

Before the  
**MAHARASHTRA ELECTRICITY REGULATORY COMMISSION**

World Trade Centre, Centre No.1, 13<sup>th</sup> Floor, Cuffe Parade, Mumbai 400 005

Tel. No. 022 22163964/65/69 – Fax 022 22163976

E-mail [mercindia@mercindia.com](mailto:mercindia@mercindia.com)

Website: [www.mercindia.com](http://www.mercindia.com)

Case No. 105 of 2009

In the matter of  
**Dodson-Lindblom Hydro Power Pvt. Ltd.'s Petition  
for re-determination of Tariff for 34 MW Bhandardara Hydro  
project- Phase II**

**Shri V.P. Raja, Chairman  
Shri S.B. Kulkarni, Member  
Shri V.L. Sonavane, Member**

**ORDER**

**Dated: May 24, 2010**

M/s. Dodson-Lindblom Hydro Power Pvt. Ltd. (hereinafter referred as 'DLHPPL' or 'the Petitioner') submitted a Petition under affidavit before the Maharashtra Electricity Regulatory Commission (hereinafter referred to as 'MERC' or 'the Commission') on January 7, 2010, seeking re-determination of tariff for its Bhandardara Hydro Power Project (Phase II), in view of the Appellate Tribunal for Electricity's Judgment dated December 23, 2009, in Appeal No. 151 of 2009 and Interlocutory Application (IA) No. 265 of 2009 filed by DLHPPL against the MERC Order dated July 8, 2009 in Case No. 27 of 2008 in the matter of Determination of Tariff for Bhandardara-II Hydro Power Project (BHEP-II).

2. In the said Petition, the Petitioner stated that it is a Generating Company incorporated under the Companies Act 1956. The Petitioner further stated that on December 31, 2004, the bid submitted by DLHPPL in response to the invitation for bids from private entrepreneurs for operation and maintenance of 34 MW Bhandardara Hydro Project -II (BHEP-II) was accepted by the Government of Maharashtra, Water Resources Department (GOMWRD) and a Letter of Intent was issued to that effect. Subsequently, Maharashtra State Electricity Distribution Company Ltd. (MSEDCL) (erstwhile MSEB), based on the proposal given by M/s DLHPPL to it, submitted a Petition on March 23, 2005 to the Commission for approval of tariff for the power supply from BHEP-II (Case No. 1 of 2005). The Commission, vide its Order dated April 10, 2006 directed that as the generation from BHEP-II plant at that time was limited to 16-18 MW, the tariff applicable to Small Hydro Projects (SHP) shall be applicable, with the stipulation that the developer could approach the Commission for revision of tariff subsequent to raising the height of Nilwande Dam to 610 M/ 613 M.

3. The Petitioner took over the said project on December 19, 2006 from GOMWRD, after payment of upfront amount of Rs 60 Crore.

4. Subsequent to receipt of confirmatory letter from GOMWRD that the height of Nilwande Dam has been raised to 610M/613M, the Petitioner submitted the Petition to the Commission on May 28, 2008 for determination of tariff for BHEP-II. The Order determining the tariff for sale of electricity from BHEP-II to MSEDCL was issued on July 8, 2009.

5. The Petitioner preferred an appeal under Section 111 of the Electricity Act, 2003 from the said Order dated July 8, 2009 before the Hon'ble APTEL on August 21, 2009 (Appeal No. 151 of 2009 & IA No. 265 of 2009), wherein the Commission and MSEDCL were made Respondent No. 1 and Respondent No.2, respectively. The Hon'ble APTEL, after hearing the case issued its Judgment on December 23, 2009 and vide its Judgment directed the Commission to re-visit some of the issues dealt by the Commission in its said Order dated July 8, 2009 in Case No. 27 of 2008.

6. In its Petition, the Petitioner cited the following excerpts from the said Judgment of Hon'ble APTEL:

*Para 41 : "In view of our above decision, the appeal is allowed in part, as indicated in paragraphs 09, 15, 22, 30, 33, 34, 36 and 39 above. We set aside the impugned order. The Commission is directed to re-determine the tariff in petition No. 27 of 2007(27 of 2008) in the light of the observations made above."*

Para 42: “ *The impact of the tariff revision following the judgment be distributed over twelve monthly bills of the respondent No. 2.*”

7. The Petitioner submitted that in view of the said Judgment of the Hon’ble APTEL, the Petitioner had filed the present petition for re-determination of tariff for BHEP-II.

8. In its Petition, the Petitioner submitted the following prayers:

*“1. The Hon’ble Commission may kindly be pleased to take the application on record, for re-determination of the tariff in Case 27 of 2008*

*2. The Hon’ble Commission may kindly pass an order after re-determination of tariff after taking into consideration the judgment given by the Appellate Tribunal for Electricity”*

9. The Commission noted that the Hon’ble APTEL vide its Judgment dated December 23, 2009, had directed the Commission to re-determine the tariff of BHEP-II, by allowing the Appeal in part on the following issues:

1. Pre-Operative expenses;
2. Renovation and Modernisation expenditure;
3. Auxiliary consumption;
4. Incentive based on capacity index;
5. Non-consideration of Interest during construction for calculation of O&M Cost;
6. Non-inclusion of minimum alternate tax
7. Means of finance and debt:equity ratio;
8. Date of applicability of tariff.

10. The Commission scheduled a Public Hearing in the matter on March 22, 2010 and in accordance with Section 64 of the EA 2003, directed the Petitioner to publish its Petition in the prescribed abridged form and manner, to ensure public participation and also directed the Petitioner to forward copies of the Petition to the Consumer Representatives authorised by the Commission under Section 94(3) of the EA 2003.

11. The Petitioner published the Public Notices in two Marathi and two English language newspapers on February 24 and 25, 2010, inviting suggestions and objections from stakeholders on the Petition. The Petitioner also served copies of the Petition along with its accompaniments to the authorised Consumer Representatives. The copies of DLHPPL's Petition were made available for inspection/purchase to members of the public at DLHPPL's offices and on DLHPPL's website ([www.dlz.com](http://www.dlz.com)) and also on the website of the Commission ([www.mercindia.org.in](http://www.mercindia.org.in)) in downloadable format.

12. Subsequently, the copies of the Public Notice regarding the Public Hearing were also sent to the Maharashtra State Electricity Distribution Company Ltd. (MSEDCL), Maharashtra State Power Generation Company Ltd. (MSPGCL) and Water Resource Department, Government of Maharashtra (GOMWRD).

13. The Public Hearing in the matter was held in the Commission's office at 13th Floor, Centre 1, World Trade Centre, Cuffe Parade, Mumbai-400 005 on March 22, 2010. The list of objectors and other stakeholders, who participated in the Public Hearing, is provided in Appendix- 1. During the Public Hearing, DLHPPL was represented by Shri M.G. Ramachandran, Advocate, Shri Shyam Vaidya, Shri V.V. Rajadhyaksha, Shri P. Paunekar, and Shri Uday Samant.

14. The Petitioner stated that the Commission, in its Order in Case No. 27 of 2008, has made references to the report submitted by the expert consultant, Shri VVRK Rao, appointed by the Commission. The Petitioner requested the Commission to provide a copy of the report submitted by Shri VVRK Rao, which was agreed to by the Commission. During the hearing, the Petitioner made a presentation highlighting the issues on which the Hon'ble APTEL has either allowed an Appeal or directed the Commission to revisit the issues vide its Judgment in Appeal No. 151 of 2009 and IA No. 265 of 2009.

