



APPLICATION  
FOR  
PROVISIONAL TARIFF  
FOR BHEP II  
FY 2016-17

Submitted by:  
JAMMU & KASHMIR POWER DEVELOPMENT CORPORATION LTD.  
November-2016



**PETITION FOR PROVISIONAL TARIFF FOR  
FY 2016-17 FOR BAGLIHAR HEP STAGE-II**

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

Filing No.....

Case No.....

IN THE MATTER OF:

APPLICATION FOR PROVISIONAL TARIFF FOR  
BAGLIHAR HYDRO ELECTRIC PROJECT  
STAGE-II OF JAMMU & KASHMIR STATE  
POWER DEVELOPMENT CORPORATION  
LIMITED FOR THE FINANCIAL YEAR 2016-17  
IN TERMS OF THE J&KSERC (CONDUCT OF  
BUSINESS) REGULATIONS, J&KSERC (TERMS  
& CONDITIONS OF DETERMINATION OF  
HYDRO GENERATION TARIFF) REGULATIONS,  
2011 AS AMENDED FROM TIME TO TIME  
WHEREVER APPLICABLE

**AND**

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-180004.

..... PETITIONER

DEVELOPMENT COMMISSIONER, POWER,  
POWER DEVELOPMENT DEPARTMENT,  
GOVERNMENT OF JAMMU AND KASHMIR,  
EXHIBITI ROAD, SRINAGAR/ JANIPUR, JAMMU.

.....RESPONDENT

**1. BACKGROUND OF THE PETITION**

- I. The application for determination of Tariff of Baglihar HEP Stage-II for the FY 2016-17 already stands submitted in terms of clause 45 of the JKSERC (conduct of business) and in terms of Regulation 2(1) Chapter -1 and 4(2)(b) of chapter -2 of the JKSERC (Terms and conditions of Determination of Hydro Generation Tariff) Regulations 2011 dated 20-04-2011 as amended from time to time vide letter dated 30.09.2016.
- II. The Baglihar HEP Sage-II was declared commercially operational on 04-05-2016. The energy generated from BHEP-II is being sold to JKPDD. Power Purchase Agreement Dt. 27.04.2012 for supply of power from BHEP-II with JKPDD provides that the tariff for supply of energy shall be determined by Hon'ble JKSERC. For the purpose of calculation of infirm power, a provisional per unit rate of Rs.2.61 as approved by the Hon'ble JKSERC for BHEP-I ( Hydro) in the Tariff Order for the FY 2016-17 Dt.31/03/2016 has been considered. The same shall stand revised in accordance with the Tariff/rate approved by the Hon'ble Commission.
- III. JKSPDC is filing the instant petition for approval of provisional tariff pending determination of final tariff in accordance with the petition filed vide our letter vide letter No PDC/F/1144-46 Dt. 30.09.2014.

**2. DETERMINATION OF PROVISIONAL TARIFF FOR BAGLIHAR HEP STAGE -II**

**I. 450 MW BAGLIHAR HEP STAGE –II**

Baglihar HEP- II with an installed capacity of 450 MW having three units 150 MW each envisaging utilization of water of international river Chenab (Chandrabhaga) at Village Baglihar, Ramban Tehsil of Doda District of Jammu & Kashmir for Power

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Generation was taken for excavation JKSPDC. This Hydro Project was approved by the State Government vide Govt. order No. 81-PDD of 2012 dated 19.03.2012 and all the three units were commissioned on the dates as under:-

Sl. No.	Name of Power House	Unit	Capacity of each unit (MW)	Installed Capacity (MW)	Date of Commissioning
1.	Baglihar HEP Stage-II	Unit I	150	450	05/09/ 2015
		Unit II	150		30/03/ 2016
		Unit III	150		04/05/ 2016

The commercial date of commissioning of Baglihar HEP-II has been declared as 04-05-2016.

