

**Before the
MAHARASHTRA ELECTRICITY REGULATORY COMMISSION
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Case No. 17 of 2007

**In the matter of
Maharashtra State Power Generation Company Ltd.'s (MSPGCL) Petition for
Approval of Lease Rent of Hydel Stations owned by GoM leased to MSPGCL for
Operation and Maintenance**

**Shri A. Velayutham, Member
Shri S. B. Kulkarni, Member**

ORDER

Dated: October 27, 2008

The Maharashtra State Power Generation Company Ltd. (MSPGCL) filed a Petition on May 25, 2007, in accordance with Commission's directions in its Order on Determination of Aggregate Revenue Requirement (ARR) of MSPGCL for the first Control Period from FY 2007-08 to FY 2009-10 and Tariff for FY 2007-08, dated April 25, 2007, seeking approval for revision in lease rent for Hydro Electric Projects (HEPs) leased out to MSPGCL by the Government of Maharashtra. Following are the main prayers in the Petition:

“MSPGCL requests the Hon'ble Commission to approve the revised lease rent for HEPs as per the GR No. जविप्र/प्रक्र 90/उर्जा-4 दि. 12 जानेवारी, 2007.

Any errors/omissions may please be condoned, and opportunity be given to rectify the same.”

2. MSPGCL in its Petition submitted that the Government of Maharashtra (GoM) issued Government Resolution (GR) No. जविप्र/प्रक्र 90/उर्जा-4 दि. 12 जानेवारी, 2007 revising the lease rent for HEPs handed over to MSPGCL for operation and maintenance. Further, the said GR stipulates:



“The decision of the Government on lease rent shall be implemented on approval by the MERC. MSPGCL should submit application seeking approval for the same. Implementation of the said decision of the Government shall be done in accordance with the decision of the MERC and shall be applicable from the date as may be approved by the Commission.”

3. MSPGCL, in its Petition mentioned that along with the additional data and clarifications to the data gaps after Technical Validation Session (TVS) of the Multi Year Tariff (MYT) Petition, it had submitted revised values of ARR after incorporating the effect of revised lease rentals (as per the GR) in the Formats specified for the hydro stations in the revised MYT Petition. The Commission, in its MYT Order dated April 25, 2007, in the matter of determination of ARR of MSPGCL for the Control Period from FY 2007-08 to FY 2009-10 and Tariff for FY 2007-08, vide Para 5.9 stipulated as follows:

“As the lease rent on hydel stations has a direct bearing on tariff of hydel stations, the Commission will separately undertake the exercise of determining lease rent of hydel stations. MSPGCL is directed to submit the Petition for approval of the lease rent to the Commission, along with the supporting documents and computations, within six weeks from the date of issue of this Order. For the time being, the Commission has considered the lease rent for the Control Period as Rs 85 Crore. Any variation in lease rent as determined by the Commission will be considered for truing up at the time of annual performance review during the first Control Period.”

4. MSPGCL, in its Petition, submitted that the Hydro Electric Projects in the State of Maharashtra were designed, erected and commissioned through the Water Resource Department (WRD) of GoM. After commissioning, the projects were handed over on long lease to MSPGCL (erstwhile MSEB) for Operation and Maintenance and till date, 27 such projects including Koyna Stage I & II projects have been handed over to MSPGCL by GoM. MSPGCL submitted that the Lease Agreement was signed between GoM and erstwhile MSEB, for Koyna Stage I & II projects only, for a period of 25 years, which expired in the year 1988. MSPGCL further submitted that the Lease Agreement was neither renewed nor any new Agreement was signed for the projects handed over to MSPGCL. MSPGCL submitted that it has been paying the lease rent to GoM on ad-hoc basis after the expiry of the Lease Agreement.



5. MSPGCL submitted that a meeting was held on April 17, 2002, which was presided over by Chief Secretary, GoM in which it was decided to determine and to seek the approval from the Commission for the principles of lease rent for such projects. The matter was heard before the Commission on July 17, 2003. During the hearing, the Commission opined that GoM-WRD should take into account all the provisions and spirit of the recently enacted Electricity Act 2003 (EA 2003) for adopting a commercial approach as well as the various alternatives available for such projects to GoM-WRD. It was submitted that under the EA 2003, GoM-WRD is also a generating unit and can consider a relationship with private parties.

6. MSPGCL, in its Petition, submitted that the lease rent was initially calculated using Discounted Cash Flow (DCF) method assuming that the cost of project will be recovered in 20 years at 8% discount rate. In November, 2001, the Secretary (Finance), GoM mentioned that computation of lease rent using Discounted Cash Flow (DCF) method was not in accordance with commercial business principles. Secretary (Finance), GoM opined that the earlier Government had adopted the DCF method for computing the lease rent, and it is not advisable to continue the same in future considering the lease rent as a source of revenue income. He opined that as GoM has invested a substantial amount in HEPs, it is necessary that GoM must get adequate returns on the investment and lease rent should be decided considering the borrowing rate of interest that GoM pays on the loans taken, after the project has been handed over to the MSPGCL (erstwhile MSEB).

7. It was submitted in the Petition that in a meeting presided by the Chief Secretary on April 17, 2004, following general principles were decided for fixing lease rent of HEPs:

- a) interest amount on capital invested will be considered at the State Bank of India Prime Lending Rate (SBI PLR) or interest rate at which GoM borrows from open market;
- b) lease rent for Government land will be considered at the rate of Rs 1000 per MW of generation capacity;
- c) royalty on water will be considered at the rate of Rs 0.05 per unit of generation;
- d) the Charges towards civil maintenance expenditure incurred on the projects under control of WRD will be considered based on actual expenditure;
- e) as increase in lease rent will raise tariff for electricity consumers, approval for the lease rent should be obtained from the Commission.



8. MSPGCL, in its Petition, submitted that the GoM analysed the various approaches for computing the lease rent for the HEPs, which are discussed below:

Approach 1: Return on Capital invested by GoM at Prime Lending Rate (PLR) and reimbursement of maintenance expenditure incurred by Government.

GoM-WRD and the Chief Secretary suggested this method in the meeting held on April 17, 2004 and suggested that lease rent should be computed considering Return on Capital invested by GoM at PLR and reimbursement of maintenance expenditure incurred by GoM. With this approach, the lease rent was computed as Rs 443 Crore.

Approach 2: Lease rent by Market rate of electricity

The Department of Finance, GoM, suggested this method for computing lease rent, considering the electricity purchase price at rate of Rs 2.60 per unit and subtracting from it the actual maintenance expenditure of Rs 0.10 per unit. The lease rent with this approach was computed as Rs 1008 Crore.

Approach 3: Computations as per (Terms and Conditions of Tariff) Regulations of Central Electricity Regulatory Commission (CERC)

The Energy Department, GoM, computed the lease rent considering CERC (Terms and Conditions of Tariff), Regulations 2004, issued on March 26, 2004 through M/s CRISIL, Consultant appointed for this purpose. Some of the important features of the methodology adopted for computing lease rent under this approach are given below:

- a) Considered FY 2005-06 as base year for tariff computation;
- b) Considered useful plant life of 35 years, based on CERC norms and accordingly computed the balance life of each project by subtracting number of years of operations since COD of each project from normative life;
For Koyna Stage I&II, although the balance life is zero, additional benefit of plant life of 35 years from FY 2004-05 has been taken into account due to the additional capital expenditure incurred by GoM-WRD on strengthening of the Koyna dam;
- c) Considered the project cost as informed by GoM-WRD for all the HEP's. Project cost considered as on 31st March, 2004 for tariff computation. Further, additional capitalisation for Koyna Stage I&II and Tillari has been considered. Capital expenditure incurred by MSPGCL has not been included in the project cost for computation of tariff;



- d) Considered the auxiliary consumption as per CERC norms, and for HEP's for which auxiliary consumption cannot be determined as per CERC norms, auxiliary consumption has been assumed at 0.5% of the gross generation;
- e) Considered the normative debt:equity ratio of 70:30 for all HEPs, except for Koyna Stage IV, for which, debt equity ratio of 3.24:1 has been considered;
- f) Considered interest rate of 8.5% p.a. based on the present lending rate offered by PFC for MSPGCL's upcoming projects;
- g) Considered the O&M expenditure for the base year FY 2003-04 as per the CERC norms for all the Hydro Electric Projects by considering O&M expenditure of MSPGCL as well as GoMWRD. In absence of actual data on MSPGCL's plant wise O&M expenditure, the division wise O&M expenditure has been prorated as per respective capacity to arrive at MSPGCL's HEP-wise O&M expenditure;
- h) Computed the working capital and interest on working capital based on the CERC norms;
- i) Considered the depreciable value of asset at 90% of the capital cost (as per CERC norms);
- j) Return on equity considered at @ 14% per annum.