15. Shri Ponrathnam, one of the Consumer Representatives, stated that the original cost incurred by the GOM on the project is of no consequence now and the final cost discovered through the competitive bidding process should be considered as "the cost of the project" for all further computations. He further stated that the bidder was expected to consider all subsequent costs including renovation and modernisation in its bid and the same need not be considered separately again. Shri Ponrathnam further submitted that in case incentive is to be considered for generation above capacity of the plant, dis-incentive for lower generation should also be applicable. Regarding auxiliary consumption, Shri Ponrathnam stated that the norms for auxiliary consumption as

specified in the MERC (Terms and Conditions of Tariff) Regulations, 2005, should normally be considered, however, in this specific case, a Technical Committee may be formed to study the issue further.

16. During the Public Hearing, the Commission observed that the issues involved are more factual in nature and a site visit needs to be made to have more clarity in the matter. Accordingly, the Commission scheduled a site visit at the 34 MW Bhandardara Hydro project- Phase II at Bhandardara, Maharashtra, on April 9, 2010, followed by a hearing at the site scheduled in the presence of the representatives of MSEDCL, MSPGCL, GOMWRD and the authorised Consumer Representatives.

17. As Shri VVRK Rao's report was sought for by the Petitioner during the aforesaid public hearing, subsequently, the Commission provided a copy of the report of Shri VVRK Rao to the Petitioner. The Commission sent an intimation letter regarding the proposed visit and hearing at site on April 9, 2010 to all the concerned. The Commission also invited Shri VVRK Rao, the former-chairman of the Central Electricity Authority (CEA) and expert consultant regarding Hydro projects to join the proposed site visit and subsequent hearing scheduled in the matter at site on April 9, 2010.

18. The hearing in the matter of re-determination of tariff for BHEP-II of DLHPPL was held at the location of the said plant on April 9, 2010. The list of participants, who participated in the hearing held on April 9, 2010, is provided in Appendix- 2. The major issues discussed during the hearing held on April 9, 2010, are as under:

**Pre-operative expenditure**

19. The Petitioner reiterated the request for inclusion of the pre-operative expenditure of Rs. 9.75 Crore as part of the Capital Cost of BHEP-II. The Commission enquired of the Petitioner regarding whether these expenses were not estimated and factored in, while bidding for the project.

20. The Petitioner submitted that the said expenditure was not pre-bid expenditure but fully audited expenditure towards Technical and Management fees, Financing fees, etc., which were incurred after the acceptance of the bid. The Petitioner explained that even after the best estimation, all expenditure could not have been envisaged, and reiterated its prayer that the same may be allowed as part of the Capital Cost.

21. The Commission enquired of the Petitioner regarding whether there were any industry standards for such fees. The Petitioner replied that the industry standards of financing fees of around 0.5% of the project cost could not be applied for BHEP-II Project, as the same was applicable for large-size projects, having very high project cost, whereas BHEP-II was a small project, and hence, the financing cost would work to a much higher percentage.

22. MSEDCL submitted that any expenditure allowed to the Petitioner would affect its consumers and hence, reasonability of such expenditure needs to be ascertained before allowing the same.

23. Authorised Consumer Representatives, Shri Ponrathnam and Shri Rakshpal Abrol submitted that normally the bidder is expected to estimate all expenditure before bidding, more so, as none of these expenses incurred by the Petitioner are of extraordinary nature, and the same should be to the Project holder's account and not passed on to consumers over and above the price paid by the Petitioner to the GoM.

24. As the Hon'ble APTEL has directed to allow these expenses after exercising a prudence check, the Commission enquired of the Petitioner regarding whether all the relevant documents pertaining to this expenditure had been submitted to the Commission, to which, the Petitioner replied that only the audited statements had been submitted. The Commission directed the Petitioner to ensure that all the relevant documents are submitted to the Commission, to enable the Commission to scrutinize the documents and undertake necessary prudence check on the same.

### **Expenditure incurred towards Renovation & Modernisation**

25. The Petitioner submitted that these expenses were of "one time" nature and cannot be treated as routine Operation & Maintenance (O&M) expenses. The Petitioner added that the expenses were based on the recommendation of the Consultant, M/s Flook, and based on these recommendations, some amount on automation, and replacement of obsolete and worn out components had already been undertaken.

26. The Petitioner stated that it has proposed to incur additional expenditure towards Renovation & Modernisation in FY 2009-10 and FY 2010-11. The Petitioner submitted that when the plant was being operated by GoM, the runner of the turbine had got damaged due to an accident and cracks had developed. The damage had been repaired and the plant was running satisfactorily for 3 years, i.e., from FY 2002-03 to FY 2005-06, when it was taken over by the Petitioner. However, the Petitioner had doubts about

the repairs carried out by GoM and apprehensions regarding the health of the runner of the turbine and hence, it has proposed to procure a 'Spare Runner' at an estimated cost of Rs. 4 Crore. The Petitioner also clarified that the new runner has not yet been procured, and added that after the procurement of the new runner and its installation, the present runner would become the spare runner.

27. The Petitioner also submitted a note to the Commission on BHEP-II covering the various actions taken by it since taking over BHEP-II, including summary table of runner inspections carried out, details of the energy audit carried out on January 2, 2008, etc.

28. The representative of GOMWRD submitted that the repaired runner was in good condition at the time it was handed over to the Petitioner, and they had not envisaged its premature replacement.

29. The Petitioner admitted that the turbine had not shown any indications of imminent failure. However, in the event of any failure, procurement of a new runner from M/s Bharat Heavy Electricals Ltd. (BHEL), who is the only manufacturer of the equipment in the country, would take a lead time of at least 2 years during which, the consumers would not be supplied power from the said plant.

30. Shri M R Shelar, Director Operations of MSPGCL, submitted that the turbine runner normally has a long life, equal to the expected life of the plant and no failures are generally expected. However, it is important that the runner should be inspected regularly, and should be kept in good condition to avoid loss of generation for long periods.

31. Shri Ponrathnam enquired whether any specific insurance against the anticipated failure of the runner or the business insurance of the petitioner to cover revenue loss in such eventuality. The Petitioner submitted that it would explore the option of availing such insurance.

32. Shri Abrol enquired regarding the repair plans of the Petitioner after procurement of such spare runner. The Petitioner explained that immediately after procurement of the new runner, it will be put to use and the existing runner will be kept as spare runner.

33. Shri VVRK Rao expressed his opinion that regular inspections and proper diagnostic monitoring would give proper indication of the condition of the runner and based on these, the Petitioner should find innovative solutions. He further said that it is neither an industry practice nor does it appear to be a correct solution to procure a spare runner in anticipation of failure without the required detailed studies.

34. The Commission observed that this is a question of balancing the cost of procurement of a new runner against the cost of probable failure feared by the Petitioner resulting in the loss of generation in the absence of a spare runner.

35. The Commission directed MSPGCL to submit on affidavit the details regarding the practice followed at their other hydro plants regarding critical spares, especially runners of turbines.

#### **Auxiliary Consumption**

36. The Petitioner submitted that on account of the peculiar nature of the plant and low Plant Load Factor (PLF), the auxiliary consumption projected as percentage of the gross generation appears high and requested that the same may be allowed although it is higher than the normative value approved by the Commission.

37. Shri VVRK Rao explained that the BHEP-II belongs to the category of 'Run of the river with pondage' and it had no exceptional feature as compared to other Hydro or Small Hydro plants. Shri Rao further explained that several other hydro plants also have low PLF and are designed for peaking operation, requiring frequent starts and stops.