**II. SALIENT FEATURE OF THE BAGLIHAR HEP STAGE-II**

The main salient features of the Baglihar HEP Stage -II are given as under:-

Sl. No	Description	Feature
1.	Name of the River	: Chenab (Chandrabhaga)
2.	Village	: Baglihar
3.	Tehsil	: Ramban
4.	District	: Doda
5.	State	: Jammu & Kashmir
6.	Installed Capacity	: 450 MW
7.	Number of units	: 3
8.	Design Energy	: 1302.08 MU in 90% dependable year
9.	<b><u>Surge Shaft</u></b>	
i)	Type	: Restricted orifice
ii)	Size	: 27.50 Metre dia.
iii)	Height	: 79.50 Metre
10.	<b><u>Pen Stock</u></b>	
i)	Nos	: 3
ii)	Diameter of steel liners	: 5.5 Metre dia each

Sl. No	Description	Feature
iii)	Length	: 184 Metre , 190 Meter & 213 Metre
iv)	Type	: Underground
11.	<b><u>Power House</u></b>	
i)	Type	: Underground
ii)	Number of Turbines	: 3 nos. turbines
iii)	Excitation	: Static

### **III. INFIRM POWER**

Infirm power means electricity generated prior to commercial operation of HEP. The commissioning date of all the three units along with commercial operation date of the HEP are given below:-

Date of commissioning of unit -I	05-09-2015
Date of commissioning of unit -II	30-03-2016
Date of commissioning of unit -II	04-05-2016
Commercial Operation date of HEP	04-05-2016

The electricity generated and its revenues from sale of infirm power (prior commercial operational date) are given below:-

**(Rs in Crore)**

Sl. No	Name of buyer	Infirm power Energy generated in MUs	Revenue Collected
2	PDD	225.56	NIL

The entire power generated from the BHEP-II is sold to JKPDD. JKPDD, however has not paid any amount on account of infirm power from BHEP-II. The accrued revenue calculated at provisional rate of Rs. 2.61 per unit as approved by the Hon'ble JKSERC for BHEP-I (Hydro) in the Tariff Order for the FY 2016-17, Dt 31/03/2016 amounts to Rs. 58.87 Crore. The accrued revenue as above from sale of energy to PDD from infirm power has been considered to be deducted from the total project cost for the purpose of tariff determination.

**IV. ACTUAL GENERATION**

The saleable energy actual and as per Design Energy are as under;-

Sl. No	Description	Unit	Value
	Saleable Energy		
(i)	Actual Upto August'16	MU	1234.02
(ii)	As per Design Energy	MU	1302.08

**V. DESIGN ENERGY**

The design energy has been considered in a 90% dependable year with 95% installed capacity of 450 MW of Baglihar HEP as per regulation 3(14) of Jammu & Kashmir State Electricity Regulatory Commission (Terms & Conditions for Determination of Tariff) Regulations, 2011 dated 20th April, 2011.

The final design energy in a 90% dependable year with 95% installed capacity was calculated at 1302.08 GWH in base year of 1984-85.

Month wise design energy for 90% dependable year and 95% installed capacity is given below:-

Sl. No.	Moith wise Design Energy for 90% dependable year 1984-85	Design Energy output (GWH)
1	January, 1985	0.00
2	February, 1985	0.00
3	March, 1985	0.00
4	April, 1985	0.00
5	May, 1985	185.10
6	June, 1984	307.80
7	July, 1984	318.06
8	August, 1984	318.06
9	September, 1984	173.07
10	October, 1984	0.00
11	November, 1984	0.00
12	December, 1984	0.00
13	<b>Total</b>	<b>1302.08</b>

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**VI. TOTAL PROJECT COST FOR BAGLIHAR-HEP STAGE-II (450 MW)**

The details of cost/expenditure in respect of Baglihar HEP Stage-II is given below:

**Details of break up cost / expenditure of Baglihar HEP Stage-II - final estimated completion cost, expenditure as on COD i.e 04.05.2016 & 31.3.2017 is provided below:**

(Rs. in Crore)

