Before the

MAHARASHTRA ELECTRICITY REGULATORY COMMISSION

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Case No. 142 of 2011

Petition of M/s. Dodson Lindblom Hydro Power Pvt Ltd for Clarification and Directions on the Calculation of the Capacity index for the Generating station of the Petitioner for supply of Electricity to the Respondent

Shri V.P. Raja, Chairman
Shri Vijay L. Sonavane, Member

Dodson Lindblom Hydro Power Private Limited .....Petitioner
Maharashtra State Electricity Distribution Company Ltd.(MSEDCL) .....Respondent

Present during the hearing :

Petitioner :
Shri Prem Paunikar, DLHPPL
Shri Uday Samant DLHPPL
Shri Anand Ganesan (Advocate), DLHPPL
Shri Sanjay Sen, (Advocate). DLHPPL

Respondent:
Smt. Deepa Chavan (Advocate) **,** MSEDCL
Shri A S Chavan, MSEDCL

ORDER

Dated: May 21, 2012

The Petitioner, M/s Dodson Lindblom Hydro Power Private Limited submitted its Petition on 19 September 2011 seeking certain clarifications and directions upon the Respondent, Maharashtra State Electricity Distribution Company Limited, in regard to the calculation of Capacity Index in the generation and supply of electricity by the

Petitioner to the Respondent under the Power Purchase Agreement dated 28 June 2006, and in accordance with the MERC Tariff Order dated 24 May10 (Case No 105 of 2009).

Following are the prayers of the Petitioner:

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The Hon'ble Commission may be pleased to:

1.

(a) Hold and declare that the calculation of Capacity Index based on the machine availability in cases where there is inadequate or no water flow on account of factors beyond the control of the Petitioner is correct and applicable.

(b) Hold and declare that the calculation of Capacity Index by the Respondent without considering the machine availability when there is inadequate or no water flow is incorrect and illegal.

(c) Direct the Respondent not to make any unilateral adjustments in the invoices of the Petitioner.

(d) Direct the Respondent to clear all outstanding amount due to the Petitioner with interest at 18% per annum for the overdue period forthwith.

(e) Direct the Respondent to pay the cost of the present proceedings.

(f) Pass such other orders as the Hon'ble Commission may deem just in the facts of the present case.

2. It is also respectfully prayed that pending the present petition, the Hon'ble Commission may be pleased to:

(a) Pass an ex-parte ad interim order directing the Respondent not to make any unilateral adjustments in the bills raised by the Petitioner.

(b) Direct the Respondent to clear all outstanding amount due to the Petitioner with interest at 18% per annum for the overdue period forthwith

(c) Confirm the above order after notice to the Respondent.

(d) Pass such other order(s) as the Hon'ble Commission may deem just in the facts of the present case.

2. Submission by the Petitioner:

2.1 The Petitioner in its Petition submitted that it has entered into a Power Purchase Agreement (dated 28 June 2006) with the Respondent under which the Petitioner has to supply electricity for a period of 20 years, on the terms and conditions contained therein. The tariff for the sale of electricity has to be as determined by this Commission after completion of Nilwande Dam above level RL 630 meter. Accordingly, the Commission determined the tariff and the Tariff Order

dated 24 May 2010, was issued. The entire electricity generated by the Petitioner from the Bhandardara II station is being supplied to the Respondent.

2.2 The Petitioner submitted that Bhandardara II station is irrigation based project and the generation of electricity is solely based on the release of water by the Irrigation Department of the Government of Maharashtra. The Petitioner submitted that the Bhandardara – II station is located at about 12 km downstream of the Bhandardara I hydro power facility. The Bhandardara – II station is operated on the water released from the Bhandardara – I hydro power facility located up stream. The Petitioner submitted that the water is released by the Irrigation Department as per its requirements from time to time. The Petitioner further submitted that it has no control over the release of water and there are occasions when the plant of the Petitioner is available but there is no generation of electricity on account of non-availability of water.

2.3 The Petitioner submitted that the Maharashtra Electricity Regulatory Commission (Terms and Conditions of Tariff), Regulations, 2005, notified by the Commission, *inter-alia*, deals with the terms and conditions for determination of the tariff for hydro power generating stations for supply of electricity to distribution licensees in the State of Maharashtra. The Petitioner submitted that the said Regulation is also consistent with the Tariff Regulations notified by the Central Commission. The Petitioner submitted that the Tariff Regulations of the Central Commission, since the year 2001, has been based on the order dated 8 December 2000, *inter-alia*, dealing with the terms and conditions for the tariff for hydro power generating stations including the methodology for calculation of Capacity Index.

The Petitioner further submitted that in the said order dated 8 December 2000, the Central Commission has proceeded on the principle that, in case the generator is not able to generate on account of lack of water when the machines were available, 100% Capacity Index is to be taken as "available".

2.4 The Petitioner submitted that the above principle has been consistently adopted by the Central Commission for the purposes of determination of tariff for hydro electric generation stations. The concept of allowing the 100% capacity index based on machine availability, when the generation of electricity could not take place on account of non-availability of water for the generating station, is well settled and is fundamental in the tariff determination for Hydro Electric projects.

2.5 The Petitioner submitted that the Tariff Regulations, 2005, notified by the Commission is also primarily based on the Tariff Regulations, 2004, of the Central Commission. The Petitioner submitted that the Commission has determined the normative Capacity Index at 85% to be achieved by the Petitioner, as similar to the Regulations of the Central Commission.

2.6 The Petitioner submitted that the Petitioner has been generating and supplying electricity to the Respondent. The Petitioner has charged tariff based on the tariff order dated 24 May 2010 passed by the Commission, applicable since 1July 2009. The Petitioner has also been raising invoices on the Respondent for payment of incentive for achieving Capacity Index of more than the normative Capacity Index of 85% in terms of the Tariff Regulations, 2005 and the Tariff Order dated 24 May 2010, of the Commission. The Capacity Index was calculated on daily basis and the data is being submitted to the Chief Engineer, SLDC, Kalwa and the Chief Engineer (Commercial) of the Respondent.

2.7 The Petitioner submitted that, the invoices raised by the Petitioner were, however, kept pending by the Respondent, on the ground that the Respondent was not convinced about the calculation of Capacity Index when there was no water release by the Government of Maharashtra upstream and consequently non-generation of electricity, even though the machines were available.

The Petitioner submitted that on account of the above, the Petitioner vide letter dated 9 July 2010, explained the correct position to the Respondent including the Order dated 8 December 2000, passed by the Central Commission and the practice followed thereof. A copy of the letter dated 9 July 2010 sent by the Petitioner to the Respondent has been submitted by the Petitioner for record.