By this approach, Energy Department GoM, computed the lease rent as Rs.401.16 Crore for the first year, with reduction in the lease rent as the capital cost recovery component reduces over the years.

MSPGCL submitted that the Department of Finance, GoM objected to the decreasing lease rent as suggested by Energy Department (i.e., methodology adopted by M/s CRISIL). Department of Finance, GoM viewed that the electricity rates will witness a rising trend in future, and so will the market price of HEPs. Accordingly, GoM approved escalation in the lease rent by 5% p.a. for 35 years from Commercial Operation Date (COD). GoM also opined that for HEPs, where the cost of dam has not been included in their capital cost, the Royalty for water will be charged at the rate of Rs 0.05 per kWh, which is to be escalated at 5% annually. Accordingly, GoM fixed the lease rent for the year 2005 as Rs 403.42 Crore and computed the lease rent for 35 years by escalating by 5% p.a. The summary of the lease rent as proposed by GoM for 35 years is shown in the Table below:



Rs Crore

Particular	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Lease Rent	401.16	421.22	443.04	465.19	489.11	500.82	516.18	541.99	569.55	598.02	624.50	655.72
Water Royalty	2.26	2.37	2.49	2.61	2.74	2.72	2.85	3.00	3.15	3.30	3.47	3.64
Total Lease Rent including Water Royalty	403.42	423.59	445.53	467.80	491.85	503.54	519.03	544.99	572.70	601.32	627.97	659.36
Particular	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
Lease Rent	688.76	723.20	752.54	790.16	789.20	791.44	819.65	860.63	879.01	920.04	966.04	1014.34
Water Royalty	3.83	4.02	4.01	4.21	4.33	4.14	4.15	4.36	2.83	2.81	2.95	3.10
Total Lease Rent including Water Royalty	692.59	727.22	756.55	794.37	793.53	795.58	823.80	864.99	881.84	922.85	968.99	1017.44
Particular	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	
Lease Rent	1038.74	1090.68	1145.21	1202.47	1202.54	1233.65	91.71	96.30	101.11	106.17	111.48	
Water Royalty	2.90	3.05	3.20	3.36	1.67	1.03	0.00	0.00	0.00	0.00	0.00	
Total Lease Rent including Water Royalty	1041.64	1093.73	1148.41	1205.83	1204.21	1234.68	91.71	96.30	101.11	106.17	111.48	

9. The Commission scheduled the Hearing in the matter on July 18, 2007 in the presence of Consumer Representatives authorised on a standing basis under the EA 2003. Notices were issued accordingly.

10. MSPGCL, during the hearing, submitted that the revision in lease rent with respect to HEPs operated and maintained by MSPGCL, as declared in the Government Resolution dated January 12, 2007, needs to be approved by the Commission. Vide the said Resolution, GoM further directed MSPGCL to seek the Commission's approval for the said revision in the lease rent. Further, under the Order dated April 25, 2007 in Case No. 68 of 2006 (in the matter of ARR and Multi Year Tariff Petition of MSPGCL for the first Control Period from FY 2007-08 to FY 2009-10), MSPGCL has been directed to submit the necessary application for determination of lease rent of HEPs under MSPGCL's operation and maintenance.

11. The Commission enquired from the representatives present on behalf of the Government of Maharashtra (GoM) as to which authority under the GoM has been designated under law or rules and regulations for fixation of lease rent for such HEPs, and the legal parameters that are to be observed for such fixation. The Commission further enquired regarding the role of the Water Resource Department, GoM in determining/fixing such lease rent and revision thereof.



12. Shri. V.M. Kulkarni, Superintending Engineer, Koyna Design Circle (KDC), WRD-GoM, submitted that the Irrigation Department, GoM filed a Petition before the Commission in 2002, seeking revision in the lease rent for HEPs owned by the GoM and leased out to MSPGCL. The Commission directed the Irrigation Department, GoM to prepare a proposal for the said lease rent revision and seek the approval of the GoM on the same. The Irrigation Department, GoM thereafter presented a proposal before the Cabinet of the GoM. The GoM convened various cabinet meetings for approval of the said proposal and considered the following aspects for fixing the lease rent of HEPs:

- (i) Huge capital investments made by its Irrigation Department on the HEPs (e.g., capex of Rs 2546 Crore, additional capitalization of Rs 148 Crore, capacity addition of 10 to 60 MW since 1991 or 1992, etc.);
- (ii) Written submissions and statements provided by MSPGCL;
- (iii) Power procurement rates applicable to the MSEB as provided by the Energy Department-GoM, and
- (iv) Existing CERC regulations/guidelines, observed that since no formal lease agreement has been executed between the Irrigation Department, GoM and MSPGCL, the former may lease out its HEPs to any other party through the process of competitive bidding.

13. Shri. Kulkarni, GoM-WRD, submitted that letting out HEPs to a private bidder will accrue an estimated annual lease rent of Rs 1000 Crore in favour of the Irrigation Department, GoM. However, on consideration of the interests of consumers of Maharashtra, the GoM decided to lease the said HEPs to MSPGCL for an annual lease rent of around Rs 400 Crore. Nevertheless, it was also observed that, in terms of the EA 2003 which has come into force at the relevant time, such a preference to MSPGCL shall amount to cross-subsidy in favour of MSPGCL to the tune of Rs 600 Crore (a concept which is not in consonance with the EA 2003 regime). In order to negate this incidence of cross-subsidy, the GoM has passed the aforesaid notification to increase the existing lease rent for the said HEPs on a percentage basis on year-to-year basis.

14. The Commission enquired of Shri. V.M. Kulkarni as to the provisions of the EA 2003 and the CERC/Guidelines that were referred to by the Irrigation Department, GoM while determining the annual lease rent for the said HEPs at Rs 1000 Crore. The Commission further enquired as to the basis, methodology and modality adopted by the GoM for calculating the revision in lease rent. Shri. V.M. Kulkarni submitted that



sufficient reliance was placed on the existing procurement rates at which, MSPGCL sells power to MSEDCL, while determining the said revision in the lease rent. The Commission observed that the rate at which MSPGCL sells power to any energy procurer could not be the basis for fixation of lease rent. Procurement rates are related to, amongst other factors with the longevity of the projects/plants. Though HEPs are resources of the State and need to earn adequate revenue, the basis of determination of the revenue should be made under a regulated regime. As regards comparison of lease rent payable to GoM with tariff for Teesta VI Hydro Electric Project in Sikkim for which PPA has been signed by MSEDCL with M/s Lanco Energy Private Limited, the Commission is of the view that this comparison is not appropriate as all the HEPs of GoM have been commissioned by FY 1999-2000, while the Teesta VI HEP is under development and hence, there is wide variation in capital cost of GoM HEP projects and Teesta VI HEP.

15. The Commission further observed that revision in the lease rent would have an impact on the ARR of MSPGCL and it needs to be primarily determined whether power that is generated at the HEPs is incidental generation or major generation. It needs to be determined whether the HEPs are essentially hydro-electric projects or essentially irrigation projects. Shri. V.M. Kulkarni submitted that out of the 4000 MU that are generated annually, almost 3000 MU are from the Koyna Project, around 60 MW is discharged from Vaitarna HEP and a certain quantum is further discharged from Tillari and thus around 90% of total generation is from hydro-electric projects.

16. The Commission enquired of the representatives present on behalf of MSPGCL as to whether MSPGCL is allowed to generate from Koyna Project as per their requirement. On an enquiry made by the Commission as to the veracity of the said submission of Shri. V.M. Kulkarni, Shri. Vinay T. Bapat submitted that the Koyna Project is essentially a hydro-electric project from which MSPGCL is able to generate as per its requirement.