S. No.	Particulars	Details of Final estimated completion	Expenditure on COD i.e. 4th May' 16	Expenditure on ending i.e. 31st March' 17
I	II	III	IV	V
1	Pre-operative expenses	7.50	1.50	7.50
2	Infrastructure works	40.66	19.03	40.66
3	Civil & Hydro mechanical Works	1452.66	1390.28	1452.66
4	Electro-mechanical works	1223.46	1209.96	1223.46
5	Transmission works	36.43	16.43	36.43
6	Environment & Ecology & Rehab / Resett; (CAT Works & Fisheries)	19.18	8.05	19.18
7	Site Supervision ( Consultant)	89.69	74.85	89.69
8	O&M mobilization etc.			
9	Contingencies			
10	Subtotal base cost (Sl. No. 1 to Sl.No.9)	2869.58	2720.10	2869.58
11	IDC & FC	521.00	458.89	521.00
<b>12</b>	<b>TOTAL</b>	<b>3390.58</b>	<b>3178.99</b>	<b>3390.58</b>

**VII. NET PROJECT COST**

As per Regulation 17, Chapter -1 of J&KSERC Regulation dated 20-04-2011, any revenue earned by the utility from the sale of infirm power is to be taken as reduction in project cost and not to be treated as revenue. The revenue from infirm power has been calculated at a provisional rate of Rs.2.61 per unit in accordance with the rate approved by the Hon'ble JKSERC for BHEP-I ( Hydro) in the Tariff Order Dt

31/03/2016 for the FY 2016-17. Accordingly, the net project cost is calculated as under:-

**(Rs. In Crore)**

<b>Description</b>	<b>Final Estimated completion cost</b>	<b>Cost on COD i.e. 04.05.2016</b>	<b>Cost as on 31.03.2017</b>
Total project cost	3390.58	3178.99	3390.58
Less : Revenue from infirm power	58.87	58.87	58.87
<b>Net project cost</b>	<b>3331.71</b>	<b>3120.12</b>	<b>3331.71</b>

The net project cost has been further bifurcated for final estimated completion cost, COD i.e. 04.05.2016 and 31-03-2017 as under:-

<b>Sl. No.</b>	<b>Description</b>	<b>Final estimated completion cost</b>	<b>As on COD (04-05-2016)</b>	<b>Cost as on 31.03.2017</b>
1	Total cost excluding IDC +FC	2869.58	2720.10	2869.58
2	IDC +FC	521.00	458.89	521.00
3	Total cost including IDC +FC	3390.58	3178.99	3390.58
4	Less: Cost of Infirm power	58.87	58.87	58.87
5	<b>Net Cost (Sl.No.3 -Sl NO.4)</b>	<b>3331.71</b>	<b>3120.12</b>	<b>3331.71</b>

**VIII. FINANCING OF THE PROJECT COST FOR BAGLIHAR –HEP STAGE-II**

The debt part of the cost of project has been financed by the bank and financial institution as detailed below:

**(Rs. in Crore)**

<b>Sl. No.</b>	<b>Name of FIs/ Banks</b>	<b>Loan Sanctioned</b>
1	PFC	1679.23
2	J&K Bank Limited	500.00
3	<b>Total</b>	<b>2179.23</b>



**IX. TOTAL EQUITY FOR BAGLIHAR –HEP STAGE-II**

Total Equity contribution for the project has been funded by the internal resource of JKSPDC. The actual equity for this project is as under:-

(Rs in crore)

JKSPDC	1211.35
<b>Total</b>	<b>1211.35</b>

**X. SUBSIDY FOR BAGLIHAR –HEP STAGE-II**

No subsidy has been received from the Central/State Government in respect of the BHEP-II.

**XI. THE SUMMARY OF FINANCE FROM VARIOUS SOURCES IS AS UNDER:**

(Rs. in Crore)

Sl. No.	Source of fund	Amount
1.	Equity by Govt. of J&K / JKSPDC	<b>1211.35</b>
2.	Debt from FI/Banks	<b>2179.23</b>
3.	<b>Total</b>	<b>3390.58</b>

**XII. ACTUAL STATUS OF AVAILING THE FINANCE FROM VARIOUS SOURCES AS ON COD ( 04.05.2016) AND 31.3.2017 ARE AS UNDER:**

(Rs. in Crore)

Sl. No.	Source of fund	As on COD – 04.05.2016	Total Drawal upto 31.03.2017
1	Equity by Govt. of J&K / JKSPDC	1515.94	1702.23
2	Debt from FI/Banks	1663.05	1688.35*
3	<b>Total</b>	<b>3178.99</b>	<b>3390.58</b>

