

**BEFORE THE J&K STATE ELECTRICITY REGULATORY COMMISSION****AFFIDAVIT**

Petition No.

(To be filled by the office, if number  
has not earlier been assigned)

In the matter of:

application for approval of annual revenue requirement and tariff petition of Hydro Electric Stations, Gas Turbine and Transmission Line of JKSPDC for the financial year 2009-10 and 2010-11 in terms of clause 45 of the J&KSERC (conduct of business) regulations and J&KSERC (terms & conditions of determination of hydro generation tariff) regulations, 2005 as amended from time to time, wherever applicable

Name(s) and full address (s)

Jammu & Kashmir State Jammu & Petitioner(s)  
Kashmir State Power Development Corporation  
Limited,  
Exhibition Ground, Srinagar / Ashok Nagar,  
Satwari, Jammu

Affidavit nature of petition  
(Specific nature of Petition)

Affidavit for “Approval of annual revenue requirement and tariff petition of Hydro Electric Stations, Gas Turbine and Transmission Line of JKSPDC for the financial year 2009-10 and 2010-11 in terms of clause 45 of the J&KSERC (conduct of business) regulations and J&KSERC (terms & conditions of determination of hydro generation

tariff) regulations, 2005 as amended from time to time, wherever applicable

I, Mohammad Hussain Teli, son of Kh. Abdul Rashid Teli aged 47 years residing at Jammu and presently posted as Deputy General Manager, JKSPDC do hereby solemnly affirm and declare on oath as under:-

The statements made in paragraphs 1-7 of the petition / application herein now shown to me and marked with the letter "A" are true to the best of my knowledge and the statements made in paragraphs 8-12 are based on information received and I believe them to be true.

That the contents of the above affidavit are true to my knowledge and no material has been concealed therefrom.

Deponent

Identified before me

BEFORE THE J&K STATE ELECTRICITY REGULATORY COMMISSION (J&KSERC),  
JAMMU

Filing No.....

Case No.....

IN THE MATTER OF:

JAMMU & KASHMIR STATE POWER DEVELOPMENT  
CORPORATION LIMITED  
(HEREINAFTER REFERRED TO AS JKSPDC),  
EXHIBITION GROUND, SRINAGAR-190009, KASHMIR /  
ASHOK NAGAR, SATWARI, JAMMU

..... **Petitioner.**

The Applicant respectfully submits as under:-

**1. BACKGROUND**

The Corporation was incorporated as “Jammu and Kashmir State Power Development Corporation Private Limited” on 16<sup>th</sup> February 1995 under the Companies Act, 1956. Subsequently, the Corporation was converted to public limited Company and the name was changed to “Jammu and Kashmir State Power Development Corporation Limited” and a new Certificate of Incorporation was issued by the Registrar of Companies, Jammu & Kashmir, at Jammu on 24<sup>th</sup> November, 1999. The Corporation is wholly owned by the State Government of Jammu & Kashmir.

The Corporation, in spite of being incorporated on 16.02.1995, continued to work on Treasury pattern upto 31.12.1997. JKPDC effectively shifted to commercial pattern / Banking System with effect from 01.01.1998 as per Government Order No. 329F of 1997 dated 10.12.1997 when its financial set up was de-linked from the Treasury. The assets acquired costing Rs. 907.84 crore was transferred to the Corporation in the year 1999 vide Order No. PDD/AC/11/99 dated 29.10.1999

**2. MAIN OBJECTS**

The main objects of the Corporation on its incorporation were:-

- (i) To take over, execute, complete and operate Power Stations and Power projects of the Jammu and Kashmir Government including all property rights and other rights and obligations including with respect to personnel that may be assigned by the Government of the State of Jammu and Kashmir, and to arrange for conveyancing

loan or assignment in favour of the Company of all properties and rights that may be necessary for this purpose.

- (ii) a. To plan, promote and organize an integrated and efficient development of electric power in all aspects including planning, investigation, research, design and preparation of preliminary feasibility and detailed project reports, construction, generation, operation and maintenance of Power Stations and projects, transmission, distribution and sale of power generated at power stations in accordance with the policy of the State of Jammu and Kashmir and objectives laid down by the State Government from time to time.
- b. To undertake, where necessary, the construction of transmission lines and ancillary works for timely and coordinated supply of Power.
- (iii) To co-ordinate the activities of its subsidiaries, to determine their economic and financial objectives / targets and to review, control, guide and direct their performance with a view to secure optimum utilization of all resources placed at their disposal.
- (iv) To act as an agent of the Government / Public Sector Institutions, to exercise all the rights and powers exercisable at any meeting of any Company engaged in the Planning, Investigation, Research, Design and Preparation of Preliminary Feasibility and Detailed Project Reports, Construction, Generation, Operation and Maintenance of Power Stations and Projects, Transmission, Distribution and Sale of Power, in respect of any shares held by the Government, Public Financial Institutions, National Banks, Nationalized Insurance Companies with a view to secure the most effective utilization of the financial investments and loans in such companies and the most efficient development of the concerned industries.
- (v) To carry on the business of purchasing, selling, importing, exporting, producing, trading, manufacturing or otherwise dealing in power generation and transmission equipment and supplies for power development, ancillary and other allied industries and for that purpose to install, operate and manage all necessary plants, establishments and works.

### 3 INSTALLED CAPACITY

#### (i) Hydro Electric Power Stations

The Corporation has 20 hydro electric power stations (HEPs) having total installed capacity of 763.70 MW. Out of these total HEPs, 18 hydro power stations were commercially in operation at the beginning of the year.

One new HEP namely Baglihar has been commissioned on 01/04/2009.

One HEP namely Mohra, is not operating since floods of Sep, 1992.

Thus 19 HEPs having total installed capacity of 754.70 MW owned by the Corporation are presently functioning.

Accordingly details of installed capacity of hydro electric power stations of JKSDPC for the year 2009-2010 are given here under:-

#### Details Of Hydro Electric Power Stations

Sl. No.	Name of Power House	Unit	Capacity of each unit (MW)	Installed Capacity (MW)	Year of Commissioning
<b>A.</b>	<b>Jhelum River Basin</b>				
1	Lower Jhelum	Unit I	35.00	105.00	Feb, 1978
		Unit II	35.00		Jan, 1979
		Unit III	35.00		Nov, 1979
2	Upper Sindh – I	Unit I	11.30	22.60	Dec, 1973
		Unit II	11.30		July, 1974
3	Ganderbal	Unit I	3.00	15.00	Feb, 1955
		Unit II	3.00		Feb, 1955
		Unit III	4.50		1961
		Unit IV	4.50		1961
4	Upper Sindh – II	Unit I	35.00	105.00	June, 2000
		Unit II	35.00		Sept, 2001
		Unit III	35.00		June, 2002
5	Karnah	Unit I	1.00	2.00	1991
		Unit II	1.00		1997
6	Pahalgam	Unit I	1.50	3.00	June, 2005
		Unit II	1.50		June, 2005

Sl. No.	Name of Power House	Unit	Capacity of each unit (MW)	Installed Capacity (MW)	Year of Commissioning
<b>B.</b>	<b>Chenab Basin</b>				
7	Chenani – I	Unit I	4.66	23.30	1971
		Unit II	4.66		1971
		Unit III	4.66		1971
		Unit IV	4.66		1975
		Unit V	4.66		1975
8	Chenani – II	Unit I	1.00	2.00	1996
		Unit II	1.00		1996
9	Chenani – III	Unit I	2.50	7.50	2003
		Unit II	2.50		2003
		Unit III	2.50		2003
10	Baderwah	Unit I	0.50	1.00	May, 2005
		Unit II	0.50		May, 2005
11	Baglihar	Unit I	150	450	01/04/ 2009
		Unit II	150		
		Unit III	150		
<b>C.</b>	<b>Ravi Basin</b>				
12	Sewa – III	Unit I	3.00	9.00	June, 2002
		Unit II	3.00		Oct, 2002
		Unit III	3.00		June, 2003
<b>D.</b>	<b>Indus Basin</b>				
13	Iqbal Bridge	Unit I	1.25	3.75	Nov, 1995
		Unit II	1.25		1996
		Unit III	1.25		1996
14	Hunder	Unit I	0.20	0.40	1995
		Unit II	0.20		1995
15	Sumoor	Unit I	0.05	0.10	1993
		Unit II	0.05		1993
16	Bazgo	Unit I	0.15	0.30	1994
		Unit II	0.15		1994
17	Igo-Mercellong	Unit I	1.50	3.00	1/6/2005
		Unit II	1.50		19/08/2005
18	Marpachoo	Unit I	0.25	0.75	2006
		Unit II	0.25		2006
		Unit III	0.25		2006
19	Haftal	Unit I	0.50	1.00	2006-2007
		Unit II	0.50		2006-2007
	<b>Total capacity in MW</b>			<b>754.70</b>	

**(ii) Gas Based Thermal Power Stations**

In addition to the hydro electric power stations PDC has Gas Based Thermal Power Stations as listed below which are operated only on call from transmission & distribution utility i.e. J & K PDD only due to prohibitive cost of power generation.

Government of Jammu and Kashmir bears only the cost of fuel whenever the units are operated.

S. No.	Name of Power House	Unit	Capacity of Each unit (MW)	Installed Capacity (MW)	Year of Commissioning
1	Gas Turbine Station –I Pampore	Unit I	25.0	75.00	1989-90
		Unit II	25.0		1989-90
		Unit III	25.0		1989-90
2	Gas Turbine Station –II Pampore	Unit I	25.0	100.00	1993-94
		Unit II	25.0		1993-94
		Unit III	25.0		1993-94
		Unit IV	25.0		1993-94
<b>Total Thermal capacity</b>				<b>175.00</b>	

**(iii) Transmission System**

PDC has commissioned a 400kV D/C line from Baglihar to Kishenpur and two bays at 400kV Kishenpur S/s of PGCIL. The tariff for the same has been determined separately

**4. ENERGY SALES WITHIN THE STATE TO POWER DEVELOPMENT DEPARTMENT (PDD)**

The entire quantity of electricity generated by the HEPs, which have since been commercially commissioned, is being sold within the State to the Power Development Department (PDD) except for Baglihar Phase –I where 50% generation is sold to Power Development Department (PDD) and balance 50% generation is sold through Power Trading Corporation, to meet the lenders requirement

**5. COMPLIANCE OF DIRECTIVES**

In compliance to the directives issued by the Hon'ble Commission in its order dated 31<sup>st</sup> March 2009 in Petition No. 16, filed for approval of Annual Revenue Requirement (ARR) and Approval of Generation Tariffs for the year 2008-2009. We submit as under:-

**Directive – 1****Determination of Capital Cost of old plants**

The Commission had directed that in case of the old 11 Hydro Electric Projects previously covered in the Power Purchase Agreement dated 26<sup>th</sup> April 2000, the tariff proposal be submitted either after tracing the old records in support of capital cost or arrange valuation or engage a consultant for determining capital cost.

Petitioner submits that an independent consultant was engaged on 7<sup>th</sup> September 2009 for valuation of assets of old plants where the records in support of historical capital cost is not traceable. The independent consultant has submitted the report on the capital cost which is given in the table below:-

(Rs. in lac)

Sl.No.	Name of Power House	Current Replacement Value	Net Replacement Value
<b>A.</b>	<b>JHELUM RIVER BASIN</b>		
1	Karnah	2109.02	1354.53
2	USHP-I	17694.24	4626.71
3	Lower Jhelum	96197.99	42124.55
4	Ganderbal	10449.94	1594.80
<b>B.</b>	<b>INDUS BASIN</b>		
5	Iqbal Bridge	4210.23	2463.27
6	Bazgo	339.69	215.88
7	Sumoor	114.93	69.78
8	Hunder	452.47	286.20
<b>C.</b>	<b>CHENAB BASIN</b>		
9	Chenani – II	2249.96	1173.04
10.	Chenani – I	21421.91	7849.11

The certificate from the consultant on valuation is enclosed as **Annexure C5**.

**Directive – 2****Completion Report for Eight HEPS**

The Hon'ble Commission had directed to submit the audited project completion reports for the 8 HEPS.

To prepare completion report for 8 HEPs, an independent consultant was appointed who has furnished completion reports for 8 HEPs after visiting the site and other offices and ascertaining the factual details. The completion cost duly audited is given below:-

Sl. No.	Name of HEPs	Completion cost of the Project (Rs in lac)
1	Sewa III	6684.16
2	USHP-II (Kangan)	43499.26
3	Pahalgam	5520.06
4	Bhaderwah	1060.45
5	Chenani III	5496.83
6	IGO- Mercellong	4942.32
7	Haftal	1612.96
8	Marpochoo	1284.54

Certificate of the consultant in this regard is enclosed as Annexure C7

### **Directive – 3**

#### **Manpower**

Regarding the directive of the Commission on manpower, the Petitioner submits that an independent consultant was employed who has conducted a detailed man power study and analyzed the training needs.

