Before

UTTARANCHAL ELECTRICITY REGULATORY COMMISSION

In the matter of: Paper on "Approach to Initial Tariff for New Hydro Generating Stations with capacity above 1 MW and upto 25 MW" circulated on 08.09.2005.

And

In the matter of: Tariff determination for hydro generating stations having installed capacity above 1 MW and upto 25 MW under section 62(1)(a) of the Electricity Act, 2003.

Coram

Sri Divakar Dev   Chairman

Date of Order 10th November 2005

ORDER

The Himalayan Region of the country in general and Uttaranchal State in particular, have significant potential for generation of electricity through widely distributed small hydro generating units. The Electricity Act, 2003 (hereinafter referred to as "Act") stipulates promotion of electricity from the renewable sources of energy which has manifested primarily in the current practice of requiring the distribution licensee to purchase power generated by such units ahead of the merit order. The Act also stipulates that any person generating electricity for distribution in a notified rural

area is not required to take license under section 14 of the Act. Thus, the legal and the policy framework in the State are already conducive to setting up of such units. Notwithstanding this, the present level of exploitation of this particular source is still disappointing. State's potential for generation of electricity through small hydro units is estimated to be 1478.23 MW. Against this, the present installed capacity is only 62.19 MW and there is no noticeable trend suggesting early tapping of the remaining potential.

2. It is sometimes felt that one of the reasons why progress in harnessing this potential has been disappointing is uncertainty with regard to tariff for sale of electricity produced by such units to the distribution licensee. With a view to removing any misapprehensions on this account, the Commission had circulated an approach paper spelling out the Commission's approach to the issue of tariff determination during the initial years of new hydro generating stations having capacities higher than 1 and upto 25 MW. The paper listed out and also quantified the contribution of individual cost elements taken into account during the tariff determination exercise. To impart maximum transparency to any such exercise, the paper also tried to develop predefined relationships for important cost elements with the capital cost of the project. The objective behind the paper was to help the developers and the financial institutions to take reasonably informed investment decisions. The paper did not attempt to work out normative tariffs but with a view to minimising uncertainties, it did suggest maximum and minimum acceptable values for the capital cost and the Plant Load Factor (PLF) of any such plant. This order now spells out the Commission's final approach and the extent to which the Commission would be willing to relax its Uttaranchal Electricity Regulatory Commission (Terms and Conditions for Determination of Hydro Generation Tariff) Regulations, 2004 (hereinafter referred to as "Regulations") in any such exercise. Tariff for each individual project will continue to be determined in accordance with the provisions of the Act, taking into account the details of each project and following the approach spelt out in this order. This order does not lay down any normative costs or

tariffs. It only attempts to give the Project Developers and Financial Institutions (FIs) a reasonable idea of the tariff that can be expected for their project in the initial years to enable them to take informed investment decisions.

1   Responses to the Paper

3.   The said paper was floated for responses and suggestions on 08.09.2005. In addition, copies of the said paper were specifically sent to:

    i)   All State Electricity Regulatory Commissions

    ii)   Small Hydro Plant developers in the State

    iii)   All members of the State Advisory Committee

    iv)   Power, Finance and Industry/Planning Departments of Government of Uttaranchal (GoU)

    v)   Uttaranchal Power Corporation Ltd. (UPCL), Uttaranchal Jal Vidyut Nigam Limited (UJVNL)

    vi)   Leading Financial Institutions such as Indian Renewable Energy Development Agency (IREDA), Power Finance Corporation (PFC), Rural Electrification Corporation (REC), State Bank of India (SBI), Punjab National Bank (PNB) etc.

4.   In all, 20 responses to the above paper were received. Details of individuals and organisations who have sent their responses is given in Annexure-I. The responses/suggestions received have been clubbed together subject-wise and are as discussed below:

1.1   Capital Cost

5.   *Most of the respondents have suggested that the proposed ceiling of Rs. 4 Crore/MW on Capital Cost is not aligned with current construction costs of such plants in the hilly region like*

Uttaranchal. The range of suggested ceiling on Capital Cost is Rs. 5 to 7 Crore/MW, but without any supporting details/data. Some stakeholders have also furnished Capital Costs of some Detailed Project Report (DPR) recently approved by FIs, which vary from Rs. 4 to 7 Crore/MW. UJVNL has suggested a ceiling of Rs. 6 Crore/MW for this purpose. The reasons for higher Capital cost have been stated to be higher Cost of Civil Works, Transportation of Men and Material, Cost of construction of Roads/Bridges and Longer Transmission Lines etc. in the hilly regions. One respondent has even suggested that due to peculiar, unique and widely varying characteristics of each Small Hydro Power (SHP), putting any ceiling on the Capital Cost is not correct and may lead to either under-recovery of cost incurred or may lead to reduction in Capital Cost by compromising on the safety, reliability and optimal design of the plant particularly on account of geological surprises. IIT Roorkee has suggested the cost/MW as detailed below:

Civil Works	*3.0*
E&M Works	*1.5-2.0*
T&D Works	*0.5*
Administrative, Engg. & Management	*0.6*
Total	***5.6 - 6.1***

