Before

UTTARAKHAND ELECTRICITY REGULATORY COMMISSION

In the matter of:

Petition no. 13/2009 filed by Uttarakhand Jal Vidyut Nigam Limited

…..……..……….Petitioner

And

In the matter of:

Determination of Final Tariff for Maneri Bhali Stage II Large Hydro Power Project u/s 62(1)(a) and 86 of the Electricity Act, 2003.

Coram

Shri V.J. Talwar	**Chairman**
Shri Anand Kumar	**Member**

Date of Order: 30.12.2009

ORDER

This Petition has been filed by Uttarakhand Jal Vidyut Nigam Limited (hereinafter referred to as "Petitioner") under sections 62 and 86 of the Electricity Act, 2003 (hereinafter referred to as "Act") read with relevant regulations and guidelines of the Commission for determination of final tariff of Petitioner's large Hydro Power Project with an installed capacity of 304 MW under the name Maneri Bhali II Hydro Power Project.

2. The Petitioner, Uttarakhand Jal Vidyut Nigam Limited (hereinafter referred to as "UJVNL") is a company incorporated under the provisions of the Companies Act, 1956, having its registered office at UJJWAL, Maharani Bagh, GMS Road, Dehradun.

3. The Petitioner had submitted the Petition for determination of provisional tariff of its Maneri Bhali-II (MB-II) power station on 25.02.2008 which was admitted by the Commission on 01.07.2008 after removal of deficiencies by the Petitioner. Meanwhile, the Petitioner had approached the Commission seeking determination of interim tariff to enable the Petitioner to meet its financial commitments towards PFC and GoU. The Commission, pending determination of provisional tariff, allowed an interim tariff of Rs. 2.69/kWh vide its Order dated 07.07.2008, which was to be adjusted on account of excess/short recovery on the basis of provisional tariff to be determined by the Commission.
4. Subsequently, the Commission issued an order on 28.11.2008 vide which the the Commission approved the provisional tariff of MB-II station for the period 15.03.2008 to 31.03.2008 and also for FY 2008-09.
5. The Petitioner filed a Petition seeking review of the above mentioned tariff Order dated 28.11.08 which was returned by the Commission directing the Petitioner to file the application for final determination of tariff.
6. The Petitioner, therefore, filed the present Petition on 07.08.2009 seeking determination of final tariff of MB-II hydro power project for the year 2007-08, 2008-09 and 2009-10. The Petition did not have the specific approval of the Board of Directors of UJVNL as required under UERC (Conduct of Business) Regulations, 2004 which was submitted by the Petitioner on 28.08.2009 and the same could, therefore, be admitted by the Commission on 07.09.2009.
7. The Petition filed by the Petitioner had certain information gaps relating to the capital cost and financing thereof which was communicated to the Petitioner and the details were sought from the Petitioner. The issues raised in the Petition filed by the Petitioner and also arising out of the additional information submitted by the Petitioner have been dealt with adequately later at relevant portions of this Order.

1. Commission’s Scrutiny & Analysis

8. The Commission determines the Final Tariff of any Hydro Generating Station as per Uttaranchal Electricity Regulatory Commission (Terms & Conditions for

Determination of Hydro Generation Tariff) Regulations, 2004 (hereinafter referred to as "Regulations"). The Petitioner's proposals are, therefore, being examined in this Order in light of these Regulations.

9. In terms of the Regulations, apart from the tariff determined herein, taxes are allowed to be passed through and recovered separately from the beneficiaries.
10. The proposals made by the Petitioner are discussed hereafter alongwith the Commission's analysis on the same while examining different elements of the Petitioner's annual fixed charges.