Given below is a note on Comprehensive Restructuring Proposal

JKSPDC has engaged M/s Ernst & Young as consultants for carrying out study for preparing comprehensive restructuring proposals for the corporation. The scope of work of the consultants as per the contract agreement is as follows:-

#### **Scope of Work**

- 1) Formulation of Organization Structure for the Corporation
- 2) Determination of roles, positions and work relationships
- 3) Assigning functional responsibility and commensurate delegation of powers to each position enabling execution of its role and duties efficiently.
- 4) Integration of the structure at the operational and corporate level for smooth and better performance of operations as well as to respond to future demands.

- 5) Identify training needs at different functional levels and suggest specific measures to be taken for capacity development
- 6) Manpower Planning Study for future up-gradation / expansion plans of J&KSPDC
- 7) Specify performance linked incentive system
- 8) Define overtime work compensation system
- 9) Preparing Service Manual/Standing Orders for the organization
- 10) Terms & Conditions of Service and Recruitment Rules of the employees by taking into account the legacy issues connected with the creation of the JKSPDC. Some of the tasks of the scope of work are elaborated in items 11-15 below.
- 11) Reviewing Institutional Framework: This will be undertaken by the consultant concomitant to the scope stated hereinbefore. The consultant will review the institutional and legal framework and identify the constraints that the existing framework has imposed, and/or may impose, on the power sector in the state. This review will help assess the changes required in the existing institutional framework. The consultant will analyze the HR process, with a focus on manpower adequacy, skill levels, motivation levels, etc. The consultant shall study the relevant legal and regulatory issues as defined by the State Government, Company Law, etc. The consultant will discuss the issue with different stakeholders, including key personnel in the Power Sector of the State. The consultant will also examine manpower planning in light of the proposed up-gradation and expansion plans of JKSPDC.
- 12) Recommendation of Organization Structure: Based on the findings in the preceding scope (item-11), specific recommendations will be made by the consultant in respect of legal and procedural framework along with draft outline, evaluating pros and cons of new setup and dealing with the social, legal and financial issues pertaining to rationalization, redeployment and re-skilling of the existing manpower of JKSPDC. While assessing the requirement of manpower for JKSPDC, the successful bidder consultant will consider the projected growth in the scale of operations such as targeted generation capacity, to ensure that the

manpower will be adequate to service the needs of the increased scale in operations. The consultant will suggest ways to redeploy the surplus staff, if any, after studying the legal and financial implications.

- 13) The consultant will also explore and suggest the possible career growth for various classes of employees in the organization. The consultant will also identify the skill sets required for improving the efficiency of operations, and will identify training and development needs, and, the measures for capacity development.
- 14) The consultant would create templates and suggest a methodology for the creation of employee database.
- 15) **Drafting HR Rules and Regulations:** The consultant shall study the employees' existing rules and regulations, and, recommend a new structure of rules. The Employee Rules will be recommended considering the organization structure, the nature of the work undertaken, productivity levels desired etc., with a view to enhance manpower productivity and minimizing resource losses. While formulating the HR Rules, the consultant would take into consideration the Labour Laws, prevailing HR Rules and other relevant Govt. regulations. Special efforts will be made to ensure that the proposed terms and conditions of service for the employees, presently on deputation from the Govt. and who get absorbed in the Corporation would not be inferior to their existing terms and conditions of service. Besides, the consultant would also suggest a suitable mechanism to address the pension liabilities of the Corporation on account of such absorbed employees, as also, any other terminal benefits due to such employees an account of their past service with the Govt. The HR rules will specify the rules regarding several aspects relating to the day-to-day functioning, interalia:
  - Nature and scope of work
  - Recruitment Policy
  - Probation Period
  - Salary
  - Accommodation
  - Conveyance Allowance/Reimbursement

- Medical Expenses Reimbursement
- Provident Fund
- Gratuity/ Superannuation
- Leave Encashment
- Traveling and Conveyance Rules
- Incentive/ Bonus Scheme
- Pension Liabilities/Terminal Benefits
- Overtime compensation rules
- Code of conduct
- Performance Evaluation
- Transfer
- Promotion
- Exit Policy

16) Training Needs

17) Any other matter/issue related to above scope of work including evaluation of outsourcing opportunities.

As per the contract agreement the Consultants are being paid Rs 53 lacs as fee for the assignment. Implementation of the proposals will have substantial financial implications which will be worked out on submission of final report.

The Consultants have presented the final report before the Management Committee of JKSPDC prior to presenting the same before the BoD, JKSPDC. Based on the input of the BoD, JKSPDC, the consultants will submit final report most likely by March 2010.

#### **Directive – 4**

##### **Expenditure on Gas Turbine Systems**

For the Gas turbine Power plant separate records for the expenditure are being maintained now. However the Tariff Petition for the Gas Turbine Stations is prepared on the basis of the Regulation of Central Electricity Regulatory Commission's applicable for 2009-2014 issued on dated 19<sup>th</sup> January 2009 (in view of the status that no Regulation is notified by J & KSERC till date).

**Directive – 5****Submission of next petition**

The petition for 2009-10 & 2010-11 is being filed after compiling directives 1 and 2 above. The Tariff Petition for Baglihar HEP along with status report from an independent consultant is also submitted for determination of tariff.

**Directive – 6****Design Energy**

To comply with the directive of the Commission, an independent consultant was also appointed for valuation of Design Energy calculations. The consultant has submitted its report for calculating the design energy as per definitions provided in the Regulations and accordingly the design energy for 19 HEPs is given in the following table:-

Sl. No.	Name of Power House	Installed Capacity (MW)	Year of Commissioning	Design Energy in MUs as per consultant
<b>A.</b>	<b>Jhelum River Basin</b>			
1	Lower Jhelum	105.00	Feb, 1978	609.43
			Jan, 1979	
			Nov, 1979	
2	Upper Sindh – I	22.60	Dec, 1973	106.62
			July, 1974	
3	Ganderbal	15.00	Feb, 1955	90.15
			Feb, 1955	
			1961	
			1961	
4	Upper Sindh – II	105.00	June, 2000	447.37
			Sept, 2001	
			June, 2002	
5	Karnah	2.00	1991	11.36
			1997	
6	Pahalgam	3.00	June, 2005	14.920
			June, 2005	
<b>B.</b>	<b>Chenab Basin</b>			
7	Chenani – I	23.30	1971	110.02
			1971	
			1971	
			1975	
			1975	

Sl. No.	Name of Power House	Installed Capacity (MW)	Year of Commissioning	Design Energy in MUs as per consultant
8	Chenani – II	2.00	1996	12.00
			1996	
9	Chenani – III	7.50	2003	36.71
			2003	
			2003	
10	Baderwah	1.00	May, 2005	8.32
			May, 2005	
11	Baglihar	450	1 <sup>st</sup> April 2009	2536.07
<b>C.</b>	<b>Ravi Basin</b>			
12	Sewa – III	9.00	June, 2002	33.06
			Oct, 2002	
			June, 2003	
<b>D.</b>	<b>Indus Basin</b>			
13	Iqbal Bridge	3.75	Nov, 1995	21.23
			1996	
			1996	
14	Hunder	0.40	1995	1.77
			1995	
15	Sumoor	0.10	1993	0.45
			1993	
16	Bazgo	0.30	1994	1.09
			1994	
17	Igo-Mercellong	3.00	1/6/2005	15.88
			19/08/2005	
18	Marpachoo	0.75	2006	3.79
			2006	
			2006	
19	Haftal	1.00	2006-2007	4.88
			2006-2007	
	<b>Total capacity in MW</b>	<b>754.70</b>		<b>4016.92</b>

The certificate of the consultant on working out the Design Energy is enclosed as **Annexure C6**.

**Directive – 7**

**Expenditure on O & M**

The Commission has also asked for the actual expenditure on Operation & Maintenance cost for the HEPs. Project wise record of the O&M expenditure was not maintained in the corporation in the past. This shall be maintained from year 2009-10 onwards.

It may not be out of place to mention here that the O & M expenditure in the past were not in line with the requirement of the O & M. The reason being-

- (i) the paucity of funds due to non payment in full of Tariff dues by PDD
- (ii) non availability of shut downs due to huge deficit in power availability vis-à-vis requirement, in the State.

In view of the above, the Hon'ble Commission is prayed to allow O & M Charges based on norms for next 5 years and may be reviewed based on actual expenditure and performance thereafter once the power plants get stabilized..

Presently we are considering the O & M charges as follows:-

- (a) For 9 HEPs (including Baglihar) @ 1.5% of the cost plus annual escalation of 4% where capital cost is available
- (b) For 10 old HEP's on the basis of Net Replacement Value, the O & M has been taken as Rs.20.00 Lacs per MW & Rs. 18.75 lac per MW based on the calculations enclosed as **Annexure -1**

### **Directive – 8**

#### **Valuation of Assets of HEP**

Hydro power projects have a life of 35 years.. In view of the provision of advance against depreciation, JKSPDC should be allowed to consider normal depreciation @2.57% per annum for 10 years and thereafter the residual value in next 25 years. In view of this asset wise classification is prayed not to be insisted upon.

## **6. METHODOLOGY OF DETERMINATION OF TARIFF**

### **A. For 10 Old HEP**

For the following 10 hydro power projects for which records could not be traced out, valuation has been got done by an independent consultant as given in the table below:

(Rs. in lac)

Sl. No.	Name of Power House	Unit	Capacity of each unit (MW)	Installed Capacity (MW)	Year of Commissioning	Current Replacement Cost	Net Replacement Value (NRV)
1	Upper Sindh-I	Unit I	11.3	22.6	Dec, 1973	17694.24	4626.71
		Unit II	11.3		July, 1974		
2	Lower Jhelum	Unit I	35	105	Feb, 1978	96197.99	42124.55
		Unit II	35		Jan, 1979		
		Unit III	35		Nov, 1979		
3	Ganderbal	Unit I	3.0	15	Feb, 1955	10449.94	1594.80
		Unit II	3.0		Feb, 1955		
		Unit III	4.5		1961		
		Unit IV	4.5		1961		
4	Chenani-I	Unit I	4.66	23.3	1971	21421.91	7849.11
		Unit II	4.66		1971		
		Unit III	4.66		1971		
		Unit IV	4.66		1975		
		Unit V	4.66		1975		
5	Karnah	Unit I	1	2	1991	2109.02	1354.53
		Unit II	1		1997		
6	Iqbal Bridge	Unit I	1.25	3.75	Oct, 1995,	4210.23	2463.27
		Unit II	1.25		1996 &		
		Unit III	1.25		1996		
7	Bazgo	Unit I	0.15	0.30	1994	339.69	215.88
		Unit II	0.15				
8	Sumoor	Unit I	0.05	0.10	1993	114.93	69.78
		Unit II	0.05				
9	Hunder	Unit I	0.20	0.4	1995	452.47	286.2
		Unit II	0.20				
10	Chenani-II	Unit I	1	2	1996	2249.96	1173.04
		Unit II	1		1996		

Following methodology is adopted for working out the tariff.

1. Considered the cost of project as on 1st April 2009 based on Net Replacement Value (NRV)
2. Considered 50% of this as equity for these projects which were commissioned long back and at that time the consideration for the equity used to be 50% on normative basis though actual equity employed was almost 100%.

3. The O & M expenses is considered as Rs. 20 Lac / MW and Rs.18.75 Lac / MW for the year 2009-10 and escalated @ 4% per annum (as per the Tariff Notification dated 23.09.2005) for the year 2010-11, with details as per Annexure - 1.
4. Considered depreciation @1% for the very old power projects Sl. No. 1.to 4 commissioned before 1980's and for the projects at Sl. No.5 to 10 commissioned after 1993, the depreciation have been taken as 2% per annum (Ignoring the additional capital expenditure incurred from time to time in the past)
5. Considered no interest on loan.
6. Considered interest on working capital as per the Regulations

**B. For 8 HEPs**

For 8 HEPs commissioned before the year 2007 wherein the completion reports have been prepared by the consultant, the tariff is prepared as per Regulations. The cost of project submitted earlier was not approved by the Commission which had allowed the cost only @ Rs.5.5 Crore / MW. Now with the completion cost as compiled by the consultant and certified by the Chartered Accountant, the tariff is prepared based on these compiled Completion Costs.

**C. New Project**

Baglihar Stage-I, 450 MW HEP was put on commercial operation on 1<sup>st</sup> April, 2009. The tariff have been calculated based on the capital cost required for completion of the project after accounting for the actual revenue received from infirm power received by the JKSPDC.

Depreciation has been considered @ 2.57% on the over all project cost excluding the cost of land. Advance Against Depreciation has been considered as per Regulations, wherever applicable.