6.   *Some stakeholders have also referred to some proposal for amendment in* Ministry of *Non-conventional Energy Sources (MNES) guidelines for Capital Cost, which assumes Rs. 12 Crore/MW as the cost for normative PLF of 100% and proportionate reduction in the same with PLF. The Government of Uttaranchal has also suggested a ceiling of Rs. 5.5-6.0 Crore/MW. The State Bank of India, in its response has also proposed a ceiling of Rs. 5-6 Crore/MW. IREDA, while highlighting the difficulties in determining the Capital Cost of such projects has not suggested any normative value of ceiling for the same.*

7.   Nearly 90% of the Annual Fixed Charge (AFC) of any such project is fixed and is on account of expenses like interest costs, depreciation and return on equity. These are derived directly from the project's capital cost. The balance AFC of around 10% is on

account of salary and wages of the staff, repairs & maintenance and administrative expenses which together are called O&M expenses and this component varies from year to year. These expenses also, in an indirect manner, depend on the individual features of each project reflected in its Capital cost. Their normative values can also be linked to the capital cost of the project. Therefore, correct determination of any project's capital cost, which would invariably vary from project to project, becomes important. To give the project developer a fair idea of the acceptable level of AFC for his project, a normative ceiling of Rs. 4 Crore/MW for Capital Cost had been suggested in the paper. Most of the respondents have sought increase in this ceiling. While existing generators and project developers have suggested this ceiling to be around Rs. 6-7 Crore/MW, the State Government has suggested that this ceiling should be between Rs. 5.5-6 Crore/MW, and I.I.T. Roorkee has suggested graded ceilings ranging between Rs. 5.6 Crore/ MW to Rs. 6.1 Crore/MW. The State Bank of India has suggested this ceiling to be Rs 5-6 Crore/MW.

8.   While the cost ceilings suggested by State Government, I.I.T. Roorkee and The State Bank of India are comparable, those suggested by generators and developers are higher. While this group's suggestion could have been influenced by self interest, no such bias can be attributed to the State Government or to a renowned institution like I.I.T Roorkee for that matter to an institution like The State Bank of India. The Commission is, therefore, placing greater reliance on the suggestions received from these quarters. Accordingly, while determining the tariff for any such generating station, the actual value of capital cost will be determined by the Commission based on details of each project, but subject to a maximum ceiling of Rs. 5.5 Crore/MW.

1.2   Operation & Maintenance (O&M) Expenses

9.   The paper highlighted the need for relaxing the norm of 1.5% of Capital Cost for O&M Expenses. Most of the respondents have supported the proposed relaxation, but

have asked for different relaxed norms going up to 10% of the Capital Cost, but without backing their suggestions with any documentary evidence or data.

10.   The reasons advanced are requirement of minimum staff irrespective of capacity, higher staffing and administration expenditure due to remote and hilly locations & higher R&M expenditure due to frequent repairs and outages of civil/electromechanical parts on account of high silt and adverse weather conditions. These are indeed the very reasons for relaxing the norm for such expenditure stipulated in the Regulations, but by themselves they do not give support to any particular value for such relaxation.

11.   In absence of any validly supported value for such expense, the Commission is relying on the available information and the norms adopted for appraisal of such projects by some financial institutions. The Commission is accordingly adopting a ceiling norm of 3% of the Capital cost for O&M expenses. In addition actual insurance expenses will be admissible subject to a ceiling of 1% of the Capital cost. This is in consonance with the range of 3-4% for such expenses suggested by The State Bank of India for projects other than very small projects, which in any case are not covered by this order. Indian Renewable Energy Development Agency Limited (IREDA) have also supported this graded normative ceiling but have suggested a slab structure linked to the installed capacity for the same instead of a %age of the Capital Cost.

1.3   Plant Load Factor (PLF)

12.   *Some stakeholders have pointed out that the rivers in Himalayan Region are perennial and hence a PLF higher than the minimum stipulated PLF of 45% is possible in this region, which should be considered. On the other hand, some other stakeholders have stated that the concept of fixing the minimum limit of PLF is not correct as it is dependent on availability of water, availability of grid and availability of plant, while the paper assumes uniform water availability throughout the year and life of project. While the third parameter is within the*

control of the developer, the other two are out of his control and, therefore, availability based norms similar to Central Electricity Regulatory Commission (CERC) should be fixed. Further, claims of inadequate data and consequential difficulty in determining Design Energy & capacity index are not correct and, therefore, the concept of normative PLF should be done away with. Some other respondents have suggested minimum PLF to be in the range of 25 to 30% instead of 45% given in the paper. Some respondents want this to be the normative level instead of minimum.

