

**Jammu & Kashmir
State Electricity Regulatory Commission**



Tariff Order
on
Annual Revenue Requirement
and
Determination of Generation Tariffs
for
Financial Year 2009-10 and Financial Year 2010-11
for
J&K State Power Development Corporation

Jammu & Kashmir State Electricity Regulatory Commission
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Before

Jammu & Kashmir State Electricity Regulatory Commission

Petition Number: 20/ 2009-10

In the Matter of:

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 of the Jammu & Kashmir State Electricity Power Development Corporation Limited

In the Matter of:

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

Order

Order No. JKSERC/04 of 2010; Dated 30th April, 2010

(Passed on this 30th Day of April, 2010)

- 1.1 This Order relates to ARR and tariff petitions filed by the Jammu & Kashmir State Power Development Corporation (hereinafter referred to as JKSPDC or the Petitioner or the utility) before the Jammu & Kashmir State Electricity Regulatory Commission (hereinafter referred to as J&KSERC or the Commission). The petitions were filed as per the J&KSERC (Terms and conditions for Determination of Hydro-Generation Tariff) Regulations, 2005 (hereinafter referred to as the "Regulations").
- 1.2 The Commission in its tariff order for FY 2008-09 had directed the Petitioner that in case of the 11 old Hydro Electric Projects (HEPs) covered under the Power Purchase Agreement dated April 26, 2000, the next ARR and tariff proposal should be submitted either after tracing the old records in support of capital cost or determination of the capital cost through appropriate valuation methodology by engaging a consultant/ certified valuers. The Petitioner has complied with the directive by engaging a consultant for valuation of assets for 10 HEPs. The Petitioner has submitted that 1 HEP namely Mohra, is not functional since the floods of September 1992. Hence this HEP has not been included in the valuation report submitted by the Petitioner.
- 1.3 The Petitioner failed to file the ARR & Tariff Petition for FY 2009-10 and FY 2010-11 by the stipulated date of November 30, 2008 and November 30, 2009 respectively. The Petitioner has filed a combined Petition for the year 2009-10 and 2010-11 on January 12, 2010.
- 1.4 The Commission on initial review of the ARR & tariff petition for FY 2009-10 and



FY 2010-11 directed JKSPDC to submit further information/ clarifications on several issues through its letter no. JKSERC/449-50 dated February 1, 2010.

- 1.5 The Commission held a technical validation session with the Petitioner on February 8, 2010, wherein requisite data and additional information and clarifications were submitted by JKSPDC through its letter no. PDC/P-241/5117 dated February 8, 2010. The Commission considered the supplementary information provided by JKSPDC and admitted the petition for FY 2009-10 and FY 2010-11 on February 08, 2010 for all HEPs except the recently commissioned Baglihar HEP. The Commission has directed the Petitioner to file a separate petition for the Baglihar HEP. The Commission intends to conduct a detailed prudence check of the capital cost for the Baglihar HEP before allowing the same in the tariff.
- 1.6 On February 10, 2010, the Commission directed the Petitioner vide letter no. JKSERC/480 to issue a Public Notice and invite comments/ objections/ suggestions from consumers on the petitions.
- 1.7 The gist of petition and tariff proposal was published by JKSPDC in 6 newspapers on February 12 and 13, 2010. The stakeholders were requested to submit their comments/ suggestions/ objections by March 8, 2010.

Gist of Petition

- 1.8 The tariff petition submitted by JKSPDC relates to the financial years 2009-10 and 2010-11. JKSPDC has 20 hydro electric power stations (HEPs) having a total installed capacity of 763.70 MW. Out of these HEPs, 19 stations are in commercial operation with an installed capacity of 754.70 MW at the beginning of the year. This tariff petition admitted by the Commission covers 18 stations owned and operated by the Petitioner in the state having a total installed capacity of 304.70 MW.
- 1.9 The Petitioner has submitted the following in respect of the directives that were issued by the Commission in the tariff order for FY 2008-09.

Table 1: Compliance to Directives

Sl.	Directive	Status of Compliance
1	Determination of Capital Cost of Old HEPs	The Petitioner had engaged independent consultants/ valuers for determination of the capital cost of the old HEPs. The Capital cost determined using suitable valuation methodologies has been used for arriving at the proposed ARR and for tariff determination. This directive has been complied with.
2	Completion Report for Eight HEPs	The Petitioner has submitted that it had engaged an independent consultant to prepare the completion report for the 8 HEPs. The consultant has completed and furnished the reports after visiting the site and other offices and ascertaining the factual details. This directive has been complied with.
3	Manpower	The JKSPDC has engaged consultants for undertaking the requisite study. The final report on recommendations is expected to be submitted shortly.
4	Expenditure on Gas	The Petitioner has not submitted information confirming compliance to the

Sl.	Directive	Status of Compliance
	Turbines	directive.
5	Submission of next Petition	The Petitioner has submitted that the ARR petition for FY 2009-10 and FY 2010-11 is being filed after complying with Directives 1 and 2 above.
6	Design Energy	To comply with the directive of the Commission, an independent consultant was also appointed for revalidating the Design Energy for all HEPs. The findings of the study have been submitted in the Petition.
7	Expenditure on O&M	The Petitioner has not complied with this directive. The Petitioner has requested for allowance of O&M expenses as per Regulations.
8	Submission of asset class wise details of capital cost for HEPs	The Petitioner has not complied with this directive. The Petitioner has prayed for allowance of depreciation at the blanket rate of 2.57% for the HEPs.

1.10 The Petitioner has projected the Annual Fixed Charges (AFC) for the 10 HEPs which were covered under the PPA dated 26th April 2000. The valuation for these HEPs has been done by engaging an independent consultant as directed by the Commission in its tariff order for FY 2008-09. The AFC proposed for approval are as under:

Table 2: Proposed Annual Fixed Charge for 10 HEPs (Rs. Cr)

Name of HEP	O&M Expenses		Depreciation		RoE		Int. on WC		AFC	
	FY 10	FY 11	FY 10	FY 11	FY 10	FY 11	FY 10	FY 11	FY 10	FY 11
Iqbal	0.75	0.78	0.49	0.49	1.72	1.72	0.11	0.11	3.08	3.11
Sumoor	0.02	0.02	0.01	0.01	0.05	0.05	0.00	0.00	0.09	0.09
Bazgo	0.06	0.06	0.04	0.04	0.15	0.15	0.01	0.01	0.26	0.27
Hunder	0.08	0.08	0.06	0.06	0.20	0.20	0.01	0.01	0.35	0.35
Chenani II	0.40	0.42	0.24	0.24	0.82	0.82	0.06	0.06	1.51	1.53
Karnah	0.40	0.42	0.27	0.27	0.95	0.95	0.06	0.06	1.68	1.69
USHP I	4.52	4.70	0.46	0.46	3.24	3.24	0.39	0.41	8.62	8.81
Chenani I	4.66	4.85	0.79	0.79	5.50	5.50	0.49	0.51	11.43	11.64
Lower Jhelum	19.69	20.48	4.21	4.21	29.49	29.49	2.26	2.35	55.65	56.52
Ganderbal	3.00	3.12	0.16	0.16	1.12	1.12	0.23	0.24	4.50	4.63
Total	33.58	34.92	6.73	6.73	43.23	43.23	3.62	3.76	87.16	88.64

1.11 For the other 8 HEPs the cost completion report, certified by a Chartered Accountant has been submitted to the Commission. The AFC proposed for approval of the Commission are as under:

Table 3: Proposed Annual Fixed Charge for 8 HEPs (Rs. Cr)

Name of HEP	FY	O&M	Interest	Depr.	AAD	RoE	Int. on WC	AFC
USHP II	FY 10	8.50	11.04	10.99	19.46	18.27	2.13	70.39

Name of HEP	FY	O&M	Interest	Depr.	AAD	RoE	Int. on WC	AFC
	FY 11	8.84	6.62	10.99	19.46	18.27	2.10	66.29
Chenani III	FY 10	1.03	2.02	1.41	2.44	2.31	0.27	9.48
	FY 11	1.08	1.44	1.41	2.44	2.31	0.27	8.95
Sewa III	FY 10	1.26	2.46	1.70	2.98	2.81	0.33	11.53
	FY 11	1.31	1.76	1.70	2.98	2.81	0.33	10.88
Pahalgam	FY 10	0.96	2.61	1.40	2.25	2.19	0.26	9.68
	FY 11	1.00	2.14	1.40	2.25	2.19	0.26	9.24
Igo Merchellong	FY 10	0.86	2.32	1.27	1.98	1.95	0.23	8.62
	FY 11	0.89	1.90	1.27	1.98	1.95	0.23	8.23
Baderwah	FY 10	0.19	0.41	0.27	0.30	0.34	0.05	1.55
	FY 11	0.19	0.33	0.27	0.30	0.34	0.05	1.49
Marpachoo	FY 10	0.22	0.66	0.33	0.45	0.47	0.06	2.18
	FY 11	0.22	0.56	0.33	0.45	0.47	0.06	2.09
Haftal	FY 10	0.27	0.82	0.41	0.56	0.58	0.07	2.72
	FY 11	0.28	0.70	0.41	0.56	0.58	0.07	2.60
Total	FY 10	13.28	22.34	17.77	30.43	28.92	3.41	116.15
	FY 11	13.81	15.45	17.77	30.43	28.92	3.37	109.75

- 1.12 Based on the proposed Annual Fixed Charges and the Design Energy, the indicative tariff for the HEP has been computed as under.

Table 4: Proposed Indicative Tariff (Rs./ kWh)

Sl.	Name of HEP	FY 2009-10	FY 2010-11
1	USHP II	1.59	1.50
2	Chenani III	2.61	2.46
3	Sewa III	3.49	3.29
4	Pahalgam	6.55	6.26
5	IGO-Merchellong	5.48	5.23
6	Baderwah	1.89	1.80
7	Marpachoo	5.81	5.56
8	Haftal	5.63	5.39
9	Iqbal	1.47	1.48
10	Sumoor	1.93	1.95
11	Bazgo	2.45	2.47
12	Hunder	2.00	2.02
13	Chenani-II	1.28	1.29
14	Karnah	1.49	1.51
15	USHP I	0.82	0.83

Sl.	Name of HEP	FY 2009-10	FY 2010-11
16	Chenani I	1.05	1.07
17	Lower Jhelum	0.91	0.93
18	Ganderbal	0.51	0.52

1.13 The Petitioner has also computed the O&M costs of the gas turbines owned and operated by them in accordance with CERC Regulations and submitted the same for approval of the Commission.

State Advisory Committee

1.14 The Commission convened a meeting with the Members of the State Advisory Committee (SAC) in Jammu on March 11, 2010 discussing the ARR and tariff petition. A presentation on the main components of the ARR & Tariff petition covering major items of expenditure and revenue was made by JKSPDC. The members provided several valuable suggestions which have been considered by the Commission in this Order at appropriate places.

Public Hearing

1.15 Public hearings on the ARR & tariff petition filed by JKSPDC were held at Jammu on March 13, 2010 and Srinagar on March 15, 2010. The Commission had invited several NGOs, industrial organizations and consumer bodies to take part in the process of tariff determination and represent interests of the consumers. The comments/ objections/ suggestions received during the hearings have been duly considered while finalizing this Order.

Approved AFC & Indicative Tariff for 8 HEPs

1.16 The Commission has approved the capital cost of these 8 HEP stations on the basis of the audited cost completion report submitted by the Petitioner.

1.17 The Commission has analyzed the projected costs for each of the items in the ARR in detail in this Order. The AFC and the indicative tariffs based on the recalculated design energy for the 8 HEPs approved by the Commission for FY 2009-10 and FY 2010-11 are shown in the following table:

Table 5: Approved Annual Fixed Charges and Indicative Tariffs for 8 HEPs

Name of HEP	FY 2009-10		FY 2010-11	
	AFC	Indicative Rate	AFC	Indicative Rate
	Rs Cr	Rs/kWh	Rs Cr	Rs/kWh
USHP –II	69.87	1.58	65.77	1.49
Chenani-III	8.83	2.43	8.29	2.28
Sewa –III	10.73	3.28	10.08	3.08

Name of HEP	FY 2009-10		FY 2010-11	
	AFC	Indicative Rate	AFC	Indicative Rate
	Rs Cr	Rs/kWh	Rs Cr	Rs/kWh
Baderwah	1.53	1.86	1.46	1.77
Pahalagam	9.57	6.48	9.13	6.18
Haftal	2.69	5.57	2.57	5.33
Marpachoo	2.16	5.74	2.06	5.50
Igo-Mercellong	8.59	5.46	8.20	5.21
Total AFC/ Weighted Average Tariff for 8 HEPs	113.97	2.04	107.56	1.93

Approved ARR & Indicative Tariff for 10 Old HEPs

- 1.18 The Commission in the Tariff Order for FY 2008-09 had directed the Petitioner to apply for approval of tariff for these 10 HEPs as per the Hydro Generation Tariff Regulations, 2005.
- 1.19 Based on the Directive issued by the Commission in the previous Order, the Petitioner JKSPDC had engaged an independent consultant / registered valuers to carry out a Physical Verification and Revaluation of Fixed Assets of the 10 HEPs. The consultants engaged by the Petitioner submitted a report on the Physical Verification and Revaluation of Fixed Assets as on March 31, 2009 with respect to the 10 HEP projects.
- 1.20 The Commission has taken into consideration the project cost for the 10 HEPs as given in the Physical Verification and Revaluation of Fixed Assets report issued by the consultants of the JKSPDC. Tariff determination for the 10 HEPs for FY 2009-10 and FY 2010-11 has been done by taking into account the project costs detailed in the report.
- 1.21 The Design Energy of each of the 10 HEPs has been estimated in the design energy validation report issued by consultants as per the Directive issued to JKSPDC in the Tariff Order 2008-09 by the Commission.
- 1.22 The Commission has considered the projected costs for each of the items in the ARR in detail in this Order. The AFC and the indicative tariffs based on the recalculated design energy for the 10 HEPs approved by the Commission for FY 2009-10 and FY 2010-11 are shown in the following table:

Table 6: Approved Annual Fixed Charges and Indicative Tariffs for 10 Old HEPs

Name of HEP	FY 2009-10		FY 2010-11	
	AFC	Indicative Rate	AFC	Indicative Rate
	Rs Cr	Rs/kWh	Rs Cr	Rs/kWh
Karnah	1.09	0.97	1.10	0.98

Name of HEP	FY 2009-10		FY 2010-11	
	AFC	Indicative Rate	AFC	Indicative Rate
	Rs Cr	Rs/kWh	Rs Cr	Rs/kWh
USHP-I	3.25	0.31	3.28	0.31
Lower Jhelum	29.57	0.49	29.87	0.50
Ganderbal	1.12	0.13	1.13	0.13
Iqbal Bridge	1.98	0.94	2.00	0.95
Bazgo	0.17	1.60	0.18	1.62
Sumoor	0.06	1.26	0.06	1.27
Hunder	0.23	1.31	0.23	1.32
Chenani – II	0.94	0.79	0.95	0.80
Chenani – I	5.51	0.51	5.57	0.51
Total AFC/ Weighted Average Tariff for 10 old HEPs	43.92	0.46	44.37	0.47

Implementation of the Order

- 1.23 This Tariff Order shall be applicable from April 1, 2009 to March 31, 2011, unless amended or modified by an order of this Commission. The AFC approved for FY 2009-10 and FY 2010-11 as approved by the Commission shall be applied for the respective years for the 18 HEPs covered in this Order.
- 1.24 The Commission has thus accepted the petitions of JKSPDC with modifications and conditions, and has determined the AFC and indicative tariffs recoverable by JKSPDC for the 18 HEPs covered in this Order for FY 2009-10 and FY 2010-11. The Commission directs that this Order be implemented along with directions given and conditions mentioned in the detailed Order and schedules attached to this order.
- 1.25 Having regard to the interests of consumers as well as the utility, the Commission expects the Petitioner to submit its petition for approval of ARR and determination of Baglihar HEP within 10 days from the date of issue of this order.
- 1.26 In exercise of powers vested under the Jammu & Kashmir State Electricity Regulatory Commission Act, 2000 (Act VIII of 2000), the Commission hereby passes this Order today, the April 30, 2010.