Annexure-1DETAILS OF (O&M) CHARGES CONSIDERED**A) For Station Up To 25 Mw**

As per Regulation 2 of Notification dated 10<sup>th</sup> May, 2006 of J&K SERC dealing with generating stations of capacity 1 MW to 25 MW -(O&M) charges at the rate of 3% of the Capital cost of Rs.5.5 crore / MW have been specified.

Considering the above provision, the (O&M) charges for the year 2009-10 works out to be Rs. 20.07 lacs / MW. The calculations are given as under:

Capital cost                      Rs.5.5 crore /MW

(O&M) Rate                      3.0% of Capital cost with annual escalation  
@ 4% (as per Regulation 26(2) (a) of Regulation dated 23.9.2005.

(O&M – Rs. lac / MW)

Particulars	2004-05	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11
O&M Charges	16.50	17.16	17.85	18.56	19.30	20.07	20.87

Based on the above (O&M) for the year 2009-10 it is considered @ Rs.20 lac / MW.

**B) For Stations Above 25 Mw**

As per Regulation 26(2)(b) of Regulation dated 23.9.2005, (O&M) charges @ 1.5% of the Capital Cost with annual escalation @ 4% are allowed.

Based on the above provisions, the (O&M) charges for Baglihar HEP for the year 2009-10 works out to be Rs.18.75 Lac / MW.

The calculations are given as under:

Capacity of Baglihar HEP                      450 MW

Capital Cost on COD (1.4.2009)  
(only cost of HEP)                      Rs. 562590 lacs

(O&M) charges @ 1.5% of Capital  
Cost                       $\frac{562590 \times 1.5}{450 \times 100} = 18.75 \text{ lacs/MW}$

Based on this, the (O&M) charges for Lower Jehlum HEP (LJHP) of 105 MW capacity has been considered without taking into account economy of scale.

**7. PRESENT STATUS OF BILLING OF ENERGY**

It is to submit before Hon'ble Commission that presently billing of energy from 18 HEPs is being done provisionally as per Hon'ble Commission's order dated 31<sup>st</sup> March, 2009 applicable for the year 2008-09.

For the Baglihar HEP the billing is being done @ Rs. 3.54 per kWh as per Power Purchase Agreement with PDD dated 13.12.2000

**8. A. DETERMINATION OF TARIFF FOR 8 HEPs**

As per the directives of the Honourable Commission, the completion cost of 8 HEPs has been finalized and the tariff has been calculated with the procedure defined in Chapter 4. of JKSERC Regulations, 2005 dated 23.09.2005:-

Sl. No.	Name of HEP	Capacity MW	COD
1.	USHP-II Kangan	105.00	June, 2002
2.	Chenani-III	7.50	June, 2003
3.	Sewa-III	9.00	June, 2003
4.	Pahalgam	3.00	June, 2005
5.	Igo-Marcellong	3.00	Aug; 2005
6.	Baderwah	1.00	May, 2005
7	Marpochu	0.75	2006
8	Haftal	1.00	2006-07

As defined in the said Regulations, the two part tariff for sale of electricity from a hydro power station shall comprise of recovery of Annual Capacity Charges and primary Energy Charges. Accordingly following have been considered for tariff Petition:-

**Annual Fixed Charges:**

The Annual Fixed Charges (AFC) consists of:-

- (i) Interest on Loan Capital

- (ii) Depreciation including Advance Against Depreciation
- (iii) Return on Equity
- (iv) Operation & Maintenance Expenses
- (v) Interest on Working Capital

The assumptions considered for 8 HEPs are given below:

S No	Particulars	Unit	Value	
1	<b>Plant Availability Factor</b>			
	Normative Capacity Index		First Year	Afterwards
	Run of River	%	85	90
	Storage Type	%	80	85
2	<b>Auxiliary Consumption</b>		With Rotating Exciter	With Static Excitation
	Surface	%	0.20	0.50
	Underground	%	0.40	0.70
3	<b>Transformer Losses</b>	%	<u>0.50</u>	-
4	<b>O&amp;M Expenses</b>			
	% of Cap Cost	%	1.50	
	Annual Escalation	%	4.00	
5	<b>Depreciation</b>			
	Plant Life 35 Yrs, Residual life 10%	%	2.57	
	Advance Against Depreciation	Equivalent to difference of actual repayment of loan and normal depreciation		
6	<b>Working Capital</b>			
	Receivable	months	2	of Fixed Charges
	O & M Expenses	months	1	
	Spares for Maintenance	%	1	of historic cost
	Escalation in Spares Inventory	%	6	
	Rate of Interest	%	11 as per PLR of J&K Bank as on 1.4.2005	
7	<b>Return on Equity</b>	%	14	
8	<b>Initial Spares as part of Capital Cost</b>	%	1.50	

S No	Particulars	Unit	Value	
9	<b>Equity</b>	%	30	Net Project Cost
	<b>Loan</b>	%	70	Net Project Cost
10	<b>Interest</b>	%	as per sanction	
11	<b>Moratorium</b>		No moratorium after COD	
12	<b>Sale of Infirm Power</b>		UI Rate	
13	<b>Foreign Exchange Rate Variation</b>		Foreign exchange involved	

a) **Project Cost**

Final project costs of the 8 HEPs as per completion report and as certified by the Chartered Accountant (Copy enclosed) is as given under:-

Sl. No	Name of HEP	Capacity in MW	Total Project Cost Rs in Million
1	USHP-II Kangan	105.00	4349.926
2	Chennani-III	7.50	549.68
3	Sewa-III	9.00	668.42
4	Pahalgam	3.00	552.01
5	Igo-Mercellong	3.00	494.23
6	Baderwah	1.00	106.04
7	Marpachoo	0.75	128.45
8	Haftal	1.00	161.30

**b) Design Energy**

The Design Energy as validated by the consultant for the following eight nos. HEPs has been considered for calculation of Gross Generation.

Sl. No	Name of HEP	capacity in MW	Design Energy in MUs
1	USHP II	105.00	447.37
2	Chennani III	7.50	36.71
3	Sewa III	9.00	33.06
4	Pahalgam	3.00	14.920
5	Igo-Mercellong	3.00	15.88
6	Baderwah	1.00	8.32
7	Marpachoo	0.75	3.79
8	Haftal	1.00	4.88

**(c) Interest on Loan Capital**

Details of loan liabilities and rate of interest thereon and moratorium period for these HEPs are enclosed at Annexure F8A. Total interest on loans has been worked out as per Clause 22. of JKSERC Regulation NO.5/JKSERC/2005 dated 23.09.2005 and given here under for the years 2008-09,2009-10,2010-11 and 2011-12.

Sl. No.	Description	Rs. in Million							
		Name of HEP							
		USHP – II	Cheneni - III	Sewa - III	Pahalgam	IGO-Merchellong	Baderwah	Marpachoo	Haftal
1	Total cost of project	4349.93	549.68	668.42	552.01	494.23	106.04	128.45	161.30
2	MNRE subsidy	0.00	0.00	0.00	30.00	30.00	24.40	17.00	22.50
3	Net cost of the project	4349.93	549.68	668.42	522.01	464.23	81.65	111.45	138.80
4	Total normative Loan considering 70% of the net cost of the project	3044.95	384.78	467.89	365.40	324.96	57.15	78.02	97.16

Sl. No.	Description	Rs. in Million							
		Name of HEP							
		USHP – II	Cheneni - III	Sewa - III	Pahalgam	IGO-Merchellong	Baderwah	Marpachoo	Haftal
5	Total normative Equity considering 30% of the net cost of the project	1304.98	164.90	200.52	156.60	139.27	24.49	33.44	41.64
6	Rate of Interest on loan	14.50%	15.00%	15.00%	13.00%	13.00%	13.00%	13.00%	13.00%
7	<b><u>Interest Amount for the year</u></b>								
(i)	2008-09	154.53	25.97	31.58	30.88	27.46	4.83	7.61	9.47
(ii)	2009-10	110.38	20.20	24.56	26.13	23.23	4.09	6.59	8.21
(iii)	2010-11	66.23	14.43	17.55	21.38	19.01	3.34	5.58	6.95
(iv)	2011-12	22.08	8.66	10.53	16.63	14.79	2.60	4.56	5.68

**(d) Depreciation including Advance Against Depreciation****(i) Depreciation**

Depreciation has been calculated annually based on Straight Line Method and computed @2.57% on the Project Cost for the financial year 2008-09 considering the useful life of the asset as 35 years. Details of depreciation for these eight HEPs are given as under:-

Sl. No.	Description	Rs. in Million							
		Name of HEP							
		USHP – II	Cheneni - III	Sewa - III	Pahalgam	IGO-Merchellong	Baderwah	Marpachoo	Haftal
1	Cost of project excluding Land Cost	4274.93	546.68	661.42	546.20	493.48	104.57	127.22	160.83
2	Residual value	10%	10%	10%	10%	10%	10%	10%	10%

Sl. No.	Description	Rs. in Million							
		Name of HEP							
		USHP – II	Cheneni - III	Sewa - III	Pahalgam	IGO-Merchellong	Baderwah	Marpachoo	Haftal
3	Total Depreciation to be claimed	3847.43	492.01	595.27	491.58	444.13	94.11	114.50	144.75
4	Normal depreciation rate	2.57%	2.57%	2.57%	2.57%	2.57%	2.57%	2.57%	2.57%
5	<b><u>Total depreciation for the year</u></b>								
(i)	2008-09	109.87	14.05	17.00	14.04	12.68	2.69	3.27	4.13
(ii)	2009-10	109.87	14.05	17.00	14.04	12.68	2.69	3.27	4.13
(iii)	2010-11	109.87	14.05	17.00	14.04	12.68	2.69	3.27	4.13
(iv)	2011-12	109.87	14.05	17.00	14.04	12.68	2.69	3.27	4.13

**(ii) Advance Against Depreciation (AAD)**

In addition to allowable depreciation, the JKSPDC is entitled to Advance against Depreciation (AAD) also which has been considered as per the formula

“Advance against Depreciation = Annual Repayment of Loan – Normal Depreciation”

Details of AAD are furnished in the following table:-

Sl. No.	Description	Rs. in Million							
		Name of HEP							
		USHP – II	Cheneni - III	Sewa - III	Pahalgam	IGO-Merchellong	Baderwah	Marpa choo	Haftal
1	Total Normative Loan Amount	3044.95	384.78	467.89	365.40	324.96	57.15	78.02	97.16
2	1/10th off Loan	304.49	38.48	46.79	36.54	32.50	5.72	7.80	9.72
3	Annual Repayment of Loan	304.49	38.48	46.79	36.54	32.50	5.72	7.80	9.72
4	Normal Depreciation for full year	109.87	14.05	17.00	14.04	12.68	2.69	3.27	4.13
5	<b><u>Advance Against Depreciation</u></b>								
(i)	2008-09	194.63	24.43	29.79	22.50	19.81	3.03	4.53	5.58
(ii)	2009-10	194.63	24.43	29.79	22.50	19.81	3.03	4.53	5.58
(iii)	2010-11	194.63	24.43	29.79	22.50	19.81	3.03	4.53	5.58
(iv)	2011-12	194.63	24.43	29.79	22.50	19.81	3.03	4.53	5.58

**(e) Return on Equity (ROE)**

As per provision under Regulation 25 of JKSERC Regulations, 2005, Return on Equity has been considered @ 14% per annum for each of Hydro Power Station. However, Debt and Equity components have been taken on actual basis for determination of tariff. Details of Return on Equity for these eight HEPs are given as under:-

Sl. No.	Description	Rs. in Million							
		Name of HEP							
		USHP – II	Cheneni - III	Sewa - III	Pahalgam	IGO-Merchellong	Baderwah	Marpachoo	Haftal
Sl. No	Name of HEP	USHP – II	Cheneni - III	Sewa - III	Pahalgam	IGO-Merchellong	Baderwah	Marpachoo	Haftal
1	Net cost of the Project	4349.93	549.68	668.42	522.01	464.23	81.65	111.45	138.80
2	Total normative Equity 30% of the Project Cost	1304.98	164.90	200.52	156.60	139.27	24.49	33.44	41.64
3	Rate of Return on Equity	14.00%	14.00%	14.00%	14.00%	14.00%	14.00%	14.00%	14.00%
4	<b><u>Return on Equity</u></b>								
(i)	2008-09	182.70	23.09	28.07	21.92	19.50	3.43	4.68	5.83
(ii)	2009-10	182.70	23.09	28.07	21.92	19.50	3.43	4.68	5.83
(iii)	2010-11	182.70	23.09	28.07	21.92	19.50	3.43	4.68	5.83
(iv)	2011-12	182.70	23.09	28.07	21.92	19.50	3.43	4.68	5.83

**(f) Operation & Maintenance Expenses**

The earliest COD out of these eight HEPs is that of USHP-II Kangan in June, 2002. All the remaining seven HEPs were commercially commissioned subsequent to this date of June, 2002. Thus none of the HEPs was in operation even for 5 years in the base year of 2004-05. Therefore, as per provision under Regulation 26(2)(b) of Regulations, 2005, the

Operation & Maintenance Expenses for these eight HEPs have been considered @ 1.5% of the Capital Cost from COD with escalation @ 4% per annum.