1.1. Capital Cost

11. The Petitioner has submitted that the capital cost incurred on MB-II HEP as on CoD, i.e. 15.03.08, was Rs. 1920.10 Crore and has supported it with the CA certificate dated 20.02.2009. However, the Petitioner has further submitted that after subsequent scrutiny of accounts the capital cost incurred upto CoD works out to Rs. 1,950.27 Crore.
12. The reasons advanced by the Petitioner for variation of capital cost vis-à-vis the capital cost as reflected in the CA certificate are due to the DRB claim not considered in CA certificate, extra provisions against accrued liability made and considered upto 15.03.08 that has been subsequently written back on review of accounts, the value of stock and spares and advances to contractors pending adjustment not considered have been included in the capital expenditure.
13. Due to these reasons, the Petitioner has submitted that the capital expenditure incurred upto 15.03.08 has increased from Rs.1920.10 Crore as per CA certificate to Rs. 1950.27 Crore. The Petitioner has further given the comparative details of break-up of the cost under those heads where actual expenditure has increased from the level considered by the Commission in its Order dated 28.11.2008.
14. Further, the Petitioner has submitted the reasons for delay in commissioning of project and increase in the capital cost which are given hereunder:

i. Causes of delay due to inadequate condition of MB-II HEP at the time of commencement:

a) The project works re-started after a gap of 10-12 years and the barrage complex site was marshy, full of bushes and earlier constructed structures were inundated a lower levels. The tunnels and power house structures were fully filled with seepage water/water charged and most of the construction site was inaccessible.

b) Surge Shaft area was covered with landslides and its approach road was not even walkable. Himalayan geology was/is totally unpredictable due to heterogeneous rock-mass conditions and changes at every step. Hence, the construction period of 39 months was assessed totally based upon calculated risk and unforeseen initial conditions and geological configurations, expected to be encountered, alongwith the progress of the work.

ii. Causes of delay during construction of the project:

a) Initial hindrances created by local public by agitations at site and road blockage from time to time, stopping the work for several days causing months of delays and resulting in claims of the contractors, thus, creating unnecessary financial burden.

b) The Survey of India reference pillars got disturbed in the last 10-12 years period of stoppage of the project work due to earthquakes during this period. The checking and re-survey for alignment etc. took time causing delay in construction work.

c) Initially, there was restriction on quarrying of the broken stones/ boulders from quarry site and from rivers. Quarrying sites were made available by the local administration after considerable delay.

d) Poor geological rock-mass conditions were encountered in different reaches, squeezing and, hence, distorting the erected ribs also causing delay.

e) Change in design of Flushing Conduits and surge shaft because of which the design & subsequent construction took considerable additional time.

iii. Reasons for increase in capital cost:

a) Steep rise in cost of material, viz. cement & steel and labour resulted in much higher cost than anticipated earlier.

b) Due to frequent encounter of poor rock and subsequent formation of cavities, there was considerable increase in the quantities of various items viz. Tunnel Excavation, Tunnel concrete lining, Backfill concreting, permanent steel support etc. which lead to corresponding increase in cost.

c) Provision for compensation of crops to villagers of Dhanarigad, site provision for workshop building, false ceiling & miscellaneous work of power house, which were required to be done in prevailing site requirements.

d) Provision for construction of toe-wall at dumping site of HRT muck, fencing of surge-shaft area & road maintenance at Dharasu.

e) Use of various special admixtures viz. super plasticizers, accelerators and micro silica etc. for RBM zone, cavity treatments, tunnel lining and surge shaft lining.

f) Provision of the consultancy services is add-on which was not anticipated earlier.

g) Due to variation in the actual cost of orders executed (e.g. Firefighting equipment, DG set, Illumination, AC & ventilation system etc.) as compared to estimated earlier.

15. The Petitioner submitted that the reasons for delay in commissioning of project and increase in capital cost of project have been due to the reasons beyond the control of the Petitioner and its associated agencies. Geological surprises and natural & social phenomena have been prime reasons for delay in commissioning of the project and consequential increase in capital cost.

16. The Petitioner submitted that since the delay in commissioning of the project has primarily been on account of geological surprises and natural phenomena, it submitted that the interest during construction period of Rs. 403.35 Crore up to the date of commissioning may be allowed. Further, it has submitted that the subsidy under AG&SP scheme was disallowed by PFC and has been subsequently paid by it to PFC on 29.06.09.