17. Shri. V.M. Kulkarni submitted that primarily, lease rent has been calculated by the GoM as per applicable CERC Tariff Regulations and MERC Tariff Regulations. It was observed that as per the Tariff Regulations, the amount of lease rent was undergoing a gradual decrease on year-to-year basis. Such a decrease was not in the interests of the GoM as the investments in the nature of capacity addition that have been borne by the GoM have considerably increased the market value of HEPs. The GoM has considered revising the lease rent as per investments made on the HEPs and



thereafter, arrived at a figure of Rs 800 Crore. It was further submitted that in case of small/independent HEPs, the cost recovery of Capital Cost of the dam, bench top, and other linked costs are not considered while determining the lease rent. The Commission enquired as to whether the full economic benefit of the Koyna dam, being an independent dam, is for the purpose of power generation. Shri. V.M. Kulkarni submitted that 70% of the economic benefit of the Koyna dam is from power generation and the balance 30% is from irrigation. Revision in lease rent for HEPs leased out to MSPGCL has been determined on the basis of the ratio corresponding to the said economic benefit.

18. The Commission observed that revision of lease rent cannot be determined by combining two separate methodologies. While on one hand, the lease rent has been calculated as per applicable CERC guidelines and MERC guidelines, on the other hand, the lease rent is proposed to be revised considering the market rates and cost-sharing ratio. This amounts to a departure from both the processes for determination of lease rent. If the lease rent is determined in accordance with the Regulations, the lease rent will reduce every year due to reduction in interest on loan capital. Shri. V.M. Kulkarni submitted that the methodology adopted while determining the lease rent, and the further revision, are in consonance with relevant provisions of the EA, 2003.

19. The Commission further directed the Irrigation Department-GoM to file detailed written submissions as to the legal basis of determination and revision of lease rents for HEPs leased out to MSPGCL. The Commission also directed that the said submissions should specify the provisions of law that govern the fixation and/or revision of such lease rent. Shri. V.M. Kulkarni requested for a period of one month for the submission of written submissions.

20. Shri. V.M. Kulkarni further submitted that the GoM-WRD has to pay huge interest to the tune of about Rs 80-90 Crore for the various loans that have been obtained. In view thereof, Shri. V.M. Kulkarni requested the Commission to revise the existing lease rent as per the Government Resolution dated January 12, 2007 in the interim till final disposal of the present proceedings. He further submitted that the said interim revision of lease rent shall be adjusted as per the final Order in the present proceedings.



21. The Commission opined that MSPGCL should be given reasonable opportunity on the issue of interim revision of lease rent. The Commission directed the GoM-WRD to file a proper Petition detailing the process of determination of lease rent and/or grounds for implementation of interim revision of lease rent. The said written submissions should be served upon MSPGCL for providing MSPGCL a reasonable opportunity of being heard. The Commission further directed MSPGCL to issue notice and serve a copy of the present Petition to MSEDCL, as the revision of lease rent for HEPs leased out to MSPGCL shall have an effect on the ARR of MSEDCL.

22. In compliance with the Commission's directions during the hearing, GoM-WRD submitted its say in the matter on affidavit on August 02, 2007.

23. GoM-WRD submitted that as per the State Policy, GoM through its Water Resources Department (formerly known as Irrigation Department) erects hydro power generating stations through its own resources. GoM has invested an amount of around Rs 4042 Crore on these projects. These HEPs are then handed over to MSPGCL for operation and maintenance. GoM has handed over 27 projects to MSPGCL. The total installed capacity of these 27 projects is 2348.75 MW and average annual generation is 4033 MU and more than 50% of the generation is during peaking hours. GoM-WRD submitted that currently, MSPGCL has been paying annual lease rent of Rs 85 Crore on ad-hoc basis. GoM-WRD submitted that this lease rent needs revision due to following reasons:

- No increase in lease rent since 1992-93, although there has been capacity addition of 1060 MW through Koyna Stage IV and 8 other SHPs;
- GoM has commissioned Koyna Stage IV in 1999, by investing about Rs 2546 Crore, which is continuously generating 1000 MW peaking power since its COD. However, MSPGCL has not paid any amount towards lease rent towards this project since its commissioning. World Bank Loan was taken for this project. Further, GoM has been repaying the same through yearly instalment of USD 34.20 million;
- Since 1992-93, GoM has incurred Rs 148 Crore towards additional capitalisation on HEPs, which were commissioned prior to 1992-93. (Strengthening of Koyna dam for extending the useful life of the project : Rs 136.44 Crore and Rs 11.47 Crore towards payment to the contractor as per the Arbitration award on Tillari Hydro Electric Project);



- Annual O&M burden on GoM towards main HEPs excluding Small Hydro Projects (SHPs) is more than Rs 30 Crore, which is increasing every year. The hydro electric projects have following four main components, i.e., reservoir, intake structure, water conductor system and power house. The operation and maintenance of powerhouse is carried out by MSPGCL, whereas GoM does operation and maintenance of reservoir, intake structure and water conductor system from its own resources;
- Lease rent of Rs 85 Crore does not include lease rent for Koyna Stage I, II, III, IV and other SHPs, viz. Surya, Surya RBC, Warana, Manikdoh, Dimbhe, Dudhaganga, Terwanmedhe;
- After deducting Rs 30 Crore, which is spent on O&M, GoM receives only Rs 55 Crore annually from the current level of lease rent on its huge investment of Rs 4042 Crore, which is not even adequate to repay the annual instalments of loan of about (USD 34.20 million) taken by GoM for Koyna Stage IV from World Bank.

GoM submitted that as a consequence, it is neither getting any depreciation for any of its projects nor any returns on its investment on HEPs, which is totally against the provisions and spirit of Section 61 of the EA, 2003.

24. Further it was submitted that the Irrigation Department, GoM had approached the Commission on June 18, 2002 regarding revision of lease rent under the relevant provisions in the erstwhile Electricity Regulatory Commissions (ERC) Act, 1998. The matter was heard by the Commission on July 17, 2003. The Commission directed GoM to apply formally in an appropriate manner, after obtaining due sanction of the State Government.

The Commission also recorded the following observations:

- Provisions and spirit of Electricity Act, 2003 should be taken into account;
- Under Electricity Act, 2003, Irrigation Department can also be a generating company, which can have direct commercial relationship with private parties. MSEB can be one of them;
- Government can lease out the projects by bidding process;
- HEPs could become important profit centres for the Government.



25. GoM-WRD, in its submission, submitted that accordingly, detailed proposal for revision of lease rent for HEPs was presented to the Cabinet along with different methodologies that can be considered for deciding the lease rent based on observations recorded by the Commission dated July 17, 2003. State Cabinet approved the proposal in its meeting dated January 24, 2006 and GR was issued on January 12, 2007. MSPGCL considered the revised lease rent in its ARR proposal, however, the Commission in its Order dated April 25, 2007 directed MSPGCL to submit a separate petition in the matter for fixation of lease rent. Accordingly, MSPGCL has filed this petition.

26. GoM-WRD submitted that various options for computing lease rents were submitted to the Cabinet for its consideration. One of the alternatives was the proposal prepared by MSPGCL through its consultant M/s CRISIL. This proposal was based on CERC (Terms and Conditions of Tariff), Regulations dated March 26, 2004, which does not violate the principles laid down by the Commission in MERC (Terms and Conditions of Tariff) Regulations, 2005.

27. It was submitted that GoM also considered the available option of leasing out HEPs by competitive bidding, as MSPGCL has not signed the lease agreement for any of the HEPs, which is also in accordance with the provisions of the EA, 2003. GoM submitted that as per its estimates, it could have got more than Rs 1000 Crore annually if these projects are leased out through bidding. However, considering the larger interest of the State, GoM took a policy decision to revise lease rent from Rs 85 Crore to Rs 445.53 Crore to be payable in the year 2006-07 and 5% increase thereon in subsequent years. GoM approved MSPGCL's proposal by making certain modifications.

28. GoM-WRD submitted that the cost of dam has not been included in the capital cost of the SHPs, hence, it is not accounted for in cost based tariffs. If, proportionate cost of the dam is considered in the capital cost, SHPs become unfeasible. Hence, GoM has adopted a policy decision to levy water charges @ nominal rate of Rs 0.05/unit generated through SHPs, which is as per GoM-WRD Policy for SHPs dated September 15, 2005. MSPGCL, while computing the lease rent, has not considered this aspect and hence, GoM-WRD has included these charges, which amount to Rs 2.26 Crore only. For subsequent years, GoM has proposed to increase the lease rent by 5 % per annum up to normative life of the individual project (35 years). GoM-WRD submitted that in the initial years, the lease rent proposed is far less than what



GoM is likely to get if these HEPs are leased out by competitive bidding and commercial value of these installations is expected to increase further with time. Hence, GoM-WRD submitted that 5 % annual hike in lease rent as proposed by GoM is justified.