38. Shri Rao opined that such being the case, no exception for allowing higher Auxiliary consumption of the plant should be made. Shri Rao further submitted that a thorough audit of the loads and metering needs to be carried out to identify the problem areas and address them appropriately so as to lower the auxiliary consumption and bring the same in line with the norms.

#### **Incentive based on Capacity Index**

39. The Petitioner stated that in the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2009, the secondary energy is not treated separately. The new Regulations have addressed the issue of compensating the generator adequately in the event of over or under generation as compared to the design Energy of the plant. The petitioner submitted that this is a way to recognize efficient



operationalisation of the plant and requested the Commission to adopt the same mechanism.

40. The Commission concluded the hearing, observing that the other items mentioned by the Hon'ble APTEL in its Judgment in Appeal No. 151 of 2009 & IA No. 265 of 2009 were related to the above discussions and the same will be re-visited and addressed appropriately, once the desired information from various stakeholders is received.

41. Having heard the Parties and after considering the material placed on record, the Commission is of the view as under:

42. In the following paragraphs, the Commission has given its detailed analysis on each of the issues on which the Hon'ble APTEL has remanded the matter back to the Commission, based on the submissions made by the Petitioner and the stakeholders during the regulatory process, as well as documentary evidence submitted by the Petitioner to substantiate its claims.

#### **PRE-OPERATIVE EXPENSES**

43. As regards the allowance of Pre-Operative expenses, the Hon'ble APTEL, in its Judgment dated December 23, 2009 in Appeal No. 151 of 2009 & IA No. 265 of 2009, ruled as under:

*“It appears to us that the Commission did not sufficiently scrutinise the petition of the appellant so far as it relates to claim for Rs.9.75 Crores and rejected the entire claim on the assumption that these expenses were pre-bidding expenses and, therefore, not permissible to be recovered through tariff. The Commission, therefore, further needs to revisit its decision in this regard.*

*The Commission is fully entitled to carry out prudence check and disallow as much of the expenditure claimed as may be found to be imprudent. No part of the expenditure can be disallowed simply on the ground that it is more than the usual pre-operative expenditure. The Commission has to keep in view the project specific requirements and the peculiar situation in which the project was transferred including the fact that the project was running far below the design capacity and was a part of the irrigation project. This is all that we have to say in respect of appellant's claim for pre-operative expenses”*

44. In this regard, the Commission is of the view that as stated by the stakeholders during the hearing, any bidder before bidding for the Project, would have undertaken due diligence of the Project to assess the technical parameters and performance of the Plant as well as the capital expenditure that is likely to be incurred to improve the operational performance of the Plant. While it is true that at that stage, exact assessment would not be possible, a certain extent of provisioning would have been done by the Bidder at the time of bidding itself. Merely because the tariff is being determined on a cost-plus basis, all the capital costs incurred by the Petitioner in refurbishing the Plant cannot be passed on to the consumers on the plea that the plant was not in proper running condition when it bid for it. Notwithstanding the above observation, the Commission has undertaken the prudence check of the pre-operative expenses claimed by the Petitioner, in accordance with the Hon'ble APTEL Judgment in this regard.

45. The expenses claimed by DHPPL under this head are mainly towards payment of Technical and Management fees, Financing and Legal fees, Administration expenses, Machinery, tools, equipment, and Furniture and fixtures. During the hearing held at site on April 9, 2010, the Commission directed the Petitioner to submit all the documents pertaining to these expenses, in order to enable the Commission to undertake the prudence check on the same. In compliance with the above direction, on April 19, 2010, the Petitioner submitted the available documents such as vouchers, bills and payment receipts for the expenses directly incurred by DLHPPL Indian office. The Petitioner was further directed on May 10, 2010 that to support the above details, it has to also submit the documents such as vouchers, bills and payment receipts for the expenses directly incurred by DLHPPL parent office in the USA, copies of Orders placed on the technical and financial consultants, the Terms of Reference given to the consultants, copies of reports submitted by the consultants, relevant Government or RBI approvals for remittances or payments made in foreign currency, etc., to enable the Commission to conduct prudence check on these expenses. Merely because an expense is stated to have been incurred and is duly audited and the necessary back up invoices are submitted, it does not mean that the expenses are prudent, and need to be passed on to the consumers. The prudence check involves the assessment of the efficacy of the expenditure incurred, and whether the desired objectives were achieved.

46. As regards the details sought from the Petitioner such as copies of Orders placed on the technical and financial consultants, the Terms of Reference given to the consultants, copies of reports submitted by the consultants, etc., DLHPPL has only provided some of the documents pertaining to the Scope of Work/Terms of Reference, however, the Petitioner has not submitted the required copies of the Reports of the

Consultants and other Agencies. As the Petitioner has not submitted all the details sought by the Commission, the Commission has been unable to carry out the complete and meaningful prudence check of this expenditure, and hence, the Commission has not considered the expenses incurred towards fees for consultants and technical studies, as part of the Capital Cost.

47. Similarly, as regards the expenses incurred by USA Sponsor (Parent Company), the Petitioner has not submitted the complete details of the various expenses incurred by USA Sponsor (Parent Company). As the Petitioner has not submitted all the details sought by the Commission, the Commission has been unable to carry out the complete prudence check and hence, the Commission has not considered the reimbursement of the cost incurred by Parent Company in USA, as part of the Capital Cost. .

48. The Commission is of the view that the inability of the Petitioner to furnish the desired documents from his own records reflects on the managerial practices of the Petitioner, and not having sufficient controls and systems in place for making payments. The Petitioner also has a duty to ensure that only those expenses that are just and reasonable as well as essential are passed on to the consumers.

49. Apart from the expenses discussed above, the Commission has considered after verifying the documents and allowed all other expenses incurred by the Petitioner under this head, which includes administration expenses, bank commission for arranging Bank Guarantees, financing charges including upfront fees and commitment charges, stamp duty charges, notary charges and other miscellaneous expenses.

50. Thus, the Commission has considered the total pre-operative expenses of Rs 4.54 Crore as part of Capital Cost while re-determining the tariff as against the amount of Rs 9.75 Crore claimed by the Petitioner.

### **RENOVATION AND MODERNISATION EXPENSES**

51. As regards the Renovation & Modernisation expenses, Hon'ble Tribunal, in its Judgment dated December 23, 2009 in Appeal No. 151 of 2009 & IA No. 265 of 2009, ruled as under:

*“The Commission has not approved of the Renovation and Modernization (R&M) expenses claimed by the appellant for recovery through tariff. A major item disallowed is the expenditure incurred for a spare runner which the appellant considers necessary to acquire as it is a long delivery item and may*

*be required anytime which the appellant feels wise to keep available in view of the nature of the project. The appellant is aggrieved that in disallowing the R&M expenditure claimed the Commission has solely relied upon the report of a technical expert Mr. V.V.R.K. Rao without any opportunity being given to the appellant to respond to the report or for any discussion or hearing either before Mr.V.V.R.K.Rao or before the Commission in respect of the report. The fact remains that the appellant was not provided with an opportunity to make any submission regarding the report of Mr.V.V.R.K.Rao. Nor did Mr.V.V.R.K.Rao hear the appellant. In this regard we find that the appellant is rightly aggrieved and that appellant needs to be given an opportunity to explain its position vis-à-vis the report of Mr.V.V.R.K.Rao.*

*...in respect of the R&M expenditures to be allowed to be pass through in tariff, the Commission needs to re-visit its decision after allowing the appellant an opportunity to explain its case vis-à-vis the report of Mr.V.V.R.K.Rao”*

52. In order to comply with the direction stipulated by the Hon’ble APTEL as above, the Commission took the following steps:

- a) A copy of the report of Shri VVRK Rao was handed over to the Petitioner immediately after the Public Hearing on March 22, 2010;
- b) An opportunity was given to the Petitioner during the hearing held at site on April 9, 2010 to interact freely with Shri VVRK Rao regarding the issues under consideration;
- c) The opinion of representatives of GOMWRD present during the hearing on April 9, 2010 at the site was also sought regarding the details of the accident in which the turbine runner was involved, the repairs carried out, and the condition of the item when the project was handed over;
- d) The opinion of MSPGCL was also sought at the time of the hearing held at site regarding their practice of maintaining a spare turbine runner.