17. Hence, in view of all the above submissions, the Petitioner has submitted before the Commission to review the capital cost approved by the Commission of Rs. 1741.72 Crore and consider the capital cost of Rs. 1950.27 Crore claimed by it for determination of final tariff of MB-II HEP for FY 2007-08.
18. The Petitioner was asked to submit the detailed quantitative justification for each component of the capital cost alongwith the relevant details and technical/financial approvals for variations. In response, the Petitioner referred to the report of the Committee constituted by the Government of Uttarakhand (GoU) for provisional conditional sanction of the revised estimates of MB-II project.
19. On perusal of the report of the Committee, it was observed that the revised estimates prepared by the irrigation department and UJVNL for civil and E&M works for completion cost of the project had been shown as Rs. 2,093.62 Crore implying an increase of about Rs. 844 Crore over and above the approved estimate of Rs. 1,249.18 Crore by CEA apart from the claims of various contractors. The reasons for increase in the costs had been advanced by UJVNL before the Committee.
20. The Committee explored various options with regard to the finalization of the project cost and based on the discussions recommended that since the civil works had been allocated to the Irrigation department on deposit basis and the E&M works were carried out by UJVNL and in both the organizations there were established norms and the levels of decision making/approval of estimates, the revised estimate be approved at the appropriate empowered level in irrigation department and UJVNL for their part of the project which could then be considered by the Board of UJVNL.
21. The Committee has refrained from approving any revised estimates of the completion cost of the MB-II project. It would be relevant to mention here that there was no representation from the Irrigation department during the meeting of the Committee. Irrigation department was also an important constituent in the Committee considering the fact that civil works are carried out by it and major variations in cost and time overruns have been claimed by UJVNL on this head.

Further, nowhere it has been evidenced that the revised estimates had the approval of the Committee or for that matter GoU.

22. The Committee only recommended further course of action regarding finalization of the completion cost of the MB-II project. The cost estimates were to be approved firstly by both the irrigation department and UJVNL for their part of the project respectively which was then to be considered by the Board of UJVNL. However, the Petitioner has not submitted the outcome of the Committee's recommendations. It is also not clear whether the two organizations have approved the completion cost of the project at their respective levels based on the Committee's recommendations.

23. It would also be relevant to point out the different set of figures available with the Commission regarding the capital cost of the project. The revised estimate submitted to the Committee regarding the cost of the project was of Rs. 2,093.62 Crore excluding the claims of various contractors. Further, the Annexures forming part of the Committee's report includes a comparison of General Abstract of Cost provided by the irrigation department for civil works and UJVNL for E&M works which shows the present cost of MB-II project as on 03/2008 as Rs. 2,323.33 Crore. The amount of capital expenditure incurred on the project as per the CA's certificate dated 20.02.2009, on CoD, i.e. 15.03.2008 works out to Rs. 1,920.10 Crore and the amount claimed by UJVNL on CoD is of Rs. 1,950.27 Crore. Further, PFC on 23.06.2008 had approved an additional loan of Rs. 336 Crore to UJVNL for financing the cost escalation in the MB-II project involving a total cost of Rs. 2,323 Crore which was yet to be approved. Subsequently, PFC vide its letter dated 12.03.2009 informed UJVNL that since the Board of UJVNL had approved to avail a loan of only Rs. 135 Crore from PFC, the sanction amount was reduced from Rs. 336 Crore to Rs. 135 Crore. The reasons for this reduction in availing the loan amount by the Board of UJVNL might be due to the non-requirement of the loan amount approved by PFC. Moreover, there was a claim of Rs. 1896.74 Crore as on 15.03.2008 as per CA certificate dated 06.06.2008 in the previous filing of UJVNL.

24. In light of the above, it is very difficult for the Commission to approve any final cost of the project. The Petitioner was asked to submit the quantitative justification of the cost and time overruns which has not been done by the Petitioner. Moreover, after establishing the capital cost the Petitioner needs to justify the reasons for cost over-run for each component, which requires prudence check by the Commission. In this regard, it would be pertinent to quote the Note in sub-Regulation 2 of Regulation 15 which specifies as under:

    "The scrutiny of the project cost estimates by the Commission shall be limited to the reasonableness of the capital cost, financing plan, interest during construction, use of efficient technology and such other matters for the purposes of determination of tariff."