The O&M Expenses for these eight HEPs are as under:-

Sl. No	Description	Rs. in Million							
		Name of HEP							
		USHP - II	Chenani - III	Sewa - III	Pahalgam	IGO-Merchellong	Baderwah	Marpachoo	Haftal
1	Total cost of project	4349.93	549.68	668.42	552.01	494.23	106.05	128.45	161.30
2	O & M Expenses	1.50%	1.50%	1.50%	1.50%	1.50%	1.50%	1.50%	1.50%
3	Annual Escalation	4.00%	4.00%	4.00%	4.00%	4.00%	4.00%	4.00%	4.00%
4	<b><u>O &amp; M Expenses for the year</u></b>								
(i)	2008-09	81.77	9.94	12.08	9.22	8.26	1.78	2.06	2.59
(ii)	2009-10	85.04	10.33	12.57	9.59	8.59	1.85	2.15	2.70
(iii)	2010-11	88.44	10.75	13.07	9.98	8.93	1.92	2.23	2.80
(iv)	2011-12	91.98	11.18	13.59	10.38	9.29	2.00	2.32	2.92

(g) **Interest on Working Capital**

The requirement of Working Capital & Interest thereon has been computed as per Clause 27 “Interest on Working Capital” of the J&KSERC Notification No.5/JKSERC/2005 dated 23.09.2005. Interest @ 11 % per annum on working capital has been considered which is the Prime Lending Rate of Jammu & Kashmir Bank. The calculation of interest on working capital is summarized below:-

Sl. No	Description	Rs. in Million											
		Name of HEP											
		USHP – II				Chenani – III				Sewa - III			
Financial Year	2008-09	2009-10	2010-11	2011-12	2008-09	2009-10	2010-11	2011-12	2008-09	2009-10	2010-11	2011-12	
1	Total Working Capital	196.08	193.40	190.99	188.87	25.29	24.88	24.51	24.18	30.64	30.15	29.70	29.29
2	Rate of Interest	11.0%	11.0%	11.0%	11.0%	11.0%	11.0%	11.0%	11.0%	11.0%	11.0%	11.0%	11.0%
3	Interest on working Capital	21.57	21.27	21.01	20.78	2.78	2.74	2.70	2.66	3.37	3.32	3.27	3.22

Sl. No	Description	Rs. in Million											
		Name of HEP											
		Pahalgam				Igo-Mercellong				Baderwah			
Financial Year	2008-09	2009-10	2010-11	2011-12	2008-09	2009-10	2010-11	2011-12	2008-09	2009-10	2010-11	2011-12	
1	Total Working Capital	24.19	23.88	23.60	23.35	21.57	21.30	21.05	20.83	4.11	4.08	4.06	4.04
2	Rate of Interest	11.0%	11.0%	11.0%	11.0%	11.0%	11.0%	11.0%	11.0%	11.0%	11.0%	11.0%	11.0%
3	Interest on working Capital	2.66	2.63	2.60	2.57	2.37	2.34	2.32	2.29	0.45	0.45	0.45	0.44

Sl. No	Description	Rs. in Million							
		Name of HEP							
		Marpachoo				Haftal			
Financial Year	2008-09	2009-10	2010-11	2011-12	2008-09	2009-10	2010-11	2011-12	
1	Total Working Capital	5.41	5.34	5.29	5.24	6.75	6.68	6.61	6.55
2	Rate of Interest	11.0%	11.0%	11.0%	11.0%	11.0%	11.0%	11.0%	11.0%
3	Interest on working Capital	0.59	0.59	0.58	0.58	0.74	0.73	0.73	0.72

**TOTAL ANNUAL FIXED CHARGES (AFC) AND ANNUAL REVENUE REQUIREMENT (ARR) (FOR 8 HEPS )**

Based on the above parameters , station-wise AFC & ARR for the Financial Year 2008-09, 2009-10, 2010-11 and 2011-12 are given in the following tables :

**Annual Fixed Charges**

(Rs in Million)

**A) USHP - II HEP**

Financial Year	2008-09	2009-10	2010-11	2011-12
O&M Expenses	81.77	85.04	88.44	91.98
Interest on Loan	154.53	110.38	66.23	22.08
Depreciation	109.87	109.87	109.87	109.87
Additional Depreciation	194.63	194.63	194.63	194.63
Return on Equity	182.70	182.70	182.70	182.70
Interest on Working Capital	21.57	21.27	21.01	20.78
Income Tax	0.00	0.00	0.00	0.00
<b>Total Annual Fixed Cost</b>	<b>745.06</b>	<b>703.88</b>	<b>662.87</b>	<b>622.02</b>

<b>CHENANI - III HEP</b>				
Financial Year	2008-09	2009-10	2010-11	2011-12
O&M Expenses	9.94	10.33	10.75	11.18
Interest on Loan	25.97	20.20	14.43	8.66
Depreciation	14.05	14.05	14.05	14.05
Additional Depreciation	24.43	24.43	24.43	24.43
Return on Equity	23.09	23.09	23.09	23.09
Interest on Working Capital	2.78	2.74	2.70	2.66
Income Tax	0.00	0.00	0.00	0.00
<b>Total Annual Fixed Cost</b>	<b>100.26</b>	<b>94.84</b>	<b>89.44</b>	<b>84.06</b>

<b>SEWA - III HEP</b>				
Financial Year	2008-09	2009-10	2010-11	2011-12
O&M Expenses	12.08	12.57	13.07	13.59
Interest on Loan	31.58	24.56	17.55	10.53
Depreciation	17.00	17.00	17.00	17.00
Additional Depreciation	29.79	29.79	29.79	29.79
Return on Equity	28.07	28.07	28.07	28.07
Interest on Working Capital	3.37	3.32	3.27	3.22
Income Tax	0.00	0.00	0.00	0.00
<b>Total Annual Fixed Cost</b>	<b>121.89</b>	<b>115.31</b>	<b>108.75</b>	<b>102.20</b>

<b>PAHALGAM HEP</b>				
Financial Year	2008-09	2009-10	2010-11	2011-12
O&M Expenses	9.22	9.59	9.98	10.38
Interest on Loan	30.88	26.13	21.38	16.63
Depreciation	14.04	14.04	14.04	14.04
Additional Depreciation	22.50	22.50	22.50	22.50
Return on Equity	21.92	21.92	21.92	21.92
Interest on Working Capital	2.66	2.63	2.60	2.57
Income Tax	0.00	0.00	0.00	0.00
<b>Total Annual Fixed Cost</b>	<b>101.23</b>	<b>96.81</b>	<b>92.41</b>	<b>88.04</b>

**IGO MERCHELONG HEP**

Financial Year	2008-09	2009-10	2010-11	2011-12
O&M Expenses	8.26	8.59	8.93	9.29
Interest on Loan	27.46	23.23	19.01	14.79
Depreciation	12.68	12.68	12.68	12.68
Additional Depreciation	19.81	19.81	19.81	19.81
Return on Equity	19.50	19.50	19.50	19.50
Interest on Working Capital	2.37	2.34	2.32	2.29
Income Tax	0.00	0.00	0.00	0.00
<b>Total Annual Fixed Cost</b>	<b>90.09</b>	<b>86.16</b>	<b>82.25</b>	<b>78.36</b>

**BADERWAH HEP**

Financial Year	2008-09	2009-10	2010-11	2011-12
O&M Expenses	1.78	1.85	1.92	2.00
Interest on Loan	4.83	4.09	3.34	2.60
Depreciation	2.69	2.69	2.69	2.69
Additional Depreciation	3.03	3.03	3.03	3.03
Return on Equity	3.43	3.43	3.43	3.43
Interest on Working Capital	0.45	0.45	0.45	0.44
Income Tax	0.00	0.00	0.00	0.00
<b>Total Annual Fixed Cost</b>	<b>16.20</b>	<b>15.53</b>	<b>14.86</b>	<b>14.19</b>

**MARPACHOO HEP**

Financial Year	2008-09	2009-10	2010-11	2011-12
O&M Expenses	2.06	2.15	2.23	2.32
Interest on Loan	7.61	6.59	5.58	4.56
Depreciation	3.27	3.27	3.27	3.27
Additional Depreciation	4.53	4.53	4.53	4.53
Return on Equity	4.68	4.68	4.68	4.68
Interest on Working Capital	0.59	0.59	0.58	0.58
Income Tax	0.00	0.00	0.00	0.00
<b>Total Annual Fixed Cost</b>	<b>22.75</b>	<b>21.81</b>	<b>20.88</b>	<b>19.94</b>

**HAFTAL HEP**

Financial Year	2008-09	2009-10	2010-11	2011-12
O&M Expenses	2.59	2.70	2.80	2.92
Interest on Loan	9.47	8.21	6.95	5.68
Depreciation	4.13	4.13	4.13	4.13
Additional Depreciation	5.58	5.58	5.58	5.58
Return on Equity	5.83	5.83	5.83	5.83
Interest on Working Capital	0.74	0.73	0.73	0.72
Income Tax	0.00	0.00	0.00	0.00
<b>Total Annual Fixed Cost</b>	<b>28.35</b>	<b>27.18</b>	<b>26.02</b>	<b>24.86</b>

*Note:* -The above AFC are exclusive of Income Tax. Income tax shall be requested for reimbursement based on the actual payment as may be made to the Income tax authorities.

**8. B. DETERMINATION OF TARIFF FOR 10 HEPs**

As per the directives of the Hon'ble Commission for 10 old HEPs the valuation was done by the consultant and the tariff has been calculated for each HEP as per the methodology explained above:-

Sl. No.	Name of HEP	Capacity (MW)	COD
1	Upper Sind-I	22.6	Dec, 1973, July 1974
2	Lower Jhelum	105	Feb, 1978, Jan. 1979, Nov. 1979
3	Ganderbal	15	Feb, 1955, 1961
4	Chenani-I	23.3	1971, 1975
5	Karnah	2	1991, 1997
6	Iqbal Bridge	3.75	Oct, 1995, 1996 & 1996
7	Bazgo	0.30	1994
8	Sumoor	0.10	1993
9	Hunder	0.4	1995
10	Chenani-II	2	1996

As defined in the said Regulations, 2005, the two part tariff for sale of electricity from a hydro power station shall comprise of recovery of Annual Capacity Charges and primary Energy Charges.

Accordingly following have been considered for tariff Petition:-

**Annual Fixed Charges:**

The Annual Fixed Charges (AFC) consists of:-

- (vi) Interest on Loan Capital
- (vii) Depreciation including Advance Against Depreciation
- (viii) Return on Equity
- (ix) Operation & Maintenance Expenses
- (x) Interest on Working Capital

Following norms, except for equity and loan, as prescribed in Chapter 3 of JKSERC Regulations, 2005 of dated 23.09.2005 have been considered for filing the Petition-

For all the 10 HEPs the tariff have been prepared based on the net replacement value with the following assumptions:

S No	Particulars	Unit	Value	
1	<b>Auxiliary Consumption</b>		With Rotating Excitation	With Static Excitation
	Surface	%	0.20	0.50
	Underground	%	0.40	0.70
2	<b>Transformation Losses</b>	%	0.50	-
3	<b>O&amp;M Expenses</b>			
	Projects up to 25 MW	Rs Lac/MW	20	
	Projects above 25 MW	Rs Lac/MW	18.75	
4	Annual Escalation	%	4.00	
5	<b>Depreciation</b>			
	Plant Life	Years	35	
	Residual life	Years	10	
	For Projects prior to 1980	%	1.0	
	For Projects after 1990	%	2.0	
	Advance Against Depreciation	Nil		
6	<b>Working Capital</b>			
	Receivable	months	2	of Fixed Charges
	O & M Expenses	months	1	
	Spares for Maintenance	%	Nil	
	Escalation in Spares Inventory	%	Nil	
	Rate of Interest	%	11 as per PLR of J&K Bank as on 1.4.2005	
7	<b>Return on Equity</b>	%	14	
8	<b>Equity</b>	%	50	
	<b>Loan</b>		Nil	

a) **Project Cost**

Final project costs of the 10 HEPs as per valuation reports and as certified by the Chartered Accountant (**Copy enclosed**) is as given under:-

(Rs. in lac)

Sl. No.	Name of Power House	Installed Capacity (MW)	Current Replacement Cost	Net Replacement Value (NRV)
1	Upper Sind-I	22.6	17694.24	4626.71

2	Lower Jhelum	105	96197.99	42124.55
3	Ganderbal	15	10449.94	1594.8
4	Chenani-I	23.3	21421.91	7849.11
5	Karnah	2	2109.02	1354.53
6	Iqbal Bridge	3.75	4210.23	2463.27
7	Bazgo	0.3	339.69	215.58
8	Sumoor	0.1	114.93	69.78
9	Hunder	0.4	452.47	286.2
10	Chenani-II	2	2249.96	1173.04

b) **Design Energy**

The Design Energy as valued by the consultant for the following ten nos. HEPs have been considered for calculation of Gross Generation.