Ordered as above, read with attached detailed reasons, grounds and conditions.

G.M. Khan (Member - Finance)	D.S. Pawar (Member – Technical)	S.M. Desalphine (Chairman)

Dated: April 30, 2010

Place: Jammu

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A1: INTRODUCTION

- 1.1 The Jammu and Kashmir State Power Development Corporation Limited (JKSPDC hereinafter referred to as the Petitioner) has filed Annual Revenue Requirement (ARR) and tariff petition before the Jammu & Kashmir State Electricity Regulatory Commission (hereinafter referred to as the Commission) for approval of its ARR and generation tariffs for FY 2009-10 and FY 2010-11 under Regulation 4 of the J&K State Electricity Regulatory Commission (Terms and Conditions for Determination of Hydro-Generation Tariff) Regulations, 2005 dated September 23, 2005 (hereinafter referred to as Hydro Generation Tariff Regulations, 2005) and J&K State Electricity Regulatory Commission (Conduct of Business) Regulations, 2005 framed by the Commission.
- 1.2 The Commission is guided by the Jammu & Kashmir State Electricity Regulatory Commission Act, 2000 (Act VIII of 2000) (hereinafter referred to as the SERC Act) and other legislations in its approach to regulation of the electricity sector. The SERC Act mandates the Commission to take measures conducive to the development and management of electricity industry in the State in an efficient, economic and competitive manner.
- 1.3 The Petitioner, viz. Jammu and Kashmir State Power Development Corporation Limited (JKSPDC) is a State Government owned company which owns and operates various hydro-generation power projects in the State of Jammu & Kashmir.

ARR and Tariff Filing

Procedural History

- 1.4 The JKSPDC had on December 20, 2008 filed its first ARR & Tariff petition post framing of the J&K State Electricity Regulatory Commission (Terms and Conditions for Determination of Hydro-Generation Tariff) Regulations, 2005.
- 1.5 The Commission issued the first tariff order for JKSPDC on March 31, 2009, which was applicable for the period April 1, 2008 to March 31, 2009.
- 1.6 The Commission in its tariff order had directed the Petitioner that in case of the 10 Hydro Electric Projects (HEPs) covered under the Power Purchase Agreement dated April 26, 2000, the next ARR and tariff proposal should be submitted either after tracing the old records in support of capital cost or determination of the capital cost through appropriate valuation methodology by engaging a consultant/ certified valuers. The Petitioner has complied with the directive by engaging a consultant for valuation of assets for the 10 HEPs.
- 1.7 The Petitioner failed to file the ARR & Tariff Petition for the year 2009-10 and 2010-11 by the stipulated date of November 30, 2008 and November 30, 2009 respectively. The Petitioner has filed a combined Petition for the year 2009-10 and 2010-11 on January 12, 2010.

Information Gaps

- 1.8 The Commission carried out a scrutiny of the petition filed by the Petitioner and noticed several information gaps and data inconsistencies. A note listing out the deficiencies in the petition was prepared and the Petitioner was directed to submit suitable clarification, corrections and further information vide Commission's letter no. JKSERC/449-50 dated February 1, 2010.
- 1.9 On February 8, 2010, the Commission held a technical validation session with the Petitioner on the petitions filed by it for FY 2009-10 and FY 2010-11 to convey its views and obtain clarifications/ information for analysis of the petition and determination of tariff. During the session, the Petitioner submitted letter no.PDC/P-241/5117 dated February 8, 2010 providing clarifications, corrections and additional information to the points raised by the Commission during the interaction and through the deficiency note issued earlier.
- 1.10 The Commission after scrutiny and the validation session admitted the petition submitted by the Petitioner for determination of ARR and generation tariffs for FY 2009-10 and FY 2010-11 on February 8, 2010 for all HEPs except the recently commissioned Baglihar HEP. On February 10, 2010, the Petitioner was directed by the Commission, vide letter no. JKSERC/480 to issue a summary of its petition and tariff proposals as Public Notice in newspapers in English and local languages as per the requirement of Regulation 48(2), Chapter 5 of the JKSERC (Conduct of Business) Regulations 2005 and invite comments, objections and suggestions from consumers or stakeholders on the petitions.
- 1.11 The Commission has directed the Petitioner to file a separate petition for the Baglihar HEP. The Commission intends to conduct a detailed prudence check of the capital cost for the Baglihar HEP before allowing the same in the tariff.

State Advisory Committee

- 1.12 The Commission convened a meeting of the State Advisory Committee (SAC) on March 11, 2010 in Jammu to discuss the ARR and tariff petitions submitted by the Petitioner.
- 1.13 The Petitioner explained the salient features of the petition, highlighting the methodology followed for determining the various cost components of tariff. The SAC members discussed the general condition of the power generation in the state and the operational performance of the HEPs owned and operated by the Petitioner.
- 1.14 The issues and concerns raised and the suggestions and recommendations offered by the SAC members have been considered by the Commission while preparing this order.

Inviting Public Comments

- 1.15 As directed by the Commission, the Petitioner published a Public Notice in some of the widely read English, Hindi and Urdu newspapers indicating the salient features of its petition and inviting objections and suggestions from the consumers and other stakeholders. The public notice appeared in the following newspapers on the mentioned dates:
- (a) Daily Excelsior on February 13, 2010
 - (b) Amar Ujala on February 12, 2010
 - (c) Kashmir Uzma on February 12, 2010
 - (d) Himalyan Mail on February 12, 2010
 - (e) Dainik Jagran on February 13, 2010
 - (f) State Times on February 13, 2010
 - (g) Greater Kashmir on February 14, 2010
- 1.16 Copies of the above Public Notice were also made available on the Petitioners website and at its office address mentioned in the notice. The last date for submitting the comments/ objections on ARR and tariff petition was March 8, 2010.
- 1.17 The public notice advised respondents to submit (in person or by post, fax or email) their objections written either in English, Hindi or Urdu to the Commission with a copy to the Petitioner. Respondents were also given the option to be heard in person during the public hearings conducted by the Commission.
- 1.18 The Commission and Petitioner received written objections and comments from several respondents. The list of stakeholders who attended the public hearing is provided in Annexure 2.
- 1.19 The Commission held public hearings in Jammu on March 12, 2010 and in Srinagar on March 15, 2010, to discuss the issues related to the petition filed by the Petitioner for determination of ARR and generation tariff. The public hearings enabled the utility to present its case and to respond to the objections raised by various respondents. The Commission allowed attendants who had not submitted written objections to present their views, objections and suggestions during the public hearing.
- 1.20 Empowered by Section 15 of the SERC Act, the Commission had authorised the following persons to represent the interests of the consumers in its proceedings:
- (a) Sh. P.B. Khajuria

- (b) Sh. S.K. Gupta
- (c) Sh. B.L. Suri
- (d) Sh. Sonam Ganbo
- (e) Sh. Aftab Ahmed
- (f) Sh. Syed Khurshid Ahmad

1.21 The issues and concerns voiced by various stakeholders have been carefully examined by the Commission. The major issues discussed during the public hearing, through the objections raised by the respondents and the observations made by the Commission, have been summarized in the relevant chapter in this Order.

A2: SUMMARY OF ARR AND TARIFF PETITION

- 2.1 This section contains a summary of the ARR and Tariff Petition for FY 2009-10 and FY 2010-11 submitted by the Jammu & Kashmir State Power Development Corporation Limited (JKSPDC) to the Commission. The details regarding the Baglihar HEP which were also included in the Petition have not been included here as the Petitioner has been instructed to submit the same under a separate Petition.
- 2.2 The Petitioner has also submitted tariff proposals for FY 2011-12, however, the same are not shown in the summary provided in this chapter. The Commission will consider the same only when submitted in a separate petition and after compliance with the directives issued in this Order.

Installed Capacity

- 2.3 The JKSPDC has submitted that it has 20 hydro electric power stations (HEPs) having a total installed capacity of 763.70 MW. Out of these HEPs, 18 hydro power stations were commercially in operation at the beginning of the year and one new HEP namely Baglihar has been commissioned on April 1, 2009. Another HEP namely Mohra, is not operating since the floods of September, 1992. Thus, 19 HEPs having a total installed capacity of 754.70 MW owned by the Corporation are presently functioning.
- 2.4 The details of installed capacity and dates of commissioning for the 18 hydro electric power stations of JKSDPC covered in this Order are given below:

Table 7: Details of 18 Hydro Electric Power Stations owned by JKSPDC

Sl.	Name of Power House	Unit	Capacity of each unit (MW)	Installed Capacity (MW)	Year of Commissioning
A.	Jhelum River Basin				
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	Jun, 2000
		Unit II	35.00		Sept, 2001
		Unit III	35.00		Jun, 2002
5	Karnah	Unit I	1.00	2.00	1991
		Unit II	1.00		1997



Sl.	Name of Power House	Unit	Capacity of each unit (MW)	Installed Capacity (MW)	Year of Commissioning
6	Pahalgam	Unit I	1.50	3.00	Jun, 2005
		Unit II	1.50		Jun, 2005
B.	Chenab Basin				
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
C.	Ravi Basin				
11	Sewa – III	Unit I	3.00	9.00	Jun, 2002
		Unit II	3.00		Oct, 2002
		Unit III	3.00		Jun, 2003
D.	Indus Basin				
12	Iqbal Bridge	Unit I	1.25	3.75	Nov, 1995
		Unit II	1.25		1996
		Unit III	1.25		1996
13	Hunder	Unit I	0.20	0.40	1995
		Unit II	0.20		1995
14	Sumoor	Unit I	0.05	0.10	1993
		Unit II	0.05		1993
15	Bazgo	Unit I	0.15	0.30	1994
		Unit II	0.15		1994
16	Igo-Mercellong	Unit I	1.50	3.00	1/6/2005
		Unit II	1.50		19/08/2005
17	Marpachoo	Unit I	0.25	0.75	2006
		Unit II	0.25		2006
		Unit III	0.25		2006
18	Haftal	Unit I	0.50	1.00	2006-2007
		Unit II	0.50		2006-2007
Total installed capacity in MW				304.70	

Gas Based Thermal Power Stations

2.5 In addition to the hydro electric power stations JKSPDC has Gas Based Thermal Power Stations as listed below which are operated only on call from JKPDD.

Table 8: Gas Power Stations operated by JKSPDC

Sl.	Name of Power House	Unit	Capacity (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
Total Thermal capacity				175.00	

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

Compliance with Directives issued in Tariff Order for FY 2008-09

2.7 In compliance with the directives issued by the Honourable Commission in its order dated March 31, 2009, the Petitioner submitted as follows:

Table 9 : Compliance with directives

Sl.	Directive	Status of Compliance
1	Determination of Capital Cost of Old HEPs	The Petitioner had engaged independent consultants/ valuers for determination of the capital cost of the old HEPs. The Capital cost determined using suitable valuation methodologies has been used for arriving at the proposed ARR and for tariff determination. This directive has been complied with.
2.	Completion Report for Eight HEPs	The Petitioner has submitted that it had engaged an independent consultant to prepare the completion report for the 8 HEPs. The consultant has completed and furnished the reports after visiting the site and other offices and ascertaining the factual details. This directive has been complied with.
3.	Manpower	The JKSPDC has engaged consultants for undertaking the requisite study. The final report on recommendations is expected to be submitted shortly.
4.	Expenditure on Gas Turbines	The Petitioner has not submitted information confirming compliance to the directive.
5.	Submission of next Petition	The Petitioner has submitted that the ARR petition for FY 2009-10 and FY 2010-11 is being filed after complying with Directives 1 and 2 above.
6	Design Energy	To comply with the directive of the Commission, an independent consultant was also appointed for revalidating the Design Energy for all HEPs. The findings of the study have been submitted in the Petition.

Sl.	Directive	Status of Compliance
7.	Expenditure on O&M	The Petitioner has not complied with this directive. The Petitioner has requested for allowance of O&M expenses as per Regulations.
8.	Submission of asset class wise details of capital cost for HEPs	The Petitioner has not complied with this directive. The Petitioner has prayed for allowance of depreciation at the blanket rate of 2.57% for the HEPs.

Methodology of Determination of Tariff

For 10 Old HEP

- 2.8 For the 10 old HEPs for which records could not be traced out, valuation has been got done by an independent consultant. The Net Replacement Value (NRV) determined for each of the projects as on March 31, 2009 has been considered as the Capital Cost in the tariff proposals.
- 2.9 The Petitioner has adopted the following methodology for working out the tariff of the above 10 HEPs.
- Considered the cost of project as on 1st April 2009 based on Net Replacement Value (NRV) as assessed in the valuation report submitted by the independent consultants.
 - Considered 50% of the assessed NRV as equity for these projects which were commissioned a long time ago and at that time the consideration for equity used to be 50% on normative basis. The Petitioner has submitted that actual equity employed was almost 100%.
 - The O&M expenses are considered as Rs. 20 Lac/ MW for generating stations of capacity 1 MW to 25 MW and Rs.18.75 Lac/ MW for stations above 25 MW for FY 2009-10 and escalated @ 4% per annum (as per the Tariff Notification dated 23.09.2005) for FY 2010-11.
 - Considered depreciation @ 1% for the very old power projects commissioned before 1980 and for the projects commissioned after 1993, the depreciation has been taken as 2% per annum (ignoring the additional capital expenditure incurred on the plants from time to time in the past).
 - Considered no interest on loan.
 - Considered interest on working capital as per Regulations.
- 2.10 Based on the above parameters, station-wise AFC for the FY 2009-10 and FY 2010-11 are given in the following table:

Table 10: Proposed AFC for 10 Old HEPs (Rs. Cr)

	O&M Expenses		Depreciation		RoE		Int. on WC		AFC	
	FY 10	FY 11	FY 10	FY 11	FY 10	FY 11	FY 10	FY 11	FY 10	FY 11
Iqbal	0.75	0.78	0.49	0.49	1.72	1.72	0.11	0.11	3.08	3.11
Sumoor	0.02	0.02	0.01	0.01	0.05	0.05	0.00	0.00	0.09	0.09
Bazgo	0.06	0.06	0.04	0.04	0.15	0.15	0.01	0.01	0.26	0.27
Hunder	0.08	0.08	0.06	0.06	0.20	0.20	0.01	0.01	0.35	0.35
Chenani II	0.40	0.42	0.24	0.24	0.82	0.82	0.06	0.06	1.51	1.53
Karnah	0.40	0.42	0.27	0.27	0.95	0.95	0.06	0.06	1.68	1.69
USHP I	4.52	4.70	0.46	0.46	3.24	3.24	0.39	0.41	8.62	8.81
Chenani I	4.66	4.85	0.79	0.79	5.50	5.50	0.49	0.51	11.43	11.64
Lower Jhelum	19.69	20.48	4.21	4.21	29.49	29.49	2.26	2.35	55.65	56.52
Ganderbal	3.00	3.12	0.16	0.16	1.12	1.12	0.23	0.24	4.50	4.63
Total	33.58	34.92	6.73	6.73	43.23	43.23	3.62	3.76	87.16	88.64