\* Actual drawal upto 27.07.2016

**XIII. INTEREST DURING CONSTRUCTION (IDC) & FINANCING CHARGES (FC)**

The repayment of loans raised from financial institutions and bank has been started from 15.07.2016. However interest during construction (IDC) and financing charges (FC) up to COD has been considered and are as under:-

(Rs. in Crore)

Description	As on COD i.e. 04.05.2016
IDC + FC	458.89

**XIV. LOAN & INTEREST**

The details of loan taken, rate of interest and total weighted average of ROI is given in the table given below:-

(Rs inCrore)

Sl. No.	Name of Lender	Total Loan sanctioned	Details of Loan as on 31.03.2015						Weighted average ROI	Opening Loan as on 1.4.2015	Details of Loan as on 31.03.2016					
			Total Loan Drawn during 2014-15	Loan Drawal 1	Loan Drawal 2	Loan Drawal 3	Loan Drawal 4	Loan Drawal 5			Loan Drawal 6	Loan Drawal 7	Loan Drawal 8	Total Loan Drawal as on 31.03.2016	Weighted average ROI	
1	PFC	1679.23	381.18254	130	120	100	31.1825	12.25%	1026.18	162.57	49.38	66.18	31.01	16.00	1188.75	
	ROI (Quarterly) - floating			12.25%	12.25%	12.25%	12.25%				12.25%	11.65%	11.65%	11.65%		12.12%
2	J&K Bank	500.00	254.77	86.59	88.54	40.41	39.23	11.75%	429.31	44.99	15.77	14.65	11.20	3.38	474.30	
	ROI (Monthly) - floating			11.75%	11.75%	11.75%	11.75%				11.75%	11.35%	11.00%	11.00%		11.69%
	Total	2179.23	635.95	216.59	208.54	140.41	70.42		1455.49	207.57	65.15	80.83	42.21		1663.06	
	Total weighted average of ROI															12.00%

**XV. NET PROJECT COST BAGLIHAR HEP-II**

The bifurcation of cost, IDC, equity, Debt etc for BHEP-II for final estimated completion cost, COD i.e. 04.05.2016 and 31-03-2017 for determination of tariff is given below:-

Sl. No.	Description	Final estimated completion cost	As on COD (04-05-2016)	Cost as on 31.03.2017
1	Total cost excluding IDC +FC	2869.58	2720.10	2869.58
2	IDC +FC	521.00	458.89	521.00
3	Total cost including IDC +FC	3390.58	3178.99	3390.58
4	Less: Cost of Infirm power	58.87	58.87	58.87
5	Net Cost (Sl.No.3 -Sl NO.4)	3331.71	3120.12	3331.71
6	Equity 30% for tariff purpose	999.51	936.04	999.51
7	Debt+ Subsidy (70% of the net cost)	2332.20	2184.08	2332.20
8	Subsidy	0.00	0.00	0.00
9	Debt for Tariff purpose	2332.20	2184.08	2332.20

**XVI. DETERMINATION OF PROVISIONAL TARIFF**

It is submitted that the petition for determination of final tariff for The Baglihar HEP Stage –II has been submitted on the basis of the technical & financial figures submitted in the above paras.

It is submitted that the project is already operational and is generating energy hence a rate is required for billing for supply of such energy to the beneficiary.

We understand that determination of final tariff for the FY 2016-17 would take time in view of the fact that the Hon'ble Commission has to scrutiny the petition and take the views of all the stake holders before deciding on the same.

In light of the above it is prayed that the Hon'ble Commission may kindly consider the above submissions and decide a provisional tariff which will applicable until the final tariff for BHEP-II is determined.

For the sake of brevity, JKSPDC has not resubmitted all the details/documents substantiating capital cost and other parameters of the HEP already submitted in the petition for approval of tariff of BHEP-II vide our letter dated 30.09.2016 which may kindly be referred to.

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**PRAYER**

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

- (a) Approve the Provisional Tariff for Baglihar HEP Stage II for the year 2016-17 as submitted.
- (b) 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:...../11/2016