Sl. No.	Name of HEP	Capacity (MW)	Design Energy in MUs
1	Upper Sind-I	22.6	106.62
2	Lower Jhelum	105	609.43
3	Ganderbal	15	90.15
4	Chenani-I	23.3	110.62
5	Karnah	2	11.36
6	Iqbal Bridge	3.75	21.23
7	Bazgo	0.30	1.09
8	Sumoor	0.10	0.45
9	Hunder	0.4	1.77
10	Chenani-II	2	12.00

c) **Interest on Loan Capital**

No Interest on Loan has been considered

d) **Depreciation including Advance Against Depreciation**

(i) **Depreciation**

Depreciation has been calculated annually based on Straight Line Method Details of depreciation for these ten HEPs are given as under:-

Sl · No	Description	Rs. in Million									
		Name of HEP									
		Iqbal	Sumo or	Bazgo	Hund er	Chena ni II	Karna h	USHP I	Chena ni I	LJHP	Gande rbal
1	Cost of project excluding Land Cost	246.33	6.978	21.59	28.62	117.3	135.45	462.67	785.11	4212.45	159.48
2	Residual value	10%	10%	10%	10%	10%.	10%.	10%.	10%.	10%.	10%.
3	Total Depreciation to be claimed	221.69	6.28	19.43	25.76	105.57	121.91	416.36	706.60	3809.21	143.53
4	Normal depreciation rate	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	1.00%	1.00%	1.00%	1.00%
5	Total depreciation for the year										
i	2009-10	4.93	0.14	0.43	0.57	2.35	2.71	4.63	7.85	42.12	1.59
ii	2010-11	4.93	0.14	0.43	0.57	2.35	2.71	4.63	7.85	42.12	1.59
iii	2011-12	4.93	0.14	0.43	0.57	2.35	2.71	4.63	7.85	42.12	1.59

(ii) Advance Against Depreciation (AAD)

Advance against depreciation considered as zero.

e) Return on Equity (ROE)

As per provision under Regulation 25 of JKSERC Regulations, 2005, Return on Equity has been considered @ 14% per annum for the year 2009-10,2010-11 and 2011-12 for each of Hydro Power Station.. Details of Return on Equity for these ten HEPs are given as under:-

Sl · No	Description	Rs. In Million									
		Name of HEP									
		Iqbal	Sumo or	Bazgo	Hund er	Chena ni II	Karna h	USHP I	Chena ni I	LJHP	Gander bal
1	Net cost of the Project	246.33	6.978	21.59	28.62	117.3	135.45	462.17	785.11	4212.45	159.48
2	Total normative Equity 50% of the Project Cost	123.16	3.49	10.79	14.31	58.65	67.73	2231.3 3	392.56	2106.23	79.74

3	Rate of Return on Equity	14.00%	14.00%	14.00%	14.00%	14.00%	14.00%	14.00%	14.00%	14.00%	14.00%
4	Return on Equity										
I	2009-10	17.24	0.49	1.51	2.00	8.21	9.48	32.38	54.96	294.87	11.16
ii	2010-11	17.24	0.49	1.51	2.00	8.21	9.48	32.38	54.96	294.87	11.16
iii	2011-12	17.24	0.49	1.51	2.00	8.21	9.48	32.38	54.96	294.87	11.16

(f) **Operation & Maintenance Expenses**

The Operation & Maintenance Expenses for these ten HEPs have been considered as per the details given at **Annexure-I** with escalation @ 4% per annum.

The O&M Expenses for these ten HEPs are as under:-

Sl. No	Description	Rs in Million									
		NAME OF HEP									
		Iqbal	Sumo or	Bazgo	Hunder	Chenani II	Karnah	USHP I	Chenani I	LJHP	Ganderbal
1	Total cost of project	246.33	6.978	21.59	28.62	117.3	135.45	4626.17	785.11	4212.45	159.48
2	O & M Expenses Rs Lac/MW	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	1.875	2.00
3	Annual Escalation	4.00%	4.00%	4.00%	4.00%	4.00%	4.00%	4.00%	4.00%	4.00%	4.00%
4	O & M Expenses for the year										
(i)	2009-10	7.50	0.20	0.60	0.80	4.00	4.00	45.20	46.60	196.88	30.00
(ii)	2010-11	7.80	0.21	0.62	0.83	4.16	4.16	47.01	48.46	204.75	31.20
(iii)	2011-12	8.11	0.22	0.65	0.87	4.33	4.33	48.89	50.40	212.94	32.45

(f) **Interest on Working Capital**

The requirement of Working Capital & Interest thereon has been computed as per Clause 27 "Interest on Working Capital" of the J&KSERC Notification No.5/JKSERC/2005 dated 23.09.2005. Interest @ 11.00% per annum on working capital has been considered which is the Prime Lending Rate of Jammu & Kashmir Bank as on 01/04/2005. The calculation of interest on working capital is summarized below:-

Sl. No	Name of HEP	Iqbal			Sumoor			Bazgo		
		2009-10	2010-11	2011-12	2009-10	2010-11	2011-12	2009-10	2010-11	2011-12
1	Total Working Capital	9.96	10.30	10.65	0.27	0.28	0.29	0.83	0.86	0.88
3	Rate of Interest	11.0%	11.0%	11.0%	11.0%	11.0%	11.0%	11.0%	11.0%	11.0%
4	Interest on working Capital	1.10	1.13	1.17	0.03	0.03	0.03	0.09	0.09	0.10

Sl. No	Name of HEP	Hunder		Chenani II		
		2010-11	2011-12	2009-10	2010-11	2011-12
1	Total Working Capital Requirement	1.14	1.17	5.10	5.28	5.47
3	Rate of Interest	11.0%	11.0%	11.0%	11.0%	11.0%
4	Interest on working Capital for the year	0.13	0.13	0.56	0.58	0.60

Sl. No	Name of HEP	Karnah			USHP I			Chenani I		
		2009-10	2010-11	2011-12	2009-10	2010-11	2011-12	2009-10	2010-11	2011-12
1	Total Working Capital	5.24	5.41	5.59	35.82	37.36	38.98	44.35	46.14	48.02
3	Rate of Interest	11.0%	11.0%	11.0%	11.0%	11.0%	11.0%	11.0%	11.0%	11.0%
4	Interest on working Capital for the year	0.58	0.59	0.61	3.94	4.11	4.29	4.88	5.08	5.28

Sl. No	Name of HEP	LJHP		Ganderbal		
		2010-11	2011-12	2009-10	2010-11	2011-12
1	Total Working Capital Requirement as per regulation	213.51	221.83	20.43	21.38	22.37
3	Rate of Interest	11.0%	11.0%	11.0%	11.0%	11.0%
4	Interest on working Capital for the year	23.49	24.40	2.25	2.35	2.46

**Total Annual Fixed Charges (AFC) for 10 HEPs**

Based on the above parameters, station-wise AFC & ARR for the Financial Year 2009-10, 2010-11 and 2011-12 are given in the following tables :

**ANNUAL FIXED COST****Rs in million**

<b>IQBAL HEP</b>			
Financial Year	2009-10	2010-11	2011-12
O&M Expenses	7.50	7.80	8.11
Interest on Loan	0.00	0.00	0.00
Depreciation	4.93	4.93	4.93
Return on Equity	17.24	17.24	17.24
Interest on Working Capital	1.10	1.13	1.17
<b>Total Annual Fixed Cost</b>	<b>30.77</b>	<b>31.10</b>	<b>31.45</b>

**Sumoor HEP**

Financial Year	2009-10	2010-11	2011-12
O&M Expenses	0.20	0.21	0.22
Interest on Loan	0.00	0.00	0.00
Depreciation	0.14	0.14	0.14
Return on Equity	0.49	0.49	0.49
Interest on Working Capital	0.03	0.03	0.03
<b>Total Annual Fixed Cost</b>	<b>0.86</b>	<b>0.87</b>	<b>0.88</b>

**Bazgo HEP**

Financial Year	2009-10	2010-11	2011-12
O&M Expenses	0.60	0.62	0.65
Interest on Loan	0.00	0.00	0.00
Depreciation	0.43	0.43	0.43
Return on Equity	1.51	1.51	1.51
Interest on Working Capital	0.09	0.09	0.10
<b>Total Annual Fixed Cost</b>	<b>2.63</b>	<b>2.66</b>	<b>2.69</b>

**HUNDER HEP**

Financial Year	2009-10	2010-11	2011-12
O&M Expenses	0.80	0.83	0.87
Interest on Loan	0.00	0.00	0.00
Depreciation	0.57	0.57	0.57
Return on Equity	2.00	2.00	2.00
Interest on Working Capital	0.12	0.13	0.13
<b>Total Annual Fixed Cost</b>	<b>3.50</b>	<b>3.53</b>	<b>3.57</b>

**CHENANI-II HEP**

Financial Year	2009-10	2010-11	2011-12
O&M Expenses	4.00	4.16	4.33
Interest on Loan	0.00	0.00	0.00
Depreciation	2.35	2.35	2.35
Return on Equity	8.21	8.21	8.21
Interest on Working Capital	0.56	0.58	0.60
<b>Total Annual Fixed Cost</b>	<b>15.12</b>	<b>15.30</b>	<b>15.49</b>

**KARNAH HEP**

Financial Year	2009-10	2010-11	2011-12
O&M Expenses	4.00	4.16	4.33
Interest on Loan	0.00	0.00	0.00
Depreciation	2.71	2.71	2.71
Return on Equity	9.48	9.48	9.48
Interest on Working Capital	0.58	0.59	0.61
<b>Total Annual Fixed Cost</b>	<b>16.77</b>	<b>16.95</b>	<b>17.13</b>

**USHP - I HEP**

Financial Year	2009-10	2010-11	2011-12
O&M Expenses	45.20	47.01	48.89
Interest on Loan	0.00	0.00	0.00
Depreciation	4.63	4.63	4.63
Additional Depreciation	0.00	0.00	1.00
Return on Equity	32.38	32.38	32.38
Interest on Working Capital	3.94	4.11	4.29
<b>Total Annual Fixed Cost</b>	<b>86.15</b>	<b>88.13</b>	<b>90.19</b>

**CHENANI - I HEP**

Financial Year	2009-10	2010-11	2011-12
O&M Expenses	46.60	48.46	50.40
Interest on Loan	0.00	0.00	0.00
Depreciation	7.85	7.85	7.85
Additional Depreciation	0.00	0.00	1.00
Return on Equity	54.96	54.96	54.96
Interest on Working Capital	4.88	5.08	5.28
<b>Total Annual Fixed Cost</b>	<b>114.29</b>	<b>116.35</b>	<b>118.49</b>

**LOWER JHELUM**

Financial Year	2009-10	2010-11	2011-12
O&M Expenses	196.88	204.75	212.94
Interest on Loan	0.00	0.00	0.00
Depreciation	42.32	42.32	42.32
Additional Depreciation	0.00	0.00	0.00
Return on Equity	294.87	294.87	294.87
Interest on Working Capital	22.62	23.49	24.40
<b>Total Annual Fixed Cost</b>	<b>556.69</b>	<b>565.43</b>	<b>574.53</b>

**GANDERBAL**

Financial Year	2009-10	2010-11	2011-12
O&M Expenses	30.00	31.20	32.45
Interest on Loan	0.00	0.00	0.00
Depreciation	1.59	1.59	1.59
Additional Depreciation	0.00	0.00	1.00
Return on Equity	11.16	11.16	11.16
Interest on Working Capital	2.25	2.35	2.46
<b>Total Annual Fixed Cost</b>	<b>45.01</b>	<b>46.31</b>	<b>47.67</b>

**SUMMARY OF ANNUAL FIXED CHARGES (AFC) AND ANNUAL REVENUE REQUIREMENT (ARR) FOR EACH HEPS ( FOR 18 HEPS)**

Fixed charges for supply of energy from the 18 hydro electric projects is given in the table as under:-

