. The Regulations clearly listed out the items of fixed costs (i.e. other than power purchase) that should be included into wheeling and retail sale activities.

4.130 The Licensee has complied with the Commission's regulations to the extent that they have filed the ARR segregated among expenses for power purchase, wheeling and retail sale activities. The Licensee has only considered normative interest on working capital for retail activity, provision for bad debts and interest on consumer security deposits into retail sale activity. All other items have been considered entirely as part of wheeling activity.

4.131 For the present tariff exercise, the Commission accepts the Licensee's method of allocating costs into wheeling and retail sale activities. However, the Commission directs the Licensee to carry out an extensive study across a representative sample of its distribution centers, RAOs, etc. to develop the allocation ratios for segregation of each expense item (excluding power purchase) into wheeling and retail sale activity. The results of this study should be presented to the Commission by the Licensee within six months of this Tariff Order. This is, however, only a stop gap arrangement. The Commission desires that the Licensee undertakes a full accounting segregation for booking expenses separately under wheeling activity and retail sale activity. The Licensee should get back to the Commission, within a month of issue of this Tariff Order, with the probable time-lines for this activity.

4.132 For the purpose of this Tariff Order, therefore, the Commission allocates the fixed costs (i.e. other than power purchase) in the following manner:

Wheeling activity shall include:

(a) O&M expenses

(b) Depreciation

(c) Interest on project loans

(d) Interest on working capital loans – for normative working capital for wheeling activity

(e) Return on Equity

(f) Other miscellaneous expenses

(g) Less: Other Income as computed in previous section

Retail sale activity shall include:

(h) Interest on working capital loans – for normative working capital for retail sale activity

(i) Interest on Consumer Security Deposits

(j) Bad and Doubtful debts

(k) Less: Other Income as computed in previous section

4.133 On the basis of above, the ARR for FY 08 for wheeling and retail sale activity for the Central Discom is approved as under:

Table 168: Allowed ARR for FY 08 segregated among wheeling and retail sale activities

Particulars	**Amount in Rs. crs. approved for FY 08**
Power Purchase expenses	1714.97

Particulars	**Amount in Rs. crs. approved for FY 08**
Transmission charges (MP Transco)	240.21
Wheeling activity:	
O&M expenditure	334.76
Depreciation	49.96
Interest and Finance Charges on Project Loans	9.38
Interest on Working Capital	3.79
Return on Equity	44.93
Other expenses	0.00
Less: Other Income	11.10
Sub-Total Wheeling ARR for FY 08 as approved	***432.24***
Retail Sale activity	
Interest on Working Capital	0.00
Bad and Doubtful Debts	23.58
Interest on Consumer Security Deposit	21.00
Less: Other Income	56.38
Sub-Total Retail ARR for FY 08 as approved	***(11.80)***
Grand Total FY 07-08 ARR as approved	**2375.10**

Revenue Gap at existing tariffs

4.134 The revenues at existing tariffs have been worked out by the Commission using this sales forecast. The revenue gap is worked out using these revenues and the approved ARR as shown in the table above. The sales revenues and the revenue gap at existing tariffs are presented in table below. The revenue gap as filed by the Licensees is also reproduced for ready reference:

Table 169: Revenue gap with approved ARR for FY 08 at existing tariffs

(Amount in Rs. Crore)

Particulars	**Amount**
Revenue gap as filed by the Licensee	(496.0)
Revenues at existing tariffs as worked out by the Commission	2351.30
Approved ARR for FY 08 (with interest on CSD, Bad Debts, etc. worked out at revenues from current tariffs)	2374.93

Particulars	**Amount**
Revenue Gap for FY 08 at existing tariffs	**(23.63)**

4.135 The Licensees had proposed to bridge the gap of Rs 496.0 Crs, as projected by them, partly by means of tariff hike and efficiency gains and partly by means of creation of regulatory asset. However the revenue gap is only 23.63 Crs, as determined above. The Commission has therefore made suitable modifications to the tariff proposals to meet the total revenue gap indicated above and there seems to be no requirement for creation of any regulatory asset for FY 08.

4.136 The expected revenues from revised tariffs for the Distribution Licensee is shown in the table below

Table 170: Revenue from revised tariffs

(Amount in Rs. Crore)

Particulars	**Amount**
Revenue gap as filed by the Licensee	(496.0)
Expected Revenues at approved tariffs for FY 08	2358.38
Approved ARR for FY 08	2375.10
Revenue (Gap)/surplus at approved FY 08 tariffs	**(16.72)**

4.137 From the table above, it is clear that there is a marginal gap left over with the Licensee. This, however, is a fall-out of maintaining uniform tariffs in the State. As the revenue gap left-over is only marginal. The position shall be reviewed while truing up for FY 08.

4.138 The consumer category-wise revenues at approved FY 08 tariffs (contained in the Tariff schedule in this Order), as worked out by the Commission are presented below:

Table 171: Consumer category-wise revenues at FY 08 tariffs

Consumer Category	**Sales (MU)**	**Revenues (Rs. Crore)**
Low Tension		
Domestic Light Fan and Power	1779	610.00
Non-Domestic Light Fan and Power	436	239.26
Water Works and Street Lights	123	40.0
LT Industrial*	218	92.35
Agricultural Consumers	1842	422.42

Consumer Category	Sales (MU)	Revenues (Rs. Crore)
TOTAL (LT)	**4398**	**1404.03**
High Tension		
Railway Traction	694	319.44
Coal Mines	38	21.53
Industrial and Non Industrial	1133	529.71
Seasonal	2	1.71
HT Irrigation and Public Water Works	91	30.20
Township and Residential Colony	148	51.76
Bulk Supply to Exemptees	0	0.00
Total HT	**2105**	**954.35**
Grand Total (LT + HT)	**6504**	**2358.38**

* LT Industrial category includes sale Agro related use in rural areas (LV 5.2) which was earlier included in Agriculture category.

A5: PUBLIC OBJECTIONS & COMMENTS ON LICENSEE'S PETITION

Introduction

5.1 On admission of the ARR for the period from FY08 to FY10 and Tariff proposals for FY08 only filed by the three Discoms viz. M.P.Poorva Kshetra Vidyut Vitaran Company Limited, M.P.Paschim Kshetra Vidyut Vitaran Company Limited and M.P.Madhya Kshetra Vidyut Vitaran Company Limited, salient features of the same were published in the newspapers for determination of retail tariff for FY08. The Commission has invited stakeholders' response on the tariff proposals filed by the Discoms for which the last date was fixed as 26.12.2006 for all Discoms. The Commission received large number of comments/objections for each Discom. The Commission has considered all the comments received up to the date of public hearings. Details of persons and organizations who had filed the comments/objections are given in Annexure-1. The Commission also sought response of the Discoms on the comments received from the stakeholders.

S.No.	Name of Discom	Number of comments received	
		Within due date	After due date
1.	East Discom	20	NIL
2.	West Discom	40	4
2.	Central Discoms	20	1

5.2 The Commission held public hearings as per following schedule in the Conference hall of the Commission at its headquarters at Bhopal.

S.No.	Name of Discom	Date of public hearing
1.	East Discom	22.1.2007
2.	Central Discom	24.1.2007
2.	West Discom	29.1.2007

5.3 The Commission has also invited Non Government Organizations to take part in the process of tariff determination to represent interest of all consumers.

5.4 The issues and concerns voiced by various stakeholders have been carefully examined by the Commission. Major responses, including the ones raised in the public hearings, have been grouped together according to the nature of the comments/objections and are summarized in this Chapter.

Issue No. 1: Discrimination in Demand charges

Issue raised by stakeholders

5.5 Some of the respondents raised the issue of discrimination of demand charges at different voltage levels. They have contended that demand charges are higher for 33 kV and 132 kV than for 11 kV supply consumers. Even though the line losses are lesser and power factor is better at higher voltage. Therefore, respondents expect that demand charges at 132 kV should be the same as for 11 kV consumers.

Response from Discoms

5.6 It is not appropriate to compare only the demand charges at various voltage levels. The effective tariff comprising demand and energy charges (including load factor incentive) should be compared across voltage levels.

Commission's views

The Commission agrees with the views of the Distribution Companies. The demand charges have to be seen in relation to the total consumption and load factor. Lower demand charges will imply higher energy charges. However, keeping in view the concerns of the objectors, some changes have been made in the fixed charges and energy charges.

Issue No. 2: Fuel surcharge adjustment

Issue raised by stakeholders

5.7 Some of the respondents raised the issue that the tariff order can not consider new FCA formula. Regulations 2006 under clause 1.29 already allow the Licensee to approach the Commission if fuel surcharge is permitted to Generating Company.

Response from Discoms

5.8 The proposal of the Licensee is in line with the provisions of Clause 5.3 (h) (4) of the National Tariff Policy. The respondents point out that Regulations 2006 under clause 1.29 allow the Licensee to approach the Commission for such a formula as follows:

"As provided in Section 62(4) of the Act, a fuel surcharge formula may be specified by the Commission and tariff may be permitted to be charged under the terms of specified formula …"

5.9 Therefore, in line with the above provisions of the National Electricity Policy and the Regulations, the Licensee has proposed the formula for computation of Fuel Surcharge Adjustment for kind consideration of the Commission.

Commission's views

The Commission agrees with the views of the Distribution Companies. The Commission will consider FCA formula in view of National Tariff Policy and Regulations made by the Commission in this regard.