53. During the hearing at site on April 9, 2010, GoMWRD submitted that accidental damage had occurred on the said turbine and the damages were repaired in-situ. GoMWRD representatives further submitted that the repairs work carried out in-situ were satisfactory and after repairs, the machine had been performing quite well, and the turbine runner was in good condition at the time of handing over the Project to the Petitioner.

54. MSPGCL submitted the following on affidavit on May 4, 2010:

*“It is to submit regarding critical spares, especially runners of turbines that, presently, there is no practice of keeping a spare runner for small hydro power stations. Thorough checking of the runner is usually done during annual overhaul. So far the replacement of runner has not been done in any of small hydro power stations. However minor repairs are carried out in-situ. Almost all small HPS are different in design aspect, and as a MSPGCL’s policy no spare runner is kept for each individual small hydro power stations.*

*Only one incident (viz at Dudhganga HPS), welding repair works for runner has been carried out. Since then, the unit is running normal. However, as per OEM’s recommendations, order for one set of blades has been placed.*

*Regarding Koyna HPS, there are two spare runners each for Stage –I (4X70 MW) and Stage –II (4X80 MW; ) one sapre runner for Stage –IV (4X 250 MW). There is no spare runner for Stage -III (4 X 80 MW) and KDPH (2X18 MW). Minor repairs are carried out in-situ whenever required.”*

55. The Petitioner submitted that expenses of capital nature, equipments/instruments that need replacement due to earlier damages and new equipments/instruments that are essential, have been covered under Renovation & Modernisation expenses. The Petitioner also submitted the list of the assets capitalised.

56. The Petitioner added that the scrutiny of each item will establish that these Renovation & Modernisation works were essentially required. At the time of operation of the plant by GOMWRD, many of the items were damaged, while some items were not provided at all, and almost all the equipments needed overhauling, as the maintenance of the plant for the last 13 years had been negligible.

57. The Petitioner further submitted that the procurement of the runner is essential at this stage, as the plant is being operated with damaged runner. The Petitioner added that the Draft Tube (DT) Gates were not commissioned by GOMWRD and the overhauling and commissioning was required to be done in FY 2008-09 as the Nilwande Dam level was increased to RL 623 M and back water pressure on turbine would have caused damage to it, in the absence of DT gates.

58. After due analysis of the above information and submissions, the Commission observes that as a matter of routine maintenance management, there is no standardized protocol regarding keeping a spare runner. Spare runner are at times procured at large hydro plants having machines of similar design as a common spare to all of them and not one to one spare. However, it is also observed that such spare part, although treated as an insurance spare, remains unutilized for years together. The Commission, based on the representations made by GoMWRD and expert advice, notes that there are no apparent signs of impending failure of the runner in service at the plant of the Petitioner, and therefore, procurement of an expensive spare runner appears to be unwarranted. However, the Petitioner may provide at its own cost to protect its commercial interest.

59. A perusal of summary of runner inspections done since taking over of the project on December 19, 2006, indicates that DLHPPL has carried out 7 inspections. The summary of the inspections submitted to the Commission stipulates that the cracks developed on Blade Nos. 7, have already been repaired by welding by GOMWRD and since then the conditions of both the blades is as it is and there has been no further deterioration in the cracks as on January 22, 2010. As regards the hair crack developed on Blade No. 14 and cavitation marks on Blade No. 19, the situation from January 6, 2007 to January 22, 2010 has remained the same. However, the summary tabulation submitted by DLHPPL does not indicate the remedial action taken/repairs done by DLHPPL. DLHPPL has stated that as a result of the various actions taken by them after taking over the plant, the availability of the plant has improved to 99.98% and there had been no occasion when the water was let out without power generation. Moreover, it is to be noted that the Petitioner has also installed the online vibration monitoring system and hence, any indication of failure on account of the cracks in the blades would be identified by the vibration machines, as the impact of the cracks would be first indicated in terms of vibrations.

60. The Commission is of the view that forced outages of the plant may occur due to failure of the Runner, the Generator or any of the critical parts of the plant and these may cause extensive periods of non-availability of the plant. The Commission therefore, advises the Petitioner to put in place predictive and pre-emptive measures such as installation of diagnostic tools on the machine, following a strict regime of inspection of the runner and repairs to the same through expert technicians as required, instead of proposing to procure an expensive spare runner.

61. During the site visit on April 9, 2010, the Petitioner furnished detailed list of Renovation & Modernisation jobs actually carried out during the period from FY 2006-07 to FY 2008-09. The Petitioner also submitted the details of the Renovation & Modernisation proposed to be undertaken during the period from FY 2009-10 to FY 2011-12. The Petitioner submitted that the works, which normally fall under O&M are not being taken up under Renovation & Modernisation. The details of the total works and R&M works as submitted by the Petitioner is given below:

(Rs. Lakh)

Particulars	Total Expenses on Works	Expenses on Renovation & Modernisation works
FY 2006-07	61.33	57.50 (capitalised)
FY 2007-08	92.94	63.55 (capitalised)
FY 2008-09	29.23	17.33 (capitalised)
FY 2009-10	-	14.30 (estimated)
FY 2010-11	-	292.00 (estimated)
FY 2011-12	-	450 (estimated)

62. As regards capitalisation of additional capital expenditure incurred after the commissioning of the plant, Regulation 30.3 of the MERC (Terms and Conditions of Tariff), Regulations, 2005, stipulates as under:

“30.3 *The capital expenditure of the following nature actually incurred after the cut-off date may be allowed by the Commission for inclusion in the original cost of project, subject to prudence check:*

(i) ----

(ii) ----

(iii) ----

(iv) *Any additional works/services which have become necessary for efficient and successful operation of the generating station, but not included in the original project cost;”*

63. The Commission has carried out the prudence check on the details of the assets actually capitalised during FY 2006-07, FY 2007-08 and FY 2008-09 and has found them to be in order. Accordingly, the Commission has considered the actual

capitalisation for the period from FY 2006-07 to FY 2008-09 as submitted by the Petitioner.