29. GoM-WRD submitted that the lease rent of Rs 445.53 Crore, amounts to Rs 1.11 per kWh, considering the average annual generation of 4000 MU, which is even lower than the tariff approved by the Commission in its Order dated September 7, 2006 on ARR and Tariff Petitions of MSPGCL for the year 2006-07.

30. GoM-WRD submitted that GoM has considered the relevant provisions in Section 61 of the EA 2003 and the directives given by the Commission on July 17, 2003 while approving the proposal of revision in the lease rent of HEPs. Accordingly, GoM-WRD requested to approve the revised lease rent and submitted that lease rents approved by the GoM are in line with spirit of the EA, 2003, Government of India's (GoI) Tariff Policy dated January 6, 2006 and MERC (Terms and Conditions of Tariff), Regulations, 2005.

31. GoM-WRD further submitted that in lease rent computations made by MSPGCL and subsequently approved by GoM, normative life of the project has been considered as 35 years and accordingly rate of depreciation has been worked out. However, for projects commissioned before April 01, 2004 it has been presumed that lease rent is paid by the same approach till FY 2006-07. Only balance depreciation has been considered. The Return on Equity (ROE) has also been proposed for the balance period. GoM-WRD has not considered the aspect of whether lease rent has been actually paid from COD or not. For example, in case of Koyna Hydro Electric Project Stage IV, COD considered for lease rent calculations is June, 1999. For first 7 years, no lease rent has been paid. However, lease rent is proposed only for next 28 years presuming that lease rent with same norm has been paid for 7 years. Unless arrears are paid, this assumption is not realistic and does not consider full payback of the investment made by GOM. Accordingly, GoM-WRD in its submission requested the Commission to consider one of the following options.

- allow lease rent for 35 years from the date from which MSPGCL starts to pay lease rent for the particular project;
- or as an alternative, rate of depreciation may be worked out suitably to allow 90% depreciation in remaining normative life of the project;



- or Interest During Construction (IDC) should be included in the capital cost up to the date from which MSPGCL starts paying lease rent.

32. Further, GoM-WRD requested the Commission to issue immediate interim Orders, directing MSPGCL to pay to GoM lease rent as per the GR dated January 12, 2007 subject to adjustments if any, as finally decided by the Commission.

33. Subsequently, GoM-WRD, in response to the Commission's direction for submission of the facts and legal provision in support of G.R. No. HP/2005 case No.90/energy-4 dated January 12, 2007 issued by GoM regarding lease rent, submitted that no Power Purchase Agreement (PPA) has been entered in to between GoM-WRD and MSPGCL as on the date and also on the date on which Electricity Act 2003, CERC (Terms and Conditions of Tariff) Regulations, 2004 dated March 26, 2004 and MERC (Terms and Conditions of Tariff) Regulations, 2005 were made effective.

34. GoM-WRD submitted that there is no specific provision in CERC/MERC Regulations, which is appropriate for determination of tariff for such group of old and new projects except Section 5.1 of MERC (Terms and Conditions of Tariff) Regulations, 2005 which stipulates:

'A Generating Company or Licensee, as the case may be, may agree to any terms and conditions that may vary from the terms and conditions contained in these Regulations where the terms and conditions agreed upon will result in a lower total cost of supply of electricity to consumers in the State during the entire duration of the agreement of which such terms and conditions form apart:

Provided that such agreement shall come in to effect only with the previous approval of the Commission, except where such approval is not specifically required under the Act or these Regulations.'

35. GoM-WRD further submitted that the generation during peak hours through these generating stations has been more than 50% of the total generation, which can be further optimised up to 70%. The levelised tariff of these HEPs is only Rs 1.48 per kWh (average tariff rate of Rs 1.68 per kWh), which is much lower than the tariff approved by the Commission for FY 2006-07 in its Order dated April 25, 2007 in



Case No. 68 of 2006. GoM-WRD submitted that this levelised tariff is also much lower as compared to effective landed cost at MSEDCL's periphery for PPA's entered into by MSEDCL for procurement of hydel power from other generating companies viz. Lanco Energy Pvt. Ltd., Sikkim. It is also much lower than the rate at which MSEDCL is presently purchasing power from traders (Rs 5.40 per kWh).

36. GoM-WRD submitted that the proposed lease rent and PPA's signed on that basis will result in lower total cost of supply of electricity to the consumers in the State during the entire duration of PPA. Hence, GoM-WRD requested the Commission to approve the lease rent as requested by MSPGCL in its affidavit dated May 23, 2007 under Section 5.1 of the MERC (Terms and Conditions of Tariff) Regulations, 2005.

37. GoM-WRD added that MSPGCL benefits from power generated from Koyna I, II, III and Yeldari projects, even though it has stopped paying lease rent for these projects. Further, from Koyna Stage IV and 7 other projects, which have been handed over to MSPGCL in May 2002, MSPGCL has been generating electricity without paying any least rent for these projects. In turn, consumers in the State have availed the benefits from these State-owned hydel projects without paying for it. On the other hand, GoM has been receiving lease rent, which is disproportionately lower than its investment, and is not even adequate to pay back the loan raised for one of the projects from World Bank, viz., Koyna Stage IV. GoM-WRD submitted that this is against the provisions of Section 61 (b) and (d) of Electricity Act, 2003 and requested the Commission to consider this aspect also while disposing of the Case.

38. Subsequently, in accordance with the Commission's direction to MSPGCL to submit its views and concerns on the submissions of GoM-WRD, MSPGCL filed its submission on August 21, 2007. MSPGCL, in the said submission, requested the Commission to

- Allow MSPGCL to retain 4% out of total 14% of RoE provided as per CERC/MERC Tariff Regulations;
- Approve the applicability of modified lease rental from prospective date;
- Allow pass through of the lease rental as approved by the Commission in the Aggregate Revenue Requirement (ARR) of MSPGCL.



39. The Commission enquired from MSPGCL, vide its letter dated September 19, 2007, whether it has issued notice and served a copy of the Petition in the matter to MSEDCL. MSPGCL, vide its letter dated September 29, 2007 submitted that it has served a copy of the said Petition on MSEDCL.

40. The Commission held another hearing in the presence of the four authorised Consumer Representatives on October 23, 2007 at the Commission's office.

41. During the hearing, Shri. Gyanendra Thakur, M/s CRISIL, Consultants to MSPGCL, referred to the affidavits filed by the GoM-WRD and refuted that fixation/revision in the lease rent applicable for HEPs was done by GoM-WRD as per Regulations issued by the CERC. It was further submitted that there are no Regulations, which have been issued by the CERC on the lease rent to be charged for hydro stations.

42. Shri. Thakur submitted that GoM-WRD has proposed 14% RoE on the HEPs leased out to MSPGCL. It was submitted that MSPGCL makes considerable financial investments in the operation and maintenance of the said leased out HEPs. MSPGCL should therefore, be allowed favourable financial benefit while the existing lease rent is proposed to be revised, considering that amounts towards RoE shall be entirely retained by the GoM. A certain amount of money, in all fairness, should be allowed to be retained by MSPGCL considering the high operation and maintenance costs on the said HEPs. It was submitted that MSPGCL has taken the said HEPs on lease only to meet their commercial interests. Shri. G.L. Narkhede, Chief General Manager (H), MSPGCL, submitted that GoM-WRD has not considered reimbursing MSPGCL on the said operation and maintenance costs. The Commission observed that such commercial issues should be settled between MSPGCL and GoM.

43. Shri. V.M. Kulkarni, Superintending Engineer, KDC - GoM-WRD, referred to Regulation 5.1 of the MERC (Terms and Conditions of Tariff) Regulations, 2005, and submitted that in terms of the said Regulations, a Generating Company may agree to any terms and conditions at variance with the Tariff Regulations, provided that long-term benefits of consumers are secured. The proposal for revision in lease rent as submitted by MSPGCL under the present petition has been agreed to by the GoM-WRD. The Commission has to assess whether the terms and conditions as agreed by and between the GoM-WRD and MSPGCL secures the long-term interests of electricity consumers in Maharashtra.