2.8 The Petitioner submitted that the Respondent had informed the Petitioner that the matter required clarifications from the Commission. The Petitioner submitted that in view of the above, the Petitioner, by communication dated 23 July 2010, sought for the above clarification required by the Respondent regarding the calculation of Capacity Index, in cases when the machines were available but there could not be any generation on account of water flow restrictions. The Respondent, vide letters dated 31 July 2010 and 20 August 2010 reiterated that the incentive could be processed by the Respondent only after the decision of the Commission on the issue of calculation of Capacity Index. The Petitioner submitted that, subsequently, the Respondent sent a communication dated 6 September 2010 to the Commission, seeking clarification on the matter of calculation of Capacity Index for the

Bhandardara II station of the Petitioner. The Copies of the communications dated 23 July 2010, 31 July 2010, 20 July 2010 and 6 July 2010 have been submitted by the Petitioner for record.

2.9 The Petitioner submitted that the calculation of Capacity Index and the invoices for incentive by the Petitioner have not been properly implemented and addressed by the Respondent. The Petitioner submitted that by letter dated 5 Augest 2011, the Respondent had stated that the payments would be made by the Respondent for the per unit fixed charges corresponding to Capacity Index of 85%, based on the design energy of 43.40 MUs, subject to the decision of the Commission. It was also stated that the invoices for the previous period would also be worked out on the above basis and would be adjusted in the bills for June, 2011 onwards. The Petitioner submitted that in the above, the Respondent has not accepted the principle of calculation of capacity index based on machine availability in cases when there is lack of water flow and consequently non-generation of electricity. A copy of the letter dated 5 August 2011 of the Respondent has been submitted by the Petitioner for record.

2.10 The Petitioner submitted that the above position taken by the Respondent is contrary to the provisions of the Tariff Regulations, 2005 of the Commission for calculation of Capacity Index. The Petitioner submitted that the Tariff Regulations, 2005 as well as Tariff Order dated 24 May 2010, clearly provide the calculation of Capacity Index on the "Declared Capacity ex bus" and "Maximum Available Capacity". The Petitioner submitted that the concept of the Respondent to link the calculation of Capacity Index to the Design Energy is contrary to the Tariff Regulations, 2005 and Tariff Order and also contrary to the basic principles for calculation of hydro generation tariff. The Petitioner submitted that it is a well accepted principle that Capacity Index is linked to the plant availability and not with the Design Energy.

2.11 The Petitioner submitted that, the Petitioner, by communication dated 8 August 2011 to the Commission, had complained about the unilateral decision of the Respondent, to link the Capacity Index with Design Energy and probably reduce the Fixed charges of the Petitioner. A copy of said the letter dated 8 August., 2011, of the Petitioner, is submitted by the Petitioner for record.

2.12 The Petitioner submitted that the Petitioner has been calculating on an hourly basis, the 'Maximum Available Capacity (MW)', based on Discharge and Net Head (Net Head considering level of Randha Weir, level of Nilwande dam and head

loss) and Ex-bus Declared Capacity (MW), based on actual energy export. Consequently, the Daily Capacity Index is calculated, by averaging out hourly Capacity Index and submitted daily to the Chief Engineer (SLDC), Kalwa, and Chief Engineer (Commercial) of the Respondent. The petitioner submitted for record, the sample Daily Capacity Index Sheet for date 28 July 2010.

2.13 The Petitioner submitted that it is evident that for the hours when there is discharge of water through the turbine, the Capacity Index is calculated as a ratio of Ex-Bus load and Maximum Available Capacity. The Petitioner submitted that for the hours when there is no discharge of water due to non-release of water by the irrigation department, the Capacity Index considered is '1' (i.e. 100%). The Plant is available 100% during this period. The above is consistent with the provisions for tariff determination of the Central Commission as given in the CERC Order dated 8 December 2000. The Petitioner submitted that the provisions had been incorporated based on detailed analysis and scrutiny of the parameters to be applicable for hydro generation stations and after obtaining inputs from the hydro experts in the country.

2.14 The Petitioner submitted that in the order of the Central Commission, dated 8 December 2000, it is provided that the "Declared Capacity (MW) is the capacity to be available from the plant over the peaking hours of the next day, as declared by the Generator. The Petitioner submitted that the relevant consideration is on the Available Capacity or "Availability". Further, the Central Commission has also observed that when all the generating units are available but the water in the reservoir is less than that required to run all the machines, 100% Capacity Index can be claimed by the generator.

2.15 The Petitioner submitted that in the facts and circumstances mentioned above and in view of the wrong stand taken by the Respondent on the calculation of Capacity Index contrary to the well accepted principle, and on account of the decision of the Respondent to adjust all previous bills and bills from June, 2011 onwards, according to its unilateral decision of calculation of Capacity Index linked to the total design energy of 43.40 MUs, the Petitioner has approached the Commission with the present petition for appropriate immediate direction.

2.16 The Petitioner submitted that in the circumstances, the petitioner is also seeking urgent interim orders from this Commission, restraining the Respondent from unilateral adjustment of the bills of the Petitioner, pending clarification by the Commission.

2.17 The Petitioner submitted that there is no prescribed period of limitation applicable for the present petition to be filed by the Petitioner under the provisions of the Electricity Act, 2003. An order seeking clarification is not subject to any limitation. The Petitioner submitted that the petition has become necessary in view of the unreasonable stand taken by the Respondent in giving effect to the order passed by the Commission. The Petitioner submitted that even applying the general principles of limitation under the Limitation Act, 1963 which is three years in the present case, the present petition is not barred by limitation. The Petitioner submitted that the cause of action in the present case has arisen after 24 May 2010, when the invoices were raised by the Petitioner and not paid by the Respondent. The Petitioner submitted that the cause of action has further arisen when the Respondent on 31 July 2010 and 20 August 2010 did not accept the claim of Capacity Index based on machine availability when there was inadequate or no water flow on account of factors based beyond the control of the Petitioner. The Petitioner submitted that the cause of action is still continuing, when the Respondent has threatened unilateral adjustment of the invoices raised by the Petitioner. The Petitioner submitted that in the circumstances, in its opinion, the present petition is not barred by limitation.

3. The Commission scheduled a hearing in the case on 30 November 2011 at 11.00 hrs and accordingly, notices were sent to the Petitioner, the Respondent and the authorized consumer representatives.