25. Hence, **the Commission directs the Petitioner to get an independent audit of the capital cost of the project done within 6 months of the issue of this Order. The work of assessing and estimating the capital cost may be awarded to any independent audit firm by proper tendering process and the scope of work for this assignment should include the scope as laid down in Annexure 1.** The Commission also advises the Petitioner to get the capital cost of the project approved by its Board of Directors in line with the Committee's recommendations which would then be considered by the Commission based on the report of the audit of the cost subject to prudence check as specified in the Regulations.
26. Hence, at present the Commission has no other option but to continue with the capital expenditure of Rs. 1,559.91 Crore approved by it in its Order dated 28.11.2008 for MB-II project.
27. The Petitioner has also submitted that the interest during construction period of Rs. 403.35 Crore upto the date of commissioning may be allowed. Further, it has submitted that the subsidy under AG&SP scheme was disallowed by PFC and has been subsequently paid by it to PFC on 29.06.09.
28. The IDC claimed by the Petitioner has increased from Rs. 154.50 Crore approved by PFC to Rs. 403.35 Crore as claimed by the Petitioner mainly on account of time overruns. The Petitioner was asked to give quantitative justifications of the same

which has not been done by the Petitioner. Hence, in light of the direction given in Para 25 of this Order, the Commission is at the moment not tinkering the IDC approved by it of Rs. 181.81 Crore in its Order dated 28.11.2008.

29. The Commission had already advanced the reasons for considering the capital cost including IDC of Rs. 1741.72 Crore in its Order dated 28.11.2008. Thus, based on the above discussions there seems no reason material enough for the Commission to alter the capital cost already approved by the Commission till the Board of UJVNL approves the capital cost of the project and the report of independent audit is available before the Commission. The Commission would then scrutinize the Capital Cost and reasons for any increase in the same for prudence check. Without such a check, the cost and financing of the incremental cost arising due to cost/time over runs cannot be passed on to consumers in tariff.

30. Thus, based on the above, the total capital cost as on CoD approved by the Commission is Rs. 1,741.72 Crore against the Petitioner's claim of Rs. 1,950.27 Crore. As the project cost still remains provisional, the tariff determined now cannot be final tariff and is again provisional subject to the adjustments on final determination based on finally approved capital cost.

31. A comparative of the Capital Cost on CoD at different stages, now claimed by UJVNL and that considered by Commission is given in the Table below:

Table 1: Capital Cost (Rs. in Crore)

Particulars	**Original DPR**	**IInd approval of PFC**	**As per CA Certificate dated 06.06.2008 (Old)**	**As per CA Certificate dated 20.02.2009 (New)**	**Claimed By UJVNL**	**Approved**
Capital expenditure excluding IDC	***1,002.69***	***1,559.91***		***1,516.75***	***1,546.92***	***1,559.91***
Interest during Construction (IDC)						
Interest due/paid	246.49	154.50		333.48	333.48	181.81
Refund of interest Subsidy	-	-		69.87	69.87	-
Total IDC	***246.49***	***154.50***		***403.35***	***403.35***	***181.81***
Total Capital Cost	**1,249.18**	**1,714.41**	**1,896.74**	**1,920.10**	**1950.27**	**1,741.72**

1.2. Additional Capitalisation

32. In addition to the capital cost of Rs. 1950.27 Crore claimed by the Petitioner as on CoD, the Petitioner has claimed an additional capitalisation of Rs. 2.69 Crore for the period 15.03.2008 to 31.03.2008 and Rs. 20.19 Crore during 2008-09 after the competition of project. Hence, the total capital cost claimed by the Petitioner as on 31.03.08 is Rs. 1952.96 Crore and on 31.03.2009 is Rs. 1973.15 Crore.
33. Regulation 16(1) of UERC (Terms and Conditions for Determination of Hydro Generation Tariff) Regulations, 2004 specifies as under:

    "The following capital expenditure within the original scope of work actually incurred after the date of commercial operation up to the cut-off date may be admitted by the Commission subject to prudence check……………..."
34. At present, unless the actual capital cost of the project as on CoD is determined by the Commission, it would not be feasible to examine the prudence of the expenditure booked under additional capitalisation by the Petitioner. Hence, for the present exercise the Commission is not considering any amount under this head and is deferring the matter till such time the actual capital cost of the project is approved by the Commission based on prudence check of the cost ascertained by the audit as envisaged earlier and approval of the cost by the Board of UJVNL. The additional capital expenditure incurred by the Petitioner would be trued up by the Commission after prudence check only at that stage.