44. Shri. Kulkarni submitted that lease rent/tariff proposed by MSPGCL under the present proceedings, and agreed by the GoM-WRD, is lower than the generation tariff approved by the Commission vide Order dated June 26, 2007 passed in Case No. 27 of 2006 in the matter of MSEDCL's Petition for Approval of Power Purchase Agreement with M/s Lanco Energy Private Limited for purchase of saleable energy from their 500 MW Teesta VI Hydro Electric Project in Sikkim. It was submitted that under the said Order, the estimated landed tariff @ Rs. 2.75/- per kWh at MSEDCL periphery was approved by the Commission owing to the submissions of MSEDCL that generation of energy from the 500 MW Teesta VI Hydro Electric Project in Sikkim shall considerably mitigate the power shortage prevailing in the area of supply of MSEDCL. It was submitted that considering the prevailing power shortage, the Commission should consider revising the lease rent payable for HEPs leased out to MSPGCL, which shall require electricity consumers of MSEDCL to pay a tariff lower than the tariff determined in effect of energy generation from the 500 MW Teesta VI Hydro Electric Project in Sikkim.

45. Shri. V.M. Kulkarni submitted that it is quite a unique situation as no provision from the EA 2003 is directly applicable for the incidence of revision in the lease rent for the said HEPs, which have been constructed by GoM and leased out to MSPGCL. At present, 27 HEPs have been leased out to MSPGCL, out of which 8 HEPs are new projects in the sense that no lease rent has been paid on these 8 HEPs till date. It was submitted that no Lease Agreement has been executed by the GoM with MSPGCL. The lease rent that is being paid by MSPGCL to GoM at present is inadequate and thus, needs to be revised. The present petition thus, needs to be allowed under Regulation 5.1 of the MERC's Tariff Regulations. It is essential for the GoM to recover actual costs on the construction of the said leased out HEPs. In this regard, the Commission should revise tariff in accordance with Section 61 (d) of the EA 2003.

46. On an enquiry made by the Commission, Shri. Kulkarni submitted that on approval of the proposed revision in lease rent, the same shall stay fixed for a period of 35 years. A Lease Agreement shall be executed by the GoM with MSPGCL for a period of 35 years. Shri. Gyanendra Thakur submitted that as per the terms and conditions proposed by GoM for execution of the Lease Agreement, an annual escalation of 5% in the lease rent has been proposed. Shri. Thakur submitted that the arithmetical calculations of levelised tariff as prepared by M/s. CRISIL for MSPGCL reflects a declining trend. The said calculations are at variance with the calculations



prepared by GoM. Shri. Kulkarni submitted that it is incumbent on GoM to fix the applicable lease rent on the HEPs owned by the GoM. The calculations made by M/s. CRISIL in this regard need not be given any consideration. The Commission enquired of Shri. Thakur as to whether MSPGCL agrees with the lease rent as proposed by the GoM. Shri. Thakur admitted that ideally the applicable lease rent should be fixed by the GoM and the calculations made by M/s. CRISIL may not be considered. Shri. Thakur submitted that the revised rent as proposed by the GoM is not disputed if MSPGCL is kept revenue neutral and the said revisions are allowed as pass through in the tariff.

47. The Commission observed that MSPGCL has not clearly presented their case under the present proceedings. MSPGCL should clarify the reliefs sought by them under the present proceedings. The duty to work out revenue neutrality vests with MSPGCL and not with the Commission. If the main relief of MSPGCL is that the revised lease rent needs to be allowed as pass through in the tariff, then the calculations made by M/s. CRISIL need not be considered for disposal of the present matter. On an enquiry made by the Commission, Shri. Thakur admitted that the calculations made by M/s. CRISIL are not of any significance to the present proceedings. On a further enquiry made by the Commission, Shri. Thakur admitted that it is agreed by MSPGCL that the proposed Lease Agreement with the GoM shall be executed for a period of 35 years

48. The Commission observed that during the last hearing held on July 18, 2007, MSPGCL was directed to issue notice (with a copy of the present petition) to MSEDCL. On an enquiry made by the Commission as to whether necessary actions have been taken by MSPGCL in this regard, Shri. Thakur submitted that a copy of the Petition together with the record of proceedings pertaining to the hearing held on July 18, 2007, as sent by the Commission to MSPGCL, have been served upon MSEDCL. Shri. Kulkarni submitted that notices to MSEDCL have also been sent by the GoM-WRD. The Commission observed that no representative from MSEDCL was present at the hearing.

49. Shri. Kulkarni submitted that execution of a Lease Agreement has been delayed by MSPGCL citing periodical procedural difficulties. It was submitted that owing to non-revision of lease rent since 1999, GoM-WRD has been sustaining annual negative cash flow of about Rs 75 Crore, while making repayment of loans obtained from the World Bank for construction of the said leased out HEPs. The



approval of the lease rent, as proposed to be revised by GoM, should be granted by the Commission. The issues concerning whether the said approved revised lease rent shall operate with prospective effect or retrospective effect shall be addressed thereafter. Shri. Kulkarni further submitted that the present proposal for revision in lease rent should be allowed, as in the alternative, the GoM may be left with the sole option of selling the power generated from the said HEPs through competitive bidding route under Section 63 of the EA 2003. Such an event would fail to safeguard the interests of electricity consumers in Maharashtra.

50. The Commission enquired of Shri. Kulkarni as to whether it would be possible for GoM to submit any documentary evidence on actual project costs, and the date of commissioning, with respect to each HEP leased out to MSPGCL. Shri. Kulkarni submitted that the said details may be found in the books of accounts of GoM-WRD, which shall be filed in due course.

51. GoM-WRD, in its filing dated December 19, 2007, submitted that all the accounts of Government transactions are submitted to Accountant General on monthly basis. In the Accountant General's Office, these accounts are compiled project-wise after the necessary scrutiny. Some transactions like land acquisition and transactions debited through Centre-State adjustments are adjusted by Accountant General's office and it publishes the project-wise expenditure. Accordingly, GoM-WRD submitted the relevant extracts from such annual Accountant General's Report.

52. GoM-WRD, in its filing dated December 19, 2007, further submitted that as per Section 33 of CERC Tariff Regulations dated March 26, 2004, IDC has to be included while computing the capital cost. Hence, on the basis of yearly project expenditure as certified and published by Accountant General, IDC calculations have been done with prevailing rate/borrowing rates of interest informed by the Government. GoM-WRD submitted the abstract of year-wise and project-wise total costs including IDC along with costs communicated to MSPGCL earlier. GoM-WRD submitted that there is a slight variation in some figures of expenditure communicated earlier to MSPGCL due to the fact that earlier figures were based on the basis of records of Government of Maharashtra, while some adjustment/corrections (debits/credits) are done at the Accountant General level.

53. GoM-WRD in its filing dated December 19, 2007, also submitted the date of commissioning of each HEP leased out to MSPGCL.



54. Accordingly, the Petition was admitted by the Commission for regulatory process on February 11, 2008 and the Commission directed MSPGCL to publish the Public Notice for inviting comments on the Petition from the stakeholders. The Public Notice inviting objections and suggestions/comments was issued in Maharashtra Times (Marathi), Loksatta (Marathi) and in The Times of India (Mumbai Edition) and Indian Express (Mumbai Edition) on February 15, 2008.

55. The Public Hearing in the matter was held on April 15, 2008 at 11:00 hours at the Commission's Office at 13th Floor, Centre No. 1, World Trade Centre, Cuffe Parade, Mumbai-400 005. During the Public Hearing, one consumer, viz., Shri. N. Ponrathnam submitted that the power plants in Maharashtra have been taken over by the Government post independence. The Electricity (Supply) Act, 1948 mandated the creation of a State Electricity Board. The State Electricity Board has the responsibility of arranging the supply of electricity in the State. He also submitted that the power plants belongs to the public as per the Constitution and the State Government is empowered to supply electricity to the public by making law as enumerated in the concurrent list. 'Electricity' is a concurrent subject at Entry No. 38 in the List III of the Seventh Schedule of the Constitution of India. 'Water' is a concurrent subject at Entry No. 56 in the list I of the Seventh Schedule of the Constitution of India.

56. Shri. Ponrathnam added that as per the Preamble, we, the people of India cannot lease out our own property to our self. The GoM, MERC, GoM-WRD (Public Organisation/Government) has to act in the interest of the public and not as a profit centre. The alternative of leasing the power plant to any private company amounts to the Government running away from its responsibility. He further submitted that the Commission does not have any authority over deciding the lease rent payable by any Generating Company as per EA 2003. He requested that no amount should be considered in the ARR on the basis of lease rent paid to GoM.