Issue No. 3: Distribution Loss Targets

Issue raised by stakeholders

5.10 Some of the respondents raised the issue that proposed losses for FY08, FY09 and FY10 are 30.5%, 29.5% and 28.5% respectively. They have contended that as per 'Abraham Committee report' unless the losses are reduced by 3%, 2% and 2% in the tariff years respectively, the Company will not be eligible for funds under the Central Scheme. Some of the respondents have represented to consider loss trajectory as per regulations notified by the Commission.

Response from Discoms

5.11 Section 5.3(h)(2) of the National Tariff Policy specifies that "In cases where operations have been much below the norms for many previous years the initial starting point in determining the revenue requirement and the improvement trajectories should be recognised at 'relaxed' levels and not the 'desired' levels."

Commission's views

In accordance with Section 5.8.10 of the National Electricity Policy and Section 5.3 (h) (2) of the National Tariff Policy, the State Government vide order no. 8414 /13/2006 dated 28.12.2006 has notified annual milestones for distribution losses (Technical and Non-technical) to be adhered to by each of the three Distribution Companies over the next five years i.e. 2006-07 to 2010-11. For the financial year 2007-08, the loss targets are fixed as 32.5%, 40% and 28.5% for East Discom, Central Discom and West Discom respectively.

As per Section 86(4) of the Electricity Act, 2003,

"In discharge of its functions, the State Commission shall be guided by the National Electricity Policy, National Electricity Plan and Tariff Policy published under section 3."

The Commission has therefore considered the loss targets as notified above by the State Government for determining tariff for FY08.

Issue No. 4: Depreciation and advance against depreciation should not be allowed

Issue raised by stakeholders

5.12 Some of the respondents raised the issue that depreciation can be allowed as per CERC norms and not as per accounting norms. As per CERC the depreciation will reduce by 50%. Otherwise also depreciation is not cash expenditure and it is an internal resource to finance projects.

5.13 Advance against depreciation is not provided for in the regulations and should not be allowed.

Response from Discoms

5.14 In the ARR filing, the Licensee has provided detailed rationale for adopting the existing depreciation rates. It may be noted that CERC norms are for Generation and Transmission and National Tariff Policy empowers the Forum of Regulators (FOR) to come up with a modified set of norms for Distribution. The Licensee has only sought to continue with the existing depreciation norms till FOR issues the new rates for Distribution.

5.15 The earlier Regulations called 'The MPERC (Terms and Condition for Determination of Tariff for Distribution and Retail Supply of Electricity) Regulation 2005 (G-27 of 2005) provided for advance against depreciation.

5.16 While it is true that the new Regulation (RG-27(I)) of 2006 does not provide explicitly for Advance Against Depreciation, Section 2.5 of this Regulation provided that "…. *The debt-equity amount arrived in accordance with this clause shall be used for calculation of interest on loan, return on equity, advance against depreciation and foreign exchange variation.*" Further section 15(2) (b) of Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2004 provides for advance against depreciation. Therefore, considering these provisions, the Licensee expressed its view on the treatment of "Advance Against Depreciation" and placed it on record in the filing.

Commission's views

As per the calculations provided in the tariff order, it can be noted that the depreciation has been allowed on CERC norms and the depreciation amount is sufficient to meet the principal repayment requirements of loans considered to have been contracted for the creation of fixed assets.

Issue No. 5: Interest and Finance Charges

Issue raised by stakeholders

5.17 Some of the respondents made strong objections against considering higher lending rate than provided in regulations 2006

Response from Discoms

5.18 While asking for this treatment, the Licensees wished to highlight that there is a need to explicitly link the interest rates to an external benchmark rate considering the financial position of the Licensees and it is not the intention to ask for any rate higher than that provided in the Regulation.

Commission's views

The Commission while computing the allowable interest cost has verified that the interest rates are in accordance with the regulations.

Issue No. 6: Category wise cost of service

Issue raised by stakeholders

5.19 Some of the respondents made objections against the average cost proposed for reducing cross subsidy. The cross subsidy has to be as per clause 3.2 and 3.3 of the regulations 2006.

Response from Discoms

5.20 The Licensees have taken the reference of the clause 8.3 point 2 of NTP which stated that 'For achieving the objective that the tariff progressively reflects the cost of supply of electricity, the SERC would notify roadmap within six months with a target that latest by the end of year 2010-2011 tariffs are within +/- 20% of the average cost of supply.' The Licensees have also mentioned that NTP clearly demonstrates that cross subsidy is to be determined with respect to average cost of supply and not with respect to cost of supply to any specific category of consumer.

Commission's views

The Commission has considered the concerns of the stakeholders. The Commission is of the view that at present it would be difficult to work out category wise cost of supply as the Distribution Companies at present are unable to provide requisite data for the same. Under the above circumstances, the Commission has decided to follow guidelines provided under National Tariff Policy to consider average cost of supply till sufficient data are provided by the Distribution Companies. However, the Commission would pursue the matter with the Discom to provide reliable requisite data for determination of category-wise cost of supply.

Issue No. 7: Return of equity and supply margin

Issue raised by stakeholders

5.21 Some of the respondents made objections that the return on equity should be 14% as per regulations and no supply margins can be allowed as per regulations.

Response from Discoms

5.22 As explained in Section 3.9 of the filing that Clause 5.3 9a) of NTP recognizes that Distribution business entails higher risk and hence the return on equity notified by CERC for Generation and Transmission needs to be modified to reflect such higher risk involved. It is in this context the Licensee sought approval of either a higher rate of return at 16% or providing a margin separately for the “supply” business similar to the trading margin allowed as per Clause 9.0 of the NTP.

Commission’s views

The Commission fully agrees with the stakeholders’ concern and allowed Return on Equity @ 14% while determining retail tariff for FY08.

Issue No. 8: Sharing of Regulatory asset

Issue raised by stakeholders

5.23 Some of the respondents suggested that losses incurred due to inefficiencies of Discoms cannot be burdened on the consumers.

Response from Discoms

5.24 The Companies have responded that MYT framework works on the principle of incentivising the utility while sharing the costs/benefits with consumers in a fair manner. NTP prescribes that for long-term benefits to the consumer, the sharing should be asymmetrical in the initial years to provide more incentives to the Licensee while protecting it form higher risk in initial years.

Commission’s views

The Commission has allowed only prudent level of costs. The Commission has also allowed the Discoms the revenue which meets the allowable costs. In this situation when costs & revenue almost match there is no need of regulatory assets.

Issue No. 9: Delayed payment surcharge

Issue raised by stakeholders

5.25 Some of the respondents reiterated that the delayed payment surcharge is a part of the revenue earned and has to be accounted for in the ARR.

Response from Discoms

5.26 The Licensees' estimates of revenue are as per the provisions of Regulation. The Commission has earlier considered and also explained this position in para 1.32 of the Tariff Order FY'07. The Licensees believe that it is a well conceived and principled approach and also believe that the suggestion of the respondent is not tenable.

Commission's views

The Commission continues to maintain its stand for reasons provided in its tariff order dated 31.3.06.

Issue No. 10: Security Deposit in the form of Bank Guarantee

Issue raised by stakeholders

5.27 Some of the respondents raised the issue that while working out the working capital requirement, the impact of allowing security deposit in the form of bank guarantee be considered by the Commission, so that the Distribution Companies can freely accept bank guarantee.

Response from Discoms

5.28 The Commission may take a view in the matter in the light of provision of the Act.

Commission's views

The matter is subjudice.

Issue No. 11: Different Power Purchase Rate

Issue raised by stakeholders

5.29 The major item of the expenditure is the power purchase cost (around 60%) and the Companies are dependent on the trading Companies. The power purchase rates are different for different Companies. The respondent requested that ARR of trading Company needs to be scrutinized and rate of power purchase should be same in all Discoms.

Response from Discoms

5.30 The Licensees have provided details of their estimated costs and revenues and it would be scrutinised by the Commission while approving the ARR.

Commission's views

The power purchase cost has been calculated by the Commission on the basis of the GoMP notification allocating the generating capacity and the station wise generation cost determined either by the MPERC or the CERC or rate determined for NPC.

Issue No. 12 Minimum charges

Issue raised by stakeholders

5.31 The representative of a society raised the issue of the clause 3.1(e) of MPERC (Terms and Conditions of Tariffs & Charges) Regulations 2006 where it is stated "Tariff minimum: The Commission does not favour tariff minimum to be recovered from EHT/HT/LT consumers.

Response from Discoms

5.32 The Licensees believe that the concept of minimum consumption need to be continued wherever available and need to be introduced for other categories.

Commission's views

The Commission is of the view that normally tariff minimum should not be recovered from consumers if the fixed cost is fully recovered through fixed charges. However, if fixed charges are kept at very low level then the Commission has no alternative but to levy minimum charges for some of the categories of consumers so as to keep revenue balance.

Issue No. 13: Billing Demand

Issue raised by stakeholders

5.33 Some of the objectors suggested that billing demand concept may be reintroduced. It is submitted that billing demand should be 75% of contract demand or actual demand which ever is higher.

Response from Discoms

5.34 The Licensees have stated that if the concept of billing demand is introduced, it will result in revenue loss. Therefore, if it is reintroduced the Licensees need to be compensated by a higher demand charge.

Commission's views

The Central Discom and West Discom have proposed fixed charges based on full contract demand and East Discom has proposed 85% of contract demand or maximum demand, whichever is higher as the billing demand on which fixed charges may be levied. The Commission is of the view that although there are divergent views amongst East & other two Discoms, the fixed charges may be levied @ 90% of the contract demand or maximum demand whichever is higher.