13.   The Approach Paper had suggested that the actual PLF of each such project shall be considered but subject to a minimum of 45%. The suggestions received with respect to this minimum PLF vary from an extremely low figure of 25% to that higher than the suggested 45%, but without any convincing data or evidence in support. The water availability will vary considerably from one site to another and in many cases can indeed be so low that the PLF works out to lower than 45%. By stipulating a minimum value of 45% PLF, the Commission is only restricting this approach of tariff determination to moderately efficient projects. The Commission does not see any convincing reason for diluting this efficiency standard and is, therefore, retaining the minimum required PLF as 45% on annual basis for run of the river projects. The PLF shall be reckoned in accordance with the following formula:

$$PLF = \frac{\text{Annual Saleable Energy (in kWh)}}{365 \times 24 \times \text{Installed Capacity (in kW)}}$$

1.4   Projects transgressing the above limits

14.   The Commission recognises that there could be projects in which the capital cost works out higher than the stipulated ceiling of Rs. 5.5 Crore/MW or the PLF may work out to less than 45%. This approach could push up the tariffs for such projects to unacceptably high levels and such projects have, therefore, been kept outside this approach. For development of such sites the options available are:

i) The tariff for such projects may be determined through a transparent bidding process under section 63 of the Act.

ii) To meet these ceilings, Government could subsidise such projects so that such projects meet the stipulated requirements.

iii) Subject to prudence checks, tariff for such projects could be determined strictly in accordance with the Regulations.

iv) However, if the tariff determined as per above options is excessive, the present policy of the licensee purchasing power from these units ahead of merit order may need to be reviewed and suitably moderated. Alternatively, the Government could consider subsidising the difference between the tariff for such projects and normative tariff worked out with the stipulated maximum and minimum values.

1.5   Capital Subsidy

15.   *It has been suggested by some respondents that the Capital subsidy given by government should be adjusted only against the loan component of the project as it is released directly to the concerned Financial Institution. Further, grant of subsidy in relation to portion of the capital cost after the same has been incurred by the developers/lenders does not fall within the ambit of section 43 of the Income Tax Act, which stipulates reduction of portion of the costs as met by any other person or authority. Some other respondents have suggested that the capital subsidy should not be adjusted from the Capital Cost and the developer should be allowed to retain the same as a reward or incentive for setting up the project.*

16.   Normally capital subsidy is given to a project to improve its viability by bringing its products' price in level with the market. For SHPs, which typically have high capital cost, capital subsidy is again provided primarily for improving their viability. MNES' guidelines for disbursement of subsidies clearly state its objective as "to make the SHPs commercially viable".   Ignoring this well recognised practice and treating such

subsidies as reward for setting up the project would be unusual and even devoid of logic.

17.   In somewhat different context, the question of treatment of such subsidies has been addressed in the Income Tax Act, 1961 and also in the Accounting Standards issued by The Institute of Chartered Accountants of India as required by the Companies Act, 1956. Explanation 10 to Section 43(1) of the Income Tax Act stipulates that:

> *"Where a portion of the cost of an asset acquired by the assessee has been met directly or indirectly by the Central Government or a State Government or any authority established under any law or by any other person, in the form of a subsidy or grant or reimbursement (by whatever name called), then, so much of the cost as is relatable to such subsidy or grant or reimbursement shall not be included in the actual cost of the asset to the assessee."*

18.   Similarly, AS 12 of the accounting standards issued by the Institute of Chartered Accountants of India stipulates that:

> *"Government grants related to specific fixed assets should be presented in the balance sheet by showing the grant as a deduction from the gross value of the assets concerned in arriving at their book value. Where the grant related to a specific fixed asset equals the whole, or virtually the whole, of the cost of the asset, the asset should be shown in the balance sheet at a nominal value."*

19.   In this method, grant is, thus, recognized in the profit and loss account over the useful life of depreciable assets by way of a reduced depreciation charge.

20.   Further, it states that:

> *"Alternatively, government grants related to depreciable fixed assets may be*

treated as deferred income which should be recognised in the profit and loss statement on a systematic and rational basis over the useful life of the asset, i.e., such grants should be allocated to income over the periods and in the proportions in which depreciation on those assets is charged. Grants related to non-depreciable assets should be credited to capital reserve under this method. However, if a grant related to a non-depreciable asset requires the fulfilment of certain obligations, the grant should be credited to income over the same period over which the cost of meeting such obligations is charged to income. The deferred income balance should be separately disclosed in the financial statements."

21.   A combined reading of above stipulations leaves no doubt that capital grants or subsidies received against fixed assets have to be deducted from the actual cost of such assets, as has been proposed in the Approach Paper. Ignoring the capital subsidy while computing the generation cost, as has been suggested by some respondents, would mean making a major departure from well defined and widely accepted accounting practice without adequate rationale or statutory support and would burden the consumers further. The Commission is, therefore, unable to accept this contention.

22.   As far as the suggestion that the subsidy should be reduced only from the loan amount instead of pro-rata reduction in debt and equity is concerned, accepting this suggestion would result in disproportionate increase in funding of the project by artificially increasing the equity investment. This in turn would push up the tariffs and would give undue advantage to the generator at the cost of the consumer in perpetuity. A fairer approach would be to adjust this subsidy in the project cost and proportionately reduce both the loan and the equity amounts without disturbing the original debt equity ratio. It may be recalled that the developer is being handsomely compensated for his equity investment by way through 14% tax free or about 21% taxable return.

1.6 Taxes / Royalties, Clean Development Mechanism (CDM) etc.

23.   *It has been suggested by some respondents that benefits arising out of exemptions of Tax/Royalties and carbon trading should not be taken into account while fixing the generation tariff.*

24.   Taxes, whatever may be their nomenclature, are passed through in the tariff. Therefore, any changes in the same have no effect, whatsoever, on the tariff. The concept of CDM is still in infancy in the country and is not yet a significant factor at the stage of taking investment decisions. Accordingly, revenue on this account is not proposed to be taken into account, for the time being.

1.7 Recovery of AFC

25.   *While most of the respondents have supported the proposal to fix single part tariff, some others have stated that fixing single part tariff is disadvantageous to generators in comparison to the Two Part Tariff permissible under the Regulations.*

26.   Issue of non availability of water discharge data and consequential difficulties in fixing two part tariff for such stations has been dealt with in details in the Approach paper and cannot be simply wished away. However, if there are projects for which such data can be made available, the Commission will be willing to fix two part tariff for them following the Regulations, should the generator or any other stakeholder so wish.

27.   The AFC of any generating station once determined, is to be recovered through sale of energy generated. The question that now arises is on what portion of energy generated by a plant this cost should be distributed. As per the Regulations, the AFC is to be recovered from saleable primary energy which is derived from the design energy of the plant. For many of the sites on which these SHPs are to be developed accurate determination of the design energy and in turn saleable primary energy is difficult due

to problems of non availability of water discharge data. The DPRs of such projects do give estimated projections of the energy likely to be generated and the AFC could indeed be distributed over the projected generation. However, the risk in doing so is that if in a particular year water availability reduces, which is not unusual, the developer will not be able to fully recover the AFC as the comfort provided by capacity charge in the two part tariff structure applicable to LHPs is not there in single part tariff which is being contemplated for SHPs for reasons given in the paper. Considering all these issues, the prudent approach seems to be to recover the AFC from the generation at 45% annual PLF, which is the minimum acceptable level of PLF for cost plus approach in tariff determination given in the Approach Paper. This approach of recovery of the AFC on generation based on 45% normative PLF considerably lowers the risk of short recovery due to lower than projected generation, inherent in the single part. Further, the total AFC having been recovered at 45% PLF, if a plant is actually able to achieve higher generation, the excess electricity so generated will earn it revenue by way of incentive. In relaxation of Regulation 29, the rate for such incentive has been derived from the formula given in the approach paper and on the maximum acceptable capital cost of Rs. 5.5 Crore/MW. The rates of incentives worked out for first five years of operation are as given below.

Year after Commissioning	1	2	3	4	5
Rate (p/u)	26	26	25	24	24

28.   Compared to the basic tariff these rates may appear to be modest, but they do translate into very attractive additional tax free return to the developer in addition to the 14% tax free return already factored into the tariff.

2   Efficiencies and Rewards

29.   Normative values of maximum capital cost and minimum PLF having been determined above, a project developer may rush to the conclusion that there is no room

or need for ensuring efficiency in utilisation of capital or in operating the plant. Any such conclusion would be wrong and could severely jeopardise the project. Efficient funding of a project, controlling its capital expenditure and optimising the output by achieving higher PLF are objectives that continue to reward efficiency in each of these areas. This is examined hereafter for operations during the first year after commissioning.

2.1   Generation efficiency

30.   While project's total AFC is recovered from saleable energy produced at 45% PLF, if a plant is able to achieve higher output, it stands to benefit firstly by creating adequate cushion for absorbing inevitable fluctuations in generation of electricity and secondly by giving the developer additional return by way of incentive on incremental generation. Both these benefits are brought out in the following two graphs depicting benefits of higher PLF at an assumed fixed capital cost of Rs. 5.5 Crore/MW.

Graph 1: Effect of PLF on Cushion for absorbing fluctuations in output
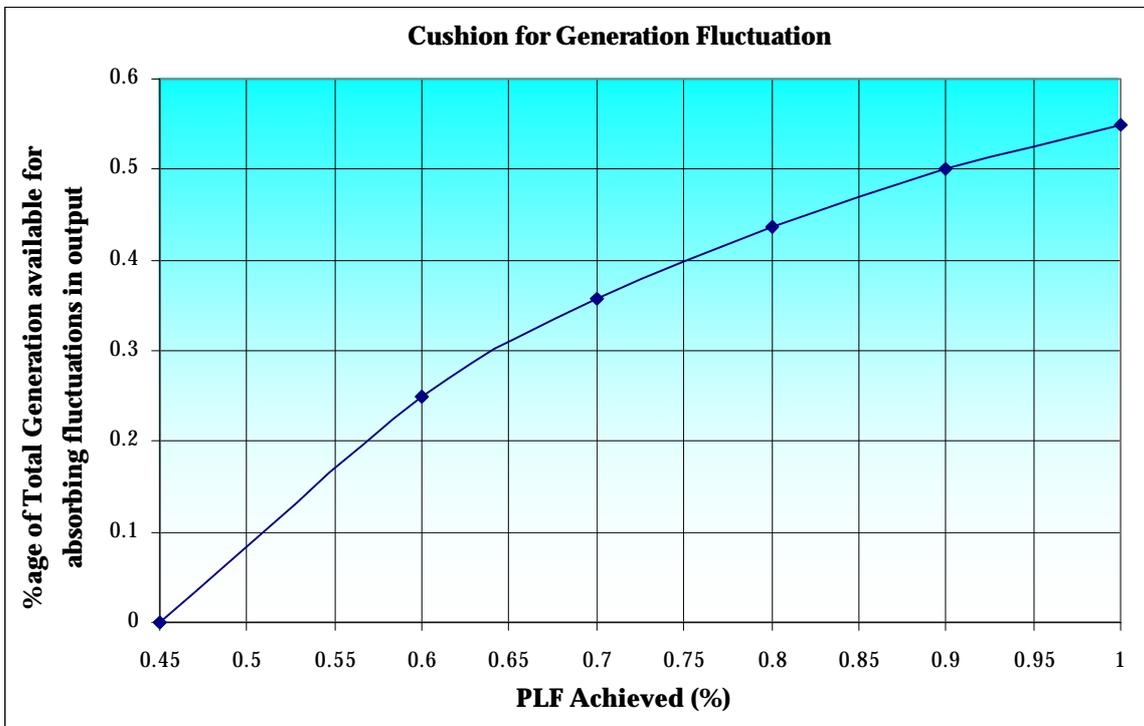
**Graph 2: Effect of PLF on return on developer's investment**
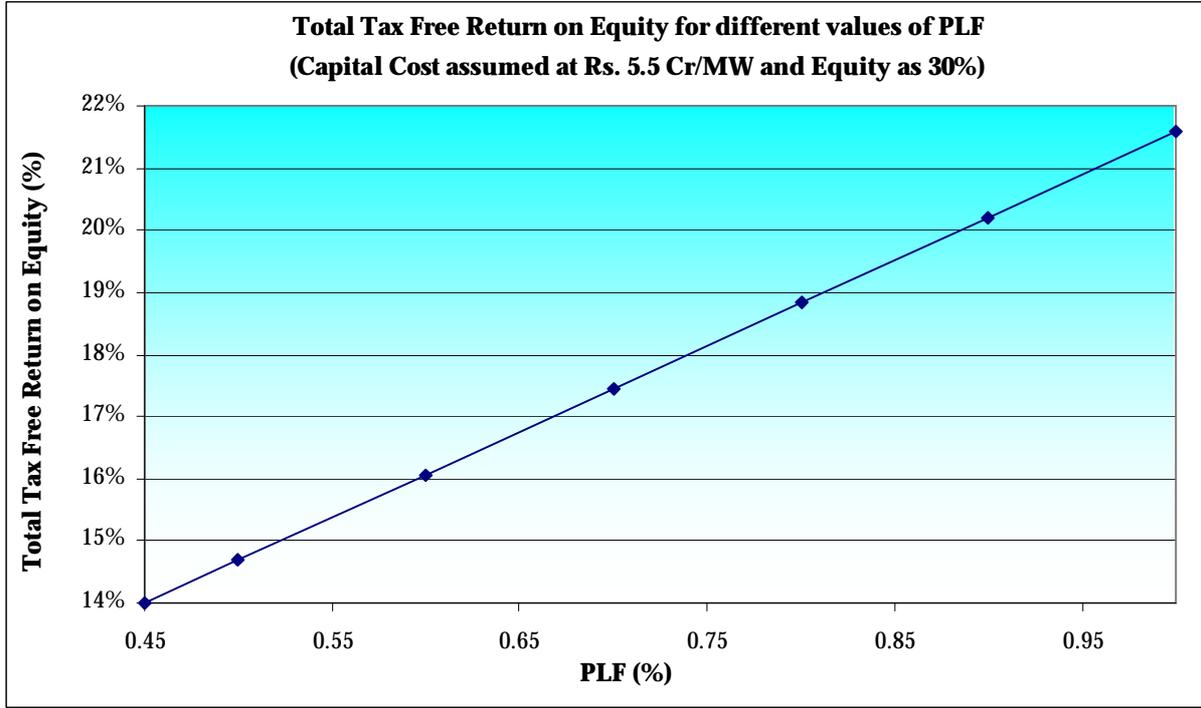
i) If a project achieves 60% PLF, which is not very high, about 20% of his generation is the safety cushion available to absorb any fluctuation in generation.

ii) Simultaneously, the tax free return on his investment goes up to 16%.

iii) These benefits increase even more as the PLF value increases.

2.2 Control of Capital Cost

31. The maximum value of acceptable capital cost being fixed by the Commission in this order is Rs. 5.5 Crore/MW. A developer who controls his expenses under this head and limits the project's capital cost to a value lower than Rs. 5.5 Crore/MW gains on account of consequential reduction in his own investment. This phenomena is reflected in the graph given below which shows how for a fixed PLF the return on developer's investment tends to decrease as the capital cost increases, even when the same is well within the outer limit of Rs. 5.5 Crore/MW.

Graph 3: Effect of capital cost on tax free return
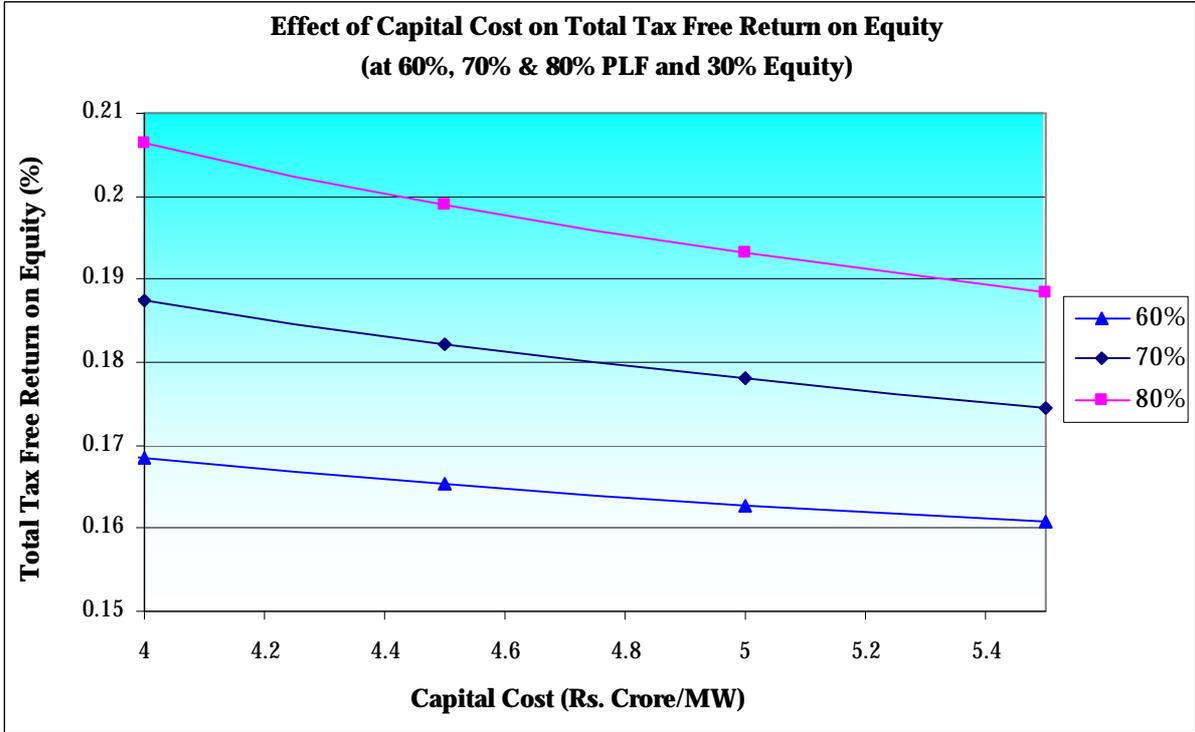

32.   It will be seen in the above graph that:

   i)   For any value of PLF, the developer's return on his investment declines considerably if the capital cost is not controlled.

   ii) Tax free return on developer's investment, which is little over 16% for a project with 60% PLF and Rs. 5.5 Crore/MW capital cost, increases dramatically to nearly 21% for 80% PLF and the Capital cost of Rs. 4 Crore/MW.

2.3   Efficient Leveraging of Funds

33.   Another parameter influencing the return on a developer's investments in a project is the loan equity mix or the debt equity ratio. Commission's Regulations permit maximum equity investment of 30% of the project cost and allow a handsome return on a developer's own funds invested in the project. For a fixed PLF value and of capital

cost, a developer who is able to leverage his funds better and. therefore, able to raise higher than 70% loans earns a higher return on his investment compared to another developer who injects maximum permissible equity and is happy with the handsome tax free return of 14% permissible as per the Regulations. This would also release developer's own funds for investment elsewhere. This is brought out tellingly in the graph given below.

Graph 4: Effect of equity on return on investment
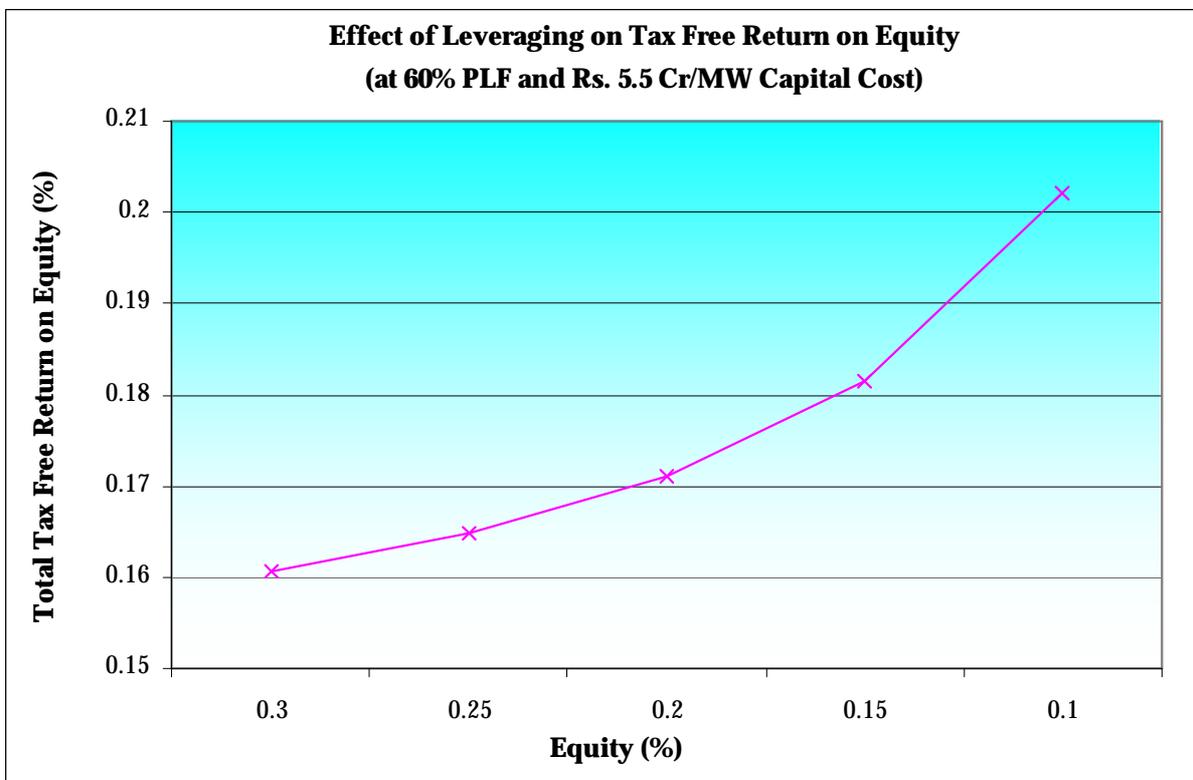
i)   Just effective negotiation of loan terms can increase a developer's tax free return substantially, all other parameters remaining unchanged.

ii)   By restricting the equity investment to 15-20%, a developer can increase the return on investment to over 17-18% tax free.

Graph 5: Combined effect of Capital Cost and Debt Equity Ratio
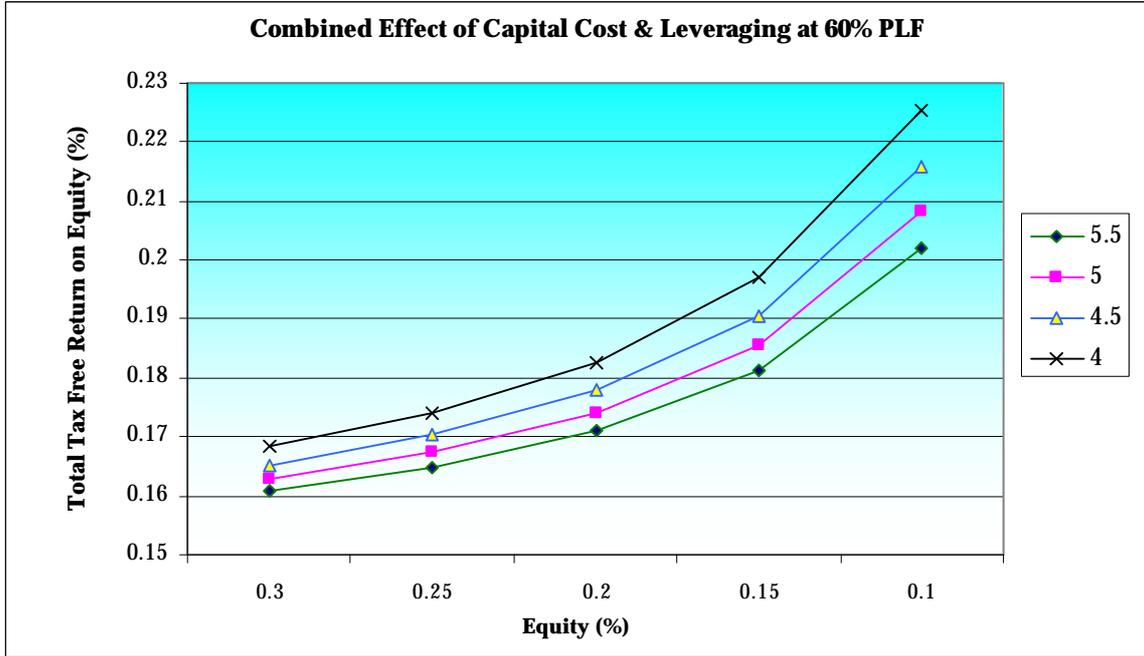
i) An optimum combination of a project's Capital Cost, PLF and debt equity ratio improves the return on developer's investment dramatically.

ii) For a fixed value of PLF, return on developer's investment increases as the loan component increases and this increases even further if the capital cost of the project is also controlled.

iii) For a plant with capital cost of Rs. 4 Crore/MW and PLF of 60%, the total return on developer's investment increases from about 16.5% to almost 23% tax free.

3   Conclusions

34.   For reasons discussed above, the Commission hereby notifies its approach for determining tariffs for hydro generating stations having capacities higher than 1 MW and upto 25 MW during the initial 5 years when reliable historical data is not available. Generation tariff for each new small hydro generating station (having capacities of more than 1 MW and upto 25 MW) for the initial years will be fixed on cost plus basis in

accordance with Uttaranchal Electricity Regulatory Commission (Terms and Conditions for Determination of Hydro Generation Tariff) Regulations, 2004 subject to following stipulations:

i) The actual capital cost of such project will not exceed Rs. 5.5 Crore/MW.

ii) The actual PLF for a project will not be less than 45% determined on annual basis. As stated in the Approach paper, PLF means annual saleable energy as %age of the energy generated annually at plant's full installed capacity.

iii) In relaxation of Regulation 26 (2), the actual O&M expenses shall not be more than 3% of the capital cost. In addition actual insurance charges will be allowed subject to a ceiling of 1% of the capital cost.

iv) The Annual Fixed Charges (AFC) of such stations will be recovered from saleable energy available at 45% PLF through a single part tariff.

v) Electricity sold over and above the minimum PLF level of 45% will earn the generator only incentive calculated as per the rates given below.

Year after Commissioning	1	2	3	4	5
Rate (p/u)	26	26	25	24	24

vi) All other related matters will be decided in accordance with the Regulations already notified by the Commission.

vii) A generator will have the option to get its tariff determined in accordance with the Regulations as relaxed above but subject to the normative ceiling of the capital cost, O&M expenses and minimum PLF stipulated above. Alternatively, a generator could get its tariff determined strictly in accordance with the Regulations without any relaxations or normative ceiling or minimum stipulations. The generator will exercise this option at the time of determination of its first tariff and the options so exercised will

be valid for the initial five years. Thereafter, tariff for all such projects will be determined only in accordance with the Regulations already notified.

viii) For projects which do not meet the normative ceiling of capital cost or the normative minimum PLF of 45% the tariff shall be determined in accordance with the notified Regulations without any relaxation, unless their tariff is determined through competitive bidding envisaged in section 63 of the Act or the Government could come forward to subsidise such projects.

ix) In case of more than one beneficiary, each beneficiary will bear the AFC and the incentive payable to the generator in proportion to its share in the total generation.

x) These provisions will apply only on a developer who enters into a power supply contract with the distribution licensee valid for a period of at least 20 years for entire or committed capacity.

(Divakar Dev)
Chairman

Annexure- I

List of Respondents in the Approach Paper to Initial Tariff Determination for New Small Hydro Generating Station

S. No.	Name & Designation of Respondents	Address
1	Sh. Mohan K. Kejriwal, President	Indian Small Hydro Power Developers Association, 82/2, Cooperganj, Kanpur.
2	Sh. B. Sadasiva Reddy, Director	Chamoli Hydro Power Private Ltd. 11, Moti Bhawan, Collectorganj, Kanpur
3	Sh. K. Vikram Reddy, Director	Himalay Hydro Pvt. Ltd. Plot no. 6, MLA & MP's Colony, Road No. 10-C, Jubilee Hills, Hyderabad
4		Polyplex Corporation Ltd, Lohia Head Road, Khatima (US Nagar)
5	Sh. S.K. Kejriwal	Birahi Ganga Hydro Power Ltd. 32-33, Nehru Place, Flat No. 403, New Delhi
6	Sh. M.R. Hazra, OSJS (Retd.), Secretary	Orissa Electricity Regulatory Commission, Bidyut Niyamak Bhawan, Unit-III, Bhubaneswar
7	Sh. Mohan K. Kejriwal, Managing Director	Harsil Hydro Ltd., 82/2 Cooperganj Kanpur
8	Sh. S.K. Rastogi, General Manager (SHP)	Office of the General Manager, Small Hydro Projects, UJVNL, T-30-32, Yamuna Colony Dehradun
9	Sh. Arun Gupta, Managing Director	Him Urja Pvt. Ltd. E-14, East of Kailash, New Delhi
10	Dr. R. K. Garg, Advocate	57, EC Road, Dehradun
11	Sh. Shekhar Bhandari,	Super Hydro Electric (P) Ltd., C-127, Defence Colony, New Delhi

12	Secretary	Kerela State Electricity Regulatory Commission, 30, Parameswara Bhavan, Belheaven Gardens, Kawdiar, Thiruvananthapuram.
13	Secretary	PHD Chamber of Commerce & Industry, 4/2, Siri Institutional Area, August Kranti Marg, New Delhi
14	Sh. Arun K. Srivastava, Secretary	Uttar Pradesh Electricity Regulatory Commission, Kisan Mandi Bhawan, 2nd Floor, Gomtinagar, Lucknow
15	Sh. Arun Kumar, Head, AHEC	Indian Institute of Technology, Alternate Hydro Energy Center, Roorkee
16	Sh. R.S. Reddi, Director	Himalaya Hydro Private Ltd, 197, Road No. 13, Jubliee Hills, Hyderabad
17	Director	Parvatiya Power (P) Ltd. Abhivadan, Panchsheel Nagar, Raipur (MP)
18	Sh. N. Ravi Shanker, Secretary	Secretary (Energy) Govt. of Uttaranchal, Dehradun.
19	Chief General Manager, State Bank of India	State Bank of India, Consultancy Services Cell, Local Head Office, 2nd Floor, 11, Sansad Marg, New Delhi.
20	Sh. K.S. Sridharan, Chief General Manager	Indian Renewable Energy Development Agency Limited, India Habitat Centre, Core-4A, East Court, 1st Floor, Lodhi Road, New Delhi - 110003