57. The Commission, vide its letter dated July 23, 2008, asked GoM-WRD to submit certain additional data. GoM-WRD submitted the requisite data vide letter dated August 08, 2008, received on August 12, 2008.

58. The Commission enquired of GoM-WRD on Para 6.1.1 of the CRISIL Report, which stipulates that the Capital Cost of the Hydro Electric Projects (HEP) is worked out by GoM-WRD based on pre-determined apportionment between irrigation and power generation projects and directed GoM-WRD to provide the total capital cost of



HEPs and basis and details of the pre-determined ratios considered for allocating the capital cost between irrigation and power generation projects. GoM-WRD submitted that the dam cost is included in Tillari, Bhira Tail Race and Vaitarna projects only and in none of the above projects, irrigation benefits are enjoyed. GoM-WRD further submitted that cost of construction of Koyna dam has not been loaded at present for lease rent fixation. Only the cost of strengthening the dam has been considered for tariff fixation of Koyna Stage I&II. Also, no irrigation benefit has been derived from Koyna Stage III, which is purely a hydroelectric project. GoM-WRD confirmed that the dam cost has not been considered at all for Koyna Stage IV. GoM-WRD also confirmed that in the remaining projects, irrigation benefits are enjoyed but in these projects dam cost has not been loaded at all to the power projects costs.

59. The Commission asked GoM-WRD to confirm whether the yearly expenditure shown under each project is exclusively for hydro electric project or also includes the expenses incurred towards dam and other irrigation facilities. GoM-WRD submitted that that yearly expenditure shown against each project is exclusively for hydro electric project only and does not include any expenditure on dam and other irrigation components. Further, in Koyna Stage I&II, the cost of construction of dam has not been considered; however, expenditure on strengthening of the dam is included. GoM-WRD submitted that this has been included because strengthening of the dam is required for deriving the benefits from the said hydroelectric project beyond projected life and this project has already rendered services for 45 years, i.e., 10 years beyond projected life.

60. GoM-WRD further submitted that under the Koyna complex, main storage (Shivajinagar Reservoir) has been constructed on Koyna river near Gandhakhop village of Patan Taluka in Satara District of Maharashtra. The main storage behind Koyna dam has been designed at 2796.5 MCum (98.78 TMC). Out of this, 453.1 MCum (16 TMC) was meant for irrigation. However, as per the Krishna Godavari Tribunal Award, the westward diversion has been restricted to 1911.4 MCum (67.5 TMC) since June 1994. Koyna Stage-I (4x70 MW) power house has been constructed at Pophali as a base load plant. With same headwork, Stage-II (4x80 MW) was constructed just adjacent to Stage-I. As such, dam, head race tunnel, surge well, pressure shaft and tail race are common elements for first two Stages. The water releases from Stage-I & II are collected at Alore in the same complex by constructing Kokewadi Dam and installing Stage-III power house (4x80 MW) to utilise residual potential of Stage I&II before letting in to the sea. After generation from Stage-III,



water is let in to the Arabian Sea and no irrigation benefit is enjoyed. Further, it was submitted that Koyna Stage-IV power house has been commissioned in the year 1999 and after its commissioning, westward diversion has been partly through Stage I&II and partly through Stage-IV. The tailrace water of Stage I&II and Stage-IV is again utilised for Stage-III generation. GoM-WRD submitted that considering the restriction of westward diversions for power generation, Koyna Stage-IV (4x250 MW) has been conceived as parallel system of Koyna Stage I&II and has a separate water-conductor system. All the three stations, i.e., Koyna Stage I, II & IV draw water from Shivajinagar reservoir and let down releases in Kolkewadi reservoir, which is a take off for further generation at Stage-III power station. Accordingly, the 600 MW base load installation of Stage I&II has been converted into 1600 MW peak load by operating Stage I, II & IV in peak hours by utilising the same amount of water as before.

61. GoM-WRD, in its filings has submitted that for HEPs for which, the cost of dam has not been included in their capital cost, the Royalty for water will be charged at the rate of Rs 0.05 per kWh for the first year, which will be escalated at 5% annually. The issue of approval of water royalty does not fall within the purview of the Commission. Accordingly, the Commission has not considered the Royalty for water for small HEPs for computation of lease rent.

62. The Commission also asked GoM-WRD to provide the year-wise details of the lease rent received from MSEB/Maharashtra State Power Generation Company Ltd. (MSPGCL). GoM-WRD submitted the station-wise details of the actual lease rent received from MSEB/MSPGCL for past years as follows:

(Rs. Crore)												
Year	1963 To 74	1974-75	1975-76	1976-77	1977-78	1978-79	1979-80	1980-81	1981-82	1982-83	1983-84	1984-85
Actual Lease Rent Received	74.4	9.4	12.1	14.4	14.3	16.3	23.2	29.1	19.8	19.7	19.8	17.1
Year	1985-86	1986-87	1987-88	1988-89	1989-90	1990-91	1992-93	1993-94	1994-95	1995-96	1996-97	1991-92
Actual Lease Rent Received	17.8	16.5	20.2	54.2	51.5	51.6	51.55	51.55	51.55	0.00	125.00	51.55
Year	1997-98	1998-99	1999-2000	2000-2001	2001-2002	2002-2003	2003-2004	2004-2005	2005-2006	2006-2007	2007-2008	Total
Actual Lease Rent Received	65.00	75.00	75.00	85.00	85.00	85.00	3.62*	85.00	85.00	85.00	85.00	1626.18



Note: * - actual lease rent amount sanctioned for FY 2003-04 was Rs. 85 crore, however, only Rs. 3.62 crore has been adjusted. The Commission has considered the lease rent of Rs. 85 crore while determining tariff for this period.

Commission's Analysis and Ruling:

63. Having heard the Parties and after considering the materials placed on record, the Commission is of the view as under.

64. The Commission has been approving the payment of existing lease rent of Rs. 85 crore per year as a part of the ARR of MSEP/MSPGCL. Since MSPGCL sells its entire generation to MSEDCL, the approved ARR of MSPGCL is a pass through in the ARR of MSEDCL in the form of the power purchase cost for purchase from MSPGCL, thus eventually forming a part of the tariff of the consumers of MSEDCL. The consumers of MSEDCL have thus, been paying for the lease rent for past years through tariff. Any revision in the lease rent payable by MSPGCL to GoM-WRD under a long-term Lease arrangement for 35 years will have a direct impact on the tariff payable by the consumers of MSEDCL, and hence, needs to be regulated by the Commission. Further, the Commission has also opined in its Order in the matter of Annual Performance Review (APR) of MSPGCL for FY 2007-08 and Tariff for FY 2008-09, that any variation in lease rent as determined by the Commission will be considered at the time of truing up, depending on the date of effectiveness of the lease rent determined in the Order. Accordingly, the Commission has considered the Petition of MSPGCL for determination of lease rent for HEPs under Section 61 of EA, 2003 and in particular Section 61 (d) which stipulates "*safeguarding of consumer's interest and at the same time, recovery of the cost of electricity in a reasonable manner*" and has approved the lease rent for such HEPs handed over to MSPGCL by GoM.

65. Conventionally, a lease is an agreement allowing one party to use another's property, plant, or equipment for an agreed period of time, for consideration. A Lease Agreement is a contractual agreement involving at least two parties, viz., a lessor, who owns the property, and a lessee, who uses the property for a specified period of time and for specific purpose, for a consideration. The lessor, essentially a creditor of financier in the transaction, is compensated by way of payment of lease or rent.

66. Leasing is a way for lessees (users) to conserve capital because, in effect, they obtain 100 percent financing. Depending on the structure of the lease, the risks of ownership (such as the possibility that the product will become obsolete) can also be



transferred to the lessor. Tax benefits accruing to the lessor could also be transferred to a lessee, resulting in lower lease payments by the lessee. Here, in this Case, GoM is the lessor, which owns the HEPs and MSPGCL is the lessee, which uses and operates the HEPs.

67. The approach of computing the lease rent considering the CERC (Terms and Conditions of Tariff) Regulations, 2004, is not considered appropriate, since the Commission is not determining tariff for the hydro projects here and is required to determine the lease rent, which is a different financial arrangement.