Issue No. 14: Annual Minimum Charges

Issue raised by stakeholders

5.35 The stakeholders suggested that concept of annual minimum charges for HT and LT industrial consumers as introduced by the Commission in the amended Tariff Order for 2006-07 should continue instead of monthly demand/fixed charges.

Response from Discoms

5.36 The Licensees mentioned that the present provision is adequate and need not to be changed.

Commission's views

The Commission agrees with the proposals of the Discoms.

Issue No. 15: Power factor incentive

Issue raised by stakeholders

5.37 Some of the respondents suggested that power factor incentive may be offered from 0.9 instead of 0.95 and the incentive should be offered on both demand and energy charges. Considerable investment is made by HT consumers in capacitors to improve power factor. Such investment is not yielding adequate return with the reduction in capacitor incentive. One of the stakeholders pointed out that there is no use of providing 2% incentive for above 99% power factor since almost no consumer in the State is maintaining such power factor continuously.

Response from Discoms

5.38 The Licensees are following the last Tariff Order and agree with the views stated in the order on PF incentive. The incentive above 0.95 PF was provided in the tariff to motivate consumers to compensate for the cost of additional equipment necessary to improve the system. Therefore, the request is not acceptable by the Licensees.

Commission's views

The Commission is of the opinion that it is the responsibility of the consumer to maintain power factor so that minimum reactive power flows in power system and the Discoms are required to provide compensation to the minimum extent possible. As such, Commission does not find any justification for providing additional incentive to the consumer even if he puts Discoms at loss by drawing reactive energy from power system. However, the Commission shall continue to provide incentive in FY2007-08 to those consumers on energy charges who maintain power factor above 95% in a billing month.

Issue No. 16: Load Factor Incentive

Issue raised

5.39 The representatives from a society suggested that load factor incentive should be provided from 50% and the incentive should be reduced from energy charges to reduce electricity duty. The respondent also mentioned that the wind generated energy units shall not be deducted while calculating the load factor.

Response from Discoms

5.40 The Licensees have mentioned that the incentive structure needs to be designed in conjunction with the demand and energy charge to encourage the consumers for improving the load factor.

5.41 Electricity duty is a matter in the ambit of the State Government and the Licensees can not design tariff to reduce/increase it.

(a) The incentive is provided to encourage higher consumption from the Licensees. Therefore, the effect of energy consumption from other sources cannot be added with the consumption from Licensees' supply for determining load factor for the purpose of incentive.

Commission's view

The Commission has considered the views of the stakeholders and has provided load factor incentive for load factors above 50 % in this order. The Commission has also redesigned the structure of load factor incentive so that consumers are encouraged to improve the load factor and at the same time, the Discoms should not suffer any revenue loss.

Issue No. 17: Temporary Power Supply Charges

Issue raised by stakeholders

5.42 One of the stakeholders made a representation that temporary power charges needs to be reduced from 1.5 times to 1.1 times the normal charges.

Response from Discoms

5.43 The Licensees have mentioned that short term power from trader cost significantly higher than the long-term power contracted from regular sources. Therefore, such supply should attract higher charges and present 1.5 times higher charges should be continued.

Commission's view

The Commission has taken a realistic view while fixing charges for temporary connections for different categories of consumers.

Issue No. 18: Interruptible and un-interruptible supply

Issue raised by stakeholders

5.44 One of the respondents strong opposes the concept of different tariffs for interruptible and un-interruptible supply as it is the basic obligation of the Licensees to provide un-interruptible supply and thus if such concept is accepted it will introduce cross subsidy through backdoor. Respondent suggested that rebate in tariff could be made available to consumers seeking 12-18 hours supply per day.

Response from Discoms

5.45 The Licensees have expressed that this matter may be decided by the Commission.

Commission's view

. The Commission believes the tariffs should also reflect quality of supply. The consumers of the State do not receive uniform quality of supply and consumers receiving poorer quality need to be compensated for that. However, the Commission has observed practical difficulties in measuring the supply hours and therefore this practice is being discontinued during FY2007-08.

Issue No. 19: Performance is not upto the mark

Issue raised by stakeholders

5.46 One of the stakeholders made representation that as per petition no. 111/2006 there is no reduction of losses up to the target level, there is no realization of 98% of the current revenue.

5.47 The respondent asked to consider reducing RoE allowance and reducing administrative and general expenses.

Response from Discoms

5.48 Though the Licensees have undertaken a number of initiatives to improve the operational performance, it may take some time before the results become visible.

5.49 In the long term interest of the Discoms and consumers at large, it is not prudent to reduce RoE and expenses. Such reduction will create financial distress for the Company and will make it commercially unviable, which will go against the interest of the consumers.

Commission's view

. The Commission has gone by its Regulations and the loss reduction trajectory given by GoMP while calculating the revenue requirement.

Issue No. 20: Bad and doubtful debts

Issue raised by stakeholders

5.50 One of the stakeholders made representation that already a burden of Rs. 131.47 Crore has been placed on consumers in the financial year 2005-06 in the name of bad and doubtful debts and now again Rs.98.81 Crore has been proposed in this petition.

Response from Discoms

5.51 The provision for bad and doubtful debts is made as per the limits specified in Clause 2.25 of the Regulations.

Commission's view

The Regulations of the Commission provide for actual bad debts written off subject to maximum of 1 % of revenue. This will be ensured.

Issue No. 21: Security Deposit

Issue raised by stakeholders

5.52 One of the stakeholders made representation that security deposit be calculated on the basis of yearly consumption and not 6 monthly basis.

Response from Discoms

5.53 Security deposit is being estimated on the basis of MPERC (Security Deposit) Regulation, 2004.

Commission's view

The Commission agrees with the Discoms.

Issue No. 22: Linkage of loans to assets

Issue raised by stakeholders

5.54 Some of the stakeholders made representation that linkage of loans to assets is a must, unlinked loans ought to be borne by State Govt.

Response from Discoms

5.55 The Licensees have requested for waiver from this provision for only historical loans and assets for the reasons articulated in the filing. As expressed in the filing the Licensees will endeavour to establish and maintain such linkages for future assets and their financing sources.

Commission's view

Due to past legacy the Discoms are not able to identify assets created out of past loans. The Commission is insisting that all loans contracted after the formation of these Discoms must be linked to assets.

Issue No. 23: Tariff income is suppressed

Issue raised by stakeholders

5.56 Some of the respondents objected that the revenue calculations do not take into account the additional charges paid by the consumers in respect of demand charges, minimum charges, penal billing, vigilance case billing etc. the method as was adopted by the Planning Commission and MPEB in the past was to work out average rate of realization. The rate was 10-15% more than the tariff rate.

Response from Discoms

5.57 The Licensees have clarified that the revenue for 2007-08 or future years are estimates only based on certain projections. While making projections, it is not possible to envisage exceptions such as raised by respondent. The Licensees have also clarified that the methodology of revenue estimate through average realization rate as suggested is inaccurate and does not reflect recoveries from various tariff components.

Commission's view

Some of the sources of income as suggested by the respondents are in the nature of non-tariff income and are considered in the ARR. The issues raised about any excess revenue income other than tariff income will be taken care of while truing up of the ARR.

Issue No. 24: Change in TOD tariff

Issue raised by stakeholders

5.58 Some of the respondents made representation that with the hydel power increasing in the State of MP, the gap between off peak and peak demand is bound to increase. It is therefore necessary to give more incentive to the users of off peak power. They have requested for a change in TOD tariff and for increase of off peak rebate to 15%.

Response from Discoms

5.59 The contention of the respondents on increasing gap between off-peak and peak demand is not clear. It appears that the respondents have not kept in view the short term power purchase. The Licensees believe that the off-peak rebate offered is adequate and hence do not agree to the suggestion of increasing the same.

Commission's view

The Commission has fixed Time of Day surcharge for four hours (from 6PM to 10PM) and rebate for eight hours (10PM to 6AM next day). The Commission does not find any justification in enhancement of rate of rebate to be provided.

Issue No. 25: Study on base line data and verification of energy audit results

Issue raised by stakeholders

5.60 Some of the respondents suggested that for independent assessment of base line data for various parameters for every distribution circle, it is necessary to know the actual ground reality. They also recommended for third party verification of energy audit results.

Response from Discoms

5.61 The suggestions are noted by the Licensees.

Commission's view

The Commission has considered the views of the stakeholders. The Commission shall suitably direct the Discoms in due course.

Issue No. 26: Differential Tariff only for commercial losses

Issue raised by stakeholders

5.62 One of the Stakeholders made a representation that the differential tariffs, if any, have to be for commercial losses alone and not for technical losses.

Response from Discoms

5.63 At present the Licensees are not in a position to segregate technical and commercial losses. However, the suggestion is well conceived and may be considered once such segregation is possible for all areas under Licensees' area of supply.

Commission's view

The Commission agrees with the contention of the Discoms.

Issue No. 27: Tariff based on the average losses in the State with incentive to better performing areas

Issue raised by stakeholders

5.64 One of the Stakeholders suggested that tariff should be based on the average losses. The localities/areas showing lower losses than average, incentive could be given to staff/consumers of those areas. This is also supported by National Tariff Policy.

Response from Discoms

5.65 The Licensees have appreciated the suggestion, but also mentioned that present differential losses is on account of various historical reasons and therefore, it may not be appropriate to immediately differentiate between consumers of various geographical areas based on losses alone ignoring the ground realities.

Commission's view

The Commission agrees with the suggestion of the stakeholders and would work out the feasibility of its implementation in future.