4. During the Hearing in the matter held on 30 November 2011, Shri Prem Paunikar and Shri. Anand Ganesan (Advocate) appeared on behalf of the Petitioner. Smt. Deepa Chavan (Advocate) appeared on behalf of the Respondent in the matter.

4.1 The Petitioner reiterated its case and submissions as above. The Respondent stated that it had not received the copies of the submission made by the Petitioner. The Commission directed the Petitioner to provide all the relevant documents regarding the matter to the Respondent. The Commission further directed the Petitioner as well as the Respondent to submit on affidavit, their written submissions along with their written notes of the arguments, within 3 weeks.

4.2 The Commission stated that after receipt of the written submissions from the Petitioner and the Respondent, the Commission will avail the services of Shri V.V.R.K.Rao, Ex Chairman CEA to study this matter and assist the Commission in the matter.

The Commission scheduled a further hearing in the said case on Monday, 30 January 2012 at 11:00 hours.

5. Additional submissions by the Petitioner

The Petitioner submitted its additional submissions on affidavit dated 21 December 2012 which was received by the Commission on 22 December 2012 and was taken on record.

6. Order on the Expert Consultant Shri VVRK Rao

6.1 The Commission placed an order (Order No MERC/ TARIFF/ 20112012/ ***02340*** dated 19 December 2011) on the consultant Shri VVRK Rao, ex-Chairman of CEA, for subject matter under reference above

6.2 The Commission dispatched copies of the following submissions of the Petitioner, which were taken on record by the Commission, to Shri Rao, the said expert consultant, for his scrutiny and opinion.

a) Submission of Dodson-Lindblom Hydro Power Pvt Ltd., Ref MERC/BH-II/8526 dated 19 September 2011 along with all Annexures
b) Submission of Dodson-Lindblom Hydro Power Pvt Ltd., Ref. MERC/BH-II/8644 dated 22 December 2011

7. At the hearing in the matter held on 30 January, 2012 , Shri Anand Ganesan, Advocate and Shri Prem Paunikar, appeared on behalf of the Petitioner. Smt. Deepa Chavan, Advocate appeared on behalf of the Respondent in the matter.

7.1 The Commission pointed out that the Respondent had, till date, not submitted its submissions on affidavit, along with its written notes of the arguments. The Commission pointed out that these submissions were required to be filed within 3 weeks from the date of last hearing held on 30 November, 2011.

7.2 The Respondent sought further time to submit its submissions on affidavit along with its written notes of the arguments as the Respondent was still in the process of gathering some of the required facts from other states.

The Commission granted 10 days time and directed the Respondent to submit its submissions by 10 February 2012. The Commission also directed the Respondent to serve a copy of the same to the Petitioner.

7.3 The Commission scheduled a further hearing in this matter on 27 February 2012 at 11.00 hrs.

8. In response to the directives of the Commission as above, the Respondent made the submission dated 9 February 2012 bearing Ref No. AM/KKG/5973, by Little & Co. (Advocates & Solicitors), on behalf of MSEDCL .

In the said submission, the Respondent submitted as below :

8.1 The Respondent submitted that the matter raised an issue in this particular case, wherein the tender, under which the Petitioner submitted its bid, had in-depth clarity in terms of water release – actions of a prudent Generator in factoring this important element in its financials.

8.2 The Respondent submitted that the present case was under the tender issued by the GOM and that, it was pertinent to note that the transaction of purchase of electricity was under the aegis of the Bid. The bidding documents clearly gave the bidder the idea about the condition of the water release patterns. The Petitioner relied upon the following clauses of the tender :

- ***Clause 10*** *of the Bid Document allows the bidder to examine the site, station to satisfy himself about the necessary information.*
- ***Clause 11 (1)*** *of the Bid document clearly states that power generation shall be strictly as per water releases for irrigation purpose as decided by GOMID. The clause also further states that if the power generation is less than that of anticipated, no compensation shall be payable by GOMID.*
- *As per* ***Clause 3.5.6*** *of the GoM Bid Document, the bidder is expected to study existing pattern of releases keeping in mind that the release pattern may change in future. Bidder will have no say on the same and no compensation to be given on these grounds.*

The Respondent submitted that, from the reference given above, to the relevant clauses, it can be seen that the Petitioner was very well aware of the conditions at the time of the bidding and has accordingly bid, keeping in mind all the factors.

8.3 The Respondent, in its submission, expressed its apprehensions about the existing formula, wherein the Capacity Index would work out always above the normative level, even when there is no release of water, and submitted that in such

case, there could never be a situation where capacity index achieved was less than the normative value.

8.4 The Respondent submitted that Regulation 33.2.1 of MERC (Terms & Conditions of Tariff) Regulations 2005, provides for pro rata recovery of annual fixed charges, in case the generating station achieves capacity index below the prescribed normative levels. However, the Petitioner has been claiming full capacity charge even in the case of less or no generation. Further, the Respondent has been paying Petitioner the entire fixed charges in such event and has not been carrying out pro rata recovery as specified under MERC (Terms & Conditions of Tariff) Regulations, 2005. Thus, the payment of full capacity charges in case the generation is less than the normative level causes financial hardships to the Respondent and hence the Respondent further submitted that as the note under Regulation 33.2.1 provides for pro-rata recovery of annual fixed charges in case the generating station achieves capacity index below the prescribed normative levels, such Pro-rata payments can be made as contended by the Respondent in its communication dated 5 August 2011.

8.5 The Respondent submitted that the main contention in the matter of seeking clarification and direction on the calculations of the Capacity Index of a Hydro Generating Plant pertains to the exact definition of Capacity Index. As per MERC (Terms & Conditions of Tariff), Regulations 2005, the Capacity Index is defined as the declared capacity, expressed as a percentage of the maximum available capacity for the day and represented mathematically as under:

$$\text{Capacity Index} = \frac{\text{Declared Capacity (MW)}}{\text{Maximum Available Capacity (MW)}} \times 100$$

The Respondent submitted that, as stated in the MERC (Terms & Conditions of Tariff) Regulations, 2005, Declared Capacity (hereinafter "DC"), for a purely run-of-river hydro power generating station with pondage and storage-type power stations is defined as:

> *"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 and for this purpose, the peaking hours shall not be less than three (3) hours within a twenty-four (24) hour period"*** [Emphasis added]

The Respondent submitted that, on the other hand, Maximum Available Capacity (hereinafter "MAC") for a purely run of river hydro power generating station with pondage and storage-type power station is defined as:

> *"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, and for this purpose, the peaking hours shall not be less than three (3) hours within a twenty-four (24) hour period.*** [Emphasis added]

8.6 The Respondent submitted that as seen from the above two definitions, both the definitions are based on similar requisites viz, Availability of Water, Availability of Machines and also that the peaking hours shall not be less than 3 hours within a 24 hour period. As such, the definitions are very much similar. The Respondent submitted that consequently, the Petitioner always claims Capacity Index above the normative Capacity Index i.e. 85%. Further, as per Regulation 37.2 in MERC (Terms & Conditions of Tariff) Regulations, 2005, a Hydro power generating station, having a run-of-river power station with pondage or storage type is entitled to an incentive, when his Capacity Index exceeds 85%. Hence, in each and every case, the Petitioner claims Capacity charges as well as Incentives. This claim of full Capacity charges and incentives without generation or lesser generation is unfair and unnecessarily results in financial burden on the consumers.