**a) Total Annual Fixed Charges****(Rs in Million )**

Sl. No	Name of HEP	Total Annual Fixed Charges				
		Year	2008-09	2009-10	2010-11	2011-12
1	USHP II		745.06	703.88	662.87	622.02
2	Chennani III		100.26	94.84	89.44	84.06
3	Sewa III		121.89	115.31	108.75	102.20
4	Pahalgam		101.23	96.81	92.41	88.04
5	Igo-Merchellong		90.09	86.16	82.25	78.36
6	Baderwah		16.20	15.53	14.86	14.19
7	Marpachoo		22.75	21.81	20.88	19.94
8	Haftal		28.35	27.18	26.02	24.86
9	Iqbal			30.77	31.10	31.45
10	Sumoor			0.86	0.87	0.88
11	Bazgo			2.63	2.66	2.69
12	Hunder			3.50	3.53	3.57
13	Chenani-II			15.12	15.30	15.49

14	Karnah		16.77	16.95	17.13
15	USHP I		86.15	88.13	90.19
16	Chennani I		114.29	116.35	118.49
17	Lower Jhelum		556.69	565.43	574.53
18	Ganderbal		45.01	46.31	47.67

**b) Indicative Tariff**

Based on the Annual Fixed Charges and the Design Energy, the individual tariff for the HEPs is worked out as under:-

(Rs. per kWh)

Sl. No	Name of HEP	Indicative Tariff				
		Year	2008-09	2009-10	2010-11	2011-12
1	USHP II		1.69	1.59	1.50	1.41
2	Chennani III		2.76	2.61	2.46	2.31
3	Sewa III		3.69	3.49	3.29	3.09
4	Pahalgam		6.85	6.55	6.26	5.96
5	IGO-Merchellong		5.73	5.48	5.23	4.98
6	Baderwah		1.97	1.89	1.80	1.72
7	Marpachoo		6.06	5.81	5.56	5.32
8	Haftal		5.87	5.63	5.39	5.15
9	Iqbal			1.47	1.48	1.50
10	Sumoor			1.93	1.95	1.97
11	Bazgo			2.45	2.47	2.49
12	Hunder			2.00	2.02	2.04
13	Chenani-II			1.28	1.29	1.30
14	Karnah			1.49	1.51	1.52
15	USHP I			0.82	0.83	0.85
16	Chennani I			1.05	1.07	1.09
17	Lower Jhelum			0.91	0.93	0.94
18	Ganderbal			0.51	0.52	0.53

**8. C. DETERMINATION OF TARIFF FOR BAGLIHAR STAGE I HEP**

The Baglihar HEP was declared commercially operational on 1<sup>st</sup> April 2009 along with 67 KM of 400 kV D/C transmission line from Baglihar to Kishanpur for evacuation of power from the project. The 400 kV D/C transmission line has been connected with 2 nos. 400 kV lines terminating bays at Grid sub-station Kishanpur of PGCIL.

The tariff for Baglihar Hydro Electric Project is submitted as per the directives of Hon'ble Commission and the procedure defined in Chapter 4. of JKSERC Regulations, 2005 of dated 23.09.2005:-

Sl. No.	Name of HEP	Capacity MW	COD
1.	Baglihar	450	1.04.2009

a) **The total cost of the project is given in the below mentioned table:**

Rs in Crore

S. No.	Particulars	Details of Final Estimated cost
I	II	III
2	Pre-operative expenses	64.1
3	Infrastructure works	111.15
	Civil & Hydro mechanical Works	3773.09
4	Electro-mechanical works	712.5
5	Transmission works	152.33
6	Environment R&R and legal expenses	113.67
7	Fee for Owner's Engineer	130.75
8	O&M mobilization etc.	5.00
9	Contingencies	7.28
10	Sub total base cost (1-12)	5069.87
11	IDC & FC	757.30
12	<b>Total Cost</b>	<b>5827.17</b>

b) **Sale from infirm power**

Name of Buyer	Energy in MUs	Rs in crore
Sale to PTC	28.2	25.97
Sale to PDD	676.6187695	239.52
Total	704.8187695	265.50

**Revenue Received from infirm power**

Rs 25.97 Crore from Power Trading Corporation

c) **Net Project Cost**

(Rs. in Crore)

Project Cost	5827.17
Less Revenue from Infirm Power	-25.97
Net Project Cost	<b>5801.20</b>
IDC	757.30
Net Basic Cost of Project	<b>5043.90</b>

The Net cost has been further bifurcated for Hydro project and Transmission System as follows :

**d) Cost of Hydro Project (Rs. in Crore)**

Basic Cost of the Project	4891.60
IDC	734.30
Total Project Cost( Hydro)	5625.90

**e) Cost of Transmission Works (Rs. in Crore)**

Basic cost	152.3
IDC	23.00
Total cost of Transmission	175.30

**f) Subsidy**

Government of India has sanctioned a subsidy of Rs. 5760 million for the project

**g) Loan & Interest**

The details of loan taken and rate of interest is given in the table given below:

S No.	Name of Lender	Loan Sanctioned	Loan I	loan II	Loan III	Loan IV	Total	Weighted average ROI p.a
A	Bank / FII	Rs in Million						
1	PFC	8450	896.1	1103.9	4000	2450	<b>8450</b>	
	Rate of interest p.a		9.75%	8.75%	12%	11.75%		11.26%
2	REC	5650	2670	2350	630.00		<b>5650</b>	
	Rate of interest p.a		10.50%	12.75%	11.75%			11.6%
3	HUDCO	3000	2000	1000			<b>3000</b>	
	Rate of interest p.a		11.75%	11.75%				11.75%
4	JK Bank	3600	2000	1600			<b>3600</b>	
	Rate of interest p.a		10.75%	10.75%				10.75%
5	Canara Bank	730	730				<b>730</b>	
	Rate of interest p.a		11.75%					11.75%
6	Union Bank of India	730	730				<b>730</b>	
	Rate of interest p.a		10.00%					10.00%
7	Central Bank of India	370	370				<b>370</b>	
	Rate of interest p.a		10.50%					10.50%

B	Loan from Government							
8	Loan from ACA	630	630				<b>630</b>	
	Rate of interest p.a		9%					
9	Special Plan Assistance(SPA)	6700	6700				<b>6700</b>	
	Rate of interest		11.25%					11.25%
10	<b>Total Debt from FIs/Banks &amp;Govt. (sum 1 to 9)</b>	29860					<b>29860</b>	
11	<b>Wt. av. Interest on Debt p.a</b>							<b>11.23%</b>

**h) Means of Finance considered for the project is given below:**

Means of Finance to be considered as per SERC Regulation for Tariff

**For Complete Project**

**Rs. in Million**

Net Project Cost		58012.00
Equity ( Maximum)	30%	17403.60
Loan	balance	34938.40
Subsidy		5670.00

**For Hydro Project only**

**Rs. in Million**

Project Cost		56259.0
Equity ( Maximum)	30%	16877.7
Loan	balance	33882.64
Subsidy		5498.66

**For Transmission System only**

**Rs. in Million**

Project Cost		1753.0
Equity ( Maximum)	30%	525.90
Loan	balance	1055.76
Subsidy		171.34

As defined in the said Regulations, the two part tariff for sale of electricity from a hydro power station shall comprise of recovery of Annual Capacity Charges and primary Energy Charges. Accordingly following have been considered in the tariff Petition:-

**Annual Fixed Charges:**

The Annual Fixed Charges (AFC) consists of:-

- (i) Interest on Loan Capital
- (ii) Depreciation including Advance Against Depreciation
- (iii) Return on Equity
- (iv) Operation & Maintenance Expenses
- (v) Interest on Working Capital

Assumptions for Hydro Power Project excluding transmission system are given below:-

S No	Particulars	Unit	Value	
1	<b>Plant Availability Factor</b>			
	Normative Capacity Index		First Year	Afterwards
	Run of River	%	85	90
	Storage Type	%	80	85
2	<b>Auxiliary Consumption</b>		With Rotating Exciter	With Static Excitation
	Surface	%	0.20	0.50
	Underground	%	0.40	0.70
3	<b>Transformer Losses</b>	%	0.50	-
4	<b>O&amp;M Expenses</b>			
	% of Cap Cost	%	1.50	
	Annual Escalation	%	4.00	
5	<b>Depreciation</b>			
	Plant Life 35 Yrs, Residual life 10%	%	2.57	
	Advance Against Depreciation	Equivalent to difference of actual repayment of loan and normal depreciation		
6	<b>Working Capital</b>			
	Receivable	months	2	of Fixed Charges
	O & M Expenses	months	1	
	Spares for Maintenance	%	1	of historic cost
	Escalation in Spares Inventory	%	6	
	Rate of Interest p.a	%	12.75	as per PLR of J&K Bank as on 1.4.2009
7	<b>Return on Equity</b>	%	14	
8	<b>Initial Spares as part of Capital Cost</b>	%	1.50	

9	<b>Equity</b>	%	30	
	<b>Loan</b>	%	70	
10	<b>Interest</b>	%	as per sanction	
11	<b>Moratorium</b>		No moratorium after COD	
12	<b>Sale of Infirm Power</b>		UI Rate	
13	<b>Foreign Exchange Rate Variation</b>		Allowed, can be hedged	

#### 400kV Transmission system

As JKSERC has not issued any Regulations for transmission system, the AFC calculations for transmission system have been based on the Regulations of Central Electricity Regulatory Commission applicable for the year 2009-14 published on 19<sup>th</sup> January, 2009.

The Assumption for the transmission line is given below:-

S No	Particulars	Unit	Value	
1	<b>Plant Availability Factor</b>			
	Normative Capacity Index		First Year	Afterwards
	Run of River	%	85	90
	Storage Type	%	80	85
2	<b>Auxiliary Consumption</b>		With Static Excitation	
	Underground	%	0.70	
3	<b>Transformer Losses</b>	%	0.50	
4	<b>Transmission Loss</b>	%	0.30	
5	<b>O&amp;M Expenses</b>			
	Annual O&M Cost of Line per KM	Rs in Million	0.0627	As per CERC Regulation for 2009-14
	Annual O&M Cost per Bay	Rs in Million	5.24	
	Annual Escalation	%	5.72	
6	<b>Depreciation</b>			
	Plant Life 35 Yrs, Residual life 10%	%	2.57	
	Advance Against Depreciation	Equivalent to difference of actual repayment of loan and normal depreciation		
7	<b>Working Capital</b>			
	Receivable	months	2	of Fixed Charges
	O & M Expenses	months	1	
	Spares for Maintenance	%	1	of historic cost
	Escalation in Spares Inventory	%	6	
	Rate of Interest	%	12.75	PLR of J&K Bank

				as on 1.4.2009
8	<b>Return on Equity</b>	%	14	
9	<b>Initial Spares as part of Capital Cost</b>	%	1.50	
10	<b>Equity</b>	%	30	
	<b>Loan</b>	%	70	
11	<b>Interest</b>	%	Weighted Average	
12	<b>Moratorium</b>		No moratorium after COD	

a) **Project Cost**

Final project costs of the HEP after adjusting the revenue received from infirm power as per status report is as given under:-

Sl. No	Name of Project	Capacity in MW	Total Project Cost Rs in Million
1	Baglihar HEP	450	56259.00
2	Transmission System		1753.00

b) **Design Energy**

The Design Energy as validated by the consultant for Baglihar HEP has been considered for calculation of Gross Generation.

Sl. No	Name of HEP	capacity in MW	Design Energy in MUs
1	Baglihar	450	2536.07

(c) **Interest on Loan Capital**

Details of loan liabilities and rate of interest thereon for the HEP are enclosed at Annexure F8. Total interest on loans has been worked out as per Clause 22. of JKSERC Regulation NO.5/JKSERC/2005 dated 23.09.2005 and given here under for the years, 2009-10,2010-11 and 2011-12.

Rs. In Million

Sl. No	Name of HEP	Baglihar	Transmission System
1	Total cost of project	56259	1753.00

Sl. No	Name of HEP	Baglihar	Transmission System
2	Subsidy	5498.66	171.34
3	Net cost of the project	50760.34	1581.66
4	Total normative Loan considering 70% of the net cost of the project	33882.64	1055.76
5	Total normative Equity considering 30% of the net cost of the project	16877.70	525.90
6	Rate of Interest on loan	11.23%	11.23%
7	Interest Amount for the year		
(i)	2009-10	3614.91	112.64
(ii)	2010-11	3234.40	100.78
(iii)	2011-12	2853.88	88.93

(d) **Depreciation including Advance Against Depreciation**

(i) **Depreciation**

Depreciation has been calculated annually based on Straight Line Method and computed @ 2.57% of the Hydro Project Cost and for transmission system after considering the useful life of the asset as 35 years. Details of depreciation is given as under:-

Rs. In Million			
Sl. No	Name of HEP	Baglihar	Transmission System
1	Cost of project excluding Land Cost*	55564.00	1753
2	Residual value	10%	10%
3	Total Depreciation to be claimed	50007.60	1577.70
4	Normal depreciation rate	2.57%	2.57%
5	Total depreciation for the year		
(i)	2009-10	1427.99	45.05
(ii)	2010-11	1427.99	45.05
(iii)	2011-12	1427.99	45.05

\*Cost of the land for Baglihar-I HEP is Rs. 690.50 million. No land cost has been considered for transmission system.