Issue No. 28: Demand meter in LT consumers

Issue raised by stakeholders

5.66 One of the Stakeholders made a representation that demand meters be installed in the LT consumers' premises. The demand as recorded will be the criteria to fix the load, irrespective of connected load. The connected load may be considered when the demand meter is tampered.

Response from Discoms

5.67 The Licensees have proposed separate demand based tariffs.

Commission's view

The Commission is of the view that it would not be feasible to provide demand indicating meter to all LT consumers. The Discoms have proposed for demand based tariff for certain categories. For LT industrial consumers, demand based tariff is mandatory for connected load above 25 HP. However, any LT industrial consumer with connected load up to 25 HP may also opt for demand based tariff. Further, the transformer in LT connection is owned by Licensee, which is generally used to serve more than one consumer. The transformer is installed based on connected load only. Whereas, for HT consumers the ownership belongs to them including its maintenance & replacement etc. Therefore, it would not be feasible to delink connected load while fixing maximum limit of load for LT connections.

Issue No. 29: Unmetered Urban and Rural consumer

Issue raised by stakeholders

5.68 Unmetered urban and rural consumers are billed on the assessed units of 77 and 38 respectively. One of the Stakeholders raised an objection that if consumers consumes more than above, there is no check and in that case the loss in revenue become the burden to the metered medium class of domestic consumers.

Response from Discoms

5.69 The Licensees have mentioned that the assessment bill is an interim measure and the Licensee is making efforts to meter all the domestic consumers.

Commission's view

The Commission has directed the Licensees to expedite 100% meterisation of the consumers as required under the provision of the Electricity Act, 2003.

Issue No. 29: Increase in fixed charges in HV2 and HV6 categories

Issue raised by stakeholders

5.70 One of the respondents objected the proposed rise in fixed charge by 31.25% in HV2 category and 36.36% in HV6 category. This will create additional burden on the consumers.

Response from Discoms

5.71 The Licensees have explained that basis of fixed charges has been proposed as 85% of the contract demand or maximum demand whichever is higher. Considering the same the effective change is 3.45% which is lesser than the increase in average cost of supply.

Commission's view

The Commission has considered the views of both the objectors and Discoms and has initiated appropriate action in this order.

Issue No. 31: Increase in energy charge and demand charge in Railways

Issue raised by stakeholders

5.72 One of the respondents from Railways objected the proposal of hike in fixed cost charge and energy charge which is against the relevant Acts and the Tariff Policy issued by the Minister of Power on 06.01.2006. Hence the hike proposal is deviation from National Tariff Policy and Electricity Act, 2003.

Response from Discoms

5.73 The Licensees have explained that the proposed tariff is 116% of the proposed average cost of supply. It is also to be pointed out that the Licensee has proposed demand charges on the basis of billing demand which is 85% of the contract demand or actual maximum demand which ever is higher. The proposal submitted is in line with the principles laid down by the relevant Acts and Tariff Policy.

Commission's view

The Commission has considered the views of both the stakeholders and Discoms and has taken appropriate action while determination of retail tariff.

Issue No. 32: Reduction in Cross-Subsidy

Issue raised by stakeholders

5.74 Railway's representative objected that the Tariff Policy of MoP envisages that by end of the year 2010-11 tariff are within +/- 20% of the average cost of supply. But the proposed tariff doesn't contain any reduction in the rate. Also, it doesn't indicate the existing level of cross subsidy.

Response from Discoms

5.75 The Licensees have clarified that as per tariff order of 2006-07 railways tariff was 129% of average cost of supply. After proposing increase in tariff, the effective tariff (at average load factor of 58%) shall be at 116% of average cost of supply of FY2007-08. Therefore, the proposed tariff conform the NTP requirements.

Commission's view

The Commission has considered the views of both the objector and Discoms and has initiated appropriate action in this retail tariff order towards achieving the target.

Issue No. 33: Excess demand charges in Railways

Issue raised by stakeholders

5.76 Railway's representative highlighted that the tariff proposed is to charge the excess demand over contract demand of one and half times the normal tariff. The respondent gave an example that at JVVNL, Rajasthan, up to 110% of contract demand no excess demand charges are levied for traction supply. Therefore, it is requested to consider similar criterion for traction load in MP.

Response from Discoms

5.77 The Licensees have clarified that they have proposed billing demand as the higher of 85% of contract demand or the recorded maximum demand. This will give flexibility to the consumer to adjust the operations within contract demand. Therefore, proposal of allowing demand fluctuation beyond 100% of contract demand without any penal charge is not acceptable.

Commission's view

The Commission has considered the views of the Railways and has decided on a single part tariff and no levy of penalty upto 110% of the contract demand.

Issue No. 34: Voltage rebate in railways

Issue raised by stakeholders

5.78 Railway's representative contended that Railways draw power at 132 kV or 220kV for traction supply. The transmission losses are negligible at these voltages. Therefore, they have requested to the Commission to consider a voltage rebate of 2.5% on energy cost and fixed charges for traction supply as given by JVVNL.

Response from Discoms

5.79 The Licensees have clarified that the tariff rates applicable for railway traction are lower than the rates applicable to other consumers of same voltage level. Therefore, the request for further incentive is neither justified nor acceptable.

Commission's view

The Commission has noted the views of both the stakeholders and Discoms and shall take appropriate action in future.

Issue No. 35: Tariff increase for HT consumers and LT industries

Issue raised by stakeholders

5.80 One of the respondents objected that even the minor increase in tariff proposed for HT consumers needs to be withdrawn and also increase in tariff for LT industries may not be allowed in the interest of industrial sector.

Response from Discoms

5.81 The Licensees have appreciated the views of the respondent regarding withdrawal of proposed increase in HT tariff. Licensee mentioned that they have started working on the guidelines of NTP to bring the cross subsidy within +/- 20% of average cost of supply by the end of 2010-11. The cross subsidy of HT tariff has reduced from the level of existing 126% of average cost of supply to 113% for FY08 which is well within the limits prescribed in NTP.

Commission's view

The Commission has considered the views of both the objectors and Discoms and has taken appropriate action while determination of retail tariff.

A6: RETAIL TARIFF DESIGN

Legal Position

6.1 The Commission has determined the Annual Revenue Requirement for FY2007-08 for the three Distribution Companies based on the Regulations notified on 10th November 2006, under Sec 61 of the Electricity Act, 2003. The annual revenue requirement approved by the Commission for the Generating Company, Transmission Company and the Distribution Companies forms the primary basis for recovery of charges from consumers through retail tariffs.

6.2 The Commission has also separately issued Regulations under Sec 45 (2) of the Electricity Act, 2003 which specify the methods and principles for fixation of charges recoverable by the Distribution Licensee for supply of electricity.

6.3 Further, in determining the consumer category wise tariffs, the Commission is also guided by the provisions of the National Tariff Policy (NTP), notified by the Government of India on 6th January, 2006.

Commission's Approach to Tariff Determination

Uniform vs. Differential Retail Tariffs

6.4 In consultation with the State Government and after prolonged deliberations, the Commission formed the view that uniform retail supply tariff should be continued for one more year i.e., for the FY2007-08 also.

6.5 The GoMP notification issued on 14th March 2007 in respect of the revised allocation of the existing generating capacity among the three Discoms makes it possible to have a uniform tariff with more or less a balanced revenue income vis-à-vis the annual revenue requirement of the Discoms

6.6 However, the Distribution Licensee must note that the determination of the annual revenue requirement is based on the milestone for reduction in loss levels and operating norms set for FY 08.

Linkage to Average Cost of Supply

6.7 In determining the tariffs, the Commission has given due consideration to the requirement of the Electricity Act, 2003 that consumer tariffs should reflect the cost of supply. The National Tariff Policy mandates that by 2010-2011, the tariffs should be within +/- 20% of the Average cost of supply". The table below shows the cost coverage on account of revised tariffs as compared to the cost coverage as determined by the Commission in the FY 07 Tariff Order:

Table 172: Comparison of tariff v/s average cost of supply

Category/Sub-Category	As per FY 07 Tariff Order			New Tariff structure (FY 08)		
	Avg. realisation (Rs./Unit)	Avg. CoS (Per unit)	Realisation attained	State Avg. realisation (Rs./Unit)	State Avg. CoS (Per unit)	Realisation attained
Domestic (upto 30 units)	2.65	3.49	76%	2.65	3.60	74%
Domestic (Rest)	3.16	3.49	91%	3.43	3.60	95%
Non-Domestic	5.86	3.49	168%	5.48	3.60	152%
Pub. Water Works	2.95	3.49	85%	3.08	3.60	86%
Street Lights	3.53	3.49	101%	3.59	3.60	100%
LT Industry (Including "Rural Agro-based Industry" as per FY 07 Tariff structure)	4.55	3.49	130%	4.36	3.60	121%
Agriculture (metered)	2.03	3.49	58%	2.42	3.60	67%
Railway Traction	4.64	3.49	133%	4.60	3.60	128%
Coal Mines	5.50	3.49	158%	5.35	3.60	149%
Industrial and Non-Industrial	4.72	3.49	135%	4.56	3.60	127%
HT Irrigation and Water Works	3.19	3.49	92%	3.16	3.60	88%
Bulk Residential users	3.60	3.49	103%	3.49	3.60	97%
Bulk supply to Exemptees	2.83	3.49	81%	2.87	3.60	80%

6.8 The Commission has thus ensured that the cross-subsidy burden of consumer categories having average tariffs above 100% of the average CoS in FY2006-07 is reduced. Similarly, the cost coverage of agriculture (metered) category has been raised from 58% to 67%. It can also be seen from the table above, the Commission has altered the tariffs for all categories paying above 120% of average CoS.. For example Non-domestic consumers' average tariff, as per the FY 07 Tariff Order was 168% of the FY 07 Avg. CoS. As per the revised rates, their average tariff has been reduced to 152% of FY 08 Avg. CoS.