8.7 The Respondent submitted that the Petitioner on this basis has been claiming Capacity Charges. It is the contention of the Petitioner that in the event of no generation due to non-availability of water (beyond the control of the developer); Zero Declared Capacity is to be considered as 100% achievement of the Capacity Index. Although Petitioner avers that this concept is based on the fact that the water availability is not within the control of the developer, it is pertinent to note that the concept does not take into account the availability of water; whereby if the water flow is nil, there is no generation taking place, and as a result the developer should not be entitled to both Capacity Charge and incentive.

8.8 The definition of the Capacity Index must factor the availability & flow of water whereby the actual Capacity Index of the developer comes into the picture. Therefore, an alternative definition for Capacity Index is suggested as under:

$$\text{Capacity Index} = \frac{\text{Actual Generation (MWh)}}{\text{Installed Capacity (MWh)}}$$

8.9 The Respondent submitted that the Capacity Index needs to factor the availability of water for generation, akin to that of APERC (Terms & Conditions of Tariff) Regulations, 2008 which gives a clear distinction on the Capacity Index, when there is no generation of power. It may be noted that these Regulations framed by APERC are notified under Sections 61, 62, 86(1)(b), read with Section 181 of the Electricity Act, 2003. These Regulations framed by APERC have been arrived at after a detailed scrutiny keeping in mind the various factors which may arise in numerous occasions and have also been subjected to public comments /objections /suggestions on the same. Hence, the contention of the Petitioner that, 'Capacity Index should be one (1) even when there is no availability of water & the period for which the Capacity Index is zero should be excluded', cannot be held as valid.

Summarising, the Respondent submitted that

a) Pro rata recovery of annual fixed charges, in case the generating station achieves capacity index below the prescribed normative levels, may be allowed which is under the ambit of the Regulations issued by the Commission.
b) Incentive needs to be linked to the performance of the Generator and not merely based on computation under a formula.

9. The Commission sent the copy of the above submission of the Respondent to the consultant, Shri VVRK Rao for his scrutiny and opinion.

10. Rejoinder by the Petitioner :

The Petitioner submitted its rejoinder to the above submission made by the Respondent on 24 February 2012.

In the said rejoinder the Respondent submitted as follows:

10.1. The Petitioner stated that it has no dispute whatsoever regarding the formula as provided in the Tariff Regulations of the Commission and it seeks the correct implementation of the Tariff Regulations.

10.2 . The Petitioner submitted that, the bidding process for the said project was not under section 63 of the Electricity Act, 2003. Hence the provisions in the MERC Tariff Regulations regarding Capacity Index, are fully applicable to the said project and the only issue to be resolved is calculation of capacity index when the Maximum

Available Capacity is also zero, that is, when consequently the Declared Capacity is also zero .

10.3 The Petitioner submitted that the Declared capacity can never be more than the maximum capacity. The Capacity Index is only the proportion of the Declared capacity and when the said Capacity is equal to the Maximum Available Capacity, the Capacity Index is 1(or100%). The Petitioner further submitted that the capacity index will not be more than 100% as the generator cannot possibly declare more capacity than the maximum capacity that is available on account of water availability.

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10.4 The Petitioner submitted that, in case the Maximum Available capacity is zero on account of zero water availability and the declared Capacity is also zero, the capacity index should be taken, on the same basis, as 100%. This is the practice followed under the Tariff Regulation of the Central Commission since the year 2001.In fact, the Tariff Regulation, 2005 of this Commission is in *pari materia* with the Tariff Regulation, 2004 of the Central Commission and the interpretations placed on both of these Regulation also need to be the same.

10.5 The Petitioner submitted that the contention of the Respondent appears to be, to give a completely different meaning, unknown to tariff determination for hydroelectric stations, and also contrary to the settled interpretation of the provisions of the Regulations.

10.6 The Petitioner submitted that the issues raised by the Respondent with regard to the bid process, the clarity in terms of water release, examination and inspection of the station and site condition etc are irrelevant to the issue in the present Petition and have been raised by the Respondent only to confuse the issue at hand.

10.7 The Petitioner stated that the provision regarding the pro-rata recovery of Annual Capacity Charges will apply only where the Capacity Index achieved is less than 85% on an annual basis. The capacity index is to be achieved, based on the formula in the Tariff Regulations. The issues of pro-rata recovery of capacity charges or financial hardship to the Respondent apart from being irrelevant to the issue at the hand, are also misplaced.

The Petitioner submitted that it has attempted to maximize the generation for generating station and has always achieved generation more than the normative levels. In support of its submission, the Petitioner furnished the following tabulation:

Year	Design Energy (Mu)	Actual Generation(MU)	Availability of Plant
2007-2008	34.10	-	99.83%
2008-2009	34.10	51.51	99.83%
2009-2010	43.40	44.72	99.97%
2010-2011	36.26	41.80	99.81%
2011-2012	36.26	56.7535(upto 09 February 2012)	99.56%

The Petitioner submitted that the normative level of generation, i.e. Design Energy, has been fixed by the Commission in its Order dated 8 July 2009. The above figures show that operation of the plant has been above the Normative level.

11. At the hearing in the above matter held on 27 February, 2012 Shri Prem Paunikar and Shri Uday Samant appeared on behalf of the Petitioner. Smt. Deepa Chavan, Advocate and Shri AS Chavan, MSEDCL appeared on behalf of the Respondent in the matter.

11.1 The Commission observed that the Petitioner as well as the Respondent had submitted their respective submissions and these had been forwarded by the Commission's office to Shri VVRK Rao, the consultant, for his study.

11.2 The Commission directed its office, to follow up with Shri VVRK Rao, the consultant, and ensure that his report, based on the scrutiny of the above submissions, should be received by the Commission by15 March , 2012, and that the said Report would be sent to the Petitioner and the Respondent, forthwith, so as to reach them latest by 18 March 2012. The Commission directed both, the Petitioner and the Respondent to file their Affidavit in reply, on the said report, latest by 25 March 2012.

The Commission scheduled further hearing in Case No. 142 of 2011 on 2 April 2012 at 11.00 AM

12. The report of the consultant Shri VVRK Rao was received by the Commission on 15 March 2012. In his report, Shri VVRK Rao, states as follows:

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1. *Bhandardara Hydro Electric Project –II (BHEP-II) with an installed generating capacity of one unit of 34 MW gets bulk of the water for power generation from Bhandardara dam. The releases for power generation at BHPP-II are governed by the irrigation requirements downstream in the Pravara river basin (at the existing Ozar weir and the under construction Nilwande dam). Randha weir, the head works of project, has a live storage capacity of 1.42 Mcum and the power station can be operated as a peaking station and is classified as an ROR plant with pondage. The tail water level of BHEP-II is governed by the water level of the downstream Nilwande dam and the peaking capability of the project is also impacted by this level. This situation arises when the downstream Nilwande dam is built to above +613m and would be particularly important and critical when the dam is built to its FRL+ 648m. Further, BHPP-II cannot generate power whenever there is no release requirement as per downstream irrigation needs/cycles determined by GoMID (Government of Maharashtra Irrigation Department.)*

2. *Nilwande dam has reached above +613m and BHEP-II can be operated as a peaking station. Being an ROR plant with pondage, the project would have to achieve the normative Capacity Index of 85% for full recovery of fixed charges. A dispute had arisen between the generating company M/sDodson Lindbom Hydro Power Private Limited (DLHP) which owns and operates the power station and Maharashtra State Electricity Distribution Company Ltd (MSEDCL) which buys the power generated, regarding the calculation of the Capacity Index (CI) for the BHEP-II and consequent payment of Fixed charges and incentive for above normative level of performance.*

3. *DLHPPL made two submissions, one dated 19 September, 2011 (hereinafter "D-1") and the other dated 22 December, 2011(hereinafter "D-2") to MERC regarding the calculations of Capacity Index (CI). MSEDCL made its submission in the matter to MERC on 9 February, 2012. Subsequently, DLHP submitted its rejoinder (hereinafter "D-3") to MSEDCL's submission on 24 February, 2012."*

4. *In its submission, MSEDCL expresses concern that the existing formula wherein the Capacity Index (CI) would work out always above normative level even when there is no release of water and there can never be a situation where the CI achieved is less than the normative value. Alternative proposal for adoption of capacity factor in place of CI has been made.* ***The suggestion***

to adopt Capacity Factor (this is annual plant load factor) in place CI for payment is not in line with the concept of two part tariff adopted by CERC and MERC and not appropriate for a peaking hydro project." **[Emphasis added]**

5. *In the first submission (D-1) dated 19 September, 2011, a sample sheet of Capacity Index calculations of the Bhandardara Hydro Electric Project –II (BHEP-II) for 28 Jully 2010 (monsoon period) is attached (by the Petitioner). In this particular case, the power station operated for 12 hours at full capacity during that day."*

6. *In the calculation, it is seen that CI of unity has been adopted during hours of non operation of the power station and the ratio of Declared Capacity (DC) to Maximum Available Capacity (MAC) were considered during the plant operation hours. The daily CI of 0.993 had been arrived at by averaging 24 hourly CIs."*

7. *MERC regulations specify*

   "Declared Capacity means for run of river plants with pondage and storage-type power stations the ex-bus capacity in MW, which is 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 machines and for this purpose the peaking hours shall not be less than three (3) hours within the twenty-four (24) hour period".

8. *As defined, declared capacity, (DC), means average generation achieved for 3 hours in twenty four hour period and the same is to be adopted as numerator for calculating CI. There is no requirement to calculate the 24 hourly capacity indices to arrive at the daily Capacity Index.* ***The procedure adopted is thus not in conformity with MERC tariff regulations."***
   [Emphasis added]

9. *In the calculations, it is seen that hourly CI is less than unity when the plant is operating at full capacity with waters available to run the plant for the stipulated 3 hours. This is on account of the fact that MERC Tariff Regulations, 2005 stipulate Ex- bus capacity for Declared Capacity while, the Maximum Available Capacity refers to "maximum capacity in MW the generating station can generate" which would mean Gross capacity at the generator terminals. This would mean that even when the plant is performing*

as planned and designed, unity CI is not at all possible. In the instant case, the installed generating capacity is 34MW and the capacity available after allowing for normative auxiliary consumption of 1.2% would be 33.6MW. The CI would be 0.988 only under the best of operating conditions. It would be appropriate to consider a correction to provide for the auxiliary consumption in the definition of Maximum Available capacity. This is not strictly in accordance with the wording in the tariff regulations but the intent of MERC to reward expected performance levels would, in my opinion, be served better. In this background, the matter would need favorable consideration as a matter of correction/clarification. It would not be out place to mention that in the MERC tariff regulations for thermal power plants the "Availability" concept which is similar to CI for hydro plants recognizes the impact of Auxiliary consumption.

10. *DLHPPL, in their second submission (D-2) argues (Para 4) that "Zero availability on account of Zero availability (Flow) of water for generation which is beyond the control of the project Developer, does not result in Zero Capacity Index but results in full Capacity Index achieved for that particular day".*

11. *The contention means that non availability of water for power generation in general for whatever reason (non-availability of waters in storage, very poor inflows into the reservoir or irrigation constraints) would qualify for 100% Capacity Index. In support of this contention, CERC order dated 8 December, 2000 had been quoted and relied on. The conclusion has been drawn from Para 24 (c) of this CERC order."*

12. *The CERC order while discussing the concept of Capacity Index (Para 21 to 25) of hydro plants had taken the example of Chamera hydro electric project (3x180MW) to discuss the impact of the water levels in the reservoir on the peaking capability, machine availability and water availability. The points to be noted in regard to Maximum Available Capacity are: i) it would correspond to the total capacity of the station and does not change with the number of units in operation, ii) the capability of the generating units which would be lower (than the name plate rating of the units) with low water levels in the reservoir has to be taken into account and iii) it cannot be taken as zero if the units are not in operation for whatever reason."*

13. *The discussion in Para 22 and 25 are to drive home the fact that i) all the units are required to be available both during high flow monsoon periods in case of all types of plants, ii) for Run of River plants with pondage/storage, all*

the machines are required to be available during dry season also, to provide maximum capacity for at least 3hours per day and iii) extra effort is required by the generator (ROR plants with pondage) to achieve the normative capacity index of 85%."