64. Further, in its submission dated May 20, 2010, the Petitioner submitted that the actual expenses capitalised in FY 2009-10 amounts to Rs. 12.58 Lakh. Further, the Petitioner also submitted the revised capital expenditure plan for FY 2010-11 and FY 2011-12 and mentioned that it will submit the proposal with justification to the Commission for prior approval of each item. As regards the proposed capitalisation for FY 2010-11 to FY 2011-12, the Commission has considered the revised estimated capitalisation as proposed by the Petitioner, except the capitalisation proposed for installation of Supervisory Control and Data Acquisition (SCADA) of Rs. 2 Crore, and procurement of spare runner for Turbine (of Rs. 4.5 Crore). Since, the capital expenditure approval is a separate process, the Commission directs the Petitioner to submit Detailed Project Reports with cost benefit analysis for obtaining 'In principle clearance' from the Commission for these works and upon approval of the same, the Petitioner may approach the Commission for suitable adjustment in the tariff approved in this Order. The summary of additional capital works proposed by the Petitioner and as considered by the Commission is given in the following Table:

(Rs. Lakh)

Particulars	Petitioner	Commission
FY 2006-07	57.5	57.5
FY 2007-08	63.55	63.55
FY 2008-09	17.33	17.33
FY 2009-10	14.3	12.58
FY 2010-11	292	93.95

### **AUXILIARY CONSUMPTION**

65. The Hon'ble APTEL, in its Judgment dated December 23, 2009 in Appeal No. 151 of 2009 & IA No. 265 of 2009, ruled as under:

*“It is contended by the appellant that the appellant’s power plant does not fall into any of the categories mentioned above. The appellant contends that the appellant’s project is a typical well type underground power station and that the power station requires continuous running of drainage and de-watering pump due to presence of upstream and downstream reservoirs. On account of its location there is water seepage inside the power house and auxiliary consumption is required to pump out water on a constant basis. It is further contended that the power station runs at a*



*very low plant load factor of about 12% and therefore, the auxiliary consumption is high as compared to normal hydro project. It appears from the portion of the order extracted above that the Commission has not considered the peculiarity associated with the station of the appellant while determining the auxiliary consumption. The Commission, therefore, has to re-visit its decision in this regard and has to come to a fresh decision after considering the peculiarity of the power station with very low plant load factor in question”*

66. In accordance with the direction of the Hon'ble APTEL, the Commission forwarded the report of Shri VVRK Rao to the Petitioner for providing an opportunity to comment on the same. The Petitioner submitted that higher auxiliary consumption is due to continuous operation of dewatering due to seepages in the power house, and added that the plant is to be operated in morning and evening peak hours, i.e., in start and stop mode, which consumes more power. Further, high partial load operation depending on Nilwande dam level also results in higher auxiliary consumption. The Petitioner added that for BHEP-II, Energy Audit has been carried out on January 2, 2008, and that capacitors have also been installed for auxiliary supply and motors to bring down the auxiliary consumption; however, the auxiliary consumption is still above 1.44%.

67. Based on the discussions at site and opinion of the expert consultant, Shri VVRK Rao and comments received from the Petitioner, the Commission has analysed the following issues in detail for analysing the submissions of the Petitioner regarding the peculiarity of the stations:

- a) **Class or category** applicable to the BHEP-II based on the Regulations and normative limit of auxiliary consumption applicable;
- b) **Accuracy** of electrical power and energy measurements at the plant;
- c) **Energy audit** of the auxiliary consumption and issues to be addressed by the Petitioner.

**a) Category of the plant**

68. The Commission, along with its technical experts and the representatives of the Utilities had made detailed tour of the BHEP-II installations on April, 9, 2010, before commencement of the hearing at site. During the said site visit, subsequent discussions at site and based on the details provided by the Petitioner, the Commission has observed as under:

69. BHEP-II (34 MW) is located downstream of Bhandardara I Hydropower plant of 10MW (PH-I), which is located at the foot of Bhandardara storage dam, built to provide irrigation in the Pravara basin. Water releases from Bhandardara dam, after power generation at PH-I, reach Randha weir on the Pravara River located at 12 km from Bhandardara-I. Randha weir provides pondage for BHEP-II and enables it to operate as a peaking station. From this location, the water is led through a tunnel and penstocks to BHEP-II. The tail race water from BHEP-II is led back to the Pravara river upstream of Nilwande irrigation dam. The water releases from Bhandardara dam and operation of BHEPP I and II is governed by the irrigation requirements downstream in the Pravara river valley.

70. The BHEP-II has vertical shaft Francis turbine located in a semi underground powerhouse with typical well type construction as per site conditions and to achieve economy in construction. There are no special circumstances or features in such a project layout design, which would result in higher auxiliary consumption as compared to norms adopted by the Commission.

71. Based on the above project layout, arrangement and features of the project, and the opinion expressed by the expert consultant Shri VVRK Rao, the Commission is of the view that the said power plant falls into the category of “Run-of-river power station with pondage”. Hence, all the performance parameters stipulated in the MERC (Terms and Conditions of Tariff) Regulations, 2005, for this category of hydro power plant, i.e., Run-of-river power station with pondage, are applicable to BHEP-II also. As far as type of power plant for determination of auxiliary energy consumption, the norm applicable for an underground power house has been considered.

72. Thus, the higher auxiliary consumption cannot be allowed merely because the actual auxiliary consumption levels are higher. Therefore, the Commission rules that with 0.7% auxiliary consumption permitted for the above type of hydro power plant, along with 0.5% transformation loss, the total allowable limit value for Auxiliary consumption of the said hydro power plant is 1.2 % of gross generation.

73. The onus falls on the petitioner to find ways and means to ensure its performance in conformity with the normative values. The Commission observes that in this respect, the Petitioner needs to address the following major issues and find other innovative ways to ensure performance within normative levels.

**b) Accuracy of Measurements**

74. Based on the information provided by the Petitioner, the Commission has noted that the Energy Audit of the loads at the said power plant was conducted by M/s SSS Electricals. Based on the Report of the Energy Auditor dated January 7, 2008, the Commission has noted that the energy meters on the ACDB were faulty and as such, needed to be replaced. During site visit, it was informed that all the energy meters are functional. It was also informed that the accuracy class of existing instrument transformers deployed for the meters used to measure auxiliary consumption is Class-0.5.

75. In this respect, it is important to note the Central Electricity Authority (CEA) (installation and Operation of Meters) Regulations, 2006 which specify as under:

***“Energy accounting and audit meters***

*The accuracy class of meters in generation and transmission system shall not be inferior to that of 0.2 S Accuracy Class.”*

76. In accordance with the above Regulations, the Commission directs the Petitioner to ensure that all the Meters and instrument transformers installed for the measurement of auxiliary consumption shall be of 0.2 class accuracy. The improvement in metering accuracy itself can account for a significant part of actual auxiliary consumption.

**c) Energy audit of the auxiliary consumption and issues to be addressed by the Petitioner**

77. The Commission has observed that the Energy Audit has compiled the factual details regarding the loads and supply-measurement systems thereof. The Commission directs the Petitioner to use this information, deploy innovative measures and ensure that the auxiliary consumption at the plant is within the normative limits.

78. In view of the above, the Commission has rejected DLHPPL’s submissions to approve auxiliary consumption of 1.44% and has considered the normative auxiliary energy consumption and transformation losses as 0.7% and 0.5%, respectively, in accordance with MERC (Terms and Conditions of Tariff) Regulations, 2005.

## **INCENTIVE BASED ON CAPACITY INDEX**

79. In this regard, the Hon'ble APTEL, in its Judgment dated December 23, 2009 in Appeal No. 151 of 2009 & IA No. 265 of 2009, stipulated as under:

*“30) It is contended by the appellant that it is not covered by any of the two classes of hydro generating stations mentioned in the Regulations namely run-of-river power station or storage type and run-of-river power station with pondage. The Commission is required to apply its mind as to which category and why the appellant's power station will fall. The Commission needs to pass a speaking order on the appellant's contention that the Regulations do not apply to its power station in view of the fact that it is dependent on the level of water at Nilwande Dam and also because it is an irrigation related project, the demands of irrigation takes precedence over the demand of the generating station.”*

80. The Commission has observed that the said Judgment delivered by Hon'ble APTEL refers to the contention that BHEP-II is not covered by any of the two classes (Purely Run of the River or Storage and Run of the River with pondage), stipulated in the MERC Tariff Regulations, on account of the fact that the plant is dependent on the water level at Nilwande dam and water demand for irrigation, which may take precedence over power generation.