For 8 HEPs

- 2.11 For 8 HEPs commissioned before the year 2007 where the completion reports have been prepared by the consultant, the tariff is proposed as per Regulations. The cost of project submitted earlier was not approved by the Commission and the Petitioner was allowed the cost of projects only to the tune of Rs.5.5 Cr per MW of installed capacity of each project.
- 2.12 The Petitioner has since complied with the directive issued by the Commission and submitted a report detailing the completion cost as compiled by the consultant engaged by them for this purpose and certified by a Chartered Accountant. The tariff has been proposed based on these compiled completion costs.
- 2.13 The AFC and tariff proposed for the 8 HEPs for FY 2009-10 and FY 2010-11 are tabulated below:

Table 11: Proposed AFC for 8 HEPs (Rs. Cr)

Name of HEP	FY	O&M	Interest	Depr.	AAD	RoE	Int. on WC	AFC
USHP II	FY 10	8.50	11.04	10.99	19.46	18.27	2.13	70.39
	FY 11	8.84	6.62	10.99	19.46	18.27	2.10	66.29
Chenani III	FY 10	1.03	2.02	1.41	2.44	2.31	0.27	9.48
	FY 11	1.08	1.44	1.41	2.44	2.31	0.27	8.95
Sewa III	FY 10	1.26	2.46	1.70	2.98	2.81	0.33	11.53
	FY 11	1.31	1.76	1.70	2.98	2.81	0.33	10.88
Pahalgam	FY 10	0.96	2.61	1.40	2.25	2.19	0.26	9.68
	FY 11	1.00	2.14	1.40	2.25	2.19	0.26	9.24



Name of HEP	FY	O&M	Interest	Depr.	AAD	RoE	Int. on WC	AFC
Igo Merchellong	FY 10	0.86	2.32	1.27	1.98	1.95	0.23	8.62
	FY 11	0.89	1.90	1.27	1.98	1.95	0.23	8.23
Baderwah	FY 10	0.19	0.41	0.27	0.30	0.34	0.05	1.55
	FY 11	0.19	0.33	0.27	0.30	0.34	0.05	1.49
Marpachoo	FY 10	0.22	0.66	0.33	0.45	0.47	0.06	2.18
	FY 11	0.22	0.56	0.33	0.45	0.47	0.06	2.09
Haftal	FY 10	0.27	0.82	0.41	0.56	0.58	0.07	2.72
	FY 11	0.28	0.70	0.41	0.56	0.58	0.07	2.60

Summary of AFC for 18 HEPS

2.14 A summary of proposed annual fixed charges and the indicative tariff for supply of energy from the 18 hydro electric projects as proposed by the Petitioner is given in the table as under:

Table 12: Proposed Total AFC and Indicative Tariffs

Sl.	Plant Name	FY 2009-10		FY 2010-11	
		AFC (Rs. Cr)	Indicative Tariff (Rs./ kWh)	AFC (Rs. Cr)	Indicative Tariff (Rs./ kWh)
1	USHP II	70.39	1.59	66.29	1.50
2	Chenani III	9.48	2.61	8.94	2.46
3	Sewa III	11.53	3.49	10.88	3.29
4	Pahalgam	9.68	6.55	9.24	6.26
5	Igo-Merchellong	8.62	5.48	8.23	5.23
6	Baderwah	1.55	1.89	1.49	1.80
7	Marpachoo	2.18	5.81	2.09	5.56
8	Haftal	2.72	5.63	2.60	5.39
9	Iqbal	3.08	1.47	3.11	1.48
10	Sumoor	0.09	1.93	0.09	1.95
11	Bazgo	0.26	2.45	0.27	2.47
12	Hunder	0.35	2.00	0.35	2.02
13	Chenani-II	1.51	1.28	1.53	1.29
14	Karnah	1.68	1.49	1.70	1.51
15	USHP I	8.62	0.82	8.81	0.83
16	Chenani I	11.43	1.05	11.64	1.07
17	Lower Jhelum	55.67	0.91	56.54	0.93
18	Ganderbal	4.50	0.51	4.63	0.52

A3: OBJECTIONS AND ISSUES RAISED DURING PUBLIC CONSULTATION PROCESS

- 3.1 On admission of the ARR and tariff petition for FY 2009-10 and FY 2010-11 the Commission directed the utility to make available copies of the petition to the general public, and invite comments/ objections from them.
- 3.2 A notice summarizing the ARR and tariff petition was published in some of the widely read English, Hindi and Urdu newspapers of the state inviting responses from the public on the petition.
- 3.3 The petition evoked response from several consumers, and a public hearing was held in Jammu on March 12, 2010 and in Srinagar on March 15, 2010 wherein respondents put forth their comments and objections before the utility and the Commission.
- 3.4 The Commission also allowed persons/ representatives of entities who had not submitted written responses but attended the public hearing to express their views, regarding the ARR and tariff petition and the general functioning of the utility.
- 3.5 The following objectors submitted written comments on the ARR and tariff petition of the JKSPDC for FY 2009-10 and FY 2010-11:
- (a) J&KPDD
 - (b) Zainab Akhtar
 - (c) Chenab Textile Mill
 - (d) Rajesh Gupta, President Industry, Trade and Tourism Wing, Bhartiya Janta Party-Jammu & Kashmir.
 - (e) PHD Chamber of Commerce and Industry
- 3.6 A list of participants in the public hearing session held at Jammu and Srinagar is given in Annexure 2 to this Order. The issues raised during the public hearing process, the responses of the Petitioner and the Commission's observations are detailed below:

High project costs and delays in project executions

- 3.7 The Commission has received Objections from the JKPDD and other Objectors stating that the capital cost of the HEPs as claimed in the ARR & Tariff Petition is on the higher side and should not be allowed in the tariff. The following issues have been pointed out in this context:

- (a) There is a huge impact of the inadvertent delays in project execution of the HEPs on the capital cost incurred and the same should not be allowed in the tariff being approved by the Commission. This is evident from the huge difference between the originally estimated project costs and the actual expenditure incurred by the JKSPDC on various projects. The capital cost for Pahalgam, Igo Marcellong and Haftal projected at Rs.18.4 crores/ MW, Rs. 16.47 crores/ MW and Rs. 16.13 crores/ MW respectively is unduly high.
- (b) The Notification dated December 7, 2005 issued by the Commission mandates that the capital cost of projects with installed capacity ranging between 1 MW to 25 MW shall not exceed Rs.5.5 Cr per MW. Any cost above the same may not be allowed in the tariff by the Commission.
- (c) The capital costs are subject to prudence checks by the Commission under regulation 15 of the Hydro-Generation Tariff Regulations. Further, all the costs need to be duly audited and certified by statutory auditors as per regulation 2(a) and 2(b) of the Hydro-Generation Tariff Regulations.
- (d) Respondents have contended that the weighted average cost of power from Central Generating Stations should be considered as the cost for small HEPs.
- (e) Several projects were built on various social considerations despite high capital cost. The capital cost incurred on such projects should not be allowed in entirety by the Commission for determining the tariff.
- (f) The high capital costs impact the other cost items like the O&M expenses, working capital requirement etc since they are based on the cost under the provisions of the Regulations.
- (g) Further, the receipts against sale of any infirm power from these plants should be adjusted against the capital cost before allowing the same in the tariffs under the provisions of the Regulation 17 of the Hydro-generation Tariff Regulations. However, details regarding the same have not been provided in the petition.

Petitioner's Response

- 3.8 The Petitioner has submitted that in accordance with the directive given by the Commission in the previous Tariff Order, the valuation of the 10 old HEPs was undertaken by engaging an independent consultant for the same.
- 3.9 As per the directive given by the Commission, an independent consultant was engaged by the Petitioner and the report issued by the consultant detailing the certified completion cost for the 8 HEPs has been submitted to the Commission. Reasons attributing to the time and cost overrun have been explained in this report.

- 3.10 The cost of the projects has been determined by the independent consultants as per valuation methodology in accordance with the directives issued by the Honourable Commission. Thus there is no consideration of sale of infirm power.

Commission's Observations

- 3.11 In the notification dated May 10, 2006 issued by the Commission it was clarified that the relaxations and variations as introduced through the Notification dated December 7, 2005 in the J&K SERC (Terms and Conditions for Hydro Generation Tariff Regulations), 2005 were made applicable only to new generating stations and for an initial period of 5 years in respect of both the categories i.e. up to 1 MW and between 1 MW and 25 MW.
- 3.12 Owing to the legacy which the Petitioner has inherited and the prevalent situation in the State there are several issues regarding availability of requisite information/ data for conducting a prudence check of the capital expenses and allocation of the escalations to controllable and non-controllable factors over the period of construction for allowing the same in the tariff. The Commission has therefore decided to allow the cost of the existing power plants after certification of the same from competent Chartered Accountants. The Petitioner has complied with the directives regarding the same and the Commission is in receipt of the audited capital costs of the HEPs.
- 3.13 However, the Commission has taken note of the issues raised by the Objectors and has decided to conduct a detailed prudence check of the Baglihar HEP and all HEPs that are in the process of being developed by the JKSPDC before allowing the same in the tariff.

Determination of capital cost for old plants

- 3.14 The Objectors have pointed out the following issues with respect to the valuation methodology and the corresponding information provided for the 10 old HEPs in the petition:
- (a) The cost evaluated for the 10 old HEPs has been done on the basis of market value rather than book value of these assets and the corresponding costs are unduly high.
 - (b) The Petitioner has not made available the basis and underlying calculations that have been used, to arrive at the Current Replacement Value and the Net Replacement Value of different stations. In the absence of such details and assumptions, the validity of these asset values cannot be determined.
- 3.15 The capital cost determined through this exercise shall form the basis of the computation of O&M charges, maintenance costs and depreciation. Thus it is important that the capital costs submitted by the Petitioner should be reasonable. The Petitioner should also be directed to provide details regarding the premises and assumptions considered in arriving at these values.

Petitioner's Response

- 3.16 The Petitioner has submitted that the capital costs for these 10 old plants have been determined in accordance with the relevant directive given by the Honourable Commission in the Tariff Order for the year 2008-09.
- 3.17 In complying with this directive, the Petitioner had engaged reputed consultants for carrying out the physical verification and revaluation of the fixed assets of the Hydro Electric projects. The detailed report containing the methodology adopted and the workings has been submitted to the Commission.

Commission's Observations

- 3.18 The Replacement Cost New (RCN) and Net Replacement Value (NRV) for different fixed assets groups of the Petitioner was estimated taking into account their estimated replacement costs, present economic value, expected service life and remaining useful life
- 3.19 The records regarding actual capital costs for these old HEPs were not available with the JKSPDC owing to its legacy and lack of preparedness for functioning under the transparent regulatory regime. In order to streamline and improve the current practices followed in this regard, the Commission has decided to adopt the Net Replacement Value as on March 31, 2009 for the purpose of tariff determination.

Computation of Design Energy

- 3.20 The Objectors have asserted that the detailed methodology and the workings for arriving at the revised design energy for various plants have not been elaborated upon in the Petition. The following issues have been pointed out in this context:
- (a) Design energy for old projects shall be strictly as per definition 14 of the Hydrogenation Tariff Regulations.
 - (b) The design energy at 90%, 75% and 50% hydrological dependability criteria should have been indicated to justify the proposed figures. The design energy of the various plants which have been reworked and submitted in the petition has not been elaborated upon. The basis for this revised design energy calculation should be explained by the Petitioner.

Petitioner's Response

- 3.21 The Petitioner has submitted that, in compliance with Directive 6 of Tariff Order for the year 2008-09, an independent consultant was appointed for revalidation of design energy based upon the norms specified in the Hydro Generation Tariff Regulations, 2005. The report issued by the consultant in this regard, has already been submitted to the Honourable Commission.

Commission's Observations

- 3.22 The Commission is in receipt of the report on validation of the design energy submitted by the Petitioner. The assessment of the design energy for various plants has been done in accordance with the Regulation 14 of Chapter – 1 of the J&K SERC (Terms and Conditions for Determining Hydro Generation Tariff) Regulations, 2005. Design Energy has been defined as the quantum of energy, which could be generated in a 90% dependable year with 95% installed capacity of the generating station.
- 3.23 The Commission has gone through the workings in the report and found the same to be in accordance with the Regulations. The comparison of the design energy originally estimated in the DPRs and that in the validation exercise undertaken by the JKSPDC are shown in the table provided below:

Table 13 : Comparison of design energy as per DPR and Validation Report for all 18 HEPs

Sl.	Plant Name	Installed Capacity (MW)	Design Energy as per DPR (MUs)	As per Validation Report (MUs)	% Change
1	Igo Marchellong	3.00	19.80	15.88	-19.80%
2	Marpochoo	0.75	4.00	3.79	-5.25%
3	Haftal	1.00	7.62	4.88	-35.96%
4	Chenani III	7.50	36.72	36.71	-0.03%
5	Bhaderwah	1.00	9.43	8.32	-11.77%
6	Sewa III	9.00	33.41	33.06	-1.05%
7	USHP II	105.00	462.59	447.37	-3.29%
8	Pahalgam	3.00	15.57	14.92	-4.17%
9	Iqbal Bridge	3.75	23.15	21.23	-8.29%
10	Hunder	0.40	1.83	1.77	-3.49%
11	Sumoor	0.10	0.46	0.45	-1.75%
12	Bazgo	0.30	1.38	1.09	-21.01%
13	Chenani I	23.30	115.49	110.02	-4.74%
14	Chenani II	2.00	11.58	12.00	3.60%
15	Lower Jhelum	105.00	605.00	609.43	0.73%
16	USHP I	22.60	105.72	106.62	0.85%
17	Ganderbal	15.00	94.62	90.15	-4.72%
18	Karnah	2.00	11.40	11.36	-0.35%
	Total	304.70	1,559.77	1,529.05	-1.97%

Operation and maintenance (O&M) expenses

- 3.24 The Commission has received objections from the JKPDD and other respondents stating that the O&M costs being claimed against each of the plants by the JKSPDC is very much on the higher side. The Objectors have raised the following issues:
- (a) The project costs estimated and put forth by the Petitioner are unduly high and do not represent a reasonable cost of investment in the various projects. As a consequence of this, the O&M costs submitted by the Petitioner are getting inflated.
 - (b) The historical information of the actual O&M expenses incurred for each of the stations as required under Directive 7 of para 6.15 of the Generation Tariff Order 2008-09 has not been submitted by the Petitioner.
 - (c) The Petitioner has computed the O&M costs for the 10 old generating stations as Rs.20 Lac/MW. This calculation is not in accordance with the provision under Regulation 26(1) (a) of Hydro Generation Tariff Regulations, 2005. It has also been submitted that the O&M expenses calculated at Rs.18.75 lakhs/MW are worked out for the Baglihar HEP and are not applicable for old HEPs with capacity of above 25 MW.