14. *The explanation under Para 24(c) "When all the generating units are available but the water in the reservoir is less than that required to run all the machines (corresponding to reservoir level of 747 M) 100% capacity index can be claimed by the generator" appears to be erroneous and not consistent with rest of the discussion and also the final tariff regulations. In the instant case, the reference is to low operating head condition which reduces the units peaking capability to a value less than the name plate capacity of the generating unit was being elaborated.* ***In Para 22 of the same order, the requirement to provide maximum capacity for at least three hours was specifically mentioned. It is also to be noted that the Declared Capacity has to ensure the requirement of 3hours of operation as provided in the notified CERC tariff regulations, 2001. It cannot therefore, be interpreted to mean that the requirement of 3hours peaking for Declared Capacity is dispensed with and not required to be satisfied for calculating CI."*** **[Emphasis added]**

15. ***Summarizing, the concept of Capacity Index is to ensure that the maximum capability of the hydro power project would be available for at least three (3) hours to meet the peaking requirements of the system.*** *The Maximum Available Capacity that could be made available to the system would depend on the prevailing upstream and downstream water levels and would be as per the design parameters of the generating equipment. It is obvious that power cannot be generated without the availability of water. The physical capability of the plant is there always and MAC cannot be taken as zero.* ***However, in the case of Declared Capacity, actual water availability for power generation is to be considered and demonstrated for the prescribed 3hours and considered accordingly to work out the CI."*** **[Emphasis added]**

16. *The qualifying criterion of 3hours operation for the Declared Capacity is in MERC regulations, which is the same as that adopted by CERC. The 3hour prescription is based on the general experience of peaking hours of Hydro Projects in operation. There could however be some exceptions to this criterion. One example is Bhira Tailrace HE Project in Maharashtra. As I recall, this project was planned for two hour peaking and under MERC*

regulations this station can never achieve normative capacity index which requires 3 hour peaking operation. This is just to point out that the criterion considered in the project planning cannot be ignored and are to be duly considered whenever there is an exception to the general criterion."

17. *Another issue of exception arises due to shut down of BHPP-II during some periods of the year. In actual operation of BHPP-II, the power station has to be shut down on account of operation of the plant in the interest of downstream irrigation requirements. As seen from working tables furnished earlier in connection with the determination of Design Energy of the project, BHPP-II cannot be operated during some periods of the year due to the need to operate the water resources system in an optimum manner to meet the priority irrigation requirements and utilization of the full storage available at Bhandaradara dam before the onset of monsoon. The Capacity Index in such situations would be zero under MERC tariff regulations since BHPP-II cannot operate for power generation though the Generating unit is available and ready to deliver power output but for operational constraints imposed by the no irrigation requirements downstream and/or non release of water from upstream Bhandaradara storage. The situations of BHPP-II shut down when the water is available in storage but not available for power generation due to irrigation considerations or all the available waters are utilized for priority irrigation use are beyond the control of the generating station and it cannot be treated as non performance provided the units are not under maintenance or outage at that time. In fact both inflows into Randha Weir and outflows for power generation at BHPP-II are under the control of GoM-ID and the project operator does not have say or control in the matter. Consequently, even the hours for which BHPP-II could be operated is also as determined by GoM-ID. What can be ensured by the generator is to ensure readiness of the generating unit for power generation. A related issue is that, this shut down period enables normal maintenance of the generating units and the normative CI of 85% takes into account the shut down period for (major) maintenance and forced outage of generating units. Exclusion of days when there is no generation on account of non availability of water, for calculating the CI could also be considered as mentioned in the DLHPPL submission (D-3)."*

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18. *The legal aspects of dealing with such exceptions mentioned above would have to be looked into by MERC*

19. *In its order (Case No. 105 0f 2009) dated 24 May 2010, MERC had opined that for BHPP-II project, some amount of co-ordination effort is called for, to optimally utilize the hydro generating capacity and suggested formation of a joint co-ordination committee would be useful to chalk out the quarterly generation plan to iron out any conflicting requirements and operate the plant at high plant utilization factor. Formation of such a co-ordination committee would be necessary to iron out the differences and action has to be taken towards this end to minimize the differences among the various agencies involved."*

13. The copies of the said report were immediately sent by the Commission to the Petitioner as well as the Respondent.

The Petitioner submitted its views on the said report of the consultant on 30 March 2012.

The Petitioner submitted that without prejudice to the rights and contentions of the Petitioner in the Petition and the submissions to be made on the issues for consideration the Petitioner liked to submit that as per the report of Shri VVRK Rao the non-availability of water for generation of electricity for whatever reasons which are beyond the control of the petitioner (generating company) including restrictions imposed by the irrigation department on the inflow or outflow of water, cannot be held against the petitioner so long as the machines are available .

The Petitioner further submitted that the water availability for the Petitioner and also the usage of water by the Petitioner for generation is only as decided by Irrigation Department of the Government of Maharashtra and the Petitioner has no control over the same. The important aspects to be ensured by the Petitioner is the readiness of the machines to generate electricity as and when the water is available for generation. The Petitioner submitted that the said aspects have been accepted in the report of Shri.V.V.K.Rao and thus the claim made by the Respondent (MSEDCL) in the present proceedings is not correct.

The Respondent submitted its views on the said report of the consultant Shri VVRK Rao, on 30 March 2012.

The Respondent submitted that on perusal of the said report, it was understood that the consultant has considered and analysed the factors,

Capacity index (CI), Maximum available capacity (MAC), impact of auxiliary consumption, and physical capability of the plant including shut down period.

The Respondent referred to para 8 of the said report of the expert onsultant and submitted that the consultant has considered therein, "Declared Capacity" of the plant to mean average generation for three hours, or as applicable, which has been considered as the Numerator for computation of CI.

The Respondent further referred to para 15 of the said report of the expert consultant and cited the recommendation of the consultant as follows :

"However, in the case of declared capacity, actual water availability for power generation is to be considered and demonstrated for the prescribed 3 hours and considered accordingly to work out CI"

The Respondent submitted that this computation of Declared capacity has been thus appropriately considered by the consultant.

The Respondent, in its submission, further referred to para 9 of the said report wherein computation of Maximum available capacity has been detailed out while recognizing the impact thereon of "auxiliary consumption". The Respondent further submitted that the consultant has also recommended that the physical capability of the plant always exists and the maximum available capacity therefore, cannot be taken as zero. The Respondent further submitted that the said fact will impact the computation of CI by altering the formula for computation of CI.