1.3. True-up

35. As the Commission is not tinkering with the capital cost approved in the provisional tariff order dated 28.11.2008, it is not modifying the AFC's approved for 2007-08 and 2008-09 in that Order. The Commission is also not carrying out the true-up of operational expenses for these years.

1.4. Financing of Capital Cost

36. The Petitioner has claimed the means of financing for the capital costs claimed by it as on CoD, on 31.03.2008 and also on 31.03.2009.

37. The Commission had already approved the financing of the capital cost of Rs. 1741.72 Crore in its Order dated 28.11.2008 for reasons given therein.

38. There seems no reason to alter the financing structure already approved by the Commission in its Order dated 28.11.2008 as at present the Commission is not altering the capital cost approved by it in the said Order. Hence, for the current exercise the Commission has no option but to consider the financing already approved by it in the Order dated 28.11.2008.

39. The financing of the project cost approved by PFC and by the Commission against the Petitioner's claim is given in the Table below:

Table 2: Financing of the capital cost (Rs. in Crore)

Particulars	Approval of PFC	Claimed			Approved as on CoD, as on 31.03.08 & 31.03.2009
		As on CoD	As on 31.03.2008	As on 31.03.2009	
PFC Loan	1,200.00	1,200.00	1,200.00	1,200.00	1200.00
Government Loan	0.00	0.00	7.01	59.11	0.00
Withdrawal of subsidy under AGSP Scheme		69.87	69.87	69.87	
Unpaid Liabilities		41.77	41.77	9.86	
Total Loans	**1,200.00**	**1311.64**	**1318.65**	**1338.84**	**1200.00**
Equity	**514.41**	**638.63**	**634.31**	**634.31**	**541.72**
PDF		341.39	341.39	341.39	341.39
GoU Budgetary support		114.29	128.92	128.92	36.33
Internal Resources		18.95			
Pre-2002 expense		164.00	164.00	164.00	164.00
Total (Debts+Equity)	**1714.41**	**1950.27**	**1952.96**	**1973.15**	**1741.72**

1.5. Interest and Financing Charges

40. The loan sanctioned and released by Power Finance Corporation was Rs. 1200 Crore. In its Petition, the Petitioner has submitted that it has worked out the quarterly interest @ 11.33% per annum on the PFC loans, at 9.50% on GoU loans and 12.25% on normative loans. Accordingly, the Petitioner has calculated the interest liabilities of Rs. 6.63 Crore for 2007-08, Rs. 140.03 Crore for 2008-09 and Rs. 139.02 Crore for 2009-10.

41. Initially, the repayments of PFC loan of Rs. 1200 Crore were to commence from 15.07.2008. PFC sanctioned an additional loan of Rs. 135 Crore to UJVNL, which has been utilized to meet additional cost not allowed by the Commission, the

same is therefore, not being considered. The repayment of PFC loan has actually started from 15.10.2008. Accordingly, the Commission has considered two repayments of Rs. 30 Crore each in 2008-09 making the opening loan for 2009-10 as Rs. 1140 Crore. The Petitioner has shown the actual interest paid to PFC of Rs. 6.33 Crore for 2007-08 and estimated it to be Rs. 133.36 Crore for 2008-09. For 2009-10, the Commission has provisionally worked out the weighted average rate of 11.26% on the loan from PFC based on quarterly interest paid to PFC for quarter ending 15.04.2009. Variation in interest liability, if any, due to change in interest rates shall be trued up subsequently. Thus, considering the repayments as envisaged in the PFC's schedule, the interest works out to Rs. 120.42 Crore for 2009-10 as shown in the Table below:

Table 3: Interest for FY 10 (Rs. in Crore)

Particulars	Amount
Loan as on 01.04.2009	1,140.00
Interest due on 15.04.2009 (For quarter beginning 15.01.2009)	31.64
Weighted avg. rate of interest	11.26%
Quarterly repayment	30.00
Loan as on 15.04.2009	1,110.00
Loan as on 15.07.2009	1,080.00
Loan as on 15.10.2009	1,050.00
Loan as on 15.01.2010	1,020.00
Interest from 01.04.2009 to 14.07.2009	36.08
Interest from 15.07.2009 to 14.10.2009	30.64
Interest from 15.10.2009 to 14.01.2010	29.79
Interest from 15.01.2010 to 31.03.2010	23.91
Total interest for FY 10	**120.42**

1.6. Depreciation including Advance Against Depreciation

42. The Petitioner in its Petition has submitted that the Commission may consider and approve the depreciation on capital cost of Rs. 1950.27 Crores as on CoD for 2007-08 and for subsequent years on the capital cost including additional capitalisation. It also submitted that the depreciation expense has been computed based on the asset classification and the applicable depreciation rates for these asset categories given in the Regulations.

43. Thus, the Petitioner has claimed a depreciation of Rs. 2.32 Crore for 2007-08 for 17 days and has not claimed any AAD since no repayment of loan was due in this

period. Further, for 2008-09 and 2009-10, the Petitioner has claimed depreciation of Rs. 49.92 Crore and Rs. 49.84 Crore respectively and AAD of Rs. 15.63 Crore for 2008-09 and Rs. 87.77 Crore for 2009-10, however in the formats it has worked out the AAD as Rs. 14.93 Crore for 2008-09.

44. The Commission provisionally accepts the categorization of assets submitted by the Petitioner pending final approval of the capital cost and hence, the weighted average rate of depreciation claimed by it. Applying the claimed depreciation rates, the depreciation works out to Rs. 44.54 Crore for 2009-10.

45. Advance Against Depreciation has been worked out on the basis of the repayment schedule of the Financial Institution for the loan considered and according to the Regulations. Thus, the total depreciation including Advance Against Depreciation allowable for 2009-10 works out to Rs. 120.00 Crore as given in the Table below.

Table 4: Advance Against Depreciation for 2009-10 (Rs. in Crore)

S. No.	Particulars	Claimed for 2009-10	Approved for 2009-10
a.	Depreciation	49.84	44.54
b.	Loan repayment during year	137.61	120.00
c.	1/10th of Loan	142.50	120.00
d.	Amount Admissible under AAD [Minimum of (b) and (c)]	137.61	120.00
e.	Advance Against Depreciation (AAD) [only if +ve]{(d) – (a)}	87.77	75.46
f.	Cumulative Depreciation		91.15
g.	Cumulative Repayment		180.00
h.	AAD restricted to {(g) – (f)}		75.46

1.7. Return on Equity

46. Regulations stipulate that Return on equity shall be computed on the equity base and shall be @ 14% per annum. The Petitioner has submitted that it has computed return on equity @ 14% assuming a normative debt equity ratio of 70:30 in accordance with the regulations. Hence, it has calculated a return of Rs. 3.82 Crore for a period of 17 days for 2007-08 on the equity base of Rs. 585.08 Crore. Similarly, the Petitioner has calculated a return of Rs. 82.02 Crore on the equity base of Rs. 585.89 Crore for 2008-09 and a return of Rs. 82.87 Crore on the equity base of Rs. 591.95 Crore for 2009-10.

47. The Petitioner has further submitted that the Commission in its order dated 28.11.08 had disallowed RoE on equity of Rs. 341.39 Crore contributed by GoU out of PDF withdrawal. Hence, the Petitioner has requested the Commission to re-consider such disallowance as the impact on RoE on such disallowance amounts to Rs. 47.79 Crore which would have major impact on the tariff determination of MB-II HEP.
48. The Commission has approved the equity of Rs. 541.72 Crore in Table 2 above. Out of this, Rs. 341.39 Crore has come from PDF. The Commission in its Order dated 28.11.2008 had not allowed any return on funds provided by GoU out of money recovered from consumers by way of PDF for reasons spelt out in the said Order. At present also there seems no reason to revisit this issue and the Commission is, therefore, not allowing any return on equity utilized for creation of assets funded out of PDF.
49. Thus, only balance equity of Rs. 200.33 Crore qualifies for earning return. The Commission is allowing return @ 14% post tax as stipulated in the Regulations, which works out to Rs. 28.05 Crore for 2009-10.

1.8. Operation & Maintenance (O&M) Expenses

50. The Petitioner has claimed the total O&M expenses of Rs. 1.36 Crore for 2007-08 for a period of 17 days. Further, for 2008-09 and 2009-10 the Petitioner has escalated the O&M expenses of the preceding year (full year) by 4% per annum to arrive at the O&M expenses for the tariff year. Further, O&M expenses on additional capitalisation have been considered at 1.5% of the actual capital cost from the year of commissioning. Thus, for 2008-09 the Petitioner has claimed Rs. 30.46 Crore and Rs. 32.05 Crore for 2009-10.
51. The Regulations provide that in case of the hydro electric generating stations declared under commercial operation on or after 1.4.2004, the base operation and maintenance expenses shall be fixed at 1.5% of the actual capital cost, as admitted by the Commission, in the year of commissioning. The Commission has admitted the capital cost of the station as Rs. 1741.72 Crore. For working out the O&M expenses for subsequent years, it would be necessary to compute the annual

escalation factors for inflationary increases for which the Commission has notified separate Regulations. The escalation rates have been considered as per the provisions specified in Uttarakhand Electricity Regulatory Commission (Terms and Conditions for Determining Escalation Factor) Regulations, 2007.

52. On the basis of the above Regulations, the Commission has considered the actual escalation factors of 8.97% for FY 2008-09. An average of escalation factors for previous five years of 6.51% based on the Wholesale Price Index (WPI) and Consumer Price Index (CPI) has been considered for FY 2009-10.

53. Thus, applying the escalation rates worked out above on the base O&M expenses for 2007-08, the approved O&M expenses for 2009-10 work out to Rs. 30.32 Crore. Since the Commission has not considered any additional capitalisation, no O&M expense on the same has been considered.

1.9. Interest on Working Capital

54. The Petitioner has claimed interest on working capital for the year 2007-08, 2008-09 and 2009-10 as Rs. 0.33 Crore, Rs. 7.49 Crore and Rs. 9.07 Crore respectively based on the norms specified under the Regulations. Cost of financing the working capital has been assumed at 12.25% p.a.

55. Regulations stipulate that the rate of interest on working capital shall be the short-term Prime Lending Rate of State Bank of India as on 1.4.2004 or on 1st April of the year in which the generating unit/station is declared under commercial operation, whichever is later. The short term PLR of SBI as on 01.04.2007 was 12.25%. Thus, the interest on working capital based on norms specified in the Regulations works out to Rs. 8.99 Crore for 2009-10.

1.10. Annual Fixed Charges (AFC)

56. Based on the above, the AFC for the Petitioner's generating station works out to Rs. 307.78 Crore for 2009-10 against the Petitioner's claim of Rs. 400.63 Crore for 2009-10. The details are given in the Table below:

Table 5: Annual Fixed Charges for 2009-10 (Rs. in Crore)

S. No.	Particulars	Claimed for 2009-10	Approved for 2009-10
1	Interest on Loan	139.02	120.42
2	Depreciation	49.84	44.54
3	Advance Against Depreciation	87.77	75.46
4	Return on Equity	82.87	28.05
5	O&M Expenses incl. Insurance Charges	32.05	30.32
6	Interest on Working Capital	9.07	8.99
7	***Gross Annual Fixed Charges***	**400.63**	**307.78**
8	Less: Other Income	0.00	0.00
9	***Net Annual Fixed Charges (7-8)***	**400.63**	**307.78**

The AFC of the generator would be recovered through Primary energy charges and balance through capacity charges, subject to the condition that the generator maintains the normative capacity index.

1.11. Primary Energy

57. The design energy claimed by the Petitioner is 1566.10 MU which has been taken as per the DPR.
58. The Petitioner has reduced auxiliary consumption and transmission losses amounting to 15.66 MUs from the design energy to calculate the saleable primary energy of 1550.44 MUs.
59. The station is a surface hydro electric power generating station with static excitation system. Thus, 0.5% of energy generated would be allowed as Auxiliary consumption in accordance with the Regulations.
60. The Regulations also provide for 0.5% of energy generated as transformation losses to be allowed.
61. Thus, the saleable primary energy works out to 1550.44 MU's as claimed by the Petitioner.

1.12. Primary Energy Rate

62. The primary energy rate for calculation of primary energy charge shall be based on lowest variable charges of the central sector thermal power generating station in Northern Region which is 89.70 paise/kWh for 2009-10. The balance recovery

of the Annual Fixed Charges will be through Capacity Charges in accordance with the Regulations 12, 20 and 28 and NOTE given in Regulation 12, which stipulates that:

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

1.13. Procedure for Recovery of Tariff

63. The AFC for 2009-10 shall be deemed to be recoverable in 12 equal monthly installments subject to achievement of normative capacity index for each month. Pro-rata recovery of monthly capacity charges for monthly capacity index being less than normative level shall be done subject to adjustment at the year end on the basis of annual capacity index. Arrears of bills due to increased tariff for the period upto the month of November 2009 shall be payable in balance 4 months in equal installments. Incentives and secondary energy charges shall, however, be payable only at the year end on annual basis as stipulated in the Regulations.
64. The annual fixed charges as approved herein are subject to truing up of the expenses on compliance of the Commission's directions contained in this Order regarding the capital cost of the project and submission of necessary details by UJVNL. The tariffs approved in this order shall continue to apply till further orders of the Commission.
65. The Petition is disposed off accordingly.

(Anand Kumar)
Member

(V.J. Talwar)
Chairman

Annexure 1: Scope of work regarding audit of the project cost of Maneri Bhali Stage II

Background

Uttarakhand Jal Vidyut Nigam Limited (UJVNL) is the State owned generating company. UJVNL owns and operates small as well as large hydro stations in the State generating electricity for supply to the sole distribution licensee in the State, i.e. UPCL.

UJVNL had commissioned a generating station by the name of Maneri Bhali-II located in the district of Uttarkashi of 304 MW capacity on 15.03.2008. This project was conceptualized way back in 1972 and the infrastructure works of the project was started in 1979-80. The project work did not proceed at a good pace because of shortage of funds and the project work came to the standstill in 1990-91 due to complete stoppage of funds. The revised project estimate was prepared on 2/99 base for Rs. 1249.18 Crore including escalation and IDC and necessary approvals were accorded to the project. Subsequently, the State of Uttarakhand was created and all the completed projects including the CWIP of the ongoing projects were transferred to UJVNL from U.P. Subsequently in 2002 PFC sanctioned a loan of Rs. 800 Crore to meet the project cost of Rs. 1249.18 Crore. The terms of sanction of PFC envisaged that the project would be completed by the end of September 2005. UJVNL again sought an approval of the revised project cost of Rs. 1741.40 Crore from PFC during 2005. PFC agreed to issue an additional loan of Rs. 400 Crore subject to the condition that the project would be completed by the end of March 2007 and the IDC of the two loans would be restricted to Rs. 154 Crore. However, the date of commissioning of the project exceeded the date envisaged in the sanction approved by PFC which resulted in cost overruns and time overruns.

The actual capital expenditure incurred by UJVNL as estimated by it is Rs. 1950 Crore as on 15.03.2008 against the provisionally certified figure of Rs. 1920 Crore by a CA firm. The capital expenditure estimated by UJVNL and certified by the CA firm includes an element of interest during construction of Rs. 403 Crore. However, the revised estimates of UJVNL suggest the project cost to be around Rs. 2323 Crore.

UERC (Terms & Conditions for Determination of Hydro Generation Tariff) Regulations, 2004 stipulate the norms for calculation of generation tariff. However, such tariffs are dependent on the capital cost of the station as well as the financing of the same. UERC has, therefore, required UJVNL to carry out special audit of the capital cost of the project. The special audit of project accounts is to be done with a view to find out unambiguous and definite position on the above issues.

Scope of work

The activities shall include the following:

(i) Analysis of the accounts of UJVNL relating to MB-II projects.

(ii) Determining the component-wise capital cost of the project including the IDC of the project actually incurred as on 31.03.2007, 15.03.2008, 31.03.2008, 31.03.2009 and 30.09.2009.

(iii) Determination of financing of the capital cost.

(iv) Date-wise schedule of receipts and payment of funds.

(v) Examining the reasons of time overruns and cost overruns and quantifying the impact of such overruns by carrying out variance analysis.

(vi) Classifying the factors leading to time overruns and cost overruns into controllable and un-controllable.

(vii) Ascertaining the amount of opening CWIP inherited for MB-II project from UPJVNL and also the financing of the same.

(viii) Preparation of detailed report showing the findings of the consultant on the above aspects.