Rebate for consumers in rural areas

6.9 The fixed charges are meant for recovering cost of infrastructure created by the Distribution Licensee. However, realising that the consumers in the rural areas are placed at a disadvantage compared to urban consumers in getting un-interrupted and reliable power supply, the Commission has given a reduction in the fixed charges for the consumers in the rural areas.

Incentive scheme based on Load Factor

6.10 The Commission, in this Tariff Order, has introduced a new incentive scheme for providing Load Factor based tariff incentives for HT consumers for specified categories. The previous scheme of load factor incentives is hereby replaced with this new scheme.

6.11 The new scheme offers reduction of threshold load factor for eligibility of incentive claim, from 60% to 50%, linearizing the discounts on energy charges etc. Another important feature of the new scheme is that higher discount on energy charges shall be provided to consumers in the load factor range of 50% to 60%, with a gradual decline in the discount percentage in LF slabs of 61% to 70% and 71% to 80% respectively. This has been intentionally done to provide a greater push to the larger number of consumers in the sub 50% and upto 60% LF range to increase their energy consumption and better their load factors.

Power Factor incentives for LT consumers

6.12 In order to incentivise consumers to improve Power factor, the Commission has provided an incentive of 1% of energy charge for each 1% increase by which the average monthly power factor exceeds 90%. This would also help the Distribution Licensee in reducing losses and improving voltage profile.

Other highlights of FY 08 retail tariff design

6.13 Following are the other important features of the retail tariff design for FY 2007-08:

Rationalisation of tariffs for HT categories

6.14 In the Tariff Order dated 31st March 2006 under HV -3.1 category, the consumers at 132 kV are being charged at a higher rate as compared to consumers connected at 33kV at low load factors. This was because the Fixed Charges at 132 kV were twice of those at 33kV. It was expected that the consumers connected at 132kV shall maintain a higher load factor as compared to the consumers connected at 33kV, and therefore, even with higher fixed charges, their effective average tariffs would be lower.

6.15 The consumer-wise database for FY2005-06 as submitted by the Licensees shows that the average Load Factor for 11kV (HV-3.1 category) consumers is 26% and they are paying an average tariff of Rs 4.92 / Unit as per Tariff Order for FY2006-07 whereas consumers connected to 33kV are operating at an average Load Factor of 40% and are paying an average tariff of Rs. 4.52 /Unit. Consumers connected to 132kV are having an average Load Factor of 50% and are paying an average tariff of Rs.4.51 / Unit which is almost same as that of 33kV consumers. Therefore, to keep the tariff of 132kV consumers much lower than 33kV consumers because of the fact that losses at 132kV are much lower than that of 33kV, the Commission has decided to reduce the tariff for 132kV consumers in FY2007-08 by reducing the fixed charges.

Single-part tariff for Railways

6.16 The Railways have historically been charged a two-part tariff comprising Demand Charges applied on Contract Demand and Energy charges applied on energy consumption. Also, in FY07 Tariff Order, the Commission had specified that the Simultaneous Maximum Demand at all connection points in the licensed area shall be considered to measure contract demand violation.

6.17 The Railways have time and again expressed their inability to control their maximum demand due to the moving nature of their loads. The Commission has considered the same and after extensive deliberations decided to levy only single-part energy based tariff to the Railway Traction loads. Demand Charges have been removed. Since, now there are no demand charges, Simultaneous Maximum Demand (SMD) has lost its relevance and it is being abolished.

Reduction of fixed charges for LT Industry in Rural Areas and bringing the Rural Agro-based Industry under the LT Industry

6.18 In keeping with the distinction created between rural and urban consumers, the Commission has reduced fixed charges for LT Industry in Rural Areas. The consumers classified under LT Agro-based industry in FY 07 have been brought under the existing LT Industry.

Introduction of new consumer category for Co-operative Group Housing Societies taking supply at single-point

6.19 The concept of providing supply to consumers at a bulk point is increasingly picking up because of its inherent advantages of reducing the loss levels of the Licensees. Also, the Licensees's effort on metering, billing and collection reduces since the Licensees only have to meter the bulk supply point, deliver one bill as against several individual bills and similarly collect charges from one consumer only at the bulk supply point.

6.20 As the MPERC regulations, 2004 (Third Amendment (No. AG-1(iii) of 2005), the Commission, in this Tariff Order has created a separate sub-category for co-operative group housing societies, which are or shall be taking supply at a single point HT connection, at any voltage level from 11kV upto 132kV. The tariff decided by the Commission for this sub-category has been kept lower than individual domestic connections so as to promote such co-operative group housing schemes to take supply at a single point HT connection.

A7: STATUS OF COMPLIANCE OF COMMISSION'S DIRECTIVES GIVEN IN PREVIOUS TARIFF ORDERS

7.1 The enactment of the Electricity Act, 2003 and consequent National Electricity Policy/ National Tariff Policy has brought about enormous changes in the structure of the power sector. Numbers of new initiatives are required to be taken in the changing context. The Commission in its Tariff Order dated 31st March'06 had re-iterated directives of previous tariff orders and also issued fresh directives. These directives pertain to improvements regarding operational and financial performance and quality of customer services. The status of compliance and Commission's directives on the salient issues is discussed in following paragraphs.

7.2 The Commission in its earlier Tariff Orders of 20.09.2001, 30.11.2002, 10.12.2004 had issued directives related to maintenance of asset registers, reduction of T & D losses, assessment of agriculture customer consumption, prior approval of the Commission for power purchase, status of border villages, manpower planning, arrangement for better consumer care, modification of R-15 revenue monitoring (Formats), reduction of transformer failure, improvement of recovery and liquidation of arrears, DTR metering, consumer metering, intimation to consumer through SMS, energy auditing, introduction of spot billing and appointment of Reporter of Compliance. These directives were reiterated at para 5.1 of Retail Tariff Order for Distribution Companies issued on 31.03.2006. The Distribution Licensee has not given any information about the status in the matter in their filing with reference to the specific para. From the information that is available with the Commission during the course of earlier submissions of the Licensee, compliance has been found to be partial and requires improvement on a number of issues like maintenance of asset registers, reduction of T&D losses, prior approval of the Commission for power purchase, DTR metering, etc. etc.

7.3 The Commission in its Retail Tariff Order dated 31.03.2006 had issued new directives at para 5.3 of the order. This tariff order also contains directives in earlier sections of the order. The status of compliance submitted by the Licensee and observations of the Commission are as given below:

(a) **Directive: Para 1.20 of the Tariff Order dated 31.03.2006 - Licensee to implement a scheme for providing incentive and disincentive to the staff.**

Status Reported:

East Discom: It is stated that they have a system of providing incentive to staff and during 2006 – 07, 26 individual officers / employees have been given incentives.

West Discom: It is stated that two schemes have been introduced, first scheme relates to incentive for reduction in failure of transformers and the second relates to improvement in realization per unit.

Central Discom: The Licensee has stated that they are in the process of developing the scheme and although it is mentioned that the order for one such scheme has been issued.

Observations of the Commission: On further scrutiny of the details, it has been observed that the incentives, that are being reported to be given by East Discom, are not based on any specific issues of improvement like reduction of T&D losses, improvement in revenue, but is based on individual's specific contribution on number of divergent issues. West Discom has not submitted details of the schemes. The intention of the Commission has been to motivate employees to perform better on issues which are related to improvement in the overall efficiency of the Distribution Licensees particularly with reference to reduction of losses and improvement in revenue recovery and if it can be achieved, the Commission would appreciate the efforts.

(b) **Directive: Para 1.36 of the Tariff Order dated 31.03.2006 - The Licensee is required to provide an estimate of expected revenue from tariff and charges under Tariff Order and report to the Commission on monthly basis.**

Status Reported by all three Distribution Licensees: It is stated that this issue is being dealt with separately under SMP / 53 of 2006.

Observations of the Commission: As per the directives of the Tariff Order, the Licensees were required to submit information in respect of their Company on a monthly basis which has not been complied with. The Commission vide its letter No. 981 dated 18.04.2006 had further issued directives to the Discoms to submit the information in the formats prescribed therein. However, since the information was not submitted by the Distribution Licensees, a suo moto petition No. 53/2006 was registered. In-spite of the Commission's continuous pursuance, the Distribution Licensees have not submitted the information in respect of all the circles in their area of jurisdiction. The West Discom had submitted the information for the months of April'06 to June'06 for Dhar Circle and for the month of April'06 for Neemuch circle. Central Discom has submitted the information in respect of City Circle Bhopal only for the months of April'06 to July'06 and the East Discom had submitted the details in respect of Chattarpur Circle for the month of May'06 only. The suo moto Petition No. 53/2006 had been closed with the directives to the Discoms to continue to maintain such information for all the circles in their area of jurisdiction on a month to month basis. The Commission regrets to note that the Licensee is not interested in maintaining such records which are only for improvement of their performance.

(c) **Directive: Para 1.39 of the Tariff Order dated 31.03.2006 - The Licensees are required to ensure that next filing in October'06 meets the requirement for MYT filing for full duration of control period.**

Status Reported– All thee Discoms have reported compliance.

Observations of the Commission: Instead of filing complete tariff petition for MYT control period, only petition for ARR for MYT period was submitted on 31.10.06 by East Discom, on 4.11.06 by Central Discom and on 7.11.06 by East Discom. This petition submitted did not contain any Tariff proposals and was incomplete. The Licensee subsequently submitted the tariff proposals that too only for FY2007-08 after continuous persuasion and considerable delay.

(d) **Directive: Para 4.20 of the Tariff Order dated 31.03.2006 – The Distribution Licensees shall be required to seek approval of the Commission for their requirements which exceeds quantum of energy determined in the Tariff Order.**

Status Reported:

West Discom: It is stated that they have submitted the petition No. 91/06 for short term power procurement.

Central Discom: It is stated that they have submitted the petition No. 90/06 for short term power procurement.

East Discom: It is stated that they are approaching the Commission on short term power procurement. The exact amount of actual deviation will be known only at the end of the year

Observations of the Commission: The Distribution Licensees have filed the petition for short term power purchase during rabi season. The Commission has directed the Distribution Licensees to file the details of long term agreements so as to work out the requirement of short terms power over and above power that is available from long term agreements. The Licensees are yet to comply with the directives on this issue. The Commission has further observed that the Licensees have not followed the directives of the Regulations for power purchase.

(e) **Directive: Para 2.61 of the Tariff Order dated 31.03.2006 – Submission of Annual Capital Plan in accordance with the guidelines.**

Status Reported- All three Discoms have stated that they have submitted the annual capital plan to the Commission.

Observations of the Commission: The Commission has provisionally approved the business plan of the Distribution Licensees which includes investment plan. The plan contains schemes which are tied- up and schemes which are yet to be tied- up for the purposes of raising fund for execution of the schemes. In the ARR petition filed by the Licensees, it is observed that the Licensees have projected investment during FY'08 for the schemes funds for which are yet not tied up.

(f) **Directive: Para 2.64 of the Tariff Order dated 31.03.2006 – Licensees to claim depreciation based on year-wise additions as per rates defined in the Regulations and to ensure that no depreciation is claimed on assets which have already been depreciated to 90% of the cost.**

Status Reported:

West Discom: The Licensee has reported compliance except with regard to adoption of rates which has been stated in the ARR petition.

Central Discom: It has been stated that in case of identification of those assets which have already been depreciated to 90% of their value, it has been estimated that such assets are 47% of total assets and accordingly depreciation has been claimed.

East Discom: The Licensees has reported compliance.

Observations of the Commission: The Distribution Licensees have claimed depreciation on MoP rates while as per Regulations notified by the Commission, they are required to claim depreciation on CERC rates.

(g) **Directive: Para 2.68 of the Tariff Order dated 31.03.2006: Central Discom to submit its asset registers. All the Discoms to reconcile these registers with notified balance sheets, up date it in accordance with the Companies Act and codify all its assets.**

Status Reported:

West Discom: The Licensee has stated that asset registers for Rs 646 crores of fixed assets have been submitted. The final reconciliation shall be taken up for notification of final opening balance sheet of the Company.

Central Discom: The Licensee has stated that in the SMP 54/2006, the Commission vide order dated 18.10.06 has issued directives to submit category-wise and year-wise details of assets by 15.12.2006. Codification of assets as on 31.03.06 as per MoP guidelines have been almost completed and will be submitted to the Commission within a week. It is further stated that the directives to follow CERC guidelines will be complied from 31.03.2006 onwards.

East Discom: The work is in progress. About 88% work has been completed by end of March'06 and out of 115 field divisions / offices, asset registers for 101 divisions have been completed.

Observations of the Commission: The Central Discom's performance is not encouraging in the matter and it has not submitted any asset register so far. The information that is desired by the Commission under the suo moto petition

54/2006 is in addition to the asset register and therefore, submission made by the Central Discom is not correct with regard to compliance of submission of asset register. Moreover, the details as stated in the reply have not been received by the appointed date i.e. 15.12.2006. The Commission is not convinced by the statement of Central Discom that CERC guidelines will be complied from 31.03.06 onwards as no elaboration / justification for such a statement is made by the Licensee. The East Discom has also not submitted asset registers for all its divisions / offices so far. The Commission notes that the asset regisers are for much less value of assets than their allocated value and hence are only partial. All the three Discoms have followed MoP rates for working out depreciation, while they are required to follow CERC guidelines.

(h) **Directive: Para 2.96 of the Tariff Order dated 31.03.2006: The Licensees are directed that in future they shall maintain accurate details of utilization of all sources for the purpose of creation of fixed assets and meeting the working capital requirement.**

Status Reported:

West Discom: The Licensee has stated that it is in the process of selection and implementation of ERP software to maintain the above information.

Central Discom: The Licensee has stated that maintenance of accurate details of utilization of funds received for the purpose of creation of fixed assets has been initiated. Cash flow mechanism managed by MPSEB and a tripartite agreement has been executed between SBI, MPSEB and the Licensee. Accurate details of utilization are being maintained.

East Discom: The Licensee is working on revising the chart of accounts.

Observations of the Commission: None of the Licensees have complied with the directive.

(i) **Directive: Para 4.7 (b) of the Tariff Order dated 31.03.2006: The Licensee shall keep complete log of interruptions in order to claim the amount as per tariff schedule for fixed network charge. A periodic MIS will also be made accessible to the Commission on the area-wise interruptions for specific areas as mentioned in the order**.

Status Reported: All Discoms have reported compliance in the matter.

Observations of the Commission: The Licensees have not complied with the directives fully. The information with regard to Indore Region of West Discom was submitted for a period of May’05 to Dec’05 & Ujjain region for April&May’05 only and are partial. The East Discom had submitted details for May’05 only. The Central Discom has however has shown a better compliance in this regard and have submitted details from April’05 to Sept’06 so far. The compliance is partial.

(j) **Directive: Para 4.15 of the Tariff Order dated 31.03.2006: The Commission shall separately issue guidelines for the management of funds. The Commission has already issued guidelines and the Discoms are required to submit the details about recovery of fixed network charges from domestic consumers.**

Status Reported: All Discoms have reported that a separate account has been created for recording this fund and the information is being processed and shall be submitted early.

Observations of the Commission: The Licensees have not submitted details of recovery against fixed network charges from domestic consumers**.**

(k) **Directive: Para 5.3 (a) of tariff order dated 31.03.06: The Commission has prescribed the minimum off-take of energy from Non conventional energy sources for the Licensees in MP and has also prescribed the tariff for purchase from Wind energy sources. The Discoms are directed to report the progress to the Commission in this regard.**

Status Reported:

West Discom: The Licensee has stated that it has not procured at its own any power directly from any non-conventional energy source based on generators. Power offered by NES generators approved by MPERC is being procured besides any divergent flow of power to Licensee's system. From April'06 to September'06 wind energy has been received as inadvertent flow of 1.85 MU & against purchase as 3.81 MU. Out of total requirement of 126 MU, West Discom has to procure 60 MU

Central Discom: They are availing power generated by Urja Vikas Nigam at Village Jetpura Kalan of Rajgarh district through Solar plant having a capacity of 100 KW and this power is being inducted at 11 KV.

East Discom: At present the Licensee is purchasing power from MPPTCL on pool basis. So far no wind energy producer has offered power to the East Discom.

Observations of the Commission: Promotion of green power is one of the aims of the Electricity Act, 2003 and National Electricity Policy. The Discoms should encourage the promotion of non-conventional power in their area.

(l) **Directive: Para 5.3 (b) of tariff order dated 31.03.06:** Licensees to submit a comprehensive and realistic Business Plan

Status Reported:

West Discom: The Licensee has reported compliance and has stated that their five year business plan has been approved by the Commission.

Central Discom: The Licensee has reported compliance and has stated that the plan was submitted vide their letter dated 22.06.06.

East Discom: The Licensee has stated that a draft business plan has been submitted and the finalized business plan will be submitted once the transfer scheme is finalized.

Observations of the Commission: Five Year Business Plans for the period FY'07 to FY'11 for the three Distribution Companies had been received and the Commission had conveyed its approval. The Commission would like to emphasize that the Licensee must strive hard to achieve the goals envisaged in the business plan.

(m) **Directive: Para 5.3 (c) of tariff order dated 31.03.06: MYT filing for Distribution**

Status Reported:

West Discom: The Licensee has reported compliance that they have submitted MYT filing.

Central Discom: The Licensee has reported compliance that they have submitted MYT filing.

East Discom: The Licensee has reported compliance that they have submitted MYT filing.

Observations of the Commission: The position stated by the Distribution Companies in this regard is only partially correct, as they had submitted ARR petition only for the period FY'08 to FY'10 and did not submit the tariff proposals along with the ARR. These tariff proposals were subsequently received after insistence of the Commission and that too only for FY2007-08.

(n) **Directive: Para 5.3 (d) of tariff order dated 31.03.06: Finalize Transmission Services Agreement**

Status Reported– The Licensees have reported compliance

Observations of the Commission: The Distribution Licensees have entered into TSA with the MPPTCL and have submitted a copy.

(o) **Directive: Para 5.3 (f) of tariff order dated 31.03.06: Implementation of Intra-state ABT mechanism**

Status Reported:

West Discom: The Licensee has not cared to report any compliance in this matter.

Central Discom: The meters required for intra-state ABT are being procured by Transco and scheduled to be installed at 120 interface points by end of December'06. The Licensee has set up a control room at Bhopal to monitor flow of power. SCADA of SLDC has been extended in this control room and mock exercise has already started. The discom is receiving entitlement of power for every 15 minutes interval each day and the requirement by discoms is being submitted on a day-ahead basis.

East Discom: Allocation of source-wise generating capacity is under finalization and implementation of ABT mechanism would be finalized after that.

Observations of the Commission: The Commission would like to point out that GoMP vide its notification dated 17.10.06 and subsequently revised it vide notification dated 14th March'07 has allocated generating capacity to each discom. The MP Transco has apprised the Commission that all the ABT meters & other hardware/ software required for intra-state ABT would be commissioned by end of December'06.

(p) **Directive: Para 5.3 (f) of tariff order dated 31.03.06: Induction of full-time Directors for finance and operations in Discoms**

Status Reported:

Central Discom: At present there is no provision for full time directors for Finance and Operations in the Memorandum of Articles and the matter has been referred to the State Government.

West Discom: The Licensee has stated that they have appointed full time directors. Dr. L.D. Arya as Director (Operations) and Dr. S.P. Parashar as Director (Finance) have been reported to be appointed.

East Discom: Yet to be complied with.

Observations of the Commission: The Commission had issued the directive with the intention that the management of the Companies must be properly equipped with the requisite level of proficient persons so as to handle affairs of the Companies in an efficient and diligent manner. While the West Discom has reported compliance, the other two Distribution Companies are yet to comply with the directive.

(q) **Directive: Para 5.3 (g) of tariff order dated 31.03.06: Design franchisee model for rural electrification**

Status Reported:

West Discom: The Licensee has reported to have initiated the process. Order has already been awarded for Panchayat level franchisee for Karwa Khedi of Ratlam District. Orders for Panchayat franchisee at Kishangead, Gul Balod, Butia, Mundla Kalan, Sherpur, Hingdi, Rozana, Pritamnagar, Minavada, Rupadi, Batwadia are under process. Orders for distribution centre level franchisee have been awarded for Tonk Khurd and Tonk Kalan. For further distribution centre level franchisee, orders are under process for Gandhwa, Singhot, Jaswadi of Khandwa District.

Central Discom: The franchisee model for rural area has been developed and got approved from GoMP. This model has been sent to the field SEs for their comments and after receiving their suggestions, final version will be submitted.

East Discom: The franchisee model has been designed and 10 franchisees have been appointed for rural areas.

Observations of the Commission: The RGGVY scheme envisages appointment of rural franchisees for efficient distribution of electricity in rural areas as well as for ensuring better revenue realization. The East and West Discom have initiated the process, while the Central Discom is yet to make any evident achievements in this direction. To improve operational efficiency the process of appointment of franchisee may have to be expedited by the Companies.

(r) **Directive: Para 5.3 (h) of tariff order dated 31.03.06: Submission of Work and Financial completion certificates of all completed assets to claim deprecation**

Status Reported:

West Discom: The Licensee has reported that they have recently finalized the first financial account for FY 05-06 as an independent Company and have submitted it. The information regarding completion certificates for assets capitalized during FY 2005-06 is available with them.

Central Discom: All efforts are being done to comply with the directives of the Commission.

East Discom: The Licensee is claiming depreciation based on year-wise asset addition information as available from the records of erstwhile MPSEB.

Observations of the Commission: The Distribution Licensees are required to maintain asset details as per requirement of the Companies Act and also as per ESSAR 1985. None of the Distribution licenses have submitted details of capitalization of assets during 2006-07 as per the requirement. Similarly, the Licensees have not submitted the details as per the requirement for the assets created prior to FY'07 to claim depreciation.

(s) **Directive: Para 5.3 (i) of tariff order dated 31.03.06: Develop a time-bound programme for implementation of SCADA and data management system.**

Status Reported:

West Discom: The Licensee has reported that a time bound programme was prepared and submitted. However, the Commission considering the shortage of fund has directed to implement the programme at a later date.

Central Discom: The Commission had been kind enough to agree with the present circumstances explained by the Discom and accepted that with the present state of distribution network, it may not be feasible to implement SCADA in the immediate near future and the Discom is reviewing the position as directed by the Commission.

East Discom: Programme for implementation of SCADA and Distribution Management System on a pilot basis for Jabalpur city has been included in the proposal for financing by the ADB and the details have been submitted.

Observations of the Commission: The Commission had initiated the matter with the Distribution Licensees under the directives of the National Electricity Policy for implementation of SCADA in distribution. A suo moto Petition was registered to review the status. During the course of hearings, it was represented by the Distribution Companies that they are not in a position to implement SCADA due to various financial and technical constraints. The Commission acceded to the request of the discoms and had directed that the discoms should review the position again and report to the Commission.

(t) **Directive: Para 5.3 (j) of tariff order dated 31.03.06: Implement pilots for pre-paid meters**

Status Reported:

West Discom: The Licensee has not reported anything in the matter.

Central Discom: The Licensee has stated that they are expecting to implement the pilot scheme in Bhopal city soon. However, no firm target date has been given. They have further stated that for extending pilots, the call for expression of interest is being issued.

East Discom: Yet to be complied with.

Observations of the Commission: The National Electricity Policy directs the SERCs to encourage use of pre-paid meters. Accordingly, the Commission had issued directives for implementation of pilots for pre-paid meters so as to have the experience in the matter for further extending its use. None of the three Distribution Companies have reported any concrete achievement so far.

(u) **Directive: Para 5.3 (k) of tariff order dated 31.03.06: Implement pilots of High Voltage Distribution System (HVDS) in high loss area**

Status Reported:

West Discom: They have reported that HV Distribution System has been implemented under ADB / APDRP assistance. The achievements are as under up to October'06:

ADB:

(i) Conversion of LT line to HT - 742 Kms

(ii) Installation of low capacity DTR - 3908 Nos

APDRP:

(i) Conversion of LT line to HT - 380 Kms

ii) Installation of law capacity DTR - 580 Nos.

Central Discom: They have reported that pilots of HVDS have commenced and the present status is as under:

PLACE	**No. of small DTRs installed** **Without LT**
Gwalior Town	687
Bhopal	77
Morena	78
Bhind	109

The discom has also identified 2 Nos 11 KV feeders from 33/11 KV sub-station – Chandbad of Sehore district for implementation of HVDS pilot project for which project report has been submitted by DFID for funding. In addition, they have also made provisions under RGGVY for proving 10 KVA and 16 KVA DTR with nominal LT line on ABC cable. Provision to the following expenditures has so far been approved / sanctioned in three schemes:

PARTICULARS	**PROVISION OF SMALL TRANSFORMERS**		
	Guna	Ashoknagar	Bhopal
10 KVA single phase	1514	1185	-
16 KVA 3-phase	256	578	1395

East Discom: They have reported that implementation of HVDS has been included in the proposal for finalization by ADB and the details have been submitted.

Observations of the Commission: Implementation of HVDS has been envisaged in National Electricity Policy as an effective method for reduction of technical losses, curbing pilferage of electricity; improve voltage profile and better consumer satisfaction. It has been directed to promote it to reduce LT / HT ratio keeping in view the techno-economic considerations. The Commission is pleased to note that the Companies have moved ahead with the implementation of HVDS and expects that the process in this regard would be expedited better.

(v) **Directive: Para 5.3 (l) of tariff order dated 31.03.06: Licensee to initiate process to maintain voltage-wise costing records**

Status Reported:

West Discom: The Licensee has not complied with the directives.

Central Discom: The Licensee has not complied with the directives.

East Discom: The Licensee has reported that the records are being complied for the purpose.

Observations of the Commission: None of the Distribution Companies have complied with the directives.

(w) **Directive: Para 5.3 (m) of tariff order dated 31.03.06: Submission of Annual Capital Expenditure plans in accordance with guidelines issued by the Commission**

Status Reported– All Discoms have complied with the directives.

Observations of the Commission: The Commission has given provisional approval to the investment plan submitted by the Licensees along with the business plan.

(x) **Directive: Para 5.3 (n) of tariff order dated 31.03.06: Reconciliation of Asset Registers**

Status Reported:

West Discom: The Licensee has reported that final reconciliation shall be taken up after notification of final opening balance sheet of the Licensee. Meanwhile, on the basis of available data, the differences in value of balance sheet figures and asset register figures have been trimmed down to 4%.

Central Discom: The Licensee has stated that the codification of assets as on 31st March'06 is almost complete and shall be submitted within a week. The directives to follow CERC norms shall be followed from 31.03.06 onwards.

East Discom: The Licensee has stated that records are being complied for the purpose.

Observations of the Commission: While the West Discom appears to have made some efforts, other two Distribution Companies have not been able to demonstrate any steps taken towards compliance of the directives. In order to ascertain and allow the quantum of assets for working out depreciation rates, it is necessary that asset registers are maintained properly and they tally with the respective balance sheets.

(y) **Directive: Para 5.3 (o) of tariff order dated 31.03.06: Accounting separation of distribution and retail supply businesses for determination of wheeling charges at different voltages**

Status Reported:

West Discom: The Licensee has stated that the present accounting system does not enable it to submit information relating to accounting separation of distribution and retail supply. However, they have put in significant efforts to arrive at segregation of accounting information based on allocation factors as a part of submission of current petition.

Central Discom: The Licensee has stated that the present accounting system does not enable it to submit information relating to accounting separation of distribution and retail supply. However, they have put in significant efforts to arrive at segregation of accounting information based on allocation factors as a part of submission of current petition.

East Discom: The Licensee has proposed separate ARR for the two businesses in the present filing along with rationale for adopting the same.

Observations of the Commission: The Central and East Discom have proposed entire expenses on account of wheeling only and have not made any attempts to carry out studies to have a scientific base for allocation of activities and expenses between distribution and retail supply. West Discom however has allocated certain expenses to retail supply. The Licensees need to carry out detailed scientific studies for segregating the expenses on account of distribution and retail supply fairly accurately.

(z) **Directive: Para 5.3 (p) of tariff order dated 31.03.06 -Initiate studies for segregation of technical and commercial losses**

Status Reported:

West Discom: The Licensee has reported that exhaustive study in the matter has not been commenced. However, study of technical losses on different loads at 33/11 KV has been carried out by the Licensee.

Central Discom: The Licensee has reported that they are studying the technical losses through "CYMDIST" software. Meters are installed on 11 KV feeders and the Divisions where LT billing RMS is ruled out, 11 KV feeder-wise total sales and total losses are available.

East Discom: The Licensee has reported that he study is yet to be instituted.

Observations of the Commission: The National Electricity Policy directs that a study on segregation of losses into technical and non-technical be carried out. The Commission in pursuance of the directives had registered a suo moto petition. In response, the **West Discom** had submitted that they have placed order for installation of meters on a substantial number of distribution transformers (more than 9000) and also for carrying out study for segregation of losses. The Company's stance now is that they have not commenced a comprehensive study is contrary to their earlier submissions. The **East Discom** had in response to the above mentioned petition submitted that they have placed orders for installation of meters on DTR of their Company for six towns and along with this, the study for segregation of losses would also be taken up and completed as per time schedule. The **Central Discom** however had stated that they did not initiate any study. In order to comply with the directive of the National Electricity Policy, the Commission had directed to complete the study in the matter and submit report by March'07. The Commission fails to understand the shift in the stand now taken by the East & West Distribution Companies as compared to their submissions made earlier in response to the suo moto petition and directs all the Companies to comply with the directives given in the matter.

(aa) **Directive: Para 5.3 (q) of tariff order dated 31.03.06: Develop roadmap for reduction of loss levels so as to bring it to comparable international levels by 2012**

Status Reported:

West Discom: The Licensee has reported that it has developed and submitted investment plan for meeting its requirements related to load growth, loss reduction, system strengthening, etc. The road map is likely to be modified by GoMP.

Central Discom: It has been reported that the road map for reduction of loss level has been prepared considering the current performance level with the Licensee. Projected loss reduction trajectory is not comparable with the international level.

East Discom: The Licensee has reported that they have prepared a detailed investment plan to achieve this target.

Observations of the Commission: As per directives of the National Electricity Policy, the GoMP has notified road map for reduction of losses on a year to year basis up to 2010-11. The Company is directed to ensure achievement of targets specified in road map.

(bb) **Directive: Para 5.5 of tariff order dated 31.03.06: One of the important directives given in the tariff order passed on 29 June 05 related to the refund of a percentage of fixed charges to consumers of such areas where supply was interrupted for a duration longer than specified. The Distribution Licensees have reported that refunds have been given to affected consumers. The Commission will verify the details and pursue this matter in the coming months**

Status Reported:

West Discom: The Licensee has not reported compliance in the matter.

Central Discom: The Licensee has not reported any compliance in the matter.

East Discom: The Licensee has reported that they are abiding by the provision of refund and details of such refunds till Feb'06 have been submitted.

Observations of the Commission: The Licensees have not maintained and submit the details on a regular basis to the Commission. The Licensees are directed to submit the details on regular basis to the Commission.

(cc) **Directive: NOTE (c) of tariff schedule LV-I of tariff order dated 31.03.2006: The Licensee shall be required to intimate at the end of the**

month duration of average daily supply in each city / O&M divisions and also display it on the energy bills.

Status Reported–

West Discom – The Licensee has reported compliance.

Central Discom- The Licensees must ensure that they fully comply with the directives in this regard and ensure that recovery of charges is made in accordance with the provisions of the Tariff Order and if any excess recovery is made, it should be promptly refunded to the concerned consumers.

East Discom- The Licensee has reported compliance.

Observations of the Commission: The Licensees have not complied with the directives fully. The information with regard to Indore Region of West Discom was submitted for a period of May'05 to Dec'05 & Ujjain region for April&May'05 only. The East Discom had submitted details for May'05 only. The Central Discom has however has shown a better compliance in this regard and have submitted details from April'05 to Sept'06 so far.

(dd) **Directive: Para 5.6 of the Tariff Order dated 31.03.2006: The Licensees have to ensure that Tariff Card in Hindi language is sent to every consumer by 31.04.2006.**

Status Reported – No Discom has reported compliance in the matter.

Observations of the Commission: The Commission had directed to issue tariff cards in hindi to the consumers with a view to explain various components and charges of the bill to the consumers. While the Commission is pleased to note that the East Discom has reported its compliance in the matter, the Commission expects that the Central and West Discom shall ensure compliance now.

7.4 A review of status of compliance against the directive of the previous tariff orders reveals that the Distribution Companies have not been able to comply with number of issues concerning improvement in the quality of supply and services to the consumers as well as for improvement of operating efficiency of the Distribution Companies. The Commission had issued the directives with the intention to bring about the changes that are commensurate with the provisions of the Electricity Act, 2003 and the National Electricity Policy & National Tariff policy for the overall betterment in the power sector as a whole. The Distribution Licensees need to understand the importance of compliance of the directives and have to demonstrate willingness for its implementation. The Commission would expect Licensees to come-up with better performance in ensuing period.

7.5 **FRESH DIRECTIVES OF THIS TARIFF ORDER**: The Commission directs the Licensees to initiate action on the following directives and report compliance to each of them:

(a) **Ensuring compliance on Power Purchase Regulations**: The Distribution Companies must strictly follow power purchase regulations for purchase of power through long term PPAs and short term PPAs.

(b) **Implementation of energy audit**: It is noted from various submissions made by the Distribution Licensees during the course of hearing against suo moto petitions that the progress is tardy and the results of the energy audit are not credible. The Distribution Companies must ensure that all the energy audit meters at appropriate locations are installed by 31.12.07 and compliance reported by 15th January 2008.

(c) **Energy audit for 33/11 kV sub-stations and individual 11 kV feeders**: The Distribution Licensees are directed to initiate energy audit on 33/11 KV sub-stations and individual 11 KV feeders in the divisions where RMS has been rolled out. The Distribution Licensees should report compliance in this regard along with details and first such report of compliance be submitted by Sept'07. The Distribution Licensees should also initiate the work of consumer indexing, codification and appropriate billing software, so as to complete the work and be in a position to work out 33/11 KV sub-station-wise and 11 kV feeder-wise energy audit for all the divisions within the jurisdiction of the Company. An annual review of the activities done in this regard shall be made during next tariff determination.

(d) **Segregation of losses into technical and non-technical**: The Commission had taken a suo moto notice in the matter in accordance with the directives contained in the National Electricity Policy and had directed to carry out the study for segregation of technical and non-technical losses with the help of experts. The study is required to be completed and report is required to be submitted by the Distribution Companies to the Commission by end of March'07, which is awaited. The Distribution Companies are directed to ensure submission of report without further delay.

(e) **Reduction of distribution losses**: The GoMP has notified milestones for reduction of losses year on year basis up to 2010-11. The Distribution Companies are directed to make all possible efforts to achieve the normative level of losses indicated in the notification by way of ensuring proper energy audits, intensify checking to curb pilferage of energy and take such other actions as may be necessary.

(f) **Remote metering**: The Commission had directed earlier to the Distribution Companies to implement remote metering for high value consumers particularly of HT consumers. Although some work in this regard has been done, but still a large number of HT consumers have so far not been provided with remote metering. The Commission directs Distribution Companies to ensure implementation of remote metering of all HT consumers and report compliance in next tariff filing. The Commission also directs Distribution Companies to explore the possibility of remote metering in conjunction with pre-paid meters in the pilot schemes and report on the results.

(g) **Implementation of HVDS**: One of the directives of the National Electricity Policy provides that the Distribution Companies should go in for High Voltage Distribution System (HVDS) to curb pilferage, improve the voltage and supply reliability. Some work has been included in some of the schemes as indicated by the Distribution Companies in their petition. The Commission directs to spread implementation of HVDS to reduce technical losses, curb pilferage of energy and also improve the voltage levels at the consumer end. The Companies should report compliance giving details of the results achieved in the matter in next tariff filing.

(h) **Spot billing**: The Commission had earlier directed the Distribution Companies to commence spot billing in big towns in the first phase and spread its use to other places in the State gradually. The Commission has been given to understand that this work has recently commenced at Bhopal city in a limited manner and the results are encouraging. The Commission directs the Distribution Company to implement spot billing in all district HQ towns within a year and report compliance. Care should be taken to ensure that spot billing through use of computer aided equipments is implemented in such a manner that it integrates well with the billing systems. The use of spot billing subsequently should be spread to other areas of the Company.

(i) **Maintenance of complete asset registers**: The Commission directs the Distribution Companies to maintain its asset registers in a comprehensive manner.

(j) **Franchisee**: The Distribution Companies are directed to take appropriate initiatives for appointment of franchisees in rural areas as envisaged in the RGGVY Scheme and report on the progress in this regard in next tariff filing.

The Commission will conduct quarterly review of the status of implementation of these directives.