Petitioner's Response

- 3.25 The Petitioner has submitted that the actual O&M expenses incurred by it in the past were not in line with the actual requirement of O&M due to lack of funds and non-availability of requisite shutdowns for undertaking RMU activities due to the huge deficit scenario in the State. The Petitioner has therefore requested the Commission to allow O&M costs in the ARR as per the provisions of the Hydro Generation Tariff Regulations, 2005 for a period of five years.
- 3.26 The Petitioner has submitted that the O&M expenses worked out in the Petition are self explanatory and as per the provisions of the regulations.
- 3.27 It was further submitted that as per the CERC order dated 3rd December 2005, the O&M charges for HEPs situated in hill stations with capacity below 5 MW shall be taken at Rs.21 Lac per MW and those with capacity below 25 MW shall be Rs.15 MW for the year 2009-10 and the same is to be escalated at 5.72% p.a.

Commission's Observations

- 3.28 The Commission is of the view that the JKSPDC should maintain and submit the details of actual O&M expenses being incurred by it on various plants being operated by it. The Commission directs the JKSPDC to maintain plant wise records of the O&M expenses being incurred and submit the same along with its next petition so that any difference in the same can be taken up in true-ups while determining the AFC for the subsequent years.

- 3.29 The Commission has allowed the O&M expenses for the years 2009-10 and 2010-11 as per the applicable regulations. However, the lower of the expenses arrived at by the following methodologies has been adopted for each plant:
- (a) 3% of the capital cost subject to a ceiling of Rs.5.5 crores/ MW for the base year 2004-05 and escalated at 4% under the provisions of the J&K SERC (Terms & Conditions for determining of Hydro Generation Tariff) Regulations, 2005 dated December 7, 2005; Or
 - (b) 1.5% of the actual capital cost for the base year 2004-05 and escalated at 4% under the provisions of the J&K SERC (Terms & Conditions for determining of Hydro Generation Tariff) Regulations, 2005 dated September 23, 2005.

Depreciation & Advance against Depreciation

- 3.30 The Objectors have pointed out that the depreciation arrived at in the petition is not as per the Regulations issued by the Commission. The following issues were highlighted in the written submissions received as well as during the public hearings held:
- (a) The useful life of hydro electric projects for the purpose of computing depreciation thereon is 35 years and the corresponding rate of depreciation is 2.57% p.a. The same is not in accordance with the Hydro Generation Tariff Regulations, 2005. These regulations provide asset class wise depreciation rates. The useful life of some assets such as dams, spillways, weirs etc is 50 years and the corresponding rate of depreciation is 1.80% p.a.
 - (b) The Directive 8 which was issued by the Honourable Commission in the Tariff Order for the year 2008-09 prescribed that the Petitioner should compute depreciation separately for each class of assets. This directive has not been complied with, by the Petitioner in filing the tariff petition for FY 2009-10 and FY 2010-11.
 - (c) It has been pointed out that in case of the 10 old HEPs, the depreciation rates have been taken by the Petitioner as 1% p.a. for plants commissioned before 1980 and 2% p.a. for plants commissioned after 1993. This is not in accordance with the norms laid down by the regulations framed for hydro generation plants. Depreciation for these plants should be calculated separately for each class of assets as per the rates prescribed in the applicable Regulations.
- 3.31 The Objectors have requested the Commission to limit the project cost of various HEPs to Rs. 5.5 Cr per MW for computation of depreciation.

Petitioner's Response

- 3.32 The Petitioner has submitted that hydro electric power projects have a life of 35 years and accordingly they should be allowed to charge depreciation @2.57% p.a. for the first 10 years and thereafter charge depreciation on the residual value over the next 25 years. This has been requested by the Petitioner to facilitate the adhering of repayment of loan.
- 3.33 It was further submitted by the Petitioner, that individual asset wise classification shall differ from the charge of depreciation calculated as above.
- 3.34 As regards the 10 old HEPs, the Petitioner has claimed 1% p.a. and 2% p.a. depreciation depending on the age of the projects since no advance against depreciation was claimed earlier.

Commission's Observations

- 3.35 The Commission is of the view that the Petitioner should provide asset class wise break-up of the capital cost incurred on each of the projects for the purpose of allowing depreciation on each of the plants as per the provisions of the J&K SERC (Terms & Conditions for determining of Hydro Generation Tariff) Regulations, 2005 dated September 23, 2005.
- 3.36 The Commission has observed that as regards the 10 old HEPs, depreciation has not been computed in accordance with Regulation 23 (2) of the J&K SERC (Terms & Conditions for determining of Hydro Generation Tariff) Regulations, 2005.
- 3.37 Three projects namely USHP – I, Ganderbal and Chenani – I are already past their useful life of 35 years. However, depreciation is still being charged for these plants.
- 3.38 Despite the fact that the Petitioner has conducted a revaluation of the capital cost for these plants, the remaining useful life of the plants have not been made available for the purpose of calculation of the depreciation.
- 3.39 The Commission has approved the depreciation at the rates proposed for the FY 2009-10 and FY 2010-11 for these plants. However, the same shall be considered for true-up in the subsequent petition.
- 3.40 The Commission directs the Petitioner to submit, in its next ARR & Tariff Petition, the asset class wise break-up of the capital cost along with useful life of each item for each of the 10 HEPs for the purpose of calculation of the applicable depreciation for FY 2009-10, FY 2010-11 and the subsequent years.

Interest on Loan Capital

- 3.41 The Objectors emphasized in their written representation as well as during the public hearings that for the purpose of calculation of the interest on loan capital, the capital cost for old projects should be limited to Rs.5.5 Cr per MW as allowed by the Commission for the Tariff Order 2008-09.
- 3.42 It was also pointed out that the rate of interest at which the JKSPDC has borrowed debt is much higher in comparison to the PLR of the J&K Bank.

Petitioner's Response

- 3.43 The Petitioner submitted that interest on capital has been computed as per provisions given under Regulation 22 of the Hydro Generation Tariff Regulations, 2005.
- 3.44 It was further submitted that no interest on loan capital has been computed for the 10 old HEPs.

Commission's Observations

- 3.45 The Commission is of the opinion that the interest cost computed on actual loans taken by JKSPDC should be allowed in the tariff under the provisions of the J&K SERC (Terms & Conditions for determining of Hydro Generation Tariff) Regulations, 2005 dated September 23, 2005.
- 3.46 As already clarified by the Petitioner there is no interest cost in the tariff computations for the 10 old HEPs.

Return on Equity capital

- 3.47 The JKPDD has put forth their objection against the inclusion of a charge towards return on equity in the ARR. The following issues have been raised in this regard:
- (a) The Petitioner acquired the assets representing the 10 old HEPs through a transfer by the state government in the year 1999, vide order number PDD/AC/11/99 dated 29 Oct 1999. There is no capital investment by the Petitioner in these projects, the validity of charging a return on equity @14% on the equity component has been questioned.
 - (b) In the Petition it has been mentioned that for the 8 plants where details are available, debt has been taken on actual basis. However, in the table shown, the same has been taken at 30% of the project cost.
 - (c) The Petitioner has computed return on equity for the 10 old HEPs assuming a debt-equity ratio of 50:50. This is not in accordance with Regulation 25 of the Hydro Generation Tariff Regulations, 2005 which mandates a debt equity ratio of 70:30.

Petitioner's Response

- 3.48 The petitioner has clarified that for 8 HEPs where the details are available; debt equity ratio has been taken as 70:30.
- 3.49 The Petitioner has also submitted that the past norm in the power generation sector was that funding of capital cost was mainly through government funds and not through employing debt. Even the CERC considers debt: equity of 50:50 for old projects. This principle is still being followed for the old stations of NTPC, NHPC, and PGCIL etc. The Petitioner, in estimating the return on equity for the old 10 HEPs, has followed the same approach.

Commission's Observations

- 3.50 The Commission is of the view that RoE for old projects should be allowed as per the mandated debt: equity ratio of 70:30 only. The K.P. Rao Committee report on which the Petitioner has based its argument was applied for projects where actual capital cost and proportion of debt and equity for projects was available. Whereas, in the present case the same have been assessed by a valuation methodology. Also, as per the K.P.Rao Committee report, the equity component is to be reduced in the same ratio as the depreciation after repayment of the debt.
- 3.51 The Commission has not allowed debt: equity ratio of more than 70: 30 in the tariff determined for various plants in this Tariff Order.

Capacity utilization

- 3.52 The capacity utilization in the generating stations operated by the Petitioner was a subject matter of severe criticism. It was contended that there is a substantial loss of generation due to unplanned and forced shut downs of plants.
- 3.53 The Objectors have requested that the Commission may direct the Petitioner to furnish the plant load factor for each of the generating stations operated by the Petitioner for a period of 5 years to assess the performance of these stations.

Petitioner's Response

- 3.54 The Petitioner has submitted that the inadequate capacity utilization is mainly due to paucity of funds and constraints of continuous operation of plants which is necessitated due to the huge gap between demand and supply due to which requisite O&M and RMU activities have not been undertaken.
- 3.55 With the increase in power generation post commissioning of the Baglihar HEP, RMU activities have been initiated by the Petitioner towards improving the capacity utilization and generation efficiencies of various stations.

Commission's Observations

- 3.56 The Commission is of the opinion that the Petitioner should undertake such RMU activities in a planned manner and submit the same for the approval of the Commission before incurring any capital investments on the same. The capital expenses will only be allowed in the tariff if they are initiated with prior approval of the Commission.
- 3.57 On obtaining the Commission's approval on the RMU works being undertaken, the JKSPDC should give advance intimation to the JKPDD regarding any shutdowns planned in the process.

Gas Turbine

- 3.58 The JKPDD has suggested that operating the gas turbines in synchronous mode would serve the dual purpose of improving the power factor and ensuring that the machines are well maintained. The prolonged idling of the machines may accelerate the ageing of the machines. The Annual Fixed Charges of gas turbines should be allowed subject to the condition that these machines are operated in synchronous condenser mode to ensure improvement in the power factor.
- 3.59 The following issues have been pointed out regarding the AFC proposed by the Petitioner:
- (a) Compliance with CERC Regulations has been proposed for the purpose of tariff determination for the Gas turbine station of the JKSPDC. The CERC Regulations are meant for competitive, efficient and economical criteria in the running of the Gas turbines by various inter-regional utilities. Whereas, the Gas turbines in the State of J&K have an altogether different criteria for running as they are run only in emergency situations under the directions of the JKPDD/ State Government.
 - (b) The petitioner has not made any capital investment in the gas turbines; these assets were owned and subsequently transferred by the state government. The Petitioner should not be allowed to charge any return on equity on the investment made in these turbines.
 - (c) The Petitioner was directed by the Commission vide Directive 4 of the Tariff Order 2008-09 to furnish the details of O&M expenses incurred on the gas based power plants under a separate petition. However, details of the historical O&M expenses have not been furnished. The respondent has thereby requested the Commission that the O&M costs of these plants should not be approved.
 - (d) The tariff charged on account of such power generated is very high and the respondent has submitted that the cost of running these turbines should be borne by the J&K state government since these turbines are operated only in

emergency and on the directions of the JKPDD and the State government as per their discretion and judgement irrespective of the economies of the cost of their running.

Petitioner's Response

- 3.60 The Petitioner has submitted that the gas turbines are operated only on instructions from the State Government/ JKPDD. The Petitioner has also clarified that the operation of gas turbine stations was necessitated due to the adverse demand supply situation in the State and not due to the shut down of its HEPs.
- 3.61 The Petitioner has submitted that the operation of gas turbines in synchronous condenser mode can be considered to meet the MVAR requirements of the transmission and distribution utility. This may require additional capital expenditure as specific modifications may be required to operate gas turbines in this mode.
- 3.62 The Petitioner has submitted that return on equity has been considered as per regulations and as per the methodology adopted for the projects of CPSUs by the CERC.

Commissioner's Observations

- 3.63 The Commission agrees with the observations of the Objectors regarding the differences pointed out for the gas turbines owned by the Petitioner with respect to those under the purview of the CERC.
- 3.64 The Commission is of the opinion that the Petitioner needs to furnish the records/details regarding actual expenditure being incurred in the O&M of the gas turbines.
- 3.65 Meanwhile, the Commission will also frame regulations on terms and conditions of tariff determination for gas based power plants in the State with specific consideration to the gas turbines owned by the JKSPDC. Thereafter, the requisite capital expenditure can be initiated with prior approval of the Commission.

Non provision of day-ahead supply schedule

- 3.66 It was pointed out that the Petitioner has neglected to make available a day-ahead schedule of ex-bus generation and planned outage schedule to the JKPDD. This lack of information and uncertainty creates issues for the SLDC as regards merit order scheduling and power procurement planning.
- 3.67 Also as a consequence of this, the JKPDD on several occasions have been forced to procure power from other sources at very high costs and/ or overdraw power on UI basis.

Petitioner's Response

- 3.68 The Petitioner has taken note of the Objectors' requirement of making available the day-ahead generation schedule. However, the Petitioner has also submitted that in order to implement this scheduling, the unscheduled interchange mechanism should also be in place.

Commissioner's Observations

- 3.69 The Commission directs the JKSPDC to provide plant wise day-ahead scheduling from May 15, 2010 onwards. The same may be provided to the SLDC/ JKPDD through fax, email etc.

Other Issues

- 3.70 The Commission received objections that despite being corporatized for more than a decade now, the JKSPDC has no cadre of its own employees which is affecting its functioning adversely. It was also pointed out that the JKSPDC does not have the adequate manpower resources to carry out its business functions effectively.
- 3.71 The respondent has also contended that the Petitioner should raise power purchase bills as per the standard format followed by other generation utilities in the country.

Petitioner's Response

- 3.72 The Petitioner submitted that it has already commissioned a manpower study as per the directive issued by the Commission in the Tariff Order for the year 2008-09 and the final recommendations of the same are in the advanced stages of being submitted by the Consultant. The Petitioner also submitted that in all likelihood the JKSPDC is expected to create its own cadre of employees before the filing of the next ARR & Tariff Petition.

Commission's Observations

- 3.73 The Commission is of the opinion that since the JKSPDC is already corporatized, the delay in creating its own cadre of employees is not acceptable. The Commission directs the JKSPDC to comply with the same by October 2010.

A4: ANALYSIS OF ARR & TARIFF PETITION FOR 8 HEPS

- 4.1 The Petitioner has requested for determination of ARR or Annual Fixed Charge (AFC) resulting in the fixation of tariff for 8 HEPs in accordance with the Hydro Generation Tariff Regulations, 2005. The components of tariff and assumptions considered by the Petitioner and the Commission's view on those assumptions for the 8 HEPs have been detailed in this chapter.
- 4.2 The Commission has approved the capital cost of these 8 HEP stations on the basis of the audited cost completion report submitted by the Petitioner. This has been considered in accordance with the Notification dated May 10, 2006 pursuant to the J&K State Electricity Regulatory Commission (Terms and Conditions for Determining Hydro Generation Tariff), 2005.
- 4.3 In compliance with the Directive 6 issued by the Commission in the Tariff Order for the year 2008-09, an independent consultant was appointed by the Petitioner for revalidation of design energy based upon the norms specified in the Hydro Generation Tariff Regulations, 2005. The Commission is in receipt of the report on validation of the design energy submitted by the Petitioner.
- 4.4 The assessment of design energy for various plants has been done in accordance with the Regulation 14 of Chapter – 1 of the J&K SERC (Terms and Conditions for Determining Hydro Generation Tariff) Regulations, 2005. Design Energy has been defined as the quantum of energy, which could be generated in a 90% dependable year with 95% installed capacity of the generating station.
- 4.5 The Commission has gone through the workings in the report and found the same to be in accordance with the Regulations. The comparison of the design energy originally estimated in the DPRs and that in the validation exercise undertaken by the Petitioner are shown in the table provided below:

Table 14: Comparison of design energy as per DPR and Validation Report for 8 HEPs

Plant Name	Installed Capacity (MW)	Design Energy as per DPR (MU)	As per Validation Report (MU)	% Change
Igo Marchellong	3.00	19.80	15.88	-19.80%
Marpochoo	0.75	4.00	3.79	-5.25%
Haftal	1.00	7.62	4.88	-35.96%
Chenani III	7.50	36.72	36.71	-0.03%
Bhaderwah	1.00	9.43	8.32	-11.77%
Sewa III	9.00	33.41	33.06	-1.05%
USHP II	105.00	462.59	447.37	-3.29%
Pahalgam	3.00	15.57	14.92	-4.17%
Total	130.25	589.14	564.93	-4.11%

Interest on Loan Capital

Petitioner's Submission

- 4.6 The Petitioner has submitted the details of loan liabilities and rate of interest thereon and moratorium period for the 8 HEPs in their Tariff Petition. The interest charges on the loans have been computed as per Regulation 22 of Hydro Generation Tariff, Regulations, 2005.
- 4.7 The details of loans and interest charges for the years FY 2009-10 and FY 2010-11 are tabulated below:

Table 15: Interest on Loan Capital (Rs Cr)

Name of HEP	USHP – II	Chenani – III	Sewa - III	Pahalga m	Igo-Merchellon g	Bhaderwa h	Marpach oo	Haftal
Source of Loan	PFC	PFC	PFC	REC	REC	REC	REC	REC
Amount of loan sanctioned	6.15	0.66	0.71	1.60	1.61	0.45	0.30	0.30
Amount of Gross Loan drawn up to COD	4.75	0.63	0.71	1.25	1.15	0.27	0.18	0.26
Interest Type	Floating	Floating	Floating	Fixed	Fixed	Fixed	Fixed	Fixed
Interest Rate (%)	14.50	15.00	15.00	13.00	13.00	13.00	13.00	13.00
Moratorium Period	-	-	-	3.00	3.00	3.00	3.00	3.00
Moratorium effective from	-	-	-	*	*	*	*	*
Repayment Period (Years)	10.00	10.00	10.00	7.00	7.00	7.00	7.00	7.00
Repayment effective from	15/01/02	15/01/02	15/01/02	**	**	**	**	**
Repayment Frequency	Quarterly	Quarterly	Quarterly	Annual	Annual	Annual	Annual	Annual
Repayment Installment	40	40	40	7 equal	7 equal	7 equal	7 equal	7 equal

* Date of disbursement of 1st installment of loan or 6 months from the date of commissioning, whichever is earlier.

** Date of disbursement of 1st installment of loan.

Commission's Analysis

- 4.8 The Regulation 18(1) of the Hydro Generation Tariff Regulations, 2005 mandates that

for the purpose of tariff determination the amount of equity shall be limited to 30% of the capital cost and the balance shall be considered as normative loan. Further the Regulation 18(2) mandates that the amount of debt and equity computed in accordance with provisions of Regulation 18(1) shall be used for calculating interest on loan, return on equity, advance against depreciation and foreign exchange rate variation.

- 4.9 In accordance with the above mentioned principle, the amount of normative loan to be considered for provision of interest shall be equal to 70% of the capital cost net off subsidy.
- 4.10 Under the provisions of the Regulation 22 of the J&K SERC (Terms & Conditions for determining of Hydro Generation Tariff) Regulations, 2005 dated September 23, 2005 for the purpose of calculation of interest on loan, the outstanding loan amount shall be worked out as the gross loan as per Regulation 18 (1) minus cumulative repayment as admitted by the Commission. Future repayments shall be worked out on normative basis.
- 4.11 The interest rate, term of loan, moratorium period and repayment schedule etc for the normative loans have been kept the same as for the actual loans for each project.
- 4.12 The details of interest allowed to the Petitioner are tabulated below.

Table 16 : Approved Interest on Loan Capital for FY 2009-10 and FY 2010-11 (Rs. Cr)

Name of HEP	FY 2009-10		FY 2010-11	
	Proposed	Approved	Proposed	Approved
USHP –II	11.04	10.49	6.62	6.07
Chenani-III	2.02	1.37	1.44	0.79
Sewa –III	2.46	1.67	1.75	0.97
Baderwah	0.41	0.38	0.33	0.31
Pahalagam	2.61	2.49	2.14	2.02
Haftal	0.82	0.79	0.69	0.66
Marpachoo	0.66	0.63	0.56	0.53
Igo-Mercellong	2.32	2.29	1.90	1.87
Total	22.34	20.11	15.43	13.22

Depreciation including Advance against Depreciation

Petitioner's Submission

- 4.13 Depreciation has been computed by the Petitioner after taking into account the following considerations:
- (a) The useful life of the project has been considered as 35 years.

- (b) 90% of the cost of the asset has been depreciated over the useful life. The corresponding rate of depreciation used is 2.57% per annum on straight line basis.
- (c) The balance 10% of the capital cost shall represent the salvage value of the asset.

4.14 This is in accordance with the norms specified under Regulation 23 of the Hydro Generation Tariff Regulations 2005.

4.15 Depreciation and Advance Against Depreciation charges for the years FY 2009-10 and FY 2010-11 are tabulated below:

Table 17 : Proposed Depreciation for 8 HEPs (Rs. Cr)

Description	USHP –II	Chenani - III	Sewa - III	Pahalga m	Igo-Merchel long	Baderwah	Marpachoo	Haftal
Cost of project excluding Land Cost	427.49	54.67	66.14	54.62	49.35	10.46	12.72	16.08
Residual value	10%	10%	10%	10%	10%	10%	10%	10%
Total Depreciation to be claimed	384.74	49.20	59.53	49.16	44.41	9.41	11.45	14.48
Normal depreciation rate	2.57%	2.57%	2.57%	2.57%	2.57%	2.57%	2.57%	2.57%
Total depreciation for the year								
2009-10	10.99	1.41	1.70	1.40	1.27	0.27	0.33	0.41
2010-11	10.99	1.41	1.70	1.40	1.27	0.27	0.33	0.41

4.16 In addition to the allowable depreciation, the Petitioner has considered Advance against depreciation as per Regulation 24 of the Hydro Generation Tariff Regulations 2005. This amount has been computed as under:

$$\text{Advance against Depreciation} = \text{Annual Repayment of Loan} - \text{Normal Depreciation}$$

Table 18 : Proposed Advance Against Depreciation for 8 HEPs (Rs. Cr)

Depreciation	USHP – II	Chenani – III	Sewa - III	Pahalga m	IGO-Merchello ng	Baderwah	Marpachoo	Haftal
Total Normative Loan Amount	304.50	38.48	46.79	36.54	32.50	5.72	7.80	9.72
1/10th off Loan	30.45	3.85	4.68	3.65	3.25	0.57	0.78	0.97
Annual	30.45	3.85	4.68	3.65	3.25	0.57	0.78	0.97

Depreciation	USHP – II	Chenani – III	Sewa - III	Pahalga m	IGO- Merchello ng	Baderwah	Marpac hoo	Haftal
Repayment of Loan								
Normal Depreciation for full year	10.99	1.41	1.70	1.40	1.27	0.27	0.33	0.41
Advance Against Depreciation								
2009-10	19.46	2.44	2.98	2.25	1.98	0.30	0.45	0.56
2010-11	19.46	2.44	2.98	2.25	1.98	0.30	0.45	0.56

Commission's Analysis

- 4.17 The Commission had issued Directive 8 in the Tariff Order for the year 2008-09, whereby, the Petitioner was required to submit a class wise break up of assets for the purpose of computing depreciation.
- 4.18 The Commission has observed that this Directive has not been complied with. The Petitioner has continued the practice of computing depreciation at the blanket rate of 2.57% per annum on the capital cost of projects after excluding the cost of land. This rate of 2.57% is applicable to plant and machinery and is higher than the rate prescribed for some other components such as Dams, spillways weirs, canals etc.
- 4.19 The Commission has decided to allow depreciation @2.57% per annum on the project cost for the tariff fixation for FY 2009-10 and FY 2010-11. However, the Petitioner is hereby directed to submit the asset class wise break up of capital cost for computation of depreciation. The depreciation charged will be subject to a true-up exercise for FY 2009-10 and FY 2010-11 after the asset wise listing is submitted by the Petitioner.
- 4.20 The land cost for the Chenani III HEP has been considered at Rs.30 lacs by the Petitioner whereas the same in the Audited Completion Report for the 8 HEPs is shown as Rs.145 lacs for the project. The Commission has considered the cost of land as per the Audited Completion Report while arriving at the capital cost excluding land cost for the purpose of calculation of depreciation.
- 4.21 Details of approved amounts of depreciation for the 8 HEPs for FY 2009-10 and FY 2010-11 are given below.

Table 19: Approved Amount for Depreciation for FY 2009-10 and FY 2010-11 (Rs. Cr)

Name of HEP	FY 2009-10		FY 2010-11	
	Proposed	Approved	Proposed	Approved
USHP –II	10.99	10.99	10.99	10.99
Chenani-III	1.40	1.38	1.40	1.38
Sewa –III	1.70	1.70	1.70	1.70



Name of HEP	FY 2009-10		FY 2010-11	
	Proposed	Approved	Proposed	Approved
Baderwah	0.27	0.27	0.27	0.27
Pahalagam	1.40	1.40	1.40	1.40
Haftal	0.41	0.41	0.41	0.41
Marpachoo	0.33	0.33	0.33	0.33
Igo-Mercellong	1.27	1.27	1.27	1.27
Total	17.77	17.75	17.77	17.75

4.22 Advance against Depreciation is being allowed to the Petitioner in accordance with Regulation 24 of the Hydro Generations Tariff Regulations, 2005. The approved amount of AAD for FY 2009-10 and FY 2010-11 are given in the table below.

Table 20 : Approved Amount for Advance against Depreciation for FY 2009-10 and FY 2010-11 (Rs. Cr)

Name of HEP	FY 2009-10		FY 2010-11	
	Proposed	Approved	Proposed	Approved
USHP –II	19.46	19.46	19.46	19.46
Chenani-III	2.44	2.47	2.44	2.47
Sewa –III	2.98	2.98	2.98	2.98
Baderwah	0.30	0.30	0.30	0.30
Pahalagam	2.25	2.25	2.25	2.25
Haftal	0.56	0.56	0.56	0.56
Marpachoo	0.45	0.45	0.45	0.45
Igo-Mercellong	1.98	1.98	1.98	1.98
Total	30.42	30.45	30.42	30.45

Return on Equity

Petitioner's Submission

4.23 The Petition, has considered Return on Equity (RoE) as per the provisions of Regulation 25 of the Hydro Generations Tariff Regulations, 2005, at 14% per annum for each of the 8 Hydro Power Stations.

Table 21 : Proposed RoE for FY 2009-10 and FY 2010-11 (Rs. Cr)

Name of HEP	USHP – II	Chenani - III	Sewa - III	Pahalga m	IGO- Merchellong	Baderwah	Marpachoo	Haftal
Net cost of the Project	4349.93	549.68	668.42	522.01	464.23	81.65	111.45	138.80
Total normative Equity 30% of	1304.98	164.90	200.52	156.60	139.27	24.49	33.44	41.64

Name of HEP	USHP – II	Chenani - III	Sewa - III	Pahalga m	IGO- Merchellong	Baderwah	Marpachoo	Haftal
the Project Cost								
Rate of Return on Equity	14.00%	14.00%	14.00%	14.00%	14.00%	14.00%	14.00%	14.00%
Return on Equity								
2009-10	182.70	23.09	28.07	21.92	19.50	3.43	4.68	5.83
2010-11	182.70	23.09	28.07	21.92	19.50	3.43	4.68	5.83

Commission's Analysis

- 4.24 The Commission has scrutinized the Return on Equity claimed by the Petitioner for each of the 8 HEPs and found the same to be in accordance with the J&K SERC (Terms & Conditions for determining of Hydro Generation Tariff) Regulations, 2005.
- 4.25 The details of equity amount and RoE allowed to the Petitioner are given in the table below:

Table 22 : Approved RoE for FY 2009-10 and FY 2010-11 (Rs. Cr)

Name of HEP	Equity		RoE FY 2009-10		RoE FY 2010-11	
	Proposed	Approved	Proposed	Approved	Proposed	Approved
USHP –II	130.50	130.50	18.27	18.27	18.27	18.27
Chenani-III	16.49	16.49	2.31	2.31	2.31	2.31
Sewa –III	20.05	20.05	2.81	2.81	2.81	2.81
Baderwah	2.45	2.45	0.34	0.34	0.34	0.34
Pahalagam	15.66	15.66	2.19	2.19	2.19	2.19
Haftal	4.16	4.16	0.58	0.58	0.58	0.58
Marpachoo	3.34	3.34	0.47	0.47	0.47	0.47
Igo-Mercellong	13.93	13.93	1.95	1.95	1.95	1.95
Total	206.58	206.58	28.92	28.92	28.92	28.92

Operations and Maintenance Expenses

Petitioner's Submission

- 4.26 None of the 8 HEPs discussed here was in operation for 5 years in the base year of 2004-05. The first HEP station to be commissioned for commercial operations was USHP-II in June 2002. The remaining seven HEPs were commercially commissioned subsequent to this date of June, 2002.
- 4.27 Accordingly, the Operation & Maintenance Expenses for these eight HEPs have been considered as per Regulation 26(2) (b) of Hydro Generation Tariff Regulations, 2005

@ 1.5% of the capital cost from the COD with escalation @ 4% per annum.

4.28 The O&M Expense proposed for these 8 HEPs for the FY 2009-10 and FY 2010-11 is tabulated as under:-

Table 23 : Proposed O&M Expenses for 8 HEPs (Rs. Cr)

Name of HEP	USHP – II	Chenani – III	Sewa – III	Pahalagam	IGO-Merchelong	Baderwah	Marpachoo	Haftal
Total cost of project	434.99	54.97	66.84	55.20	49.42	10.61	12.85	16.13
O & M Expenses	1.50%	1.50%	1.50%	1.50%	1.50%	1.50%	1.50%	1.50%
Annual Escalation	4.00%	4.00%	4.00%	4.00%	4.00%	4.00%	4.00%	4.00%
O & M Expenses for the year								
2009-10	8.50	1.03	1.26	0.96	0.86	0.19	0.22	0.27
2010-11	8.84	1.08	1.31	1.00	0.89	0.19	0.22	0.28

Commission's Analysis

4.29 The Commission has computed the O&M expenses as per Regulation of the Hydro Generation Tariff Regulations 2005 which is 1.5% of the completion cost of the 8 HEPs as provided in the Audited Completion Report.

4.30 This principle has been used to compute O&M costs of the plant in the year of commissioning. Thereafter, the same has been escalated @4% per annum to arrive at the O&M costs applicable for FY 2009-10 and FY 2010-11.