81. The Commission has noted that the overall development and operation of Pravara river basin has irrigation as the main objective. This fact is well known to all, including the Petitioner, and hence, the design energy has also to be determined accordingly. Randha weir, from where the water is diverted to BHEP II for power generation, has diurnal storage, adequate to provide a limited storage to operate the station for daily peaking, and releases for power generation would be as per the irrigation requirements. Further, as stated earlier, based on the above project layout, arrangement and features of the project, and the opinion expressed by the expert consultant Shri VVRK Rao, the Commission is of the view that the said power plant falls into the category of “Run-of-river power station with pondage”.

82. The Commission notes that due to dependence of BHPP on the water level in Nilwande dam, the peaking capability of the generating station would be less than the rated capacity of 34 MW, whenever the water level in the Nilwande is above 618 M.

83. The Commission notes that Capacity Index is an important factor, which lays down the minimum achievement required for recovery of the Annual Fixed Charges and also incentive for performance above the prescribed levels. The definition of Capacity Index and details of the modalities for calculating the incentive payable to Hydro power plant based on Capacity index are clearly specified in MERC (Terms and Conditions of Tariff) Regulations, 2005, as under:

*“2 Definitions*

*2.1 In these Regulations unless the context otherwise requires:*

.....

.....

*(p) “Daily Capacity Index” means the declared capacity expressed as a percentage of the maximum available capacity for the day and shall be calculated in accordance with the following formula:*

*Daily Capacity Index = Declared Capacity (MW) x 100 / Maximum Available Capacity (MW)*

*and the term “Capacity Index” for any period shall be the average of the daily capacity indices calculated as above, for such period;”*

84. It is seen from the above definition that the Capacity Index depends on two factors, viz.,

- a) The Maximum Available Capacity (MW) of the plant and
- b) Declared Capacity (MW) of the plant

85. The Commission has already highlighted that the role of BHEP-II in power generation is required to be seen against a composite environment where irrigation requirements play a lead role.

86. The Commission notes that the maximum available capacity of BHEP-II unit to generate power during any time period depends on:

- a) **Head:** Level of Randha weir, which mainly depends on the discharge from BHEP-I and depletion of the level on account of utilization of water by BHEP-II
- b) **Tail-water Level:** Level of Nilwande dam, which depends upon control by irrigation department at Nilwande dam
- c) **Flow:** Quantum of irrigation release, which depends on flow let out from Nilwande dam by Irrigation department.

87. The Commission observes that the Maximum Available Capacity of the power plant for any period will be based not just on the availability of generating machinery, but also on the combined effect of all the above parameters. Variations in any of the above parameters can cause available capacity of the Unit to vary from a maximum of 100 % of the plant rating to zero.

88. The definition of Maximum Available Capacity as per the MERC Tariff Regulations for a run of the river hydro plant with pondage is as under:

*“...the maximum capacity in MW that the generating station can generate with all units running under prevailing conditions of water levels available for usage and flows over the peaking hours of the next day .....”*

89. Similarly, the definition of Declared Capacity as per the MERC Tariff Regulations for a run of the river hydro plant with pondage is as under:

*“...the ex-bus capacity in MW, expected to be available from the generating station over the peaking hours of the next day, as declared by the generating station, taking into account the availability of water, optimum use of water and availability of machines. ...”*

90. The Commission would like to emphasize on the fact that the Declared Capacity as well as Maximum Available Capacity for a hydro plant are intrinsically correlated to all other conditions and parameters, which are integral part of the power generation for the hydro power plant.

91. The Declared Capacity of the plant is what the plant operator declares to the State Load Despatch Centre. Here, the Commission emphasises that while declaring the electrical power generating capacity of the plant, the operator cannot be oblivious to the other parameters on the hydro side as stated above, and laid down in the Regulations. Hence, it will be totally in negation to the regulatory stipulations to ignore any constraints caused by these factors, viz., the Water Head, Tail-water level and Flow.

92. The Commission observes that the hydraulic side parameters at BHEP-II are dynamic in nature, and the Capacity Index should be calculated on hour-to-hour basis and should be averaged out over a longer period of a month or a year.

93. Further, the Commission feels that some amount of co-ordinated effort is called for, to optimally utilise the hydro generating capacity, especially in the prevalent era of power deficit. Towards this objective, the Commission feels that formation of a joint co-ordination committee comprised of members deputed from the Irrigation department (GoMWRD), MSLDC, DLHPPL and MSEDCL may be useful to chalk out the quarterly power generation plan especially to iron out any contradicting requirements and to operate the power plant at high plant utilisation factor. It may be, however, noted that non-formation or non-functioning of such a Committee cannot be a ground for seeking relief in future

94. As per MERC Tariff Regulations, 2005, incentive is applicable when the plant achieves Capacity Index better than the normative Capacity Index. The normative Capacity Index as defined in the MERC Tariff Regulations, 2005, is as under:

*"33.2.1 Normative capacity index for recovery of annual fixed charges*

*(a) During first year after commissioning of the generating station*

*(i) Purely Run-of-river power stations - 85%*

*(ii) Storage type and Run-of-river power stations with pondage - 80%*

*(b) After first year after commissioning of the generating station*

*(i) Purely Run-of-river power stations - 90%*

*(ii) Storage type and Run-of-river power stations with pondage - 85%*

*Note:*

*There shall be pro rata recovery of annual fixed charges in case the generating station achieves capacity index below the prescribed normative levels. At Zero capacity index, no fixed charges shall be payable to the generating station."*

95. Regarding the payment of incentive on exceeding the Capacity Index, the MERC Tariff Regulations, 2005, specify as under:

*"37.2 Hydro power generating stations*

*(a) Incentive shall be payable in case of all generating stations, including in case of new generating stations in the first year of operation, when the capacity index (CI) exceeds 90 per cent for purely run-of-river power generating stations and 85 per cent for run-of-river power station with pondage or storage type power generating stations and incentive shall accrue up to a maximum capacity index of 100 per cent.*

*(b) Incentive shall be payable to the generating company in accordance with the following formula:*

$$\text{Incentive} = 0.65 \times \text{Annual Fixed Charge} \times (\text{CIA} - \text{CIN})/100$$

*(If incentive is negative, it shall be set to zero.)*

*Where, CIA is the Capacity Index achieved and CIN is the normative capacity index whose values are 90 per cent for purely run of the river hydro power generating stations and 85 per cent for pondage/storage type hydro power generating stations.”*

96. Based on the above Regulations, the Commission notes that, as the said plant of the petitioner is “Run of the river with pondage” type plant, the normative Capacity Index applicable is 85%. The Commission directs that all the calculations related to the Capacity Index and the Incentive shall be based on the modalities explained above.