68. The Approach-I in MSPGCL's Petition is neither based on any Regulations nor on the principles of lease finance.

69. MSPGCL and GoM-WRD's submission that had the HEPs been leased out to other Parties through competitive bidding, it may have fetched more than Rs 1000 Crore annually, is hypothetical and hence, not tenable. Similarly, the so called market rate of electricity approach is also hypothetical and not tenable. Since, the present Petition is of leasing the HEPs to MSPGCL, the Commission has to ensure that the lease rent payable by MSPGCL is based on principles of leasing and is reasonable and in the interest of the electricity consumers of the State of Maharashtra.

70. The Commission has proceeded to determine the lease rent purely as a financial transaction and has accordingly computed the lease rent from first principles of leasing, viz., the capital cost is recovered through depreciation over the life of the project, debt is serviced during the tenor of debt and the lessor gets adequate return on his investment. Hence, the Commission has computed the lease rent payable for the life of the project by considering the interest expenses on the debt part of the project cost, return on equity on the equity employed in the project, life of the project and depreciation, based on the principles discussed in the subsequent paragraphs.

I. Life of the Plant

71. As per Annexure-I (depreciation schedule) of MERC (Terms and Conditions of Tariff) Regulations, 2005, the useful life of the HEPs has been specified as 35 years. The GoM-WRD has also proposed the same in their Petition. For Koyna Stage-I&II, the Commission has considered the useful plant life of 35 years from FY 2004-05, on account of the additional capital expenditure undertaken for strengthening of



the Koyna dam. The Commission has considered the COD for each HEP as submitted by GoM and accordingly computed the balance useful life of each project by subtracting number of years of operations since COD till FY 2008-09, for each project from the normative life of 35 years as shown in Table-1 below. The lease rent payment shall be only for the period of the balance useful life of each of the Projects.

Table-1

Sl.	Particulars	COD	Balance Useful Life	Sl.	Particulars	COD	Balance Useful Life
1	Koyna Stage I & II	June-67	30	14	Vaitarna D.T.	September-87	13
2	Koyna Stage III	July-75	1	15	Bhatsa	September-91	17
3	Koyna Stage IV	June-99	25	16	Panshet	March-91	17
4	Koyna Dam Foot P.H.	October-80	6	17	Pawana	June-88	14
5	Vaitarna	June-76	2	18	Kanher	August-91	17
6	Radhanagri	May-52	0	19	Dhom	March-92	18
7	Yeldari	June-68	0	20	Manikdoh	February-98	24
8	Veer	February-75	1	21	Dimbhe	October-98	24
9	Bhat ghar	August-77	3	22	Warna	September-98	24
10	Paithan	January-84	10	23	Surya	January-99	25
11	Tillari	October-86	12	24	Surya RB	June-99	25
12	Bhira T.R	September-87	13	25	Terwanmedhe	March-99	25
13	Ujjani	February-94	20	26	Dudhganga	February-00	26
				27	Varasgaon	March-91	17

II. Capital Cost and Means of Finance

72. The Commission has considered the details of yearly project expenditure as submitted by GoM, duly certified by Accountant General and borrowing rates of loans as submitted by GoM-WRD for computation of IDC till COD for each HEP. The Commission has computed the Gross Fixed Asset (GFA) of each HEP by considering the capital expenditure and Interest During Construction (IDC) till COD of each HEP. The Commission observed that while computing the capital cost for HEPs, GoM has computed IDC on opening balance of the total capital expenditure and IDC for half year on the total 'capital expenditure during the year, for each HEP. The Commission has computed the IDC till COD on the loan portion of the capital expenditure considering the approved means of finance in this Order. During construction period, return on equity is not earned in any project and the same is treated accordingly.

73. In addition to this, the Commission has considered the following : (i) additional capitalisation for Koyna Stage I&II for strengthening of the Koyna Dam, (ii) additional capitalisation for Tillari on account of the payment to the contractor as



per the Arbitration award on Tillari Hydro Electric Project and (iii) yearly capital expenditure and interest capitalisation on capital expenditure post COD for estimating the Gross Fixed Asset for each year of the balance useful life of each HEP.

Debt:Equity

74. As per the MERC (Terms and Conditions of Tariff) Regulations, 2005, the normative debt:equity ratio is 70:30 or actual debt if the same is higher than 70%. Accordingly for Koyna Stage-IV, the actual debt:equity ratio of 76.4:23.6 (3.24:1) has been adopted while for the other HEPs, the normative debt:equity ratio of 70:30 has been considered.

III. Depreciation

75. In accordance with the provisions of MERC (Terms and Conditions of Tariff) Regulations, 2005, the Commission has considered depreciation from the date of COD over the useful life of the HEPs and has allowed depreciation till 90% of total capital cost.

IV. Interest Rate and Repayment of the Loan

76. GoM-WRD submitted that it has considered a tenor of 10 years and the interest rate of 8.5% on loan for computation of lease rent for the base year in accordance with the present lending rate offered by Power Finance Corporation (PFC) for MSPGCL's upcoming projects. The Commission has accepted the same. Accordingly, the Commission has computed the interest expenses considering the interest rate of 8.5% and loan repayment period of 10 years

V. Return on Equity

77. As per Regulation 34.1 of MERC (Terms and Conditions of Tariff) Regulations, 2005, the Commission has adopted the applicable rate of 14% per annum in Indian Rupee terms.

VI Effective Date of Revision and Treatment of Under-Recovery/Over-Recovery

78. The Commission has computed the year-wise lease rent for each HEP from the date of COD of respective HEP. The Commission has considered the lease rent of Rs 85 Crore for FY 2008-09 in its Order dated May 31, 2008 in the matter of MSPGCL's Petition for approval of APR for FY 2007-08 and Tariff for FY 2008-09, which has effectively been passed through to the retail consumers in the MSEDCL licence area through the power purchase cost payable by MSEDCL to MSPGCL. Any mid-year



revision in the lease rent payable to GoM-WRD will have a direct bearing on the ARR of MSEDCL, which will necessitate revision in ARR and consequently tariff of MSEDCL for FY 2008-09. Accordingly, the Commission, as a matter of practicality, has approved the lease rent from FY 2009-10 onwards. However, as the revision in lease rent approved by the Commission will be effective only prospectively w.e.f April 1, 2009, to protect the interest of the lessor, the Commission has considered the under-recovery or over-recovery of lease rent from the year of COD till the end of FY 2008-09 as shown in Table-2 below and has amortised the under-recovery/over-recovery amounts in equal instalments along with a carrying cost of 6% per annum from FY 2009-10 onwards over the remaining life of the HEPs.

Table-2: Summary of Under-Recovery/Over-Recovery (Rs Crore)

Sl.	Particulars	Amount	Sl.	Particulars	Amount
1	Koyna Stage I & II	0	14	Vaitarna D.T.	(1)
2	Koyna Stage III	(26)	15	Bhatsa	(76)
3	Koyna Stage IV	1,617	16	Panshet & Varasgaon	(59)
4	Koyna Dam Foot P.H.	(14)	17	Pawana	(4)
5	Vaitarna	(20)	18	Kanher	(93)
6	Radhanagri	-	19	Dhom	(100)
7	Yeldari	(12)	20	Manikdoh	27
8	Veer	(10)	21	Dimbhe	22
9	Bhat ghar	-	22	Warna	50
10	Paithan	(13)	23	Surya	37
11	Tillari	(63)	24	Surya RB	11
12	Bhira T.R	(32)	25	Terwanmedhe	3
13	Ujjani	39	26	Dudhganga	74
			27	Total	1357

VII Approved Lease Rent

79. Based on these principles, the lease rent approved for each HEP from FY 2009-10 is given at **Annexure-1** and the summary of year-wise lease rent is shown in the Table-3 below:



Table-3

		Rs Crore									
S.No.	Particular	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
1	Koyna Stage I & II	16.28	15.51	14.73	13.96	13.18	12.41	11.64	10.98	10.62	10.49
2	Koyna Stage III	-93.67	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3	Koyna Stage IV	326.45	315.07	309.08	303.39	297.89	292.57	287.34	282.10	276.87	271.64
4	Koyna Dam Foot P.H.	-4.74	-4.52	-4.31	-4.10	-3.88	-3.67	0.00	0.00	0.00	0.00
5	Other Stations	-13.53	-11.21	8.94	15.64	16.81	18.04	19.31	20.59	21.87	23.15
	Total	230.80	314.84	328.45	328.89	324.00	319.35	318.29	313.68	309.36	305.27
S.No.	Particular	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
1	Koyna Stage I & II	10.34	10.26	10.19	10.11	10.03	9.96	9.88	9.80	9.73	9.65
2	Koyna Stage III	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3	Koyna Stage IV	261.17	255.94	250.70	245.47	240.24	235.01	229.77	224.54	219.31	214.07
4	Koyna Dam Foot P.H.	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5	Other Stations	25.77	26.15	21.54	21.01	21.49	21.98	35.43	42.27	31.95	31.22
	Total	297.28	292.35	282.43	276.59	271.77	266.95	275.08	276.62	260.99	254.94
S.No.	Particular	2031	2032	2033	2034	2035	2036	2037	2038	2039	
1	Koyna Stage I & II	9.58	9.50	9.42	9.35	9.27	9.20	9.12	9.04	8.97	
2	Koyna Stage III	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
3	Koyna Stage IV	208.84	203.61	198.37	193.14	0.00	0.00	0.00	0.00	0.00	
4	Koyna Dam Foot P.H.	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
5	Other Stations	30.49	29.76	29.02	13.39	9.58	0.00	0.00	0.00	0.00	
	Total	248.90	242.86	236.82	215.88	18.86	9.20	9.12	9.04	8.97	

It will be observed that the lease rent for FY 2009-10 is lower as compared to lease rent for FY 2010-11, which is mainly due to over-recovery of lease rent for Koyna Stage-III in previous years, and has been amortised over the available balance life of only one year, of the Project.

80. The Commission directs MSPGCL to pay the project-wise approved lease rent as shown in **Annexure-I**, each year to GoM, quarterly on a pro-rata basis, starting from June 2009 from the quarter April to June 2009 till the end of the project as shown therein.

With this Order, the Commission disposes of MSPGCL's Petition in Case No. 17 of 2007.

Sd/-
(S.B. Kulkarni)
Member

Sd/-
(A.Velayutham)
Member



(P. B. Patil)
Secretary, MERC

Annexure 1: Station wise Approved Lease Rent

Rs Crore

S No.	Particular	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
1	Koyna Stage I & II	16.28	15.51	14.73	13.96	13.18	12.41	11.64	10.98	10.62	10.49	10.41	10.34	10.26	10.19	10.11
2	Koyna Stage III	-93.67	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3	Koyna Stage IV	326.45	315.07	309.08	303.39	297.89	292.57	287.34	282.10	276.87	271.64	266.40	261.17	255.94	250.70	245.47
4	Koyna Dam Foot P.H.	-4.74	-4.52	-4.31	-4.10	-3.88	-3.67	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5	Vaitarna	-19.88	-18.71	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
6	Radhanagri	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
7	Yeldari	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
8	Veer	-6.29	-5.93	-5.57	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
9	Bhat ghar	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
10	Paithan	-1.24	-1.13	-1.02	-0.92	-0.81	-0.70	-0.60	-0.49	-0.39	-0.28	0.00	0.00	0.00	0.00	0.00
11	Tillari	-4.41	-4.02	-3.64	-3.25	-2.86	-2.44	-1.98	-1.52	-1.06	-0.60	-0.13	0.33	0.00	0.00	0.00
12	Bhira T.R	1.09	1.28	1.47	1.67	1.86	2.06	2.25	2.44	2.64	2.83	3.03	3.22	3.41	0.00	0.00
13	Ujjani	14.48	14.20	13.92	13.64	13.37	13.10	12.83	12.56	12.29	12.02	11.75	11.48	11.21	10.94	10.67
14	Vaitarna D.T.	-0.01	0.00	0.01	0.02	0.03	0.04	0.05	0.05	0.06	0.07	0.08	0.09	0.10	0.00	0.00
15	Bhatsa	-9.85	-9.50	-9.15	-8.81	-8.46	-8.12	-7.77	-7.43	-7.08	-6.74	-6.39	-6.05	-5.70	-6.96	-6.61
16	Panshet & Varasgaon	-5.67	-5.43	-5.19	-4.94	-4.70	-4.45	-4.21	-3.97	-3.72	-3.48	-3.23	-2.99	-2.74	-2.50	-2.26
17	Pawana	0.78	0.80	0.82	0.84	0.86	0.88	0.89	0.91	0.93	0.95	0.97	0.99	1.01	1.03	0.00
18	Kanher	-13.89	-13.45	-13.01	-12.57	-12.12	-11.68	-11.24	-10.79	-10.35	-9.90	-9.46	-9.01	-8.57	-8.13	-7.68
19	Dhom	-15.12	-14.66	-14.20	-13.75	-13.29	-12.83	-12.38	-11.92	-11.46	-11.01	-10.55	-10.09	-9.64	-9.18	-8.72
20	Manikdoh	5.72	5.60	5.48	5.38	5.28	5.18	5.09	4.99	4.90	4.80	4.71	4.61	4.52	4.42	4.33
21	Dimbhe	4.47	4.39	4.31	4.23	4.15	4.08	4.00	3.93	3.86	3.78	3.71	3.63	3.56	3.49	3.41
22	Warna	10.37	10.17	9.98	9.80	9.62	9.44	9.27	9.10	8.93	8.75	8.58	8.41	8.24	8.06	7.89
23	Surya	7.59	7.44	7.30	7.17	7.05	6.93	6.81	6.69	6.57	6.45	6.33	6.21	6.09	5.97	5.85
24	Surya RB	2.30	2.22	2.18	2.13	2.09	2.06	2.02	1.99	1.95	1.92	1.88	1.85	1.81	1.78	1.74
25	Terwanmedhe	0.64	0.62	0.61	0.60	0.59	0.58	0.57	0.56	0.55	0.54	0.53	0.52	0.51	0.50	0.49
26	Dudhganga	15.37	14.89	14.64	14.39	14.15	13.92	13.70	13.47	13.25	13.02	12.80	12.57	12.35	12.12	11.89
	Total	230.80	314.84	328.45	328.89	324.00	319.35	318.29	313.68	309.36	305.27	301.42	297.28	292.35	282.43	276.59



Annexure 1: Station wise Approved Lease Rent (Continued)

Rs Crore

S No.	Particular	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039
1	Koyna Stage I & II	10.03	9.96	9.88	9.80	9.73	9.65	9.58	9.50	9.42	9.35	9.27	9.20	9.12	9.04	8.97
2	Koyna Stage III	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3	Koyna Stage IV	240.24	235.01	229.77	224.54	219.31	214.07	208.84	203.61	198.37	193.14	0.00	0.00	0.00	0.00	0.00
4	Koyna Dam Foot P.H.	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5	Vaitarna	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
6	Radhanagri	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
7	Yeldari	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
8	Veer	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
9	Bhat ghar	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
10	Paithan	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
11	Tillari	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12	Bhira T.R	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
13	Ujjani	10.40	10.13	9.86	9.59	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
14	Vaitarna D.T.	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
15	Bhatsa	-6.27	-5.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
16	Panshet& Varasgaon	-2.01	-1.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
17	Pawana	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
18	Kanher	-7.24	-6.79	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
19	Dhom	-8.26	-7.81	-7.84	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
20	Manikdoh	4.23	4.14	4.05	3.95	3.86	3.76	3.67	3.57	3.48	0.00	0.00	0.00	0.00	0.00	0.00
21	Dimbhe	3.34	3.26	3.19	3.11	3.04	2.97	2.89	2.82	2.74	0.00	0.00	0.00	0.00	0.00	0.00
22	Warna	7.72	7.55	7.37	7.20	7.03	6.86	6.68	6.51	6.34	0.00	0.00	0.00	0.00	0.00	0.00
23	Surya	5.73	5.61	5.49	5.37	5.25	5.13	5.01	4.89	4.77	2.06	0.00	0.00	0.00	0.00	0.00
24	Surya RB	1.71	1.67	1.64	1.60	1.57	1.53	1.49	1.46	1.42	1.39	0.00	0.00	0.00	0.00	0.00
25	Terwanmedhe	0.48	0.47	0.46	0.45	0.44	0.43	0.42	0.41	0.40	0.31	0.00	0.00	0.00	0.00	0.00
26	Dudhganga	11.67	11.44	11.22	10.99	10.77	10.54	10.32	10.09	9.86	9.64	9.58	0.00	0.00	0.00	0.00
	Total	271.77	266.95	275.08	276.62	260.99	254.94	248.90	242.86	236.82	215.88	18.86	9.20	9.12	9.04	8.97