The Respondent further submitted that the consultant has clearly commented on the physical capability of the plant and has further submitted in the said context that, in ROR plants where the generation is based on water releases for irrigation, the water cycle is relied upon by the generator for undertaking shutdown. The Respondent submitted that the Commission should consider the said aspect from year 2006 onwards. The Respondent further submitted that it was in agreement with the expert consultant's view that the support taken by the Petitioner on the CERC order dated 8 December 2000 is inapposite in this particular case as the said the CERC order dated 8 December 2000 while discussing the concept of Capacity Index (Para 21 to 25) of hydro plants had taken the example of Chamera hydro electric project (3x180MW) to discuss the impact of the water levels in the reservoir on the peaking capability, machine availability and water availability. The Respondent submitted that thereby, the said reference made by the Petitioner appeared to be

erroneous and not consistent with the rest of the contents of the CERC order dated 8 December 2000 as well as the tariff regulations applicable. The Respondent summarised the above issue by reiterating that in its opinion , legally the applicable Regulations would be relevant and hence the CERC order dated 8 December 2000 could not be relied upon by the Petitioner and is inapplicable to the present case. The Respondent further stated that the implementation of the recommendation made by the consultant for any change in the existing applicable Regulations, inclusive of that towards exclusion of Auxiliary consumption from gross generation in the formula of CI in Para 9 of his report, may kindly be made by taking the requisite steps in accordance with the law.

14. At the hearing in the matter held on 2 April 2012, Shri Sanjay Sen (Advocate) appeared on behalf of the Petitioner and Smt Deepa Chavan (Advocate) appeared on behalf of the Respondent. The consultant Shri VVRK Rao, appointed by the Commission was also present at the hearing.

14.1 The Petitioner submitted that MERC Tariff Regulation 2005 is adopted from the CERC's Regulation of 2004. However, subsequently, in 2009 CERC has made new Tariff Regulations. Even though, the Tariff Regulation 2009 is not relevant here, it is to be noted that , the said Tariff Regulations 2009 have brought in a concept of "risk sharing" which is a slight deviation from the Tariff Regulations 2001-2004. Non availability of water cannot be counted on par with excessive trippings or maintenance outages, causing less than 85% availability.

14.2 The Respondent submitted that it cannot be expected to share hydrological risks entirely by itself. The Respondent also submitted that industry standard of outage time should be applied instead of specifying 15% time. In case Regulations need to be amended to incorporate such provision, it may be initiated.

14.3 Shri VVRK Rao, the consultant stated that the issue under consideration is how to deal with the periods of plant shut down necessitated by priority for irrigation use and its impact on the CI.

14.4 The Commission drew attention of the Petitioner as well as the Respondent to the last para of the report of the consultant Shri VVRK Rao wherein the importance of ensuring total co-ordination between the Petitioner, the Respondent and the Irrigation department has been emphasized. The Commission instructed the Petitioner as well as the Respondent to hold periodic meetings so as to optimize the generation as per water availability. Both, the Petitioner and the Respondent welcomed the suggestion for establishing such co-ordination through the above mentioned joint

arrangement. The Commission observed that although the 34 MW capacity provided to the grid by BHPP-II, is small in comparison to the total grid capacity, in the continuing situation of peaking shortages and proximity of the hydro power plant to major load center underlines the importance of maximizing the peaking benefit from BHPP-II. The coordination arrangement would help to ensure attaining the said objective.

The Commission directed the Petitioner as well as the Respondent to submit their arguments in writing by 15 April 2012.

15 Submission of written arguments :

In conformity with the directions given by the Commission, the Petitioner as well the Respondent submitted their respective written arguments to the Commission on 16 April 2012, which were taken by the Commission on record.

16. Views and ruling

The Commission's views on the response of the Petitioner and Respondent and on the opinion of Shri VVRK Rao are as follows.:

16.1 Determination of Capacity Index:

The Commission observes that determination of Capacity Index (CI), is normally a simple application of the MERC Tariff Regulations 2005 This primarily requires determination of Maximum available capacity (MAC) and Declared capacity (DC) on a daily basis. The daily CIs over the year are averaged to arrive at CI achieved, which would form the basis for payment of full fixed charges and eligible incentives

In the present case, as pointed out by the consultant, there appears to be deficiencies in the application of the Regulations, as also the issue arising in this case is how to deal with the plant shut down periods which are necessitated by priority for irrigation use.The Commission observes that the fact needs to be recognized that there are a wide variety of hydro projects and some of these projects are a component of multipurpose projects which operate in the interest of other uses such as drinking water, irrigation, flood control etc. The Regulations formulated, generally to address the hydro plants operated in the interest of power generation, would require a relook to address the issues arising at specific hydro projects, which are operated in the interest of other priority uses of water. However, the Commission observes, that such specific provisions

in Regulations cannot be made effective through directives issued in the Commission's orders alone.

Regarding calculation of Capacity Index, in the present context, the Commission observes that BHPP-II is an irrigation controlled project and it is required to be shut down as per irrigation requirements downstream. BHPP-II is also a component of a relatively complex system of two regulating reservoirs and two hydro power plants and an extensive irrigation canal system. Operation of this water resource system, in the interest of downstream irrigation, results in shut down of the power plant during some periods of the day and some days of the year. Under this background, the issue of dealing with the "plant shut down period" is required to be addressed adequately while calculating the Capacity index (CI), which, as per Regulations is the average of Daily CIs over the year.

In this respect, the Commission observes as follow :

i) The Petitioner, in calculating the Capacity index (CI) has considered all the 24 hours of the day and has adopted CI of unity during the non operating hours. This is not in conformity with the MERC Tariff Regulations 2005, considering the definition of "Declared Capacity" in the said Regulations, which states as follows:

2.1

(r) "Declared Capacity means –

(i) ….

(ii) *for run-of-river hydro power generating stations with pondage and storage-type power stations, 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 and for this purpose, the peaking hours shall not be less than three (3) hours within a twenty-four (24) hour period;*

On the guidelines of the above definition in the MERC Tariff Regulations,2005, the "Declared capacity" for 3 hours during a day needs to be considered for calculating the CI.

ii) The definition of Maximum available capacity (MAC) in MERC Tariff Regulations 2005 is as follows:

2.1

(ze) "Maximum Available Capacity" in relation to a hydro power generating

station means-
(i) for run-of-river hydro power generating stations with pondage and storage-type power stations, 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, and for this purpose, the peaking hours shall not be less than three (3) hours within a twenty-four (24) hour
period;

The Commission observes that, as provided in the said MERC Tariff Regulations, 2005, Maximum available capacity (MAC) refers to the maximum capacity in MW the generating station can generate, while the Declared capacity (DC) refers to the ex bus capacity.

In his report, the consultant Shri VVRK Rao, has suggested as follows:

It would be appropriate to consider a correction to provide for the auxiliary consumption in the definition of Maximum Available capacity.

The Commission has noted the suggestions of Shri VVRK Rao.

iii) While calculating the MAC, one has to take into account the water levels upstream and downstream of the BHPP-II. The manufacturer's rating characteristics for turbine would form the basis for the determination of MAC. The Commission directs the Petitioner and the Respondent to exchange the required data regarding all the relevant parameters and tabulate the MAC for various operating conditions. The final agreed parameters after mutual discussions as above, for determination of the MAC under various conditions, shall be filed jointly by the parties to the Commission and these shall form part of the PPA.

iv) The Commission observes that the MAC cannot be taken as zero during the periods of plant shut down as MAC is a measure of the capability of generating station with availability of water for power generation. The Commission observes that the reduction in the output of the plant is governed by the turbine rating characteristic and the factors causing limitation to its safe operation, among other things, the external factors such as lowest permissible operating head, safe water cover over the intake etc. Therefore, the Commission observes that in the normal operating range, the available capacity cannot be taken as "zero". MAC is related and governed by the output characteristic of the T-G set. It can be zero only under abnormal conditions such as when the water level goes below the safe cover of tunnel intake or the

operating head is below the permissible minimum. In case of BHPP-II, the water levels in the reservoir and tail water level would also influence the TG capacity. Hence the Commission observes that the net capacity of the plant would be taken as gross capacity as per manufacturer's guaranteed performance characteristics corresponding to the said conditions, minus normative auxiliary consumption. The Declared capacity, would therefore, be the demonstration of this MW capability taking into account the waters actually available and utilized for generation of hydro power.

v) On the days when no releases are permitted from Randha weir for power generation at BHPP-II on considerations of irrigation use pattern, there would be no power generation at BHPP-II. As per the tariff regulations, the CI on that day could be said as zero, though the plant would be capable of power generation, had it not been for the constraints imposed by the irrigation considerations. The Commission observes that such shut down of the plant is beyond the control of the Petitioner and inclusion of such shut down periods in calculating CI would lead to artificially lowering the CI. The Commission therefore considers it fair and reasonable to exclude such shut down periods in the calculations of CI for the year. Thus the Commission directs that, for BHPP-II, daily capacity Index is to be calculated by averaging CI for the operating days only. Further, the requirement of 3 hours operation shall be considered in calculating the Daily CI.

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16.2 On the background of the above observations, the Commission rules as follows :

a) In case the plant is in service for 3 hours or more, in a day, the Declared ex bus Capacity, shall be considered as average of best 3 hours operating capacity, in that day; and the same shall be taken as the "Declared Capacity" for the day, for the calculation of the Capacity Index of the day.
b) In case, the plant is in service for less than 3 hours in a day, the MW ex bus capacity achieved on line as above, during the generating hours in the day, averaged over 3 hours shall be considered as declared capacity for calculation of capacity index for that day.
c) In case there is no generation at all on any day, due to non availability of the generating machine, the capacity index on such day will be considered as zero.
d) In case there is no generation at all on any day, due to irrigation release constraints, such days should be excluded from the annual Capacity index calculations.

16.3 Incentive:

During further discussion on the matter regarding applicability of the minimum value of Capacity Index for recovery of full fixed charges by DLHPPL and incentive payment when the said CI exceeds the said value, the consultant Shri VVRK Rao has expressed his opinion as follows:

"

In the Tariff Regulations, the normative Capacity Index of 85 % (ROR Plant with pondage) and 90% (ROR plant without Pondage) had been fixed for hydro plants to take into account the time required for annual and routine maintenance besides possible forced outages. In case of ROR plants without pondage, the non monsoon period provides an opportunity for carrying out maintenance of plant and accordingly, higher normative CI (90%) which is achievable has been provided.

. BHPP -II has been classified as ROR plant with pondage and the normative CI is fixed at 85%. However, shut down of BHPP-II during the non irrigation season would provide an opportunity to carry out many maintenance activities similar to the advantage enjoyed by ROR plants without pondage. Under these circumstances, it would be fair to increase normative capacity index of BHPP-II to 90% at par with ROR plants without pondage, along with the exclusion of the periods of plant shut down in the CI calculations, and accordingly, normative CI of 90% may be fixed for payment of full fixed charges and incentive payment."

The Commission has noted the facts brought out by the consultant Shri VVRK Rao as above. The Commission however observes that while there are a variety of Hydro plants, some of which cater to wide variety objectives such as irrigation, electricity generation etc., and that the operational patterns may vary accordingly, the MERC Tariff Regulations 2005 have broadly categorized the types of the plants as **"Run of the River (ROR)"** type plants and **"Run of the River with pondage"** type plants. Further differentiation has not been done nor have any sub-categories been created.

In its order in the matter of Case 105 of 2009 dated 24 May 2010 the Commission has observed as follows:

71. Based on the above project layout, arrangement and features of the project, and the opinion expressed by the 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.

In conformity and in alignment with the view taken as above in the Order in Case 105 of 2009, the Commission is of the view that as the plant has already been categorized as a "Run-of-river power station with pondage" type of hydro plant, creating a sub category specifically for the said plant as advised by the expert consultant and applying the Regulations which are not commensurate with those applicable for the said stipulated category of the plant, would not be legally tenable.

Hence the Commission rules that the normative Capacity Index applicable to the said plant for recovery of the full capacity charge and payment of incentive for higher values, will be 85% as stipulated in the MERC (Terms and Conditions of Tariff) Regulations, 2005.

16.4 <u>Co-ordination committee</u>

The Commission advises the State Government (WRD) to take initiative and form a co-ordination group along with the Petitioner (DLHPPL) and the Respondent (MSEDCL) and hold periodic meetings so as to optimize the electricity generation from the power plant while meeting the irrigation requirements.

16.5 The Commission has noted down the advice and all the suggestions of the consultant Shri VVRK Rao in the above matters .

With the above, Case 142 of 2011 is disposed of. Accordingly, the prayer to pass ex-parte ad interim order directing the Respondent not to make any unilateral adjustments in the bills raised by the Petitioner, is rendered infructuous. No orders as to costs.

Sd/-	Sd/-
(Vijay L Sonavane)	(V P Raja)
Member	Chairman