#### **6.1. NON-CONSIDERATION OF INTEREST DURING CONSTRUCTION FOR COMPUTATION OF O&M EXPENSES**

97. In this regard, the Hon’ble APTEL, in its Judgment dated December 23, 2009 in Appeal No. 151 of 2009 & IA No. 265 of 2009, has ruled as under:

*“The appellant had contended that the capital cost of Rs.93.28 Crores did not include interest during construction as the power station was constructed by the Government of Maharashtra which does not have to borrow. Since the capital cost normally includes interest during construction the operation and maintenance cost which is related to the capital cost should include interest during construction. It is not disputed that the capital cost of Rs.93.28 Crores does not include interest during construction. In order to give a realistic assessment of O&M expenses it is only reasonable and fair that interest during construction is added to the declared capital cost of the station in order to derive the O&M expenses. The Commission has not considered this aspect of the case and has not even given any reason for not considering the component of interest during construction as a part of capital cost for deriving the O&M expenses. We, therefore, have to require the Commission to re-visit its opinion on the operation and maintenance expense and calculate the same on the basis of capital cost including interest during construction.”*



98. In accordance with the direction of the Hon'ble APTEL regarding the computation of O&M expenses on the capital cost of BHEP-II including the Interest During Construction (IDC), the Commission has considered the same. However, based on the submissions of the Petitioner, the Commission observed that the IDC claimed by the Petitioner works out to around 45% of the capital cost incurred by GoM, as shown in the Table below:

Particulars		Unit	Amount
Capital Cost incurred by GoM	1	Rs. Crore	93.29
IDC computed by DLHPPL	2	Rs. Crore	41.67
IDC as % of Capital Cost	3=2/1	%	44.67%
Construction Period		Years	16

99. As observed from the above Table, the IDC indicated by the Petitioner has not taken into the consideration the impact of cost and time over-run. Moreover, the tariff determination for BHEP-II has not been done on the basis of the capital cost incurred by the GOMWRD, rather the tariff has been determined based on the capital cost incurred by the Petitioner for being awarded the Project.

100. The Commission is of the view that it will not be appropriate to consider the IDC as 45% of the Capital Cost incurred by GoM, as proposed by the Petitioner. Even if the construction period of 16 years is considered as claimed by the Petitioner, the IDC will not work out to 45% of the Capital Cost. The Commission has examined the IDC for various hydro projects and is of the view that typically, the IDC for hydro projects is in the range to 10-15%. Further, the increase in IDC due to past time over-run cannot be passed on to consumers by the Petitioner for calculating O&M charges. Therefore, the Commission has considered the IDC equivalent to 15% of the Project Cost (Hard Cost) for arriving at the O&M expenses. The total Capital Cost considered by the Commission including IDC for estimating the O&M expenses is given in the following Table:

Particulars		Unit	Commission
Capital Cost incurred by GoM	1	Rs. Crore	93.29
IDC as % of Capital Cost	2	%	15%
IDC	3=1*2	Rs. Crore	13.99
Total Cost including IDC	4=3+1	Rs. Crore	107.28

101. Accordingly, the Commission has considered the base O&M expenses as 1.5% of the capital cost of Rs. 107.28 Crore (i.e., capital cost including IDC) from the date of COD of the project and has escalated the same @ 4% in accordance with Regulation 34.6.2 (b) of the MERC Tariff Regulations, 2005, for future years.

### **DEBT: EQUITY RATIO**

102. In this regard, the Commission, in its Order dated July 8, 2009 in Case No. 27 of 2008 had stipulated as under:

*“In accordance with the MERC Tariff Regulations, the normative debt:equity ratio is 70:30 or actual debt if the same is higher than 70%. As submitted in the Petition that the project has been financed by loan availed from IFC, DEG and SBI. The Commission asked DLHPPL to confirm whether the entire loan availed from the above mentioned sources have been utilised to fund the project, i.e., upfront payment of Rs. 60 Crore. DLHPPL, in its reply, has submitted that out of the total loan availed from IFC, DEG and SBI, the loan availed for BHEP-II is Rs. 54.62 Crore and this amount has been utilised for payment of upfront premium of Rs. 60 Crore.*

*In accordance with the provisions of the MERC Tariff Regulations, the Commission has considered the actual debt of Rs. 54.62 crore, and remaining amount of the capital cost i.e., Rs. 5.38 Crore, has been considered as equity, for funding the total capital cost of Rs. 60 crore.”*

103. As regards the debt:equity ratio, the Hon’ble APTEL, in its Judgment dated December 23, 2009 in Appeal No. 151 of 2009 & IA No. 265 of 2009, has ruled as under:

*“During arguments the appellant contended that had the Commission granted a pre-operative expense of Rs.9.75 Crores which had been spent out of equity the appellant would not have had any grievance. The appellant has not only spent Rs.60 Crores which was the bid price but also other capital expenses particularly the pre-operative expense of Rs.9.75 Crores. We have already held that the Commission needs to take into account the pre-operative expenses which were incurred by the appellant after the bid but before actually operating the plant for production of electricity. Further the R&M expenditure also needs to be taken into account. Once the Commission takes into account these items of capital expenditure the Commission will have to calculate afresh the debt equity ratio.”*

104. Based on the revised allowed Capital Expenditure, the Commission has considered the actual debt of Rs. 54.62 Crore, and remaining amount of the capital cost, i.e., Rs 9.92 Crore, has been considered as equity, for funding the total capital cost of Rs. 64.54 Crore. With this, the debt:equity ratio works out to 85:15. The Commission is of the view that in this case, it will not be prudent to consider the normative debt:equity ratio of 70:30 particularly when the actual debt availed by the Petitioner works out to around 85% and particularly when the entire financing charges i.e., fees paid to Lenders, registration charges, etc., for availing this actual loan amount has been considered as part of Capital Cost and passed on to the consumers.

105. However, for additional capitalisation of Renovation and Modernisation considered by the Commission post COD of the Project, the Commission has considered the normative debt:equity ratio of 70:30.

#### **MINIMUM ALTERNATE TAX**

106. In this regard, the Commission, in its Order dated July 8, 2009 in Case No. 27 of 2008 had considered the income tax payable as minimum alternate tax (MAT) considering the MAT rate as 11.33%.

107. The Hon'ble APTEL, in its Judgment dated December 23, 2009 in Appeal No. 151 of 2009 & IA No. 265 of 2009, has ruled as under:

*“It is stated in the counter affidavit that in accordance with the Regulations the appellant always has the opportunity to approach the Commission for suitable adjustments in the annual fixed charges on account of change in income tax rate. The omission to apply the enhanced rate of 16.995% was on account of the fact that the revision in the rate came almost simultaneously with the passage of the impugned order. We, therefore, have to direct the Commission to apply the enhanced rate of MAT while calculating annual fixed charge.”*

108. In accordance with the Hon'ble APTEL Judgment, the Commission has revised the income tax computations considering the revised MAT rate applicable for the relevant year, and for future years, by considering the prevalent MAT and Corporate Tax rate. Accordingly, the following rates have been considered for working out the MAT and Corporate Tax, subject to the Petitioner furnishing in original, Challans of the tax paid to the Income Tax authorities for the respective years.