(ii) **Advance Against Depreciation (AAD)**

In addition to allowable depreciation, the JKSPDC is entitled to Advance against Depreciation (AAD) also which has been considered as per the formula

“Advance against Depreciation = Annual Repayment of Loan – Normal Depreciation”

Details of AAD are furnished in the following table:-

Sl. No	Name of HEP	Rs. in Million	
		Baglihar	Transmission System
1	Total Normative Loan Amount	33882.64	1055.76
2	Annual Repayment of Loan	3388.26	105.58
3	Normal Depreciation for full year	1427.99	45.05
4	Advance Against Depreciation		
(i)	2009-10	1960.27	60.52
(ii)	2010-11	1960.27	60.52
(iii)	2011-12	1960.27	60.52

(e) **Return on Equity (ROE)**

As per provision under Regulation 25 of JKSERC Regulations, 2005, Return on Equity has been considered @ 14% per annum for Hydro Power Station and transmission system.

Details of Return on Equity are given as under:-

Sl. No	Rs. In Million		
	Name of HEP	Baglihar	Transmission System
1	Net cost of the Project	56259	1753.00
2	Total normative Equity 30% of the Project Cost	16877.70	525.90
3	Rate of Return on Equity	14.00%	14.00%
4	Return on Equity		
(i)	2009-10	2362.88	73.63
(ii)	2010-11	2362.88	73.63
(iii)	2011-12	2362.88	73.63

(f) **Operation & Maintenance Expenses**

As per provision under Regulation 26(2)(b) of Regulations, 2005, the Operation & Maintenance Expenses for that HEP have been considered @ 1.5% of the Capital Cost with escalation @ 4% per annum.

The O&M Expenses for the transmission system has been calculated as per CERC Regulations.

**Rs. In Million**

Sl. No	Name of HEP	Baglihar	Transmission System
1	Total cost of project	56259.00	1753.00
2	O & M Expenses	1.50%	***
3	Annual Escalation in O & M expenses	4.00%	5.72%
4	O & M Expenses for the year		
(i)	2009-10	843.89	14.68
(ii)	2010-11	877.64	15.52
(iii)	2011-12	912.75	16.41
***	Annual O&M Cost of Line	Mi Rs. per KM	0.0627
	Annual O&M Cost per Bay	Mi Rs/Bay	5.24

(g) **Interest on Working Capital**

The requirement of Working Capital & Interest thereon has been computed as per Clause 27 "Interest on Working Capital" of the J&KSERC Notification No.5/JKSERC/2005 dated 23.09.2005. Interest @ 12.75 % per annum on working capital has been considered which is the Prime Lending Rate of Jammu & Kashmir Bank as on 1<sup>st</sup> April, 2009. The calculation of interest on working capital is summarized below:-

(Rs. in Million)

Sl. No	Name of HEP	Baglihar			Transmission System		
		2009-10	2010-11	2011-12	2009-10	2010-11	2011-12
	Financial Year	2009-10	2010-11	2011-12	2009-10	2010-11	2011-12
1	Total Working Capital Requirement as per regulation	2385.26	2363.57	2344.30	71.36	70.63	69.97
3	Rate of Interest	12.75%	12.75%	12.75%	12.75%	12.75%	12.75%
4	Interest on working Capital for the year	<b>304.12</b>	<b>301.36</b>	<b>298.90</b>	<b>9.10</b>	<b>9.00</b>	<b>8.92</b>

**TOTAL ANNUAL FIXED CHARGES (AFC) AND ANNUAL REVENUE REQUIREMENT (ARR) (FOR BAGLIHAR HEP)**

Based on the above parameters , station-wise AFC for the Financial Year 2009-10, 2010-11 and 2011-12 are given in the following tables :

**ANNUAL FIXED CHARGES BAGLIHAR -I HEP**

(RS IN MILLION)

Financial Year	2009-10	2010-11	2011-12
O&M Expenses	843.89	877.64	912.75
Interest on Loan	3614.91	3234.40	2853.88
Depreciation	1427.99	1427.99	1427.99
Additional Depreciation	1960.27	1960.27	1960.27
Return on Equity	2362.88	2362.88	2362.88

Interest on Working Capital	304.12	301.36	298.90
Income Tax	0.00	0.00	0.00
<b>Total Annual Fixed Cost</b>	<b>10514.06</b>	<b>10164.53</b>	<b>9816.66</b>

**400kV Transmission System Baglihar to Kishanpur**

Financial Year	2009-10	2010-11	2011-12
O&M Expenses	14.68	15.52	16.41
Interest on Loan	112.64	100.78	88.93
Depreciation	45.05	45.05	45.05
Additional Depreciation	60.52	60.52	60.52
Return on Equity	73.63	73.63	73.63
Interest on Working Capital	9.10	9.00	8.92
Income Tax	0.00	0.00	0.00
<b>Total Annual Fixed Cost</b>	<b>315.62</b>	<b>304.51</b>	<b>293.46</b>

**Total Annual Fixed Charges ( AFC ) and Indicative Tariff :**

( Rs in Million )

Sl. No	Name of project	Total Annual Fixed Cost		
		2009-10	2010-11	2011-12
	Year	2009-10	2010-11	2011-12
1	BAGLIHAR HEP	10514.06	10164.53	9816.66
2	Transmission System	315.62	304.51	293.46
3	<b>TOTAL</b>	<b>10829.68</b>	<b>10469.04</b>	<b>10110.12</b>
4	<b>The AFC to be claimed from PDD is 50% as only 50% energy shall be supplied to PDD</b>	<b>5414.84</b>	<b>5234.52</b>	<b>5055.06</b>

( Rs. Per kWh )

Sl. No	Name of project	Indicative Tariff		
		2009-10	2010-11	2011-12
	Year	2009-10	2010-11	2011-12
1	BAGLIHAR HEP	4.21	4.07	3.93
2	Transmission System	0.13	0.12	0.12
3	<b>TOTAL</b>	<b>4.34</b>	<b>4.19</b>	<b>4.05</b>

**8. D DETERMINATION OF TARIFF:FOR GAS TURBINES I & II**

The Gas Power Station I and II are operated on the directions of the Power Development Department / State Government. The T & D utility (PDD) allows its operation only in acute emergency condition because of high / prohibitive cost of fuel for generation.

As JKSPDC has to maintain the gas turbines in running conditions to operate in emergency, staff has been provided and timely plant maintenance is also being carried out by the JKSDPC

For this purpose, JKSDC is required to be compensated with the Fixed Charges as per the Tariff Regulations issued by the Central Electricity Regulatory Commission as there is no Regulations notified by the Honorable Jammu & Kashmir State Electricity Regulatory Commission. The Annual Fixed Charges (AFC) for both the stages of the GT power stations has thus been prepared as per the said guidelines and following assumptions

S. No.	Name of Power House	Unit	Capacity of Each unit (MW)	Installed Capacity (MW)	Year of Commissioning
1	Gas Turbine Station –I	Unit I	25.0	75.00	1989-90
		Unit II	25.0		1989-90
		Unit III	25.0		1989-90
2	Gas Turbine Station -II	Unit I	25.0	100.00	1993-94
		Unit II	25.0		1993-94
		Unit III	25.0		1993-94
		Unit IV	25.0		1993-94
<b>Total Thermal capacity</b>				<b>175.00</b>	

The assumptions for tariff calculations are as under:-.

As there is no regulations for thermal station, the calculations for the tariff have been done based on the Central Electricity Regulatory Commission's regulations applicable for the year 2009-14 published on 19<sup>th</sup> January,2009.

**Gas Turbine I & II**

S No	Particulars	Unit	Value	
1	<b>Plant Availability Factor</b>			
	Normative Capacity Index	%	85	
2	<b>Auxiliary Consumption</b>	%	3	
3	<b>O&amp;M Expenses</b>			
	2009-10	Rs in Lac/MW	22.9	
	2010-11	Rs in Lac/MW	24.21	
	2011-12	Rs in Lac/MW	25.59	
4	<b>Depreciation</b>			
	Plant Life 25 Yrs, Residual life 10%	%	3.60	
	Advance Against Depreciation		Nil	
5	<b>Working Capital</b>			
	Receivable	months	2	of Fixed Charges
	O & M Expenses	months	1	
	Spares for Maintenance	%	Nil	
	Escalation in Spares Inventory	%	Nil	
	Rate of Interest	%	11.00	PLR of J&K Bank as on 1.4.2005
6	<b>Return on Equity</b>	%	14	
7	<b>Equity</b>		30	
8	<b>Loan</b>		Nil	

**a) Project Cost**

Final project costs of the Gas Turbine projects is as given under:-

Sl. No	Name of Gas Turbine	Capacity in MW	Total Project Cost Rs in Million
1	Gas Turbine -I	75	586.00
2.	Gas Turbine -II	100	1548.00

**b) Plant Load Factor:**

Plant load factor @ 85% with auxiliary consumption @3% has been considered

c) **Interest on Loan Capital**

Nil

d) **Depreciation including Advance Against Depreciation**i) **Depreciation**

Depreciation has been calculated annually based on Straight Line Method and computed @ 3.60% on the Project Cost, considering the useful life of the asset as 25 years. Details of depreciation is given as under:-

Rs. In Million			
Sl. No	PARTICULARS	GAS TURBINE-I	GAS TURBINE-II
1	Cost of project excluding Land Cost	586.00	1548.00
2	Residual value	10%	10%
3	Total Depreciation to be claimed	527.40	1393.20
4	Normal depreciation rate	3.60%	3.60%
5	Total depreciation for the year		
(i)	2009-10	21.10	55.19
(ii)	2010-11	21.10	55.19
(iii)	2011-12	21.10	55.19

(ii) **Advance Against Depreciation (AAD)**

NIL

e) **Return on Equity (ROE)**

As per provision under Regulation 25 of JKSERC Regulations, 2005, Return on Equity has been considered @ 14% per annum. Details of Return on Equity is given as under:-

Sl. No	PARTICULARS	Rs. In Million	
		GAS TURBINE-I	GAS TURBINE-II
1	Net cost of the Project	586.00	1548.00
2	Total normative Equity 30% of the Project Cost	175.80	464.40
3	Rate of Return on Equity	14.00%	14.00%

4	Return on Equity		
(i)	2009-10	24.61	65.02
(ii)	2010-11	24.61	65.02
(iii)	2011-12	24.61	65.02

f) **Operation & Maintenance Expenses**

The Operation & Maintenance Expenses for these have been considered as per the Regulation of CERC as given in the table for assumptions.

The O&M Expenses are as under:

Rs. In Million

Sl. No	PARTICULARS	GAS TURBINE-I	GAS TURBINE-II
1	Total cost of project	56259.00	1753.00
2	O & M Expenses for the year		
(i)	2009-10	171.75	229.00
(ii)	2010-11	181.58	242.10
(iii)	2011-12	191.93	255.90

g) **Interest on Working Capital**

The requirement of Working Capital & Interest thereon has been computed as per Clause 27 “Interest on Working Capital” of the J&KSERC Notification No.5/JKSERC/2005 dated 23.09.2005. Interest @ 11 % per annum on working capital has been considered which is the Prime Lending Rate of Jammu & Kashmir Bank. The calculation of interest on working capital is summarized below:-

Rs. In Million

Sl. No	PARTICULARS	GAS TURBINE-I			GAS TURBINE-II		
		2009-10	2010-11	2011-12	2009-10	2010-11	2011-12
1	Total Working Capital Requirement as per regulation	51.50	54.00	56.64	78.73	82.06	85.58
3	Rate of Interest	11.00%	11.00%	11.00%	11.00%	11.00%	11.00%
4	Interest on working Capital for the year	5.66	5.94	6.23	8.66	9.03	9.41

**TOTAL ANNUAL FIXED CHARGES (AFC) AND ANNUAL REVENUE REQUIREMENT (ARR) (FOR GAS TURBINE)**

Based on the above parameters, station-wise AFC for the Financial Year 2009-10, 2010-11 and 2011-12 are given in the following tables :

**ANNUAL FIXED COST****Rs in million****GAS TURBINE-I**

Financial Year	2009-10	2010-11	2011-12
O&M Expenses	171.75	181.58	191.93
Depreciation	21.10	21.10	21.10
Return on Equity	24.61	24.61	24.61
Interest on Working Capital	5.66	5.94	6.23
<b>Total Annual Fixed Cost</b>	<b>223.12</b>	<b>233.22</b>	<b>243.86</b>

**GAS TURBINE-II**

Financial Year	2009-10	2010-11	2011-12
O&M Expenses	229.00	242.10	255.90
Depreciation	55.19	55.19	55.19
Return on Equity	65.02	65.02	65.02
Interest on Working Capital	8.66	9.03	9.41
<b>Total Annual Fixed Cost</b>	<b>357.86</b>	<b>371.33</b>	<b>385.52</b>

**Total Annual Fixed Charges ( AFC ) and Indicative Tariff :****( Rs in Million )**

Sl. No	Name of project	Total Annual Fixed Cost		
		2009-10	2010-11	2011-12
	Year	2009-10	2010-11	2011-12
1	<b>GAS TURBINE-I</b>	223.12	233.22	243.86
2	<b>GAS TURBINE-II</b>	357.86	371.33	385.52
3	<b>TOTAL</b>	<b>580.99</b>	<b>604.55</b>	<b>629.38</b>

**( Rs. Per kWh )**

Sl. No	Name of project	Indicative Tariff		
		2009-10	2010-11	2011-12
	Year	2009-10	2010-11	2011-12
1	<b>GAS TURBINE-I</b>	0.41	0.43	0.45
2	<b>GAS TURBINE-II</b>	0.50	0.51	0.53

**8.E MOHRA HEP**

The Mohra HEP is not generating any power at present. However the switchyard is being used for the power distribution by PDD and therefore the JKSPDC must get Annual Fixed Charges amounting to Rs. 34.95 Million on account of salary, wages and O & M Expenses.