Table 24: Approved Amount for O&M expenses for FY 2009-10 and FY 2010-11 (Rs. Cr)

Name of HEP	FY 2009-10		FY 2010-11	
	Proposed	Approved	Proposed	Approved
USHP –II	8.50	8.59	8.84	8.93
Chenani-III	1.03	1.04	1.07	1.09
Sewa –III	1.26	1.27	1.31	1.32
Baderwah	0.18	0.19	0.19	0.19
Pahalagam	0.96	0.97	1.00	1.01
Haftal	0.27	0.27	0.28	0.28
Marpachoo	0.21	0.22	0.22	0.23
Igo-Mercellong	0.86	0.87	0.89	0.90
Total	13.27	13.42	13.80	13.95

Interest on Working Capital

Petitioner's Submission

- 4.31 The requirement of Working Capital & Interest thereon has been computed as per Clause 27 “Interest on Working Capital” of the Notification No.5 dated 23.09.2005 issued by the Commission.
- 4.32 Interest has been computed @ 11 % per annum on working capital requirement as stipulated above. The rate of interest has been considered as per the Prime Lending Rate of Jammu & Kashmir Bank. The interest on working capital as proposed by the Petitioner is summarized below:

Table 25: Proposed Interest on Working Capital for 8 HEPS (Rs. Cr)

Plant Name	Item	FY 2009-10	FY 2010-11
USHP-II	Total Working Capital	19.34	19.10
	Interest on working Capital	2.13	2.10
Chenani-III	Total Working Capital	2.49	2.45
	Interest on working Capital	0.27	0.27
Sewa-III	Total Working Capital	3.02	2.97
	Interest on working Capital	0.33	0.33
Pahalgam	Total Working Capital	2.39	2.36
	Interest on working Capital	0.26	0.26
Igo-Mercellong	Total Working Capital	2.13	2.11
	Interest on working Capital	0.23	0.23
Baderwah	Total Working Capital	0.41	0.41
	Interest on working Capital	0.05	0.05
Marpachoo	Total Working Capital	0.53	0.53
	Interest on working Capital	0.06	0.06
Haftal	Total Working Capital	0.67	0.66
	Interest on working Capital	0.07	0.07

Commission’s Analysis

- 4.33 The Commission has allowed Interest on Working capital in accordance with Regulation 27 of the J&K SERC (Terms & Conditions for determining of Hydro Generation Tariff) Regulations, 2005.
- 4.34 The differences in the proposed and the approved values of the interest on working capital are on account of the differences in the proposed and the approved values of constituent items of working capital allowed under the provisions of the Regulations.
- 4.35 The details of approved interest on working capital allowed are provided in the table below:

Table 26: Approved Interest on Working Capital for FY 10 and FY 2010-11 (Rs. Cr)

Name of HEP	FY 2009-10		FY 2010-11	
	Proposed	Approved	Proposed	Approved
USHP –II	2.13	2.08	2.10	2.05
Chenani-III	0.27	0.26	0.27	0.25
Sewa –III	0.33	0.31	0.33	0.31
Baderwah	0.04	0.04	0.04	0.04
Pahalagam	0.26	0.26	0.26	0.26
Haftal	0.07	0.07	0.07	0.07
Marpachoo	0.06	0.06	0.06	0.06
Igo-Mercellong	0.23	0.23	0.23	0.23
Total	3.39	3.31	3.36	3.27

Total Annual Fixed Charge

4.36 Based on the above parameters, the AFC for FY 2009-10 and FY 2010-11 for the 8 HEPs as approved by the Commission is provided in the following table:

Table 27: Approved AFC and Indicative Tariff (Rs/kWh) for FY 2009-10 and FY 2010-11 (Rs Cr)

Name of HEP	FY 2009-10 AFC		FY 2009-10 Indicative Rate		FY 2010-11 AFC		FY 2010-11 Indicative Rate	
	Prop	Appr	Prop	Appr	Prop	Appr	Prop	Appr
USHP –II	70.39	69.87	1.59	1.58	66.29	65.77	1.50	1.49
Chenani-III	9.48	8.83	2.61	2.43	8.94	8.29	2.46	2.28
Sewa –III	11.53	10.73	3.49	3.28	10.88	10.08	3.29	3.08
Baderwah	1.55	1.53	1.89	1.86	1.49	1.46	1.80	1.77
Pahalagam	9.68	9.57	6.55	6.48	9.24	9.13	6.26	6.18
Haftal	2.72	2.69	5.63	5.57	2.60	2.57	5.39	5.33
Marpachoo	2.18	2.16	5.81	5.74	2.09	2.06	5.56	5.50
Igo-Mercellong	8.62	8.59	5.48	5.46	8.23	8.20	5.23	5.21
Total AFC/ Weighted Average Indicative Tariff (Rs./ kWh)	116.15	113.97	2.08	2.04	109.76	107.56	1.97	1.93



A5: ANALYSIS OF ARR & TARIFF PETITION FOR 10 OLD HEPS

- 5.1 In the previous Tariff Order the Commission had approved the tariff for the 10 old HEPs covered under the PPA dated April 26, 2000 to be taken as the base rate of Re.0.76 per unit as per the PPA dated April 26, 2000 entered into by the Petitioner and the JKPDD for the purpose of billing of the energy sold to them.
- 5.2 However, the Commission was of the opinion that the rate of Re.0.76 per unit as agreed between the JKSPDC and the JKPDD in the PPA dated April 26, 2000 was arbitrary in nature and was not substantiated by any factual information for arriving at the same.
- 5.3 The Commission in the Tariff Order for the year 2008-09 had directed the Petitioner to apply for approval of tariff for these 10 HEPs as per the Hydro Generation Tariff Regulations, 2005.
- 5.4 The Petitioner was directed to undertake the following procedures for determination of the capital cost of investment in these HEPs:
- (a) Locate records of the JKSPDC for gathering information on capital cost incurred in these 11 projects;
 - (b) In case the same were are not traceable, engage appropriate consultants to carry out detailed assessment of the capital cost of these HEPs for determination of the capital cost for these 10 HEPs; and
 - (c) Recommend incorporation of the findings in the books of accounts to the Board of Directors of the JKSPDC.
- 5.5 Subsequently, the Petitioner JKSPDC engaged an independent consultant / registered valuers to carry out a Physical Verification and Revaluation of Fixed Assets of the 10 HEPs. The Petitioner has submitted that the Mohra HEP has not been functional since the floods of September 1992 and was therefore excluded from this exercise.
- 5.6 The consultants engaged by the Petitioner submitted a report on the Physical Verification and Revaluation of Fixed Assets as on March 31, 2009 with respect to the 10 HEP projects.
- 5.7 The Petitioner has submitted that the valuation of cost has been carried out by a team comprising Chartered Engineers, Registered Valuers and Practicing Valuers (Issued by Practicing Valuers Association of India, being a member of International Valuation Standards Committee). The consultants have estimated the Replacement Cost New (RCN) and Net Replacement Value (NRV) for each of the 10 HEPs after taking into account their estimated replacement costs, present economic value, expected service life and remaining useful life.
- 5.8 The Commission has taken into consideration the project cost for the 10 HEPs as



given in the Physical Verification and Revaluation of Fixed Assets report issued by the consultants of the JKSPDC. Tariff determination for the 10 HEPs for FY 2009-10 and FY 2010-11 has been done by taking into account the project costs detailed in this report.

- 5.9 The below mentioned table provides the details of Replacement Cost New (RCN) and Net Replacement Value (NRV) estimated for each HEP. The difference in value of Replacement Cost New (RCN) and Net Replacement Value (NRV) is on account of depreciation.

Table 28: Project Cost estimated for 10 HEPs (Rs. Cr)

Name of HEP	Installed Capacity (MW)	Design Energy	Replacement Cost New (RCN)	Net Replacement Value (NRV)
Karnah	2.00	11.36	21.09	13.54
USHP-I	22.60	106.62	176.94	46.26
Lower Jhelum	105.00	609.43	961.97	421.24
Ganderbal	15.00	90.15	104.49	15.94
Iqbal Bridge	3.75	21.23	42.10	24.63
Bazgo	0.30	1.09	3.39	2.15
Sumoor	0.10	0.45	1.14	0.69
Hunder	0.40	1.77	4.52	2.86
Chenani – II	2.00	12.00	22.49	11.73
Chenani – I	23.30	110.02	214.21	78.49
Total	174.45	964.12	1552.34	617.53

- 5.10 In compliance with Directive 6 issued by the Commission in the Tariff Order for the year 2008-09, an independent consultant was appointed by the Petitioner for revalidation of design energy based upon the norms specified in the Hydro Generation Tariff Regulations, 2005. The Commission is in receipt of the report on validation of the design energy submitted by the Petitioner.
- 5.11 The Design Energy of each of the 10 HEPs has also been estimated in the report submitted by the consultants as per the Directive issued to JKSPDC in the Tariff Order 2008-09 by the Commission.
- 5.12 The assessment of design energy for various plants has been done in accordance with the Regulation 14 of Chapter – 1 of the J&K SERC (Terms and Conditions for Determining Hydro Generation Tariff) Regulations, 2005. Design Energy has been defined as the quantum of energy, which could be generated in a 90% dependable year with 95% installed capacity of the generating station.
- 5.13 The Commission has gone through the workings in the report and found the same to be in accordance with the Regulations. The comparison of the design energy

originally estimated in the DPRs and that in the validation exercise undertaken by the Petitioner are shown in the table provided below:

Table 29: Summary of Restatement of Design Energy for 10 HEPs

Plan Name	Installed Capacity (MW)	Design Energy as per DPR (MU)	As per Validation Report (MU)	% Change
Iqbal Bridge	3.75	23.15	21.23	-8.29%
Hunder	0.40	1.83	1.77	-3.49%
Sumoor	0.10	0.46	0.45	-1.75%
Bazgo	0.30	1.38	1.09	-21.01%
Chenani I	23.30	115.49	110.02	-4.74%
Chenani II	2.00	11.58	12.00	3.60%
Lower Jhelum	105.00	605.00	609.43	0.73%
USHP I	22.60	105.72	106.62	0.85%
Ganderbal	15.00	94.62	90.15	-4.72%
Karnah	2.00	11.40	11.36	-0.35%
Total	174.45	970.63	964.12	-0.67%

Interest on Loan Capital

Petitioner's Submission

- 5.14 The Petitioner has submitted that since these plants are old and there are no outstanding loans against any of them in accordance with the same, the Petitioner has not proposed any interest on loan for these 10 HEPs.

Commission's Analysis

- 5.15 In accordance with the submissions made by the Petitioner, the Commission has not allowed any interest on loan in determination of the Annual Fixed Charge for the 10 old HEPs.

Depreciation including Advance against Depreciation

Petitioner's Submission

- 5.16 The Petitioner has proposed depreciation on straight line basis at the rate of 1% per annum for plants commissioned before 1980 and at 2% per annum for plants commissioned after 1993.
- 5.17 The capital cost considered for charging depreciation excludes the cost of land in accordance with the Regulation 23 (2) of the J&K SERC (Terms & Conditions for determining of Hydro Generation Tariff) Regulations, 2005.

5.18 In accordance with the treatment of interest on loan capital detailed above, no AAD has been proposed for these 10 HEPs.

Table 30: Proposed Depreciation for 10 HEPs (Rs Cr)

Item	Iqbal	Sumoor	Bazgo	Hunder	Chenani II	Karnah	USHP I	Chenani I	LJHP	Gander bal
Cost of project excluding Land Cost	24.63	0.70	2.16	2.86	11.73	13.55	46.26	78.51	421.25	15.95
Residual value	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%
Total Depreciation to be claimed	22.17	0.63	1.94	2.58	10.56	12.19	41.64	70.66	380.92	14.35
Normal depreciation rate	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	1.00%	1.00%	1.00%	1.00%
Total depreciation										
2009-10	0.49	0.01	0.04	0.06	0.24	0.27	0.46	0.79	4.21	0.16
2010-11	0.49	0.01	0.04	0.06	0.24	0.27	0.46	0.79	4.21	0.16

Commission's Analysis

- 5.19 The Commission has observed that depreciation has not been computed in accordance with Regulation 23 of the Regulation 23 (2) of the J&K SERC (Terms & Conditions for determining of Hydro Generation Tariff) Regulations, 2005.
- 5.20 Three projects namely USHP – I, Ganderbal and Chenani – I are already past their useful life of 35 years. However, depreciation is still being charged for these plants.
- 5.21 Despite the fact that the Petitioner has conducted a revaluation of the capital cost for these plants, the remaining useful life of the plants have not been made available for the purpose of calculation of depreciation.
- 5.22 The Commission has approved the depreciation at the rates proposed by the Petitioner for the FY 2009-10 and FY 2010-11 for these plants, however, the same shall be considered for true-up while reviewing the subsequent petition for approval.
- 5.23 The Commission directs the Petitioner to submit, in its next ARR & Tariff Petition, the asset class wise break-up of the capital cost along with useful life of each item for each of the 10 HEPs for the purpose of calculation of the applicable depreciation for FY 2009-10, FY 2010-11 and the subsequent years.

- 5.24 In accordance with the proposal made by the Petitioner no Advance against depreciation is being approved by the Commission for these HEPs.
- 5.25 The details of depreciation claimed by the Petitioner and that allowed by the Commission are provided in the table below:

Table 31: Approved Depreciation for 10 HEPs for FY 2009-10 and FY 2010-11 (Rs Cr)

Name of HEP	FY 2009-10		FY 2010-11	
	Proposed	Approved	Proposed	Approved
Karnah	0.27	0.27	0.27	0.27
USHP-I	0.46	0.46	0.46	0.46
Lower Jhelum	4.21	4.21	4.21	4.21
Ganderbal	0.16	0.16	0.16	0.16
Iqbal Bridge	0.49	0.49	0.49	0.49
Bazgo	0.04	0.04	0.04	0.04
Sumoor	0.01	0.01	0.01	0.01
Hunder	0.06	0.06	0.06	0.06
Chenani – II	0.23	0.23	0.23	0.23
Chenani – I	0.79	0.78	0.79	0.78
Total	6.72	6.71	6.72	6.71

Return on Equity

Petitioner's Submission

- 5.26 The Petitioner has proposed Return on Equity (RoE) at the rate of 14% per annum under the Regulation 25 of the J&K SERC (Terms & Conditions for determining of Hydro Generation Tariff) Regulations, 2005 for the year FY 2009-10 and FY 2010-11 for the 10 old HEPs.
- 5.27 The Petitioner has computed the equity deployed in these old projects at 50% of the total capital cost. The Petitioner has submitted that several old plants in the Central Sector are also allowed RoE on 50% of the capital cost based on the recommendations of the K.P. Rao Committee on Fixation of Tariffs for Central Sector Power Stations. It was submitted that when these plants were built the concept of debt equity ratio of 70:30 was not in practice and therefore RoE on 50% of the capital cost should be allowed in the determination of tariff.
- 5.28 Details of Return on Equity computed by the Petitioner for these 10 HEPs is given in the table below.

Table 32: Proposed Return on Equity for 10 HEPs (Rs Cr)

Item	Iqbal	Sumoor	Bazgo	Hunder	Chenani II	Karnah	USHP I	Chenani I	LJHP	Gander bal
Net cost of the Project	24.633	0.6978	2.159	2.862	11.73	13.545	46.262	78.511	421.245	15.948
Total normative Equity 50% of the Project Cost	12.316	0.349	1.079	1.431	5.865	6.773	23.131	39.256	210.623	7.974
Rate of Return on Equity	14%	14%	14%	14%	14%	14%	14%	14%	14.00%	14%
Return on Equity										
2009-10	1.724	0.049	0.151	0.2	0.821	0.948	3.238	5.496	29.487	1.116
2010-11	1.724	0.049	0.151	0.2	0.821	0.948	3.238	5.496	29.487	1.116

Commission's Analysis

- 5.29 The Commission is of the view that RoE for old projects should be allowed as per the mandated debt: equity ratio of 70:30 only. The K.P. Rao Committee report on which the Petitioner has based its argument was applied for projects where actual capital cost and proportion of actual debt and equity amount for projects was available. Whereas, in the present case the same have been assessed by a valuation methodology. Also, as per the K.P.Rao Committee report the equity component is to be reduced in the same ratio as the depreciation after repayment of the debt.
- 5.30 In view of the above, the Commission has decided to allow RoE on 30% of the capital cost determined for the 11 HEPs as per the provisions under Regulation 18 of the J&K SERC (Terms & Conditions for determining of Hydro Generation Tariff) Regulations, 2005. The return on equity has been allowed to the Petitioner at the rate of 14% per annum as per Regulation 25.
- 5.31 Details regarding RoE claimed by the Petitioner and that approved by the Commission are provided in the following table:

Table 33: Approved RoE for 10 HEPs for FY 2009-10 and FY 2010-11 (Rs Cr)

Name of HEP	Equity		RoE FY 2009-10		RoE FY 2010-11	
	Proposed	Approved	Proposed	Approved	Proposed	Approved
Karnah	6.77	4.06	0.95	0.57	0.95	0.57



Name of HEP	Equity		RoE FY 2009-10		RoE FY 2010-11	
	Proposed	Approved	Proposed	Approved	Proposed	Approved
USHP-I	23.13	13.88	3.24	1.94	3.24	1.94
Lower Jhelum	210.62	126.37	29.49	17.69	29.49	17.69
Ganderbal	7.97	4.78	1.12	0.67	1.12	0.67
IqbalBridge	12.32	7.39	1.72	1.03	1.72	1.03
Bazgo	1.08	0.65	0.15	0.09	0.15	0.09
Sumoor	0.35	0.21	0.05	0.03	0.05	0.03
Hunder	1.43	0.86	0.20	0.12	0.20	0.12
Chenani – II	5.87	3.52	0.82	0.49	0.82	0.49
Chenani – I	39.25	23.55	5.50	3.30	5.50	3.30
Total	308.79	185.27	43.23	25.94	43.23	25.94

Operations and Maintenance Expenses

Petitioner's Submission

For Station Up To 25 MW

- (a) As per Regulation 2 of Notification dated 10th May, 2006 of JKSERC 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 Cr/ MW have been proposed.
- (b) The Petitioner has submitted that considering the above provision, the O&M charges for the year FY 2009-10 works out to be Rs. 20.07 lacs/ MW. The calculations are given as under:
- (i) Capital cost - Rs.5.5 Cr /MW
- (ii) O&M Rate - 3.0% of Capital cost with annual escalation @ 4% (as per Regulation 26(2) (a) of Regulation dated 23.9.2005.

Table 34: O&M Expenses for HEPs upto 25 MW (Rs Lac/ MW)

Particulars	FY05	FY06	FY07	FY08	FY09	FY10	FY11
O&M Charge	16.50	17.16	17.85	18.56	19.30	20.07	20.87

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

For Stations above 25 MW

- (d) 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.

- (e) 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
(only cost of HEP)	Rs. 562590 lacs
(O&M) charges @ 1.5% of Capital Cost	
$562590 \times 1.5 / (450 \times 100) =$	18.75 lacs/MW

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

- 5.33 The parameters mentioned above have been used to compute O&M expenses for the base financial year of 2009-10 as the capital cost submitted by the Petitioner is as on March 31, 2009. Further, the O&M expenses computed as above have been escalated at a rate of 4% per annum to arrive at the O&M expenses for FY 2009-10 and FY 2010-11 respectively.

Table 35: Proposed O&M costs for FY 2009-10 and FY 2010-11 (Rs. Cr)

Particular	Iqbal	Sumoor	Bazgo	Hunder	Chenani II	Karnah	USHP I	Chenani I	LJHP	Ganderbal
Total cost of project	246.33	6.978	21.59	28.62	117.3	135.45	4626.17	785.11	4212.45	159.48
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
Annual Escalation	4.00%	4.00%	4.00%	4.00%	4.00%	4.00%	4.00%	4.00%	4.00%	4.00%
O & M Expenses for the year										
2009-10	7.50	0.20	0.60	0.80	4.00	4.00	45.20	46.60	196.88	30.00
2010-11	7.80	0.21	0.62	0.83	4.16	4.16	47.01	48.46	204.75	31.20

Commission's Analysis

- 5.34 The Commission is of the opinion that since these plants are old and have been in operation for more than 5 years, the Petitioner should have claimed the O&M expenses based on actual expenses incurred on the same under the provisions of the Regulation 26(1) of the J&K SERC (Terms & Conditions for determining of Hydro Generation Tariff) Regulations, 2005. However, the Petitioner has failed to do so.

- 5.35 The Commission directs the Petitioner to maintain records of actual O&M expenses being incurred on each of the HEPs and submit the same in its ARR & Tariff Petitions going forward.
- 5.36 In the absence of the above, the Commission has decided to allow O&M costs as per the provisions under Regulation 26(2) of the J&K SERC (Terms & Conditions for determining of Hydro Generation Tariff) Regulations, 2005 for the plants which have installed capacity of above 25 MW. Minimum of the following has been approved for plants whose installed capacity is below 25 MW:
- (a) O&M costs computed at 1.5% of capital cost as per Regulation 26(2) of the J&K SERC (Terms & Conditions for determining of Hydro Generation Tariff) Regulations, 2005.
- Or
- (b) 3% of the capital cost computed at a capital cost of Rs.5.5 Crores per MW under the Clause 2(i) of the Notification dated December 7, 2005 pursuant to Regulation 2(4) of the Regulations titled (Terms & Conditions for Determining of Hydro Generation Tariff) Regulations 2005.

Table 36: Approved O&M costs for 10 HEPs for FY 2009-10 and FY 2010-11 (Rs. Cr)

Name of HEP	FY 2009-10		FY 2010-11	
	Proposed	Approved	Proposed	Approved
Karnah	0.40	0.21	0.42	0.22
USHP-I	4.52	0.72	4.70	0.75
Lower Jhelum	19.69	6.57	20.48	6.83
Ganderbal	3.00	0.25	3.12	0.26
Iqbal Bridge	0.75	0.38	0.78	0.40
Bazgo	0.06	0.03	0.06	0.04
Sumoor	0.02	0.01	0.02	0.01
Hunder	0.08	0.04	0.08	0.05
Chenani – II	0.40	0.18	0.42	0.19
Chenani – I	4.66	1.22	4.85	1.27
Total	33.58	9.61	34.93	10.02

Interest on Working Capital

Petitioner's Submission

- 5.37 The Petitioner has submitted that the requirement of Working Capital & Interest thereon are as per Clause 27 "Interest on Working Capital" of the Notification No.5 dated September 23, 2005 issued by the Commission.

- 5.38 Interest has been computed at rate of 11 % per annum on working capital requirement as stipulated. The proposed interest on working capital is summarized below:

Table 37: Proposed Interest on Working Capital for 10 HEPS (Rs. Cr)

Plant Name	Item	FY 2009-10	FY 2010-11
Iqbal	Total Working Capital	1.00	1.03
	Interest on working Capital	0.11	0.11
Sumoor	Total Working Capital	0.03	0.03
	Interest on working Capital	0.00	0.00
Bazgo	Total Working Capital	0.08	0.09
	Interest on working Capital	0.01	0.01
Hunder	Total Working Capital	0.11	0.11
	Interest on working Capital	0.01	0.01
Chenani II	Total Working Capital	0.51	0.53
	Interest on working Capital	0.06	0.06
Karnal	Total Working Capital	0.52	0.54
	Interest on working Capital	0.06	0.06
USHP I	Total Working Capital	3.58	3.74
	Interest on working Capital	0.39	0.41
Chenani I	Total Working Capital	4.44	4.61
	Interest on working Capital	0.49	0.51
LJHP	Total Working Capital	20.56	21.35
	Interest on working Capital	2.26	2.35
Ganderbal	Total Working Capital	2.04	2.14
	Interest on working Capital	0.23	0.24

Commission's Analysis

- 5.39 The Commission has allowed Interest on Working capital in accordance with Regulation 27 of the J&K SERC (Terms & Conditions for determining of Hydro Generation Tariff) Regulations, 2005.
- 5.40 The differences in the proposed and the approved values of the interest on working capital are on account of the differences in the proposed and the approved values of constituent items of working capital allowed under the provisions of the Regulations.
- 5.41 The details of approved interest on working capital are provided in the following table:

Table 38: Approved Interest on Working Capital for FY 2009-10 and FY 2010-11 (Rs. Cr)

Name of HEP	FY 2009-10		FY 2010-11	
	Proposed	Approved	Proposed	Approved
Karnah	0.06	0.04	0.06	0.04
USHP-I	0.39	0.12	0.41	0.12
Lower Jhelum	2.26	1.09	2.35	1.13
Ganderbal	0.22	0.04	0.24	0.04
Iqbal Bridge	0.11	0.07	0.11	0.07
Bazgo	0.01	0.01	0.01	0.01
Sumoor	0.003	0.002	0.003	0.002
Hunder	0.01	0.01	0.01	0.01
Chenani – II	0.06	0.03	0.06	0.03
Chenani – I	0.49	0.20	0.51	0.21
Total	3.613	1.612	3.763	1.662

Total Annual Fixed Charge

5.42 Based on the approved values of the constituent parameters, the AFC for FY 2009-10 and FY 2010-11 for the 10 HEPs as approved by the Commission is provided in the table below:

Table 39: Approved AFC and indicative tariff (Rs/kWh) for FY 2009-10 and FY 2010-11 (Rs Cr)

Name of HEP	FY 2009-10 AFC		FY 2009-10 - Indicative Rate		FY 2010-11 AFC		FY 2010-11 Indicative Rate	
	Proposed	Approved	Proposed	Approved	Proposed	Approved	Proposed	Approved
Karnah	1.68	1.09	1.49	0.97	1.70	1.10	1.51	0.98
USHP-I	8.62	3.25	0.82	0.31	8.81	3.28	0.83	0.31
Lower Jhelum	55.67	29.57	0.91	0.49	56.54	29.87	0.93	0.50
Ganderbal	4.50	1.12	0.51	0.13	4.63	1.13	0.52	0.13
Iqbal Bridge	3.08	1.98	1.47	0.94	3.11	2.00	1.48	0.95
Bazgo	0.26	0.17	2.45	1.60	0.27	0.18	2.47	1.62
Sumoor	0.09	0.06	1.93	1.26	0.09	0.06	1.95	1.27
Hunder	0.35	0.23	2.00	1.31	0.35	0.23	2.02	1.32
Chenani – II	1.51	0.94	1.28	0.79	1.53	0.95	1.29	0.80
Chenani – I	11.43	5.51	1.05	0.51	11.64	5.57	1.07	0.51
Weighted Average Indicative Tariff (Rs./kWh)	87.19	43.92	0.91	0.46	88.67	44.37	0.93	0.47

A6: DIRECTIVES**Compliance with FY 2008-09 Tariff Order Directives**

- 6.1 The Commission in its first tariff order for FY 2008-09 had issued 8 directives to the Petitioner and the Petitioner in its petition has submitted that it has complied with all of them.
- 6.2 The directives issued and the status of compliance by the Petitioner and the Commission's views on each of them are tabulated below:

Table 40: Status of Compliance with Directives issued in Tariff Order for FY 2008-09

Directive/ Issue	Summary																																										
Directive 1: Determination of Capital Cost for Old Plants																																											
Directive 1	Summary of Directive:																																										
	. In case of the 11 HEPs covered under the PPA dated April 26, 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's response:																																										
	. The Petitioner has submitted that an independent consultant was engaged on September 7, 2009 for valuation of assets of old plants for which the records in support of historical capital cost are not traceable. The independent consultant has submitted the report on the capital cost of old plants which has been submitted with the Commission. The assessed capital cost for the HEPs as per the valuation report are summarized below:																																										
	Revaluation of Capital Cost of Old Plants (Rs Lacs)																																										
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Directive/ Issue	Summary																			
	<ul style="list-style-type: none"> The Petitioner has complied with the directive issued and the Commission has employed the revalued capital cost for the determination of AFC for the 10 HEPs. 																			
Directive 2: Completion Report for 8 HEPs																				
Directive 2	Summary of Directive issued:																			
	<ul style="list-style-type: none"> The Petitioner was directed to submit the audited project completion reports for the 8 HEPs for which the tariff was determined as per Regulations in the tariff order for FY 2008-09. 																			
	Petitioner's response:																			
	<ul style="list-style-type: none"> The Petitioner has submitted that it had engaged an independent consultant to prepare the completion report for the 8 HEPs. The consultant has completed the exercise and furnished the reports after visiting the site and other offices and ascertaining the factual details. The completion cost duly audited for the 8 HEPs is as given below. 																			
	Completion Cost of 8 HEPs (Rs. Lacs)																			
	<table border="1" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th>Name of HEPs</th> <th>Completion cost of the Project</th> </tr> </thead> <tbody> <tr> <td>Sewa III</td> <td>6684.16</td> </tr> <tr> <td>USHP-II (Kangan)</td> <td>43499.26</td> </tr> <tr> <td>Pahalgam</td> <td>5520.06</td> </tr> <tr> <td>Bhaderwah</td> <td>1060.45</td> </tr> <tr> <td>Chenani III</td> <td>5496.83</td> </tr> <tr> <td>IGO- Mercellong</td> <td>4942.32</td> </tr> <tr> <td>Haftal</td> <td>1612.96</td> </tr> <tr> <td>Marpochoo</td> <td>1284.54</td> </tr> <tr> <td>Total</td> <td>70100.58</td> </tr> </tbody> </table>	Name of HEPs	Completion cost of the Project	Sewa III	6684.16	USHP-II (Kangan)	43499.26	Pahalgam	5520.06	Bhaderwah	1060.45	Chenani III	5496.83	IGO- Mercellong	4942.32	Haftal	1612.96	Marpochoo	1284.54	Total
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Commission's views:																				
<ul style="list-style-type: none"> The Petitioner has complied with the directive issued and the Commission has considered the completed cost as submitted for determination of AFC for these 8 HEPs. 																				
Directive 3: Regarding Manpower availability at JKSPDC																				
Directive 3	Summary of Directive issued																			
	<ul style="list-style-type: none"> The Petitioner was directed to appoint consultants to conduct a detailed manpower study and analyze training needs. The manpower study shall include assessment of manpower requirement as well as evaluation of outsourcing opportunities. The consultant shall also advise the JKSPDC on the formulation of a recruitment policy. The Petitioner was also directed to get requisite approval from its Board of Directors for the creation of a separate cadre for its permanent employees 																			
	Petitioner's response																			
	<ul style="list-style-type: none"> The JKSPDC has engaged consultants for undertaking the requisite study. The final report on recommendations is expected to be submitted shortly. 																			
	Commission's views																			
<ul style="list-style-type: none"> The Commission appreciated the promptness with which the Petitioner has initiated action for complying with the directive. The Petitioner is directed to submit a copy of the final report on manpower study to the Commission and appraise the Commission with the decision taken by the BoD on the study. 																				

Directive/ Issue	Summary
	<ul style="list-style-type: none"> The Petitioner is also directed to inform the Commission with its implementation plan of the recommendation of the report.
Directive 4: Regarding maintenance of records for gas stations	
Directive 4	Summary of Directive issued
	<ul style="list-style-type: none"> The Petitioner was directed to maintain separately the details of expenses incurred on operation and maintenance of the Gas Turbine Stations owned by it. The same shall not be debited to the expenses of its hydro generating stations by including in the corporate O&M expenses as submitted in the petition. The details of expenses incurred on O&M of the Gas power plants shall be submitted to the Commission under a separate petition for the purpose of approval of the expenses and the mechanism for charging to the beneficiary.
	Petitioner's response
	<ul style="list-style-type: none"> The Petitioner has submitted that it has begun maintaining separate records of expenditure incurred on the Gas turbine Power plant The tariff petition for the Gas Turbine Stations has been prepared on the basis of the CERC tariff regulations applicable for 2009-2014 in view of the fact that no Regulations for gas based plants have been notified by the Commission till date.
Commission's views	
<ul style="list-style-type: none"> The Commission directs the JKSPDC to furnish records/details regarding the actual expenditure being incurred in the O&M of the gas turbines. 	
Directive 5: Regarding submission of next petition	
Directive 5	Summary of Directive issued
	<ul style="list-style-type: none"> The Petitioner was directed to submit the petition for FY 2009-10 for the existing plants only after complying with Directives 1 and 2. The Petitioner was also directed to take note of the discrepancies and information gaps pointed out by the Commission in the tariff order and avoid these while submitting the tariff petition for Baglihar Hydro generating station. The Commission had further reiterated that the Petitioner shall submit audited DPR for Baglihar HEP along with the tariff petition, the capital cost for the Baglihar HEP shall only be allowed after due prudence check by the Commission.
	Petitioner's response
	<ul style="list-style-type: none"> The petition for FY 2009-10 and FY 2010-11 has been filed after compiling with Directives 1 and 2 above. The tariff petition for Baglihar HEP along with status report from an independent consultant has been submitted for determination of tariff
Commission's views	
<ul style="list-style-type: none"> The Petitioner has complied with the directive and has filed the tariff petition for FY 2009-10 and FY 2010-11 after complying with the directive 1 and 2. The Commission has taken a decision to determine the generation tariff for Baglihar HEP separately and not include it in the current tariff determination process. 	
Directive 6: Regarding validation of design energy calculations	
Directive 6	Summary of Directive issued
	<ul style="list-style-type: none"> The Petitioner was directed to validate the design energy for all the HEPs owned and operated by it as per the definition provided in the Jammu and Kashmir State Electricity Regulatory Commission (Terms and Conditions for Determination of Hydro Generation Tariff) Regulations, 2005.

Directive/ Issue	Summary																																																																					
	<p>Petitioner's response</p> <p>. An independent consultant was appointed for valuation of design energy. The consultant has submitted its report on the design energy as per definitions provided in the Regulations. The design energy for 18 HEPs is given in the following table.</p> <p style="text-align: center;">Design Energy of 18 HEPs</p> <table border="1" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th>Name of Power House</th> <th>Installed Capacity (MW)</th> <th>Design Energy (MU)</th> </tr> </thead> <tbody> <tr> <td colspan="3">Jhelum River Basin</td> </tr> <tr> <td>Lower Jhelum</td> <td>105.00</td> <td>609.43</td> </tr> <tr> <td>Upper Sindh – I</td> <td>22.60</td> <td>106.62</td> </tr> <tr> <td>Ganderbal</td> <td>15.00</td> <td>90.15</td> </tr> <tr> <td>Upper Sindh – II</td> <td>105.00</td> <td>447.37</td> </tr> <tr> <td>Karnah</td> <td>2.00</td> <td>11.36</td> </tr> <tr> <td>Pahalgam</td> <td>3.00</td> <td>14.920</td> </tr> <tr> <td>Chenani – I</td> <td>23.30</td> <td>110.02</td> </tr> <tr> <td>Chenani – II</td> <td>2.00</td> <td>12.00</td> </tr> <tr> <td>Chenani – III</td> <td>7.50</td> <td>36.71</td> </tr> <tr> <td>Baderwah</td> <td>1.00</td> <td>8.32</td> </tr> <tr> <td colspan="3">Ravi Basin</td> </tr> <tr> <td>Sewa – III</td> <td>9.00</td> <td>33.06</td> </tr> <tr> <td colspan="3">Indus Basin</td> </tr> <tr> <td>Iqbal Bridge</td> <td>3.75</td> <td>21.23</td> </tr> <tr> <td>Hunder</td> <td>0.40</td> <td>1.77</td> </tr> <tr> <td>Sumoor</td> <td>0.10</td> <td>0.45</td> </tr> <tr> <td>Bazgo</td> <td>0.30</td> <td>1.09</td> </tr> <tr> <td>Igo-Mercellong</td> <td>3.00</td> <td>15.88</td> </tr> <tr> <td>Marpachoo</td> <td>0.75</td> <td>3.79</td> </tr> <tr> <td>Haftal</td> <td>1.00</td> <td>4.88</td> </tr> <tr> <td>Total capacity in MW</td> <td>304.7</td> <td>1529.05</td> </tr> </tbody> </table>	Name of Power House	Installed Capacity (MW)	Design Energy (MU)	Jhelum River Basin			Lower Jhelum	105.00	609.43	Upper Sindh – I	22.60	106.62	Ganderbal	15.00	90.15	Upper Sindh – II	105.00	447.37	Karnah	2.00	11.36	Pahalgam	3.00	14.920	Chenani – I	23.30	110.02	Chenani – II	2.00	12.00	Chenani – III	7.50	36.71	Baderwah	1.00	8.32	Ravi Basin			Sewa – III	9.00	33.06	Indus Basin			Iqbal Bridge	3.75	21.23	Hunder	0.40	1.77	Sumoor	0.10	0.45	Bazgo	0.30	1.09	Igo-Mercellong	3.00	15.88	Marpachoo	0.75	3.79	Haftal	1.00	4.88	Total capacity in MW	304.7	1529.05
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	<p>Commission's views</p> <p>. The Commission has considered the revised design energy as submitted by the Petitioner for determination of tariff for the 18 HEPs. The Directive has been complied with.</p>																																																																					
Directive 7: Regarding submission of information on actual O&M Expenses for HEPs																																																																						
Directive 7	<p>Summary of Directive issued</p> <p>. The O&M expenses should be based on actual expenses incurred during a financial year for each of the generating stations. The Commission directed the Petitioner to submit historical information of the actual O&M expenses incurred for each of the stations, which shall be considered while reviewing and finalizing the subsequent Hydro Generation Tariff Regulations post September 2010.</p>																																																																					

Directive/ Issue	Summary
	Petitioner's response
	. The Petitioner has submitted that project wise record of the O&M expenditure was not maintained in the corporation in the past and these shall be maintained from the year 2009-10 onwards.
	Commission's views
	. The Petitioner has failed to comply with this Directive. . The Commission directs the Petitioner to furnish requisite details while submitting the next tariff petition.
Directive 8: Regarding submission of asset class wise details of capital cost for HEPs	
Directive 8	Summary of Directive issued
	. The Petitioner was directed to submit asset class wise details for each plant with the tariff filing for FY 2009-10
	Petitioner's response
	. The Petitioner has prayed that depreciation should be allowed considering a normal rate of depreciation of 2.57% per annum. .
	Commission's views
	. The Petitioner has failed to comply with this Directive. . The Commission intended to get the computation of depreciation validated on the basis of the asset class wise depreciation rate for each plant and therefore directed the Petitioner to furnish the details of the same.

New Directives

- 6.3 The Commission, based on its analysis of the ARR & Tariff petition and the compliance to previous directives submitted by the Petitioner and information and suggestions received during the public hearing process on the functioning of the Petitioner, directs the Petitioner to comply with the following directives given in this order.
- 6.4 The Commission shall hold quarterly review meetings for monitoring the progress/status on each of the directives given in this order. The Petitioner shall submit quarterly progress report prior to the review meetings to be held by the Commission.
- 6.5 In addition to the Directives issued by the Commission in the Tariff Order for the year FY 2008-09, which have not been satisfactorily complied with, the Commission directs the Petitioner to comply with the following new set of directives.

Table 41: New Directives to the Petitioner

New Directives	
Directive 1	Day Ahead Schedule to SLDC
	<ul style="list-style-type: none"> The Commission was made aware during the public hearing by the JKPDD that the Petitioner is not furnishing details of day ahead availability and generation schedule for the 19 HEPs to SLDC. In the absence of the day ahead schedule, the distribution utility is facing difficulties in effectively and efficiently arranging power to meet the energy demand of the state. The Commission directs the Petitioner to submit day ahead schedule for all stations to SLDC from April 10, 2010.
Directive 2	Maintenance and Shutdown Schedule
	<ul style="list-style-type: none"> The Petitioner operates 754.70 MW of generation capacity through its 19 HEPs in the state. Any unscheduled outage or unplanned shutdown of any of the plants strains the power system of the state and the distribution utility is forced to bridge the shortfall by procuring power from the spot market or through overdrawal from the grid. The Petitioner is directed that it should prepare an annual maintenance and shutdown schedule covering all the 19 HEPs in consultation with the SLDC and JKPDD. A copy of the annual maintenance and shutdown schedule should be filed with the Commission by June 30, 2010.
Directive 3	Report unscheduled outage to the Commission
	<ul style="list-style-type: none"> The Petitioner is directed to report all unscheduled outages of the HEPs to the Commission on a monthly basis, indicating the duration and the reason for the outage. The Petitioner is also directed to submit a detailed report, within seven days of the plant coming online, detailing the reasons for the outage and the action taken, the generation quantum lost and the expenses incurred, for the outages which last more than 24 hrs.
Directive 4	Installation of Meters and metering protocol
	<ul style="list-style-type: none"> The Petitioner is directed to coordinate with the SLDC and JKPDD which is also the transmission utility of the state and get energy meters installed at each of the 19 HEPs within 3 months from issuance of this tariff order. The Petitioner is also directed to establish a meter reading protocol in consultation with JKPDD and submit a copy of the same to the Commission.
Directive 5	Raise Plant wise bills
	<ul style="list-style-type: none"> The Petitioner is directed to raise plant wise energy bills to JKPDD from April 2010 onwards. The Petitioner is also directed to submit to the Commission the year wise and station wise arrears pending with JKPDD and to raise the issue with the State Government for clearing the arrears.

A7: ANNEXURE**Annexure 1: List of participants in State Advisory Committee Meeting****Table 42 : Participants at State Advisory Committee Meeting held in Jammu on March 11, 2010**

Sl.	Name	Department/ Organization
1	D.S. Tara	Ex. Secretary; SERC
2	Y.V.Sharma	President CCI, Jammu
3	Er.Vikramjit Gour	Member, State Consumer Protection Council
4	Nisar Hussain Qadri	Member, State Advisory Committee
5	Irum Reshi	AGM, JKSPDC
6	Ajaz Kirmani	JKSPDC
7	I.A.Kakroo	JKSPDC
8	C.M Jain	Consultant to JKSPDC
9	V.K. Gupta	Consultant to JKSPDC
10	A.M.M. Jahangir	Director Finance, JKSPDC
11	Atul Gupta	SP, Secretary, CAPD
12	Asgar Ali	Development Commissioner (Power) J&KPDD
13	A.R.Tak	Consultant JKSPDC
14	Sonam Galson	CE S&O Jammu
15	H.S. Gupta	Retd. DCP to assist the Commission
16	Anujesh Dwivedi	Consultant to the Commission, PwC
17	Farrukh Aamir	Consultant to the Commission, PwC
18	Aakanksha Srivastava	Consultant to the Commission, PwC

Note: Some names and their spellings may vary from the actual details since the attendance sheets were filled by hand and some of the handwritings were not legible.

Annexure 2: List of participants in Public Hearings**Table 43: Participants at Public Hearing held in Jammu on March 12, 2010**

Sl	Name	Designation
1	Er. B.L. Suri	CE (Retd.)
2	Arun K. Gupta	Chairman, JKIPO
3	Er. S.K.Gupta	CE (Retd.), J&KPDD
4	Er. Vikram Gour	Member, State Consumer Protection Council
5	Vikrant K	Chairman, State Committee PHD Chamber of Commerce and Industry
6	S.Kumar Ahal	General Manger, RB Jodhamal & Co P. Ltd Jammu
7	K.C. Sharma	Jt. Executive, Chenab Textile Mills
8	D.R.Sood	Retd Member (Tech.), HPSEB & presently consultant to Chenab Textile Mills
9	J.L Mathrani	Vice President, Chenab Textile Mills
10	Rahul Bansal	Sr. Vice President, BBIA
11	Chander Vadin	Company Secretary
12	A.M.M. Jehangir	Director Finance, JKSPDC
13	K.K.Gupta	GM (Accounts), JKSPDC
14	G.H. Lone	Domestic Consumer
15	I.A. Kakroo	Deputy General Manager, JKSPDC
16	A.R.Tak	Consultant, JKSPDC
17	V.K.Gupta	Consultant, JKSPDC
18	CM Jain	Consultant, JKSPDC
19	Ajaz Kirmani	AGM, JKSPDC
20	Irum Reshi	AGM, JKSPDC
21	Anujesh Dwivedi	Consultant to the Commission, PwC
22	Farrukh Aamir	Consultant to the Commission, PwC
23	Aakanksha Srivastava	Consultant to the Commission, PwC

Table 44: Participants at Public Hearing held in Srinagar on March 15, 2010

Sl	Name	Designation
1	Asagar Ali	DCP, J&K PDD
2	Sheikh Gul Ayaz	Chief Engineer, J&KPDD
3	Mushtaq Ahmad	Chief Engineer, J&KPDD
4	A.M.M. Hehanger	Director Finance, JKSPDC
5	G.M.Dar	CE, C.I.D. Kashmir, JKSPDC
6	Syed Aftab Ahmed	Retd. DCP
7	A.R.Tak	Consultant, JKSPDC
8	Irum Reshi	AGM, JKSDPC
9	Farooq Ahangar	AGM, JKSPDC
10	C.M.Jain	Consultant to PDC
11	V.K Gupta	Consultant to PDC
12	M.A.Khan	GM, JKSPDC
13	Nazir Ahmed Shikar	Ex-Member, FCIK
14	Deljeet Singh	XEN, LDM&T JKSPDC Srinagar
15	Anurag Subham	AEE, LDM&T JKSPDC Srinagar
16	Ehtisham Andrabi	AEE, LDM&T JKSPDC Srinagar
17	B.A.Dar	AEE, J&KPDD, DCP's Office
21	Anujesh Dwivedi	Consultant to the Commission, PwC
22	Farrukh Aamir	Consultant to the Commission, PwC
23	Aakanksha Srivastava	Consultant to the Commission, PwC