Year	MAT Rate	Corporate Tax Rate
FY 2006-07	11.20%	
FY 2007-08	11.33%	
FY 2008-09	11.33%	
FY 2009-10	17.00%	
FY 2010-11 onwards	19.93%	33.22%

## SECONDARY ENERGY

109. As regards the secondary energy, the Commission, in its Order dated July 8, 2009 in Case No. 27 of 2008 had stipulated as under:

*“The MERC Tariff Regulations do not differentiate between primary energy and secondary energy, and energy charges are to be computed based on entire saleable energy. Thus, the entire revenue recovered from Energy Charges should be deducted from Annual Fixed Charges for determining Annual Capacity Charges.”*

110. In this regard, the Hon’ble APTEL, in its Judgment dated December 23, 2009 in Appeal No. 151 of 2009 & IA No. 265 of 2009, has ruled as under:

*“Although we uphold the Commission’s decision to disregard secondary energy charge, we cannot but express our concern for encouraging energy generation on the one hand and rewarding efficiency on the other. Section 61 of the Act, inter alia, requires the Commission to be guided by some factors while framing terms & conditions for determination of tariff. Clause (c) of section 61 mentions encouragement to efficiency, economic use of the resources, good performance and optimum investment. Clause (e) mentions rewarding efficiency in performance. Clause (h) directs promotion of energy from renewable sources of energy. Thus rewarding secondary energy generation is in the spirit of the provisions of section 61 of the Act. The Central Commission has accordingly made provision for rewarding secondary energy generation. We are not able to appreciate the Commission’s approach of ignoring the need to encourage generation of secondary energy by making adequate provision in its Regulations. We hope the Commission will take remedial measures in this regard and bring appropriate amendment in the Regulations.”*

111. The Commission has already initiated the process of formulation of Multi Year Tariff Regulations for the next Control Period, in which the issue of secondary energy is being addressed for all.

## **DATE OF APPLICABILITY OF THE ORDER**

112. In this regard, the Hon'ble APTEL, in its Judgment dated December 23, 2009 in Appeal No. 151 of 2009 & IA No. 265 of 2009, has ruled as under:

*“This is an obvious mistake. The Commission, having said in so many words that the tariff will be applicable w.e.f. 01.07.09, cannot ask for truing up from 2007 onwards. The prayer of the appellant in its tariff petition was in view of the appellant's prayer for enhancement in tariff. Since the tariff determined has not been enhanced it will be unfair to ask the appellant to return the tariff recovered till the impugned order was passed. In this regard we have to uphold the appellant's contention that the tariff will be effective only from 01.07.09 and adjustments of under-recovery or over-recovery will be made only for 2009-10.”*

113. In accordance with the ruling of the Hon'ble APTEL, the Commission clarifies that the tariff determined in this Order will be effective from July 1, 2009 and any difference between the approved AFC for FY 2009-10 and total revenue recovered during FY 2009-10, should be adjusted at the end of FY 2009-10. The Commission further clarifies that in accordance with the ATE Judgment, no adjustments would be done on account of under/over recovery of AFC from the year of taking over till the date of the applicability of the tariff as approved in this Order.

## **APPROVED ANNUAL FIXED CHARGES (AFC) AND TARIFF MECHANISM**

114. Based on the above principles, the AFC as approved for BHEP-II from FY 2009-10 onwards is shown in the Table below:

<i>Year</i>	<i>2009-10</i>	<i>2010-11</i>	<i>2011-12</i>	<i>2012-13</i>	<i>2013-14</i>	<i>2014-15</i>	<i>2015-16</i>	<i>2016-17</i>	<i>2017-18</i>	<i>2018-19</i>	<i>2019-20</i>
<b>Annual Fixed Charges (Rs Crore)</b>	<b>12.84</b>	<b>15.21</b>	<b>15.94</b>	<b>15.38</b>	<b>15.12</b>	<b>14.61</b>	<b>14.10</b>	<b>13.59</b>	<b>13.10</b>	<b>14.01</b>	<b>9.01</b>

<i>Year</i>	<i>2020-21</i>	<i>2021-22</i>	<i>2022-23</i>	<i>2023-24</i>	<i>2024-25</i>	<i>2025-26</i>	<i>2026-27</i>	<i>2027-28</i>	<i>2028-29</i>	<i>2029-30</i>
<b>Annual Fixed Charges (Rs Crore)</b>	<b>9.14</b>	<b>9.28</b>	<b>9.47</b>	<b>19.01</b>	<b>24.29</b>	<b>24.46</b>	<b>24.64</b>	<b>25.03</b>	<b>28.09</b>	<b>28.29</b>

<i>Year</i>	<i>2030-31</i>	<i>2031-32</i>	<i>2032-33</i>	<i>2033-34</i>	<i>2034-35</i>	<i>2035-36</i>	<i>2036-37 (for 3 months)</i>
<b>Annual Fixed Charges (Rs Crore)</b>	<b>28.49</b>	<b>28.71</b>	<b>28.94</b>	<b>29.17</b>	<b>29.41</b>	<b>29.67</b>	<b>9.42</b>

115. In accordance with the MERC (Terms and Conditions of Tariff) Regulations, 2005, the Commission hereby approves the levy of two part tariff comprising Energy Charges and Annual Capacity Charges. The rate of Energy Charge for particular financial year shall be equivalent to Energy Charge of thermal generating station in the State having lowest energy charge in that particular financial year. The entire revenue recovered from Energy Charges shall be deducted from Annual Fixed Charges for arriving at Annual Capacity Charges payable. In case of over/under recovery in any particular year with respect to Annual Fixed Charges approved for the respective year, the same will be adjusted in Annual Capacity Charge for the subsequent year.

116. Based on the above approved fixed charges, the levelised per unit energy rate in Rs/kWh as approved by the Commission works out to Rs 4.13/kWh.

**Incentive**

117. DLHPPL shall be eligible for an incentive payable in accordance with Regulation 37.2 of MERC Tariff Regulations. DHPPL shall compute the incentive on the basis of the actual performance and shall bill the same as an additional charge, payable at the end of the year. There shall be pro-rata reduction in recovery of Annual Fixed Charges in case the generating station achieves capacity index below the prescribed normative levels.

With the above Order, DLHPPL's Petition in Case No. 105 of 2009 stands disposed of.

Sd/-  
(V. L. Sonavane)  
Member

Sd/-  
(S. B. Kulkarni)  
Member

Sd/-  
(V. P. Raja)  
Chairman

(K. N. Khawarey)  
Secretary, MERC

### Appendix- 1

The list of objectors and other stakeholders, who participated in the Public Hearing

<b>S.No.</b>	<b>Name of the Objector</b>	<b>Organisation/Company</b>
1	Shri M.G. Ramachandran, Advocate	DLHPPL
2	Shri Shyam Vaidya	DLHPPL
3	Shri V.V. Rajadhyaksha	DLHPPL
4	Shri P. Paunikar	DLHPPL
5	Shri Uday Samant	DLHPPL



## Appendix- 2

The list of participants, who participated in the hearing held on April 9, 2010

S.No.	Name of the Objector	Organisation/Company
1.	Shri N . Pothathnam	
2.	Shri Raksh Pal Abrol	
3.	Shri . Uday Samant	DHPPL
4.	Shri Shyam Vaidya	DHPPL
5.	Shri M.G. Ramachandran	DHPPL
6.	Shri Prem Paunikar	DHPPL
7.	Shri Madhukar Shelar	Mahagenco
8.	Shri Palaniappan M.	MERC
9.	Shri L.N. Ambekar	Mahagenco
10.	Shri Salunkhe P.V.	Mahagenco
11.	Shri Prakash R Therade	Mahagenco
12.	Shri Rajendra Jadhav	DLHPPL
13.	Shri Shashikant Desai	DLHPPL
14.	Shri R.G. Sonavane	MSEDCL
15.	Shri S.A. Choudhari	MSEDCL
16.	Shri P.U. Shinde	MSEDCL
17.	Shri Sudheer Agashe	
18.	Shri N. Thampan	
19.	Shri Jude G. Tandon	Standford India & Motors Co.
20.	Shri Dr. V. Thanumoorthy	
21.	Shri R.G. Gawande	
22.	Shri E.B. Rajeevan	
23.	Shri B.D. Fupagar	
24.	Shri B.T. Gurav	