**9. OPTIMIZATION OF GENERATION**

Optimization Of Generation Is Being Conducted By Way Of:-

**A. RM&U of Projects:**

Normal life of any Hydro power station is around 35 years. During this life span also, the performance of the plants gradually goes down. After completion of normal life, the plants are either to be retired or major Renovation and Modernization is to be done to bring their performance back to a reasonable level. Even during the normal life of the plants, RMU programme is required to be undertaken periodically

BoD of JKSPDC approved taking up of following seven HEPs at a cost of Rs. 208.96 crores.

State Government also vide letter dated 14.01.2008 approved taking of RMU of four major HEPs. Loan of Rs. 133.95 crores has already been tied up with Power Finance Corporation out of which Rs. 32.93 crores have already been lifted. Ministry of New & Renewable Energy has also approved subsidy of Rs. 32.94 crores for the seven HEPs out of which Rs. 0.55 crores have been disbursed.

JKSPDC has taken up for RM&U of following hydro projects which is being financed by PFC, State Govt and subsidy from MNRE to the extent indicated below:-

<b>Name of the HEP.</b>	<b>Envisaged completion cost</b>	<b>Debt from PFC</b>	<b>Subsidy from MNES</b>	<b>Equity from State Govt.</b>
105MW LJHP	101.30	71.00	-	30.30

22.6MW USHP-I	25.00	14.65	10.35	0.00
23.3MW Chenani-I	39.14	24.30	10.61	4.23
15MW Ganderbal	39.30	24.00	10.00	5.30
300KW Bazgo	1.32	-	0.74	0.58
400KW Hunder	1.77	-	0.94	0.83
100KW Sumoor	1.13	-	0.30	0.83
<b>Total</b>	208.96	133.95	32.94	42.07

The works on these projects have already started. Budget approved for the current year on these works is as under. Most of the works have already been awarded and will be completed by the end of 2010-11.

(Rs. in lac)

S.No	Name of the project	Approved budget for the year
1	LJHP	5469
2	Chenani-I	3870
3	USHP-I	1823.63
4	Ganderbal	2763.79
5	Sumoor	102.85
6	Hunder	146.72
7	Bazgo	126.94
<b>Total</b>		<b>14302.93</b>

There will be an increase in annual generation of each project. Impact of RM&U on four main projects namely Ganderbal, USHP-I, Chenani I and LJHP is given below. In terms of financial returns the annual proceeds from the sale of energy from these four projects would be substantial to the tune of Rs.33 Crore. Further this will ensure that these old power stations will operate for additional period without any major overhauling problems.

Project	Installed capacity (MW)	Annual Generation in MUs	Annual Increase in generation in MUs	Probable Generation after RM&U in MUs
LJHP	105.00	412.10	81.60	493.70
USHP-I	22.60	89.36	13.24	102.60
Ganderbal	15.00	22.33	63.64	85.97
Chenani I	23.3	71.32	33.85	105.17

Renovation and modernization of three other projects viz Sumoor, Hunder and Bazgo will also have a positive impact from monetary as well as energy availability point of view. The RMU programme will be a constant cyclic feature aimed at optimizing power generation and prolonging the life of the projects.

Two more projects namely Karnah & Iqbal are being taken up for RMU. Non – Operational project Mohra, oldest power house of the State (one of the country’s oldest power house) established in 1905 is being taken up for restoration besides the possibility of augmenting its capacity beyond 9 MW to be taken up in the next year. This project requires to be maintained as a heritage project also. 1 MW Haftal project not operating to its optimum capacity is also proposed to be taken up for RMU beside augmenting its capacity by 1 MW(2x500 KW) . DPRs for the purpose are under preparation after which these will be processed for financing from Financial Institutions & Subsidy from MNRE. RMU of these projects is expected to start from 2010-2011.

**B. Stabilization works: -**

The other operational projects also need some capital restoration works other than the normal O & M, to achieve the optimum level of generation from these projects. BoD of JKSPDC has approved some stabilization works on 23.3MW Chenani-I, 2.0MW Chenani-II, 7.5MW Chenani-III, 9.0 MW Sewa-III, 105MW USHP-II, 3.75MW Iqbal, 0.75MW Marpachoo, 1.0MW Haftal, 3.0MW Igo-Mercellong and 2.0 MW Karnah in the current year with the balance works to be taken up in the coming years so that these power houses operate at their optimum .An amount of Rs. 17.69 crores is being invested which shall be met from the state plan assistance i.e. equity, as per following breakup in 2009-10.

S.No	Name of the project	Amount approved for the current year Rs. in lacs
1	Chenani-I	14.00
2	Chenani-II	99.53
3	Chenani-III	30.20
4	Sewa-III	492.25
5	USHP-II	548.58
6	Iqbal	187.77
7	Marpachoo	81.29
8	Haftal	87.40
9	Igo Mercellong	95.67
10	Karnah	132.48
<b>Total</b>		<b>1769.17</b>

#### 10. Taxes and duties

The above tariff proposal is exclusive of any statutory levies, taxes and duties, Cess or any head of imposition (s) whatsoever imposed / charged by any Govt. Central / State and for any other local bodies / authorities including auxiliary consumption etc.

The amount of such taxes / levies / Cess / duties etc shall be borne by the beneficiary (PDD) additionally.

Incidence of tax liability and other charges as per J&KSERC tariff Notification 2005 shall also be payable by the beneficiary (PDD)

#### 11. Reimbursable fee

Filing fee amounting to Rs 2 Lac deposited with the Hon'ble Commission may be allowed to be recovered from the beneficiary.

Further to comply the directives of the Hon'ble Commission, consultants have been engaged to undertake:

- A. (i) Evaluation of Design Energy
- (ii) Evaluation of Assets of old power houses
- (iii) Evaluation of completion cost of the eight power projects costing Rs. 26 lacs approximately
- B. Restructuring of the Corporation costing Rs. 60.00 Lacs
- C. Filing of tariff petition costing Rs.25 Lacs

The total value thus summing up to the tune of Rs.111 lacs

**12. ADDITIONAL SUBMISSIONS UNDER REGULATION 34(3) OF NOTIFICATION DATED 23.05.2005 ISSUED BY THE HON'BLE COMMISSION**

- (i) To determine the tariff in respect of Baglihar HEP for the generation supplied to the State T & D utility ie. J& K PDD on levelised basis for first 12 years, till the time a portion of generation is being sold to PTC to meet lender's requirement This will facilitate PDD to have comfort level in the initial years of the period. The year wise tariff for the 12 years as per regulations worked out as under

**Rs per kWh**

<b>Description</b>	<b>Year-1</b>	<b>Year-2</b>	<b>Year-3</b>	<b>Year-4</b>	<b>Year-5</b>	<b>Year-6</b>
Financial Year	<b>Mar-10</b>	<b>Mar-11</b>	<b>Mar-12</b>	<b>Mar-13</b>	<b>Mar-14</b>	<b>Mar-15</b>
Hydro Generation	4.21	4.07	3.93	3.79	3.65	3.52
Transmission	0.13	0.12	0.12	0.11	0.11	0.10
<b>Total tariff per kWh</b>	<b>4.34</b>	<b>4.19</b>	<b>4.05</b>	<b>3.90</b>	<b>3.76</b>	<b>3.62</b>

**Rs per kWh**

<b>Description</b>	<b>Year-7</b>	<b>Year-8</b>	<b>Year-9</b>	<b>Year-10</b>	<b>Year-11</b>	<b>Year-12</b>
Financial Year	<b>Mar-16</b>	<b>Mar-17</b>	<b>Mar-18</b>	<b>Mar-19</b>	<b>Mar-20</b>	<b>Mar-21</b>
Hydro Generation	3.38	3.24	3.11	2.98	1.80	1.82
Transmission	0.10	0.10	0.09	0.09	0.05	0.05
<b>Total tariff per kWh</b>	<b>3.48</b>	<b>3.34</b>	<b>3.20</b>	<b>3.06</b>	<b>1.85</b>	<b>1.87</b>

The levelised tariff for the period of the 12 years works out as under:-

For Hydro Generation	3.53
For Transmission	0.11
<b>Total tariff per kWh</b>	<b>3.64</b>

- (ii) That the indicative generation tariff for the operational power houses other than Baglihar and GTs (being operated as per the instruction of the utility) be determined on average basis to facilitate billing The indicative tariff in case of these 18 projects be worked out on the basis of the total Annual Fixed Charges

vis-à-vis the total Design Energy of these power houses. The total AFC for these power projects sum up to Rs 2033.88 Million and Rs.1984.69 Million for the year 2009-10 and 2010- 11 respectively with the break up as under:-

Sl. No.	Name of HEP.	AFC(Rs. in Million)	
		2009-10	2010-11
1	USHP II	703.88	662.87
2	Chenani III	94.84	89.44
3	Sewa III	115.31	108.75
4	Pahalgam	96.81	92.41
5	Igo-Merchellong	86.16	82.25
6	Baderwah	15.53	14.86
7	Marpachoo	21.81	20.88
8	Haftal	27.18	26.02
9	Iqbal	30.77	31.1
10	Sumoor	0.86	0.87
11	Bazgo	2.63	2.66
12	Hunder	3.5	3.53
13	Chenani-II	15.12	15.3
14	Karnah	16.77	16.95
15	USHP I	86.15	88.13
16	Chenani I	114.29	116.35
17	Lower Jhelum	556.69	565.43
18	Ganderbal	45.01	46.31
	<b>Total</b>	<b>2033.31</b>	<b>1984.11</b>

The aggregate design energy for these power houses is 1477.27 MUs with the break up as under.

Sl. No.	HEPs	Design Energy in MUs
1	Igo Marcellong	15.88
2	Marpachu	3.79
3	Haftal	4.88
4	Chenani - III	36.71
5	Baderwah	8.32
6	Sewa-III	33.06
7	USHP-II	447.37
8	Pahalgam	14.92
9	Iqbal Bridge	21.23
10	Hunder	1.77
11	Sumoor	0.45
12	Bazgo	1.09
13	Chenani - I	110.02
14	Chenani - II	12.00
15	Lower Jhelum	609.43
16	USHP-I	106.62

Sl. No.	HEPs	Design Energy in MUs
17	Ganderbal	90.15
18	Karnah	11.36
	<b>Total</b>	<b>1477.27</b>

The average indicative tariff thus works out as

Year	2009-10	2010-11
<u>Total AFC</u> Total DE	Rs.1.376	Rs.1.343

In respect of Baglihar the tariff as prayed under 12(i) is requested.

In respect of GTs, the AFC other than the cost of fuel is requested for reimbursement as the same is being funded by the utility through Govt..

In respect of Mohra, the AFC for operation of the 5MVA 33/11 kV S/Station utilized for the wheeling of the power for PDD is requested as the power house is non-operational at present.

### **PRAYER**

It is respectfully prayed that the Hon'ble Commission may be pleased to:

- (a) Approve the Annual Fixed Charges as mentioned Para 8A, B, C, D & E
- (b) Approve the reimbursement of expenditure incurred by the petitioner towards petitions, filing fee etc. as mentioned in para No.11 above.
- (c) Pass necessary orders in the light of Additional submission made in para 12 above.
- (d) Pass such other and further order(s) as are deemed fit and proper in the facts and circumstances of the case.

**Authorised Signatory**

Place: Jammu  
Date: