Second Annual Performance Review (APR) Order for the MYT Period (FY09-FY11) & Determination of Tariff for FY11

Himachal Pradesh Electricity Regulatory Commission

10 June, 2010

BEFORE THE HIMACHAL PRADESH ELECTRICITY REGULATORY COMMISSION AT SHIMLA

CASE NO. 194/2009

CORAM

YOGESH KHANNA

IN THE MATTER OF:

Application for true-up of the Tariff Order for FY09 under section 94(1) of the Electricity Act read with regulation 63 of the HPERC (Conduct of Business) Regulations, 2005.

AND

Approval of Tariff for FY11 and Revised Aggregate Revenue Requirement (ARR) for the FY10 and FY11 during the MYT Control Period (FY09 to FY11) under section 62 of the Electricity Act, 2003.

AND

IN THE MATTER OF:

HP State Electricity Board

…APPLICANT

The Himachal Pradesh State Electricity Board has filed a petition with the Himachal Pradesh Electricity Regulatory Commission (hereinafter referred to as the 'Commission' or 'HPERC') for true-up of the tariff for FY09 determined by the Commission vide Tariff Order dated August 24, 2009 under section 94 (1) of the Electricity Act, 2003, and for approval of its Revised Aggregate Revenue Requirement (ARR) for FY10 and FY11 during the MYT Control Period (FY09 to FY11) under Section 62, 64 and 86 of the Electricity Act, 2003, read with the HPERC (Terms and Conditions for Determination of Wheeling Tariff and Retail Supply Tariff) Regulations, 2007; the HPERC (Terms and Conditions for Determination of Hydro Generation Tariff) Regulations, 2007 and HPERC (Terms and Conditions for Determination of Transmission Tariff) Regulations, 2007.

The Commission having heard the applicant, interveners, consumer representatives of various consumer groups on May 17, 2010 at Shimla, and having had formal interactions with the officers and the Whole Time Members of the Himachal Pradesh State Electricity Board including its Chairman and having considered the documents available on record, herewith accepts the applications with modifications, conditions and directions specified in the following Tariff Order.

The Commission has determined the Aggregate Revenue Requirement of the Generation, Transmission and Distribution functions of the Himachal Pradesh State Electricity Board for FY10 and FY11 of the MYT Control Period under the Multi Year Tariff regime and has approved the Wheeling and the Retail Supply Tariffs for FY11 in accordance with the guidelines laid down under Section 61 of the Electricity Act, 2003, the National Electricity Policy, the National Tariff Policy and the regulations framed by the Commission. The Wheeling and Retail Supply Tariff shall be decided every year taking into account the adjustment on account of allowed variations in uncontrollable parameters.

The Commission has trued-up the ARR approved for FY09 based on analysis of the efficient and reasonable operating parameters and the prudent expenditure that could be passed on to the consumers of the State. The Commission has detailed the reasons for modifying/disallowing any expenditure in this Order.

The surplus amount that has emerged from true-up shall be adjusted in the determination of the Aggregate Revenue Requirement for FY11 in this Order.

The Commission, in exercise of the powers vested in it under Section 62 of the Electricity Act, 2003, orders that the approved tariffs together with "Schedule of General and Service Charges" shall come into force w.e.f. April 1, 2010. The arrears, if any, on account of revised tariffs for the months of April and May 2010 shall be adjusted in the bills for the months of July and August 2010 respectively.

In accordance with sub-regulation (5) of Regulation 4 of the HPERC (Terms and Conditions for Determination of Wheeling Tariff and Retail Supply Tariff) Regulations, 2007, the tariff determined by the Commission and directions given in Chapter A7 of this Tariff Order by the Commission shall be quid pro quo and mutually inclusive. The tariff determined shall, within the period specified by it, be subject to the compliance of the directions-cum-orders to the satisfaction of the Commission and the non-compliance shall lead to such amendment, revocation, variation and alteration of the tariff as may be ordered by the Commission.

In terms of sub-regulation (6) of Regulation 4 of the HPERC (Terms and Conditions for

Determination of Wheeling Tariff and Retail Supply Tariff) Regulations, 2007, the Wheeling and the Retail Supply Tariff shall unless amended or revoked, continue to be in force up to March 31, 2011. In the event of failure on the part of the licensee to file application for true up of FY10 and MYT and business plan filing for the next control period, and approval of Wheeling and Retail Supply Tariff for the ensuing financial year, in terms of Regulations 38 and 39 of the HPERC (Terms and Conditions for Determination of Wheeling Tariff and Retail Supply Tariff) Regulations, 2007 on or before November 30, 2010, the tariff determined by the Commission shall cease to operate after March 31, 2011, unless allowed to be continued for further period with such variations or modifications as may be ordered by the Commission.

In terms of sub-regulation (5) of Regulation 44 of the HPERC (Terms and Conditions for Determination of Wheeling Tariff and Retail Supply Tariff) Regulations, 2007, the consequential orders which the Commission may issue to give effect to the subsidy that the State Government may provide, shall not be construed as amendment of the tariff. The licensee Himachal Pradesh State Electricity Board shall, however, make appropriate adjustments in the bills to be raised on the consumers for the subsidy amount in the manner as the Commission may direct.

The Commission further directs the publication of the tariff in two leading newspapers, one in Hindi and the other in English, having wide circulation in the State within 7 days of the issue of the Tariff Order. The publication shall include a general description of the tariff changes and its effect on the various classes of consumers.

The Himachal Pradesh State Electricity Board is directed to make available copies of the Tariff Order to all concerned officers up to AE level Operations sub-divisions, within two weeks of issue of this Order. The Board may file clarificatory petition in case of any doubt in the provisions of the Tariff Order, within 30 days of issue of the Tariff Order.

Shimla sd/-

Dated: 10-06-2010 Chairman

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A1: BACKGROUND

1.1 The Himachal Pradesh State Electricity Board (hereinafter referred to as HPSEB or the Board) is a deemed licensee under the first proviso to Section 14 of the Electricity Act, 2003 (hereinafter referred to as 'the Act') for transmission, distribution and supply of electricity in the State of Himachal Pradesh.

1.2 The Board has filed petition on November 30,2009 with the Himachal Pradesh Electricity Regulatory Commission (hereinafter referred to as 'the Commission' or 'HPERC') for approval of its revised Aggregate Revenue Requirement (ARR) for FY10 and FY11 and determination of Wheeling and Retail Supply Tariffs for FY11 under the first Multi Year Tariff Control Period (FY09 to FY11) under Sections 62, 64 and 86 of the Act, read with the Himachal Pradesh Electricity Regulatory Commission (Terms and Conditions for Determination of Wheeling Tariff and Retail Supply Tariff) Regulations, 2007; Himachal Pradesh Electricity Regulatory Commission (Terms and Conditions for Determination of Hydro Generation Tariff) Regulations, 2007 and Himachal Pradesh Electricity Regulatory Commission (Terms and Conditions for Determination of Transmission Tariff) Regulations, 2007 (hereinafter collectively referred to as 'the MYT Regulations, 2007').

1.3 This is the second Annual Performance Review Order for the MYT Period (FY09 to FY11). It relates to the determination of revised ARR of the Generation, Transmission and Distribution functions of HPSEB for the Control Period based on the actual values of FY09 and approval of the Wheeling and Retail Supply Tariffs for FY11 based on the updated information submitted by the Board.

1.4 As per the MYT Regulations, "Wheeling and Retail Supply Tariff" shall be decided every year taking into account the adjustment on account of allowed variations in uncontrollable parameters based on the Annual Performance Review petition filed by the Licensee.

1.5 This Order has been finalised based on the review and analysis of the information submissions, necessary clarifications submitted by the Licensee and views expressed by the stakeholders.

1.6 Additional information/clarifications and details, based on the queries of the Commission and validation session, were submitted on January 15, 2010, May 5, 2010 and May 18, 2010.

1.7 PricewaterhouseCoopers were appointed Consultants to assist the Commission in the assessment of the revised ARR petition and determination of the relevant tariffs.

Filing of Review Petition for FY10 and FY11 under the MYT Control Period (FY09 – FY11)

Procedural Background

1.8 The Board filed the Revised Aggregate Revenue Requirement (ARR) petition for FY10 and FY11 with the Commission on November 30, 2009.

Admission Hearing

1.9 The Commission directed the Board on December 31, 2009 to submit details regarding the first set of deficiencies observed during a preliminary scrutiny of the revised ARR petition, which was complied with by the Board on January 15, 2010. The Commission held an Admissibility Hearing for the admission of the Petition on March 06, 2010 and admitted the petition.

Interaction with the Petitioner

1.10 Since the submission of the petition by the Board there has been a series of interactions between the Board and the Commission, both written and oral, wherein the Commission sought additional information/clarification and justifications on various issues critical for the analysis of the petition.

1.11 The Commission conducted the technical validation session on the petition filed by the Board on April 20, 2010 during which certain discrepancies and additional information requirement in the petition were highlighted.

Public Hearings

1.12 The Commission issued an interim order to the Board, after the admission hearing on March 06, 2010, to publish a disclosure of the salient features of the petition for the information of all stakeholders in the State. Accordingly the Board published the salient features of the petition in the following newspapers:

(a) The Tribune (Chandigarh edition) on March 15, 2010

(b) Amar Ujala (Chandigarh edition) on March 15, 2010

(c) The Indian Express (Chandigarh edition) on March 17, 2010

(d) Divya Himachal (Chandigarh edition) on March 17, 2010

1.13 The Commission invited suggestions and objections from the public on the tariff petition filed by the Board in accordance with Section 64(3) of the Act subsequent to the publication of the initial disclosure by the Board. The public notice inviting objections/suggestions was published on March 16, 2010 in the following newspapers:

(a) The Tribune (Chandigarh & Jalandhar edition)

(b) Amar Ujala (Chandigarh & Jalandhar edition)

1.14 Interested parties/stakeholders were asked to file their objections and suggestions on the petition by April 6, 2010.

1.15 The Commission received comments/objections from nine stakeholders by the stipulated date i.e. April 6, 2010. The Board filed its replies to these comments/objections on April 20, 2010, a copy of which was also sent to individual objectors. The objectors were also allowed to file a rejoinder, if any, to the Commission with a copy to the petitioner till April 27, 2010. Accordingly, rejoinders were filed by two objectors to the replies given by the Board.

1.16 The Commission issued a public notice informing the public about the scheduled date of public hearing on May 5, 2010 in The Indian Express and Divya Himachal newspapers. All parties who had filed their objections/suggestions were also informed about the date, time and venue for presenting their case in the public hearing.

1.17 The public hearing was held on May 17, 2010 at the Commission's Court Room in Shimla.

1.18 The issues and concerns voiced by various objectors have been carefully examined by the Commission. The major issues raised by the objectors in their written submission as well as those raised during the public hearing, have been summarized in Chapter A3 of this Order.

A2: SUMMARY OF THE TRUE UP PETITION FOR FY09 AND REVISED ARR PETITION FOR FY10 AND FY11 UNDER THE MYT CONTROL PERIOD (FY09 – FY11)

2.1 This chapter summarizes the highlights of the petition filed by the Board for revision of the Aggregate Revenue Requirement (ARR) and determination of Distribution and Retail Supply Tariff as well as Generation and Transmission Tariffs for the remaining period (FY11) of the first MYT Control Period (FY09 to FY11). This petition was first filed on November 30, 2009 and appropriate clarifications were submitted on January 15, 2010, May 5, 2010 and May 18, 2010 in response to the deficiency notes issued by the Commission.

2.2 It would be appropriate to point out here that in the absence of segregated accounting data and separate balance sheets, the filing has been made as a bundled entity and thereafter, segregation has been done partly based on the actuals and partly on assumptions.

Summary of the Revised ARR Petition for FY10 and FY11

Sales Projections

2.3 For the Control Period, the Board has projected energy sales for the Domestic, Antodya, Commercial supply, Small & Medium Power supply, Street Lighting supply, Water Pumping supply and Agricultural supply categories by applying four years' Compounded Annual Growth Rate (CAGR) (FY 2002-03 to FY 2006-07) on the estimated sales for the FY10.

2.4 For the large supply category, as per the GoI notification dated January 7, 2003 (for Himachal Pradesh and Uttarakhand), exemption in excise duty will be applicable only to industries established before March 2010. Therefore, the Board has submitted that the growth in the sales quantum witnessed in the large supply category in the last few years will not continue at the same pace in ensuing years. Hence, a lower than earlier growth rate of 12% p.a. has been considered by the Board for projecting the sales for the large supply consumers (HT & EHT).

2.5 For the Non Domestic Non Commercial (NDNC), a growth rate of 10% p.a. has been considered by the Board for projecting the sales for the Control Period.

Table 1: Consumer Category wise Energy Sales

Energy Sales (MU)	FY09	FY10	FY11
	Actual	Revised	Projected
Domestic	1088.52	1090.00	1174.00
Antodya/ BPL	0.60	0.57	0.94
Non Domestic Non Commercial	80.58	84.00	92.00
Commercial	274.66	298.00	312.00

Energy Sales (MU)	**FY09**	**FY10**	**FY11**
	Actual	Revised	Projected
Public Lighting	13.01	12.00	12.00
Small and Medium Power	180.99	181.00	193.00
Large Supply (HT, EHT)	3204.31	3461.00	3876.00
Agriculture & Allied Activities	28.74	39.00	42.00
Govt. Irrigation & Water Pumping	389.33	418.00	459.00
Temporary	22.71	26.00	30.00
Bulk Supply	177.05	206.00	213.00
Total Energy Sales	**5460.51**	**5815.57**	**6403.94**

Transmission and Distribution (T&D) Loss

2.6 In its petition, the Board has submitted that it has achieved a T&D loss level of 13.41% in FY08. The Board has also submitted that due to the law of diminishing returns, it would not be able to further reduce the T&D loss each year by the percentage set down in the MYT Order. The Board has proposed a 0.2% reduction in T&D loss every year from the FY08 level, instead of the trajectory specified in the MYT Order. Based on this, the Board has proposed to achieve a T&D loss level of 13% as against 12.49% that would be the target in keeping with the approved trajectory of loss reduction. The Board has also requested the Commission to allow an incentive for over-achievement of the T&D loss target for FY08.

2.7 The table below depicts the T&D loss projections as submitted by the Board.

Table 2: Transmission & Distribution Loss

T&D Losses	**FY09**	**FY10**	**FY11**
	Actual	Revised	Projected
Sales within State (MU)	5461	5816	6404
Proposed T&D Loss within the State (%)	**13.40%**	**13.20%**	**13.00%**
Power Requirement for sale within the State (MU)	6306	6700	7361

Energy Availability

2.8 The Board has submitted that its power requirement was primarily met through:

(a) Own hydel generation;

(b) Free power entitlement of GoHP;

(c) Central sector stations where HPSEB has share allocations;

(d) Purchase through private micro hydel plants installed in the State and bilateral short-term contracts.

Own Hydel Generation

2.9 The Board has submitted the actuals of its own generation and considered the average generation for the four years (FY 03, FY 04, FY 05 and FY 06) period for projecting its own generation for FY11, except for Larji, Khauli and Holi HEP.

2.10 The Board has estimated the generation for Larji, Khauli & Holi HEP for FY10 based on their trend of actual generation during the first six months of FY10. For FY11, the energy generation from these plants has been considered at design energy levels.

2.11 The energy availability for Bassi HEP for FY09 and FY10 has been taken by the Board to be lower than FY08, because of major R&M work proposed for the two units of the Bassi HEP. The R&M for Bassi will be completed during FY10.

2.12 The Board has submitted that due to poor monsoons and less river discharge during FY10 there is a decline in the generation level of Giri HEP. Moreover, there was a capital maintenance scheduled during FY10 for both units of Giri HEP (15 December, 2008 to 31 May 2009 for unit I and 1 June, 2009 to 6 September, 2009 for unit II).

2.13 The commissioning of Bhaba (augmentation) has been considered in the beginning of FY11.

2.14 The Board submitted the actuals for FY09 and projected the energy availability from its own generation for the remaining part of the Control Period, viz. FY10 and FY11, as detailed in the table below:

Table 3: HPSEB Projection – Own Hydel Generation (MU)

Particulars	FY09 Actual	FY10 Revised	FY11 Projected
Bhaba	605	616	572
Bassi	228	176	315
Giri	245	121	171
Andhra	72	45	63
Baner	39	31	40
Gaj	39	36	47
Binwa	27	24	30
Thirot	7	10	5
Ghanvi	82	71	75
Gumma	7	4	10
Holi	8	10	10
Larji	651	598	566
Khauli	41	31	48
Micro's	23	21	24
Bhaba Aug		0	26

Particulars	FY09	FY10	FY11
	Actual	Revised	Projected
Total	**2075**	**1793**	**2002**
Less: Auxiliary Consumption	6	9	9
Less: GoHP 12% Share in Larji, Khauli, Baner, Ghanvi & Gaj	102	92	93
Net Hydel Generation	**1967**	**1692**	**1900**

Power Purchase Quantum from Other Sources

2.15 The station-wise power purchase quantum for FY09 was submitted based on actuals. The revised estimates for FY10 and the projections for FY11 have been submitted by the Board as shown below:

Table 4: HPSEB Projection - Power Purchase Quantum

Gross Generation (MU)	FY09	FY10	FY11
	Actual	Revised	Projected
BBMB Old	44	44	44
BBMB New	124	111	125
Dehar	79	79	79
Total	**246**	**234**	**247**
NTPC Stations			
Anta (LNG)	10	16	11
Anta (GF)	80	61	88
Anta (LF)	0	7	5
Auraiya (LNG)	9	11	10
Auraiya (GF)	111	121	120
Auraiya (LF)	0	11	5
Dadri (LNG)	21	12	10
Dadri (GF)	121	131	138
Dadri (LF)	0	11	5
Unchahar-I	57	56	53
Unchahar-II	111	89	89
Unchahar-III	68	62	58
Rihand-1 STPS	310	265	244
Rihand-2 STPS	316	248	251
Kehalgaon	49	97	149
Singrauli	80	0	0
Total	**1342**	**1197**	**1236**
NHPC Stations			
Chamera – III	0	0	26
Salal	30	30	30
Tanakpur	14	15	15

Gross Generation (MU)	FY09	FY10	FY11
	Actual	Revised	Projected
Chamera-1	62	56	48
Chamera-2	54	51	54
Uri	81	69	69
Dhauliganga	41	38	40
Dhulasti	6	0	0
Total	**288**	**259**	**282**
Other Stations			
NAPP	20	33	43
RAPP	0	11	46
Nathpa Jhakri SoR	171	167	169
Shanan	5	5	5
Shanan Extn	45	45	45
Yamuna (UJVNL)	420	326	380
Khara	68	55	59
Baspa –II	1131	1050	1050
Baspa II Sec Energy	0	149	140
Tehri I	97	50	71
Patikari	62	39	49
Market Purchase	0	0	250
Total	**2021**	**1931**	**2307**
Free Power & Equity Power			
Baira Suil	15	24	35
Chamera-I	72	76	60
Chamera-II	47	170	67
Shanan Share	3	3	2
Ranjeet Sagar Dam	66	53	21
Malana	53	54	18
Baspa-II	154	159	42
Nathpa Jhakri	184	239	248
Nathpa Jhakri Equity	372	289	289
Patikari	8	7	7
Ghanvi	10	8	9
Baner	5	4	5
Gaj	5	4	6
Larji	78	72	68
Khauli	5	4	6
Chamera-III	0	0	18
Total	**1078**	**1166**	**900**
Banking Power	725	845	400

Gross Generation (MU)	FY09	FY10	FY11
	Actual	Revised	Projected
Unallocated Share	0	374	331
Private Micros	271	360	491
UI	85	183	0
Total	**1081**	**1763**	**1222**
Gross Power Purchase	**6057**	**6550**	**6194**
External Loss	3.62%	3.71%	3.71%
Net Power Purchase	**5837**	**6307**	**5964**

2.16 The Board submitted that the power purchase quantum for the first six months of FY10 is based on the actual bills received from each power purchase source/station.

2.17 The power purchase quantum from NTPC stations for the remaining six months of FY10 and for FY11 has been calculated by the Board by applying the average of three years (FY 2004-05 to FY 2006-07) month-wise PLF, except for Rihand II and Unchahar III which have been commissioned recently. In case of Rihand II, the average of previous two years month-wise PLF has been used to calculate the month-wise gross generation and for Unchahar III the PLF of 90.86% has been assumed.

2.18 The power purchase quantum from NHPC Stations for the remaining six months of FY10 and for FY11 has been calculated by the Board as per the month-wise design energy shown by each plant in their respective water studies. The effective share of the HPSEB was applied on the total month-wise ex-bus generation to estimate the month-wise energy purchases from the respective stations. The 12% free power share of GoHP from the corresponding plants has been worked out in a similar manner. For FY10 and FY11, the GoHP 12% free power share has been considered only for seven months i.e. from October to April to meet the deficit in the state. However, during first six months of FY10 the Board had to request the GoHP for allocation of free power from Chamera I, Chamera II and NJPC in order to return the power purchased under banking arrangements in the last year. The energy availability from the GoHP 12% share during summer months has been utilized for contra as well as forward banking done during the current year. The above methodology was adopted for Baspa II, Nathpa Jhakri and Tehri hydel stations. In case of Baspa II, the Board has also projected the secondary energy to the tune of 140 MU based on past year trends.

2.19 A nominal power purchase quantum from the liquid-fueled Anta, Auraiya and Dadri stations has been considered by the Board for the remaining part of the Control Period. This was done to account for the winter period when the Board shall be facing shortage of power and also to account for the possibility of liquid fuel power being booked to the Board on the basis of governing frequency during real-time operation.

2.20 The Board conveyed in its petition that the power quantum from the NAPP has been worked out at a revised PLF of 40% due to lower availability of power from NAPP during FY09 and the first six months of FY10, instead of taking the PLF to be 68.5% as per the GOI tariff notification applicable for NAPP. The Board has considered the share from RAPP on the same PLF taken for NAPP.

2.21 Power purchase quantum from Khara, Yamuna (UJVNL) for FY11 and remaining months of FY10 has been considered in line with the generation level projected at the start of the MYT Control Period.

2.22 Power purchase from Malana has been calculated by the Board as per the month-wise design energy shown in the water study. The 15% free power share has been considered only for seven months i.e. October to April to meet the deficit in the state.

New Generation Stations

2.23 In the previous year's MYT filing, the Board had considered generation from five new generating stations namely Koldam, Koteshwar, Parbati-III, Chamera-III and Barh during the control period. However, considering the latest status of commissioning of new generating stations, the Board has revised its projections of power availability. For FY11, only energy availability from Chamera-III has been considered from December 2010 onwards. The Board has submitted that since the CODs of other new generating stations have been delayed and the revised CODs are beyond FY11, therefore it has not considered any power availability from these stations during FY11.

2.24 The Board has considered allocation of 2.75% and 17.75% for summer and winter months respectively. Also, 12% free power GoHP share has been considered from Chamera-III only during the winter months of FY11.

Table 5: Revised COD of new plants as submitted by the Board

Station	Previous COD	Revised COD
Koldam (unit I)	Apr-09	Jun-10
Parbati III	Nov-10	Nov-10
Koteshwar	Apr-10	Jun-10
Chamera III	Aug-10	Aug-10
Barh (unit I)	Mar -09	Jan-11

2.25 For the current year, the Board has estimated a total banking of 845 MU as per the existing agreement of which 71 MU have been banked during the first six months. The Board has projected a banking of 400 MU during the winter months for FY11 and the same will be returned in the summer months of FY11.

2.26 Due to delay in commissioning of new generating stations and increase in demand, the Board will have to procure power from the market and other sources to meet its energy requirement during the winter months in FY10 and FY11. During the first six months of FY10, the Board has to draw 183 MU under UI to meet the peak demand in the state and banking obligations. However, due to the large quantum of energy banked during summer months which would be available during winter months, the Board has submitted that it may not be required to undertake any market purchase during the remaining six months of FY10. For FY11, short-term/market procurement of power to the tune of 250 MU has been considered to meet the demand of the state throughout the year. The provision for market purchase has been made because of delay in commissioning on new generating stations.

2.27 External transmission losses on power purchase for the control period are to be estimated at 3.50% as per the MYT Order. However, based on the actual loss levels of 3.71% for the first six months of the current year, the Board has considered external transmission losses at 3.71% during the remaining six months of FY10 and FY11.

Energy Sales outside the State

2.28 The increase in energy availability in last few years has resulted in a substantial energy surplus with the Board during the summer months and hence the Board has projected its net energy sales outside the state as shown below:

Table 6: Board's projection of energy sales outside the state (MU)

Energy Sales to Outside State (MU)	FY09	FY10	FY11
Energy available for sale to consumers outside state	1498	1299	503
Less: Banking Power Return	764	845	400
Net Energy Available for Sale Outside State	**734**	**454**	**103**

Energy Balance

2.29 The Board prepared the Energy Balance based on the estimated and projected sales data, own generation data & power purchase data. The Board thus quantified the overall T&D losses as 13.40%, 13.20% and 13.00% for FY09, FY10 and FY11 respectively. The Energy Balance submitted by the Board is as shown below:

Table 7: HPSEB Projection – Energy Balance

Energy Balance (MU)	FY09	FY10	FY11
	Actual	Revised	Projected
Power Availability			
Net Own Generation Sources	1967	1692	1900
Net Power Purchase Sources (CGS, Inter-state etc.)	5837	6307	5964
Total Availability	**7804**	**7999**	**7864**
Sales within the State	5461	5816	6404
Proposed T&D Loss % within the State	**13.40%**	**13.20%**	**13.00%**
Power Requirement for sale within the State	6306	6700	7361
Power available for inter-state sale	1498	1299	503
Total Sale (within & Outside the State)	6959	7115	6907
Overall Losses (Total availability less Total sale)	845	884	957
Overall T&D Losses %	**10.82%**	**11.06%**	**12.17%**

Annual Revenue Requirement

2.30 The Board submitted the ARR for the remaining portion of the Control Period, the components of which are as discussed below:

Cost of Power Purchase

2.31 The Board projected the cost of power available from various stations considering the following:

NTPC

2.32 The cost of power from thermal generating stations for FY10 is based on actual power purchase bills, including Fuel Purchase Agreement (FPA), received by the Board during the first six months of FY10. The actual power purchase cost per unit for the first six months of FY10 have been used for projection of power purchase cost for the entire FY10. The Board has submitted that since the CERC has not issued tariff orders for NTPC stations in accordance with the new tariff guidelines for determination of tariff from FY10 to FY 2013-14, it has considered an escalation of 5% over the FY10 per unit power purchase cost for estimating the power purchase cost from NTPC stations for FY11.

2.33 For Anta (LF), Anta (LNG), Auraiya (LF), Auraiya (LNG), Dadri (LF) and Dadri (LNG) the rates for FY10 are based on the latest bills available for these plants (using a weighted average) and an escalation of 5% on the per unit power purchase cost has been considered for the projections for FY11.

NHPC

2.34 The Board has submitted that due to unavailability of orders for NHPC plants as per the revised CERC tariff determination guidelines, it has considered the average of actual per unit power purchase cost of each hydel plant in FY09 and first six months of FY10 for projection of the power purchase cost for FY10. Power purchase cost for FY11 for NHPC and other hydel plants have been considered based on 5% escalation in the per unit power purchase cost estimated for FY10.

NPCIL

2.35 The Board has submitted that the single-part tariff for NPCIL stations based on the actual power purchase bills received during FY10 has been considered and an escalation of 5% has been applied to it for the purpose of making projections for FY11.

New Generating Stations

2.36 For Nuclear RAPP units 5 & 6, a single part tariff of 300 paisa per unit has been considered for FY10 and FY11.

2.37 For Chamera-III, the cost of 300 paise per unit has been considered for FY11.

Other Generating Stations

2.38 For the shared generation projects namely Bhakra (old), Bhakra (new), Dehar, Shanan BSS, Shanan Ext, Yamuna (UJVNL) and Khara (UPPCL), the cost of power purchase for FY10 has been considered based on the average per unit cost for FY09 and the first six months of FY10. For the purpose of projection of power purchase cost from these plants for FY11, an escalation rate of 5% has been applied on per unit cost in FY10.

2.39 The power purchase cost for Baspa-II for the current year has been computed using the average actual per unit cost during FY09 and the first six months of FY10. For the purpose of projections for FY11, per unit cost has been assumed to be similar to per unit cost estimated for FY10. The secondary energy charge has been considered at Rs. 2.97 per unit.

2.40 The Board has submitted that the arrears for Baspa II have been claimed separately for the current year and Control period. The Board has estimated a payment of Rs. 10.95 Cr each year as arrears for FY10 and FY11.

2.41 The rate for Nathpa Jhakri power (SOR Share) for the current year has been calculated by using the average actual per unit cost during FY09 and the first six months of FY10. For the purpose of projections for FY11, an escalation factor of 5% has been used over the FY10 per unit power purchase cost.

2.42 For FY10, the power from Nathpa Jhakri (SOR) has been considered based on the average per unit power purchase cost for FY09 and the first six months of FY10. An escalation of 5% has been considered for projection of the power purchase cost for FY11. Power purchase cost from Nathpa Jhakri (Equity share) has been considered based on past year actual cost as no energy has been received during the current year.

2.43 For Tehri HEP, the power purchase cost for FY10 has been estimated based on the actual average per unit cost for FY09 and the first six months of FY10. An escalation factor of 5% has been considered over the FY10 per unit cost for projecting the cost of power purchase from Tehri HEP for FY11.

2.44 The rate of purchase for free power share of GoHP during FY10 has been considered based on Rs. 3.00 per unit up to August 2009 and Rs. 2.83 per unit from September 2009 onwards. The Board has submitted that this is in accordance with the revised Order of the Commission. For FY11, the rate has been considered at Rs. 2.83 per unit.

2.45 The cost of power from private micro hydel plants has been considered at Rs. 2.50 per unit for existing plants (commissioned earlier to June 2007) and Rs. 2.87 per unit for new plants (commissioned after June 2007).

2.46 The Board has not considered any financial rates for the banking power projected for the current year and FY11.

PGCIL Charges

2.47 The charges for wheeling of power from the generation bus to the interface point of the Board for plants located outside Himachal Pradesh are to be paid to the central transmission utility i.e. PGCIL. Due to delay in COD of new generating stations, the Board has submitted that no additional transmission capacity allocation would be required during FY10 and FY11 except for RAPPS and Chamera-III. Therefore, the Board has estimated the inter-state transmission charges payable to PGCIL (Power Grid Corporation of India Ltd.) for FY10 and FY11 based on a 5% escalation each year over the actual transmission charges paid to PGCIL during FY09.

2.48 The Board has projected the ULDC charges for FY10 and FY11 similar to the actual ULDC charges incurred by the Board during FY09 without any escalation.

2.49 The table below summarizes the station-wise power purchase costs for current and ensuing year:

Table 8: Power Purchase Cost for the Control Period

Source	FY09		FY10		FY11	
	Rs. Cr	P/unit	Rs. Cr	P/unit	Rs. Cr	P/unit
Bhakra Beas Management Board						
Old HP	2	53	2	55	3	58
New HP	4	29	4	32	4	34
Dehar	5	60	4	47	4	49
Sub Total	**11**		**10**		**11**	
NHPC						
Chamera - I SoR Share 2.90%	9	150	7	132	7	139
Chameram II SoR Share 2.75%	17	340	15	295	17	310
Chamera- III	-	-	-	300	8	300
Salal	3	86	2	76	2	80
Uri (13.008 MW)	11	137	9	136	10	143
Tanakpur (3.14 MW)	2	130	2	126	2	132
Dhauli Ganga (7.7 MW)	8	207	7	189	8	199
Parbati-III	-	-	-	-	-	
Sub Total	**50**		**42**		**54**	
THDC						
Tehri	40	459	25	507	38	532
Koteshwar	-	-	-	-	-	
Sub Total	**40**		**25**		**38**	
PSEB						
Shanan Share 45 MU	2	40	2	40	2	42

Source	FY09		FY10		FY11	
	Rs. Cr	P/unit	Rs. Cr	P/unit	Rs. Cr	P/unit
Shanan Share, at cost (1 MW)	-	40	-	40	-	42
Sub Total	**2**		**2**		**2**	
Banking						
PSEB Bkg.	29	328	-	-	-	-
PSEB Contra Bkg.	153	750	-	-	-	-
HPGCL Bkg./HPPC-Bkg.	69	652	-	-	-	-
HPGCL Bkg.Contra BKg.	45	750	-	-	-	-
BYPL Bkg.	116	750	-	-	-	-
BYPL Bkg.Contra Bkg.	-	-	-	-	-	-
BRPL Bkg.	64	750	-	-	-	-
BRPL Contra Bkg.	21	750	-	-	-	-
Sub Total	**497**		**-**		**-**	
NTPC						
Rihand-I (35 MW)	50	188	48	181	46	190
Rihand-II (Firm) (16.5 MW)	51	188	53	215	57	226
Rihand-II (Infirm) (16.5 MW)	-	-	-	-	-	-
Unchahar-I (7)	12	229	12	224	13	236
Unchahar-II (12)	20	214	22	242	22	254
Unchahar-III (12)	14	252	17	266	16	279
Anta -(G) (14.2)	13	183	10	163	15	171
Anta -(L)	5	807	3	407	2	427
Anta -(LNG)	1	807	6	407	5	427
Auria -(G) (22.36)	19	189	21	171	22	179
Auria -(L)	5	877	8	754	4	792
Auria - (LNG)	2	877	8	754	8	792
Dadri (Gas)-(25.39)	22	198	24	185	27	194
Dadri (L)	11	760	8	731	4	767
Dadri (LNG)	2	760	8	731	8	767
Kahalgaon	9	238	23	243	38	255
Barh-I (unit-I)	-	-	-	-	-	-
Koldam	-	-	-	-	-	
Sub Total	**236**		**271**		**287**	
NPCIL						
Narora	4	191	6	194	9	203
RAPP (Units 5&6)	-	-	3	300	14	300
Sub Total	**4**		**9**		**23**	
Private Sector						
Baspa-II	355	338	294	280	294	280
Baspa-II Sec. Energy (Purchase)	24	297	44	297	42	297

Source	FY09		FY10		FY11	
	Rs. Cr	P/unit	Rs. Cr	P/unit	Rs. Cr	P/unit
Pattikari	14	225	9	225	11	225
Nathpa Jhakri (1500 MW)		-				
Equity (22%)	110	296	86	296	90	310
State of Region 2.47%	44	273	41	244	43	256
Khara	3	37	2	37	2	39
Uttaranchal (Yamuna)	15	35	11	35	14	36
Sub Total	**565**		**487**		**496**	
Free Power(GoHP's entitlement)						
NHPC (Bairasuil, Chamera - I & II)	40	302	81	298	46	283
Shanan Share	1	302	1	297	-	283
Ranjeet Sagar Dam	20	303	16	297	6	283
Nathpa Jhakri	55	301	72	300	70	283
Baspa-II (IPP)	47	303	47	297	12	283
Pattikari	3	303	2	293	2	283
Malana (IPP)	16	303	16	297	5	283
Chamera III	-	-	-	-	5	283
Others (HPSEB own plants post 90)	31	304	27	292	26	283
Sub Total	**213**		**262**		**172**	
Private Micros	**68**	**251**	**97**	**269**	**134**	**273**
Banking Power		-	-	-	-	-
Unscheduled Interchange (UI)	48	560	90	491	-	-
Unallocated share	61	216	85	226	79	238
Market purchase		-	-	600	150	600
Baspa-II Arrears	32		11	-	11	-
PGCIL & other transmission charges	130		137		144	
ULDC Charges & Reactive Charges	7		7		7	
Grand Total	**1,962**		**1,529**		**1,598**	

2.50 The Board has however filed a petition dated April 1, 2010 revising the power purchase cost to Rs 1932.50 Cr for FY11 on account of considering market rates (Rs 6.50 per unit) for GoHP free power & equity power, based on the GoHP letter dated March 6, 2010 to the Board stating that the State Govt. power will be made available to HPSEB and from October 2010 to March 2011 at a market determined rate keeping in view sales rate for bulk power in the neighbourhood with an appropriate discount factor for the lower losses and the costs for selling power within the State.

Repair & Maintenance Cost

2.51 The Board has indicated that it has followed the same methodology for determination of R&M expenses for FY10 and FY11 as the methodology adopted while filing the

MYT Petition in the preceding year.

2.52 The Board has proposed using the average of R&M Costs as % of Opening Gross Fixed Assets of the previous three years i.e. FY 06 to FY08 to calculate the K-factor. The R&M Costs as % of Opening Gross Fixed Assets of the previous three years i.e. FY 06, FY 07 and FY08 stands at 0.84%, 1.18% and 0.72% respectively. Taking the average of three years the K-factor comes to 0.91%

2.53 The Board has projected the future R&M costs on the basis of the average of R&M Costs as % of Opening GFA for the time period FY 2005-06 to FY08. In the current petition, the Board has considered a K-factor of 0.91% as against 1.01% proposed in previous ARR submissions made during control period.

2.54 The following table illustrates the R&M figures projected by the Board for FY10 and FY11:

Table 9: Proposed R&M Expenses for the Control Period

R&M Expenses (Rs Cr)	FY09 Actual	FY10 Revised	FY11 Projected
Plant & Machinery	6.82	9.55	10.64
Buildings	1.17	1.64	1.83
Civil Works	1.16	1.62	1.81
Hydraulic Works	0.89	1.25	1.39
Lines, Cables networks	14.54	20.36	22.69
Vehicles	3.12	4.37	4.87
Furniture & Fixtures	0.07	0.10	0.11
Office Equipments	0.04	0.06	0.06
Net R&M Costs	**27.81**	**38.93**	**43.39**
Opening GFA		4271.34	4760.36
R&M Costs as % of GFA		0.91%	0.91%

Employee Cost

2.55 The Board has mentioned that for FY10 and FY11, the employee cost has been computed considering the impact of Sixth Pay Commission.

2.56 The Board has taken an escalation of 1.86% in basic salary component of the employee expense excluding DP and DA for FY07. The Board has merged the actual DA paid during FY07 with the actual Basic Salaries of the same year, for projecting the basic salaries for FY10 and FY11.

2.57 The estimated basic salary (including DA after merger) as per the Sixth Pay Commission for FY09 has been escalated by 3% annually during FY10 and FY11. The Board has submitted that this 3% increase in salaries & allowances is mainly due to annual increments on which HPSEB has no control as this forms part of the service conditions of the employees. In the revised projections, the Board has also kept a provision for the grade pay and no escalation has been considered on the same.

2.58 The provision of DA is also kept in the revised salary structure computed from FY 07 onwards. The provision for DA component is in line with the recommendations made by the Sixth Pay Commission, which is applicable at 22% (April to June), 27% (July to December) and 32% (January to March) of the basic salary for FY10. A provision of 32% (April to June), 37% (July to December) and 40% (January to March) has also been made for the DA in projecting the employee cost for FY11.

2.59 The Board has submitted that the likely increase due to Sixth Pay Commission will be effective from January 1, 2006. Therefore, the arrears for the FY 06 (3 months), FY 07, FY08 and FY09 have been distributed equally in the employee cost for FY10 and FY11. The arrears have been claimed under the head 'Arrears due to Sixth Pay Commission'. The Board has deducted the DP, DA and IR paid to employees while computing the arrears for the past period as well as for the current year.

2.60 The Leave Salary Contribution, LTC, earned leave encashment, staff welfare expenses and payment under workmen's compensation for FY10 and FY11 have been projected by the Board to increase by 4.16% to cover the cost of inflation. Medical expense reimbursement, fee & honorarium for FY08 and the control period have also been escalated by 4.16%. Other allowances have been escalated by 8% for FY10 and FY11 because of impact of revised basic salary. The Board has considered the same escalation rate for determination of aforesaid expenses for FY11 as the escalation rate adopted while filing the first MYT Petition.

2.61 The Board's submission of Employee Cost is summarized below:

Table 10: HPSEB Projection - Employee Cost (Rs. Cr)

Employee Costs	**FY09**	**FY10**	**FY11**
	Actual	Revised	Projected
Salaries & Allowances			
Salaries (Basic) + Dearness Pay	297.28	327.47	337.29
Revised DA	0.00		
Grade pay		85.34	84.84
DA	152.07	111.46	154.08
Arrears due to the 6th Pay Commission	0.00	**82.79**	**82.79**
Other Allowances	31.12	33.61	36.30
Overtime	1.91	1.99	2.07
Bonus	0.37	0.39	0.40
Salaries – Total	**482.75**	**643.04**	**697.77**
Medical expense Reimbursement	8.11	8.45	8.80
Fee & Honorarium	0.01	0.01	0.01

Employee Costs	FY09	FY10	FY11
	Actual	Revised	Projected
Earned Leave encashment	17.47	18.20	18.95
Leave Salary Contribution	0.25	0.26	0.27
Payment under workmen's compensation	0.73	0.76	0.79
LTC	0.02	0.02	0.02
Staff Welfare expenses	0.00	0.00	0.00
Other Staff Costs – Total	**26.59**	**27.70**	**28.85**
Provident Fund Contribution	0.00		
Pension	115.58	127.14	139.85
Gratuity	22.94	25.23	27.76
Any other items	5.85	6.44	7.08
Terminal benefits – Total	**144.37**	**158.81**	**174.69**
Gross Employee cost	**653.71**	**829.55**	**901.31**
Less: capitalization	40.93	37.34	40.93
Net Employee costs	**612.78**	**792.21**	**860.38**

2.62 The Board also made submissions regarding the expected ramifications of the Sixth Pay Commission and made projections for the arrears payable for the period FY 06 to FY11. The details regarding the expected ramifications of the Sixth Pay Commission recommendations for the Board, as calculated by the Board, are shown in the table below:

Table 11: Ramifications of the Pay Commission

Sixth Pay Commission (Likely Impact)	FY06	FY07	FY08	FY09	FY10	FY11
Basic (Projected as per Sixth Pay Commission)	254.73	325.78	348.94	317.93	327.47	337.29
Grade Pay	83.55	87.96	94.21	85.84	85.34	84.84
Total Basic Salary	**338.27**	**413.74**	**443.15**	**403.77**	**412.81**	**422.13**
DA (As per Sixth Pay Commission)		10.34	21.94	66.62	111.46	154.08
(A) Salary As per Sixth Pay Commission		**424.08**	**465.08**	**470.39**	**524.27**	**576.21**
Actual payout of Basic & IR	**338.27**	195.34	207.91	206.35		
DP Paid		80.00	93.26	90.93		
DA Paid		92.50	117.61	152.07		
(B) Total Paid		**367.84**	**418.78**	**449.35**		
(C) Arrears = (A)-(B)	15.00	56.24	46.30	21.04		
(D) Terminal Benefit Arrears		7.96	8.93	10.11		
Total Arrears (C) + (D)	**15.00**	**64.21**	**55.23**	**31.15**		

Administrative & General Expenses

2.63 The Board, in its submissions, calculated that the inflation factor by giving CPI a weight of 0.55 and WPI a weight of 0.45. Therefore, inflation index $INDX_n$ = 0.55*(4.10%) + 0.45*(4.24%) = 4.16%, where the CPIs and WPIs are the averages of years FY 07 to FY11.

2.64 The Board submitted that the Regulatory & Consultancy expenses for the Control Period had been projected as per the existing agreements, contracts with the consultants and the best estimates for future regulatory and consultancy works.

2.65 The Board has also considered the payment of Rs. 14 Cr for each year of the control period for payment of loan taken for distribution of CFL bulbs to domestic consumers.

2.66 The Board has submitted that the Commission has allowed Rs. 42.74 Cr for GIS/GPS mapping, MIS implementation and CoS Studies for the control period. However, the Board has not paid the entire amount towards these expenses and the amount already paid is booked under Schedule 26 (d) of the Audited Accounts i.e. Loans and advances for the current assets. The same amount will be transferred to A&G once the study/work will be completed by the respective agencies. Therefore, the Board has not made provision for the entire amount to be incurred on account of GIS/GPS-based asset mapping exercise and MIS implementation programme for FY10 and FY11.

2.67 The summary of the proposed A&G expenses for FY10 and FY11 is provided below:

Table 12: HPSEB Projection – A&G Expenses (Rs Cr)

Administration & General Costs	FY09 Actual	FY10 RE	FY11 Projected
Administration Charges			
Rent, Rates & Taxes	2.31	2.41	2.51
Telephone, Postage & Telegrams	2.73	2.84	2.96
Consultancy Charges	0.12	6.00	14.00
Conveyance & Travel	14.91	15.53	16.18
Regulatory Expenses	2.29	3.50	3.50
Income Tax Updating Charges	0.02	0.02	0.02
Insurance	0.94	0.98	1.02
Other Charges	0.03	0.03	0.03
Incentive awards to employees/outsiders	0.25	0.26	0.27
Sub Total	**23.60**	**31.57**	**40.49**
Other Charges			
Fees & Subscriptions, Books & Periodicals	0.20	0.21	0.22
Printing & Stationery	1.23	1.28	1.33
Advertisement Expenses	0.43	0.45	0.47
Electricity Charges	2.89	3.01	3.14

Administration & General Costs	FY09 Actual	FY10 RE	FY11 Projected
Water Charges/ Cold weather expenses	0.37	0.39	0.40
Miscellaneous Expenses	0.10	0.10	0.11
Legal Charges	0.05	0.05	0.05
Audit Fee	2.78	2.90	3.02
Freight Material related Expenses	0.59	0.61	0.64
Entertainment Charges	2.90	3.02	3.15
Training to Staff	3.01	3.14	3.27
Public Interaction Program	0.10	0.10	0.11
Public Expenses/ Other professional charges	0.21	0.22	0.23
Cost Free Bulb to Consumers	14.00	14.00	14.00
A&G Expenses – Total	**52.46**	**61.05**	**70.61**
Less: Capitalisation	3.12	3.05	3.53
Net A&G Costs	**49.34**	**58.00**	**67.08**

Depreciation

2.68 The Board has submitted depreciation based on the original cost, estimated life and residual life. Depreciation for FY10 and FY11 is calculated by applying 2.5% depreciation rate (based on past years' average) on the opening balance of Gross Fixed Assets and average of the addition during the year projected for FY10 and FY11. The Board has not charged depreciation on assets created through funds in the form of grants.

2.69 The Board submitted an explanation for a discrepancy in the numbers of the GFA of the generation wing which cropped up earlier. The Board claims that the decrease in the gross fixed assets of generation business during FY08 was due to extra-ordinary internal transfer of assets worth Rs. 350.02 Cr. to another division under the Board. These assets were in transit till the end of FY08. The transfer has been reflected in the GFA of FY09, wherein this extraordinary item of Rs. 350.02 Cr is added back to the GFA.

2.70 The Board has indicated that it is taking all efforts to pursue capitalization of its assets and is planning to capitalize all the existing CWIP by the end of the Control Period. The table below summarizes the capitalization plan which the Board intends to follow during the Control Period.

Table 13: Capitalization Plan - % of Assets to be capitalized

Capitalization Plan	FY10	FY11
Opening balance for FY10 (CWIP)	33%	33%
Capex during FY10	20%	20%
Capex during FY11	0%	20%

2.71 The Board has submitted the following depreciation cost for the Commission's approval:

Table 14: HPSEB Projection – Depreciation (Rs Cr)

Depreciation (Rs Cr)	FY09	FY10	FY11
	Actual	Revised	Projected
GFA - Opening Balance			
Generation	1630.01	2092.40	2271.34
Transmission	789.80	864.00	912.89
Distribution	1144.95	1314.94	1576.12
Others	0.00	0.00	0.00
Total	**3564.76**	**4271.34**	**4760.36**
Net Additions during the Year			
Generation	462.39	178.94	248.29
Transmission	74.20	48.89	94.89
Distribution	169.99	261.18	386.48
Others	0.00	0.00	0.00
Total	**706.58**	**489.016**	**729.65**
GFA - Closing Balance			
Generation	2092.40	2271.34	2519.63
Transmission	864.00	912.89	1007.78
Distribution	1314.94	1576.12	1962.60
Others	0.00	0.00	0.00
Total	**4271.34**	**4760.36**	**5490.02**
Depreciation for the Year			
Generation	44.31	54.55	59.89
Transmission	21.47	22.21	24.01
Distribution	31.13	36.14	44.23
Grant Deduction	0.00	-0.48	-1.84
Total	**96.91**	**110.71**	**124.58**

Interest & Finance Charges

2.72 The Board submitted to the Commission that the grants for T&D have been deducted from the proposed debt component of the proposed capital expenditure plan to calculate the interest and finance charges. The Board has further submitted that it has followed a similar methodology for determination of interest charges for FY10 and FY11 as the methodology adopted while filing the first MYT Petition for the first control period (FY09 to FY11) at the beginning of the control period, except for the changes mentioned below.

2.73 Interest on working capital has been taken by the Board to be 11.75%. Also, the Board has restructured the loan of Rs. 100 Cr taken from PNB bank during FY09 for the generation business. The revised rate of interest is 10% as against 11.25%.

2.74 The various Interest and Financing details as submitted by the Board are tabulated below:

Table 15: HPSEB Projection – Interest Expenses (Rs Cr)

Interest Costs (Rs Cr)	FY09 Actual	FY10 RE	FY11 Projected
RGGVY	0.12	1.50	4.65
LIC	21.33	21.00	20.00
REC	23.18	45.50	50.00
PFC	69.78	70.00	70.00
Bonds	4.06	1.94	0.92
Bank Loans	45.91	25.45	20.25
Interest on state govt. loan	1.97	1.93	1.80
Non SLR Bonds	37.96	31.55	23.70
Other Negotiated Loan	2.71	22.98	45.63
Interest on Overdraft	0.00	0.00	0.00
Interest on GPF	0.00	0.00	0.00
Cost of raising finances	2.40	2.52	2.65
Other Charges	0.45	0.47	0.50
Interest on Security Deposits	9.00	9.45	9.92
Rebate allowed for timely payment	4.48	4.70	4.94
Interest on WC borrowing & Other Charges	47.74	48.87	52.95
Interest & Finance Charges – Total	**271.09**	**287.87**	**307.91**
Less: Interest capitalized	75.38	71.97	76.98
Net Interest & Financing Costs	**195.71**	**215.90**	**230.93**

Working Capital Requirement

2.75 The Board submitted that it has calculated the working capital requirement for FY10 and FY11 according to the MYT Regulations, 2007.

2.76 According to the Board, the working capital requirement has been revised mainly due to increase in receivables projected for the control period. Also, it has submitted that one month's Power Purchase component has not been reduced from the total working capital because the Board has historically paid all its power purchase bills within one week from the issuance of bills by the respective plants to avail the rebate for timely payment of the power purchase bills.

2.77 The estimated figures for the MYT Control Period are tabulated below:

Table 16: HPSEB Projection – Working Capital Requirement (Rs Cr)

Working Capital Requirement	FY10 Revised	FY11 Projected
2/12 of Receivables	340.54	368.31
1/12 of O&M	74.09	80.90
Maintenance spares @ 40% of R&M	1.30	1.45
Total working capital	**415.94**	**450.66**
Interest on WC @ 11.75%	48.87	52.95

Return on Equity

2.78 The Board has submitted that it has revised its equity infusion plan for FY10 and FY11. For the current year, the Board has declared that its capital expenditure plan would be funded through both debt and grants. Based on the capitalization plan for FY10 and FY11, the return on equity is estimated and included in the proposed ROE.

2.79 The Board has taken 14% return on equity for generation and transmission businesses and 16% return for the distribution business. The Board has submitted that it is planning to invest equity to the tune of Rs. 120 Cr in existing as well as new generation schemes during FY10 and FY11. Apart from generation, Board is also planning to invest Rs. 15 Cr of equity in the transmission business during FY10.

2.80 The Board's estimates of RoE for the MYT Control Period are tabulated below:

Table 17: Return on Equity (Rs Cr)

Return on Equity (Rs Cr)	FY09 Actual	FY10 Revised	FY11 Projected
Generation (14%)	25.65	27.33	30.69
Transmission (14%)	11.31	11.73	12.15
Distribution (16%)	17.02	17.02	17.02
Total	**53.97**	**56.07**	**59.85**

Non Tariff Income & Other Income

2.81 The Board has followed a similar methodology for determination of Non Tariff Income expenses for FY10 and FY11 as the methodology adopted while filing the MYT Petition in the preceding year.

2.82 An escalation of 5% p.a. is applied on FY09 actual figures for future projections of Non Tariff & Other Income.

2.83 The Board has specified that during FY09 certain receipts (PGCIL repayments) were made by the Board which are shown under the head of Wheeling charges recovery.

2.84 The Board's projections for the Non-Tariff Income are tabulated below:

Table 18: Non-Tariff Income & Other Income (Rs. Cr)

Non-Tariff Income (Rs Cr)	FY09 Actual	FY10 Revised	FY11 Projected
a) Meter Rent/Service line rentals	29.11	30.57	32.09
b) Recovery for theft of power/malpractices	21.86	9.13	9.59
c) Wheeling Charges recovery	35.87	37.66	39.55
d) Miscellaneous charges from consumers	3.42	3.59	3.77
Non Tariff Income – Total	**90.26**	**80.95**	**85.00**
Other Income			
a) Interest on Staff loans & advances	0.67	0.70	0.74
b) Income from Investments	5.64	5.92	6.22
c) Interest on loans & advances to licencees	0.00	0.00	0.00
d) Delayed payment charges from consumers	0.00	0.00	0.00
e) Interest on advances to suppliers/contractors	0.08	0.08	0.09
f) Interest on banks (other than on fixed deposits	0.00	0.00	0.00
g) Income from trading	2.52	2.65	2.78
h) Income from staff welfare activities	0.04	0.04	0.04
i) Miscellaneous receipts	14.60	15.33	16.09
Total	**23.55**	**24.72**	**25.96**
Total Non Tariff Income & Other Income	**113.81**	**105.68**	**110.96**

Aggregate Revenue Requirement

2.85 The Table below summarizes the Board's Aggregate Revenue Requirement for FY09, FY10 and FY11 as per the review petition:

Table 19: Aggregate Revenue Requirement for the Control Period (Rs Cr)

Annual Revenue Requirement (Rs Cr)	FY09 Actual	FY10 Revised	FY11 Projected
Costs			
Power Purchase Cost	1962.09	1,528.95	1,597.59
Employee Cost	612.78	792.21	860.38
Repairs & Maintenance	27.81	38.93	43.39
Admin & General	49.34	58.00	67.08
Interest Cost	195.71	215.90	230.93
Depreciation	96.91	110.71	124.58
Total Costs	**2,944.64**	**2,744.69**	**2,923.96**
Add: Return on Equity	53.97	56.07	59.85
Less: Non-Tariff Income	113.81	105.68	110.96
Annual Revenue Requirement	**2,884.81**	**2,695.09**	**2,872.85**

Revenue from Sale of Power at Existing Tariffs

2.86 Revenue from sale of power for FY11 is determined based on the energy sales estimated by the Board and the category wise tariffs approved by the Commission in its APR Order dated 24 August, 2009.

2.87 The table below summarizes the Board's estimates of the revenue realized at current tariff for the Control Period.

Table 20: Revenue from Sale of Power at Existing Tariff (Rs. Cr)

Consumer Category	FY09 Actual	FY10 Revised	FY11 Projected
Domestic Supply	284.03	295.57	308.53
Non Domestic Non Commercial Supply (NDNCS)	42.12	38.92	42.77
Commercial Supply (CS)	137.65	147.32	153.76
Small & Medium Industrial Power Supply (SMS)	78.37	69.33	71.94
Large Supply (HT)	1,078.67	760.00	836.97
Large Supply (EHT)		443.23	485.61
Agriculture & Allied Activities	15.96	9.06	9.69
Water Pumping Supply (WPS)	169.42	177.66	192.89
Street Lighting Supply	5.59	4.27	4.46
Bulk Supply	74.57	80.30	82.94
Temporary Metered Supply	11.01	17.62	20.27
Total Revenue	**1,897.38**	**2,043.27**	**2,209.85**

Revenue Gap

2.88 The Board has submitted that the revenue from the sale of power outside state has been considered at Rs. 6 per unit for the Control Period.

2.89 The Board has submitted the revised revenue gap for Control Period at existing tariff is Rs. 59.68 Cr, Rs. 379.47 Cr and Rs. 601.21 Cr for FY09, FY10 and FY11, respectively. The Board proposes an upward tariff revision to cover the revenue gap of Rs. 980.67 Cr for the FY10 and FY11 claimed by the Board.

2.90 The revenue gap details are summarized below:

Table 21: Revenue Gap during the Control Period

Particulars (Rs. Cr)	FY09 Actual	FY10 Revised	FY11 Projected
Annual Revenue Requirement	**2,884.81**	**2,695.09**	**2,872.85**
Covered by:			
Revenue @ Existing Tariff	1897.38	2043.26	2209.85
Revenue from Sale outside state	927.71	272.36	61.80

Particulars (Rs. Cr)	FY09	FY10	FY11
	Actual	Revised	Projected
GoHP Subsidy	0.02		
Revenue@Existing Tariff + GoHP Subsidy	**2,825.11**	**2,315.63**	**2,271.65**
Revenue Gap/(Surplus)	**59.70**	**379.47**	**601.21**

2.91 On the basis of the revenue gap estimated by the Board, the Board has proposed to increase the retail tariff for the state in FY11 on the grounds that the existing retail tariff is not adequate to meet the ARR projected for FY11. The detailed category-wise tariff hike proposal of the Board is provided in Chapter A6 of this Order. The additional revenue mobilization from the proposed tariff is to the tune of Rs. 743 Cr. The category-wise revenue estimated by the Board at the proposed tariffs is summarized below:

Table 22 Revenue from Sale of Power at Proposed Tariff (Rs. Cr)

Consumer Category	FY11 Projected
Domestic Supply	356.72
Non Domestic Non Commercial Supply (NDNCS)	43.98
Commercial Supply (CS)	159.77
Small & Medium Industrial Power Supply (SMS)	82.33
Large Industrial Power Supply (LIP)	1,991.62
Water and Irrigation Pumping Supply (WIPS)	201.25
Street Lighting Supply	4.46
Bulk Supply	91.62
Temporary Metered Supply	20.92
Total Revenue	**2,952.84**

Segregation of ARR for the Control Period

2.92 In its revised ARR filing, the Board has submitted that the approach towards segregation of ARR for FY10 and FY11 is based on identifying and isolating different items like activities, assets, costs and revenues to the three functions. Based on circle-wise data available for Generation, Transmission and Distribution functions for FY08 and FY09, certain estimates and assumptions have been made.

2.93 The following key points, as submitted by the Board, are part of its segregation methodology:

(a) Power purchase costs have been fully allocated to Distribution function.

(b) Interest & Finance Charges for FY08 and FY09 have been apportioned in principle of allocated loans (scheme specific). Interest & Finance charges for FY10 and FY11 have been allocated based on outstanding principle amount against loans raised for specific schemes, according to the capital expenditure plan.

(c) Gross Fixed Assets and accumulated depreciation have been allocated to various functions on the basis of the Audited Accounts for FY09 and the capitalization schedule of the capital expenditure plan.

(d) Consumer contribution has been fully allocated to Distribution business. Capital subsidies have been allocated based on the nature of the subsidy. Interest on Security deposits has been fully allocated to Distribution business.

(e) Return on equity has been allocated according to the equity invested for each of the segments for the Board.

(f) Expenses capitalised under various expense items have been allocated based on actual capitalization for FY08 as well as for FY09. Interest capitalised has been allocated based on the gross interest for that particular segment of the business.

(g) All income items other than delayed payment surcharge from consumers that form part of other income and non-tariff income have been allocated based on the nature of income. Delayed payment surcharge from consumers has not been considered as a part of ARR.

2.94 The tables below summarize the segregated ARR for FY09, FY10 and FY11 for generation, transmission and distribution respectively.

Table 23: Function-wise segregated ARR for Generation (Rs Cr)

Generation	FY09 Actual	FY10 Revised	FY11 Projected
Power Purchase Cost	0.00	0.00	0.00
Employee Cost	83.73	105.96	115.13
R & M Expenses	11.56	10.58	11.79
A & G Expenses	8.41	6.01	7.23
Depreciation	44.31	54.55	59.89
Interest & Finance Charges	132.75	146.82	149.16
Less: Interest Capitalized	45.91	41.39	44.27
Less: Other Expenses Capitalized	17.14	5.16	5.68
Return on Equity	25.65	27.33	30.69
Less: Non Tariff Income	6.58	7.06	7.41
Total ARR	**236.78**	**297.64**	**316.52**

Table 24: Function-wise segregated ARR for Transmission (Rs Cr)

Transmission	FY09	FY10	FY11
	Actual	Revised	Projected
Power Purchase Cost	0.00	0.00	0.00
Employee Cost	56.76	61.98	67.34
R & M Expenses	3.17	3.67	4.09
A & G Expenses	4.70	3.52	4.23
Depreciation	21.47	22.21	24.01
Interest & Finance Charges	21.28	14.92	29.57
Less: Interest Capitalized	4.84	10.95	11.71
Less: Other Expenses Capitalized	6.24	3.02	3.32
Return on Equity	11.31	11.73	12.15
Less: Non Tariff Income	6.54	9.67	10.15
Total ARR	**101.07**	**94.39**	**116.21**

Table 25: Function-wise segregated ARR for Distribution (Rs Cr)

Distribution	FY09	FY10	FY11
	Actual	Revised	Projected
Power Purchase Cost	1962.09	1528.95	1597.59
Employee Cost	513.22	661.61	718.85
R & M Expenses	13.08	24.68	27.51
A & G Expenses	39.35	51.53	59.15
Depreciation	31.13	33.95	40.69
Interest & Finance Charges	117.06	126.12	129.17
Less: Interest Capitalized	24.63	19.63	21.00
Less: Other Expenses Capitalized	20.67	32.21	35.46
Return on Equity	17.02	17.02	17.02
Less: Non Tariff Income	100.69	88.95	93.40
Total ARR	**2546.96**	**2303.06**	**2440.12**

Transmission & Wheeling Tariff for the Control Period

2.95 The total losses in the system are revised and projected at 13.20% and 13% for FY10 and FY11 respectively. The transmission losses are estimated at 3.71% for the current year as well as for FY11. The revised distribution losses are estimated at 9.86% and 9.65% for FY10 and FY11 respectively.

Table 26: Transmission & Wheeling Charges

Particulars (MU)	FY10	FY11
Power Availability		
Net Own Generation Sources	1692	1900
Net Power Purchase Sources (CGS, Inter-state etc.)	6307	5964

Particulars (MU)	FY10	FY11
Total Availability	7999	7864
Transmission Losses	249	273
Net Power available for sale at Transmission level	**7750**	**7591**

2.96 The Board has estimated the cost of own generation in FY10 be Rs. 297.64 Cr, while the cost of power purchase from other sources in FY10 has been estimated to be Rs. 1528.95 Cr. Hence, per unit cost of power for FY10 has been calculated as (297.64 + 1528.95) / 7999 = 2.28 per unit.

2.97 For FY11, the Board has estimated the cost of own generation to be Rs. 316.52 Cr and power purchase from other sources to be Rs. 1597.59 Cr. Hence, per unit cost of power for FY11 has been calculated as (316.52 + 1597.59) / 7864 = 2.43 per unit.

2.98 The Board has submitted that the Transmission System in the state is projected to sell 15342 MU during the FY10 and FY11 apart from bearing the transmission losses in the system. The table below summarises the total revised revenue requirement submission of the Board at Transmission level, including the cost of transmission losses.

Table 27: Transmission ARR inclusive of Transmission Losses

Transmission	FY10 Revised	FY11 Projected
Total ARR	94.39	116.21
Add: Transmission Losses	56.76	66.47
Total Revenue Requirement at Transmission Level inclusive of Transmission losses	**151.15**	**182.68**

Transmission Tariff for the Control Period

2.99 In keeping with the Board's submission of Transmission ARR as shown in Table 27 above, the Transmission Tariff for FY10 has been estimated at 20 paisa/unit (Rs. 151.15 Cr / 7750 MU). Similarly, the transmission tariff for FY11 has been proposed as 24 paisa/unit (Rs. 182.68 Cr / 7591 MU).

Wheeling Tariff for the Control Period

2.100 The Board has submitted that the wheeling tariff was calculated by deducting the power purchase cost (including transmission charges) from total distribution cost. The distribution cost is estimated at Rs. 2303.06 Cr and Rs. 2440.12 Cr for FY10 and FY11 respectively, as shown in Table 25. Hence, the wheeling tariff proposed by the Board is Rs. 1.33/unit [(2303.06–1528.95) / 5816] for FY10. Similarly, the wheeling tariff for FY11 has been proposed as Rs.1.32/unit [(2440.12–1597.59) / 6404].

Conclusion

2.101 In conclusion, the Board, in its petition has made an appeal to:

(a) Approve the Aggregate Revenue Requirement of FY11 as well as the revised estimates for the FY10;

(b) Approve proposed O&M cost including the impact of the Sixth Pay Commission;

(c) Approve the interest cost proposed for the revised capital expenditure without any disallowance;

(d) Allow taxes, FBT, cess, etc as pass through on actual basis.

A3: OBJECTIONS FILED AND ISSUES RAISED BY CONSUMERS DURING PUBLIC HEARING

3.1 There were nine objectors who filed written objections to the revised petition filed by the Board for the remaining year of the Control Period. The objectors listed at Sr. No (g), (h) and (i) have filed their objections jointly. The objections/ suggestions raised by the objectors were taken on record. The list of the objectors is as follows:

(a) Farmers of Kullu district;

(b) Joint Secretary (Agriculture), Govt. of Himachal Pradesh;

(c) Gujarat Ambuja Cement Ltd., Darlaghat;

(d) CII, PIA & BBNIA, KACCI Industries Association;

(e) ACC Gagal Cement Works, Barmana;

(f) M/s Auro Spinning Mills, Baddi;

(g) M/s H.M. Steels Ltd., Kala Amb;

(h) M/s Sri Rama Steels Ltd., Barotiwala;

(i) M/s J.B. Steel Rolling Mills, District Sirmour;

(j) M/s Sukhjit Agro Industries Ltd;

(k) Consumer Representative.

3.2 The public hearing was held on May 17, 2010 at the Commission's Court Room in Shimla. Names of objecting organization/companies and their respective representatives, who presented their cases before the Commission during public hearing, are given below:

Table 28: List of objectors present during Public Hearing

S. No.	Objector/Organization	Represented by
1	Farmers of Kullu district.	Sh. Des Raj Sharma
2	Joint Secretary (Agriculture), Govt. of Himachal Pradesh	Sh L.R Tanwar
3	Gujarat Ambuja Cement Ltd., Darlaghat	Sh. A. K. Thakur
4	CII, PIA & BBNIA, KACCI Industries Association	Sh. Rajinder Guleria
5	ACC Gagal Cement Works, Barmana	Sh. D. R. Sood
7	M/s Auro Spinning Mills, Baddi	Dr. Harish Ananad

S. No.	Objector/Organization	Represented by
8	M/s Sukhjit Agro Industries Ltd.	Sh. Daljit Singh

3.3 Important issues raised by the objectors along with the replies given to the objections by HPSEB and views of the Commission are mentioned in the sections below:

General comments on Petition filed by the Board

3.4 The objectors pointed out the following issues related to the revised petition filed by the Board for determining the ARR for FY11:

(a) The present petition has no concerns to the guiding principles laid down in the regulation in respect of MYT, nor does it take cognizance of the spirit behind the First Annual Performance Review Order dated 24th August, 2009. The directions issued to the Board negate all efforts of the Commission to help improve the performance of the Board in supplying consistent data. Formats pertaining to generation have either been left blank or are incomplete. Details of domestic loans, bonds and financial leasing are not available in respect of generation.

(b) The Board has proposed increase in expenditure on controllable parameters such as employee cost, A&G expenses and interest cost which are normally not allowable under the MYT regime.

(c) The design energy and the capacities of the power projects are not given in the ARR. The Board has given the revised estimate of 1692 MU for FY10 against the approved generation of 1852 MU by the Commission. The low estimate made by the Board be justified.

(d) The projections for Larji and Bhaba for FY11 needs to be revised/increased, as in the first two years of the control period, it has already crossed the projected level.

(e) Cost of power purchase from various sources other than the entitled shares from the Central Generating Stations, varied widely from Rs.3 per unit to Rs.6 per unit from the market rate and Rs.7.67 per unit from Central Thermal stations. The power purchase planning needs a serious thought and exercise at the Board's level. The Board should enter into long term agreement with the State Govt. for purchase of entire GoHP share of power and must buy GoHP share throughout the year and should sell the surplus outside the State.

(f) There is no reference in the current ARR regarding the subsidy receivable from the Government during FY09 and FY 10. The figure of subsidy to domestic consumers should be reworked/increased considering the increased average cost of supply for the category in the ensuing tariff Order.

(g) The revenue arrears to the tune of Rs.66.70 Crore, as stated to be due from the Government Departments/local Bodies be recovered by the Board alongwith penal interest.

(h) The initiatives taken by the Board towards energy conservation are welcomed. But the cost of free bulbs to consumers be recovered from the Govt. and not to be passed on to the consumers.

(i) Directions were issued by the Commission to carry out the unbundling of costs based on transparent and consistent methodology and to modify the accounting Manual. But the present Petition is silent on these issues.

(j) The CWIP makes no mention of the schemes name and other details such as cost estimate, start/completion target etc. The exercise relating to asset verification need to be expedited.

(k) The generation from its own stations during FY11 is more as compared to previous years, whereas the banking has reduced from 845 MU in FY10 to 400 MU in FY11.Reasons be given.

(l) The purchase of power available to H.P. from unallocated portion of the Central Generating Stations has been reduced from 374 MU in FY10 to 331 MU in FY11 and this will have impact on over all cost of power purchase. The lower projections made by the Board be justified.

(m) External transmission loss on power purchase has been taken as 3.71% for FY10 and FY11 as against the figure of 3.50% approved by the Commission. This will have an impact on additional availability of power to the tune of 14 MU amounting to Rs. 8.5 Cr.

(n) The average figure of CPI for the 5-year period works out to 4.02 instead of 4.10. Further calculation for the WPI and subsequent calculation for A&G expenses based on the revised figures needs to be checked/changed.

(o) A flat average rate of depreciation @ 2.5% has been applied for all categories of assets, which is incorrect, because the average life of assets under different heads of generation, transmission and distribution is different in each case as per the depreciation rates given under the relevant Act.

(p) Depreciation is being permitted in all ARRs. How is the Board's utilization of this recovery permitted as pass-through to consumers? Has a "Depreciation Reserve" account been created to ensure that all assets are replaced timely without seeking loans etc.?

(q) The Board did not file ARR petitions for FY03 and FY04. Loans must have been raised to bridge the relevant gap, the burden of which might have been shifted to the consumers. The Board needs to justify the same.

(r) The Capex requirement in respect of generation makes no mention of the project details, such as start date, completion date, year-wise phasing of expenditure, sources of funds and the capital cost with the IDC accrued to date. No effort has been taken by the Board to file these details.

(s) The formats for filing tariff petitions have been prescribed with the intention that relevant details be submitted by the petitioner. If these are not essential, the Commission should take initiative to modify these formats.

(t) The Board does not want to share its inefficiencies in monitoring the activities of the projects, therefore, is hiding the facts from the consumers. The Commission to take cognizance on this issue and insist its compliance.

(u) No agreements on banking have been supplied enabling the objectors to comment on this.

Board's response

3.5 The compilation of the replies to the above issues filed by HPSEB is as follows:

(a) The Commission has trued up the ARR and revenue projections of the Board for FY08 based on the audited accounts submitted by the Board along with the True-up Petition for FY08. As there are significant changes in the base year (FY08) projections made by the Commission in its MYT Order and the values approved by the Commission in the True up Order dated August 11, 2009 for FY08, the Commission has revised the trajectory for the uncontrollable and controllable components in the APR order. The Board acknowledges that an underperformance by a licensee after having all the costs approved at right level should be to the account of the licensee and not to the consumer. There have been changes subsequent to the filing, through validation sessions with the Commission and on account of availability of more authentic figures on power purchase, loans, revenue and cost estimates.

(b) The costs approved for the controllable factors in the MYT Order and the APR Order were on much lower side and the Board has revised the controllable cost fixed by the Commission for FY09 to FY11 as the same were not approved at the appropriate level by the Commission.

(c) There is no scientific base for projecting the hydel generation. The CAGR of generation of the Plants in the past four years was considered for projecting own generation during the control period. The Board has considered six months actual generation (April 09 to Sept. 09) for estimating the revised generation for FY10. The generation in FY09 was higher because of higher water discharge during the year.

(d) Larji, Khauli and Holi HEPs have been commissioned recently and past generation data for these Plants is not available. Thus, it is justified to consider the design energy as the generation is completely dependent on the availability of water. Any variation in the projected generation will be trued up at the end of the control period.

(e) The tariff paid by the Board for central generating stations has been determined by the CERC and the same is applicable to all the utilities in India. The cost of generation from the other sources in HP apart from CGS stations like Baspa, micro hydels, Govt power are under the jurisdiction of HPERC and the rates fixed by the Commission have been considered for projecting the power purchase cost. The power purchase cost of Rs. 7.67/- unit has been considered for the liquid and LNG stations considering the exiting tariff paid to these plants and the cost of fuel associated with these plants. As per the recent decision of the Government of HP dated 6.3.2010 regarding the 12% free power share will now be available throughout the year at market rate. Thus the suggestion given by the objector will not yield any positive results or profit to the Board.

(f) The Board acknowledges the receipt of due subsidy for the past years from the government on account of domestic tariff.

(g) All possible efforts are being made to recover the outstanding dues from the Government Departments/ undertakings and consumers.

(h) Expenses for distribution of free CFL bulb were initially incurred by the Government of HP but later the expenditure incurred under this scheme was transferred to the Board from the Govt of HP. The same has been presently recovered from the Board in form of interest free loan from the Government, for which the Board is paying an amount of Rs. 14 Crore per annum.

(i) The submission of all details/formats for the proposed unbundled entities is dependent on the finalization of separate accounts including details of employees transfer, loans transfers, etc., all of which will have a direct impact on the ARR of each entity. Pending such finalization, it would not be possible to provide all the details for each unbundled entity.

(j) The details of CWIP submitted to the Hon’ble Commission are as per the formats prescribed by the Commission As per the directions of the Commission, a tender for GIS/ GPS based Asset mapping and their valuation was floated by HPSEB in 2006. A pilot project under Part-1 of the Contract covering assets within the geographical boundaries of Shimla operation circle, awarded to M/S TCS is under implementation. This pilot project was targeted to be completed by 30/04/2010.The rollover project under Part-2 of the Contract awarded to M/s TCS, and M/s Rolta is under satellite imagery procurement phase. The rollover is expected to be completed by March 31, 2011.

(k) The projections made by the Board for the power purchase for FY11 is after factoring the estimated own hydel generation as well as the power available to the HPSEB from central generating stations/IPPs. The Board has projected a lower banking quantum for FY11 as against banking done during FY10, is because of delay in commissioning of central sector new plants which are now scheduled in FY11-12. Therefore, any variations in actual power purchase quantum at the end of FY11 as against the projections will be trued-up by the Commission.

(l) The unallocated quota received by the Board for FY09 is 281 MU and the same has been projected as 374 MU for FY10 based on the commitment from the Government of India at the time of filing of ARR for FY11. For the FY11, Board has projected the unallocated quota of 331 MU based on the trends in the past years.

(m) The Board has computed the transmission losses based on the losses incurred by the Board during FY09 and the first six months of FY10. Further, the power purchase and associated transmission charges are uncontrollable parameters which will be reviewed by the Commission at the end of each year.

(n) There is an inadvertent error in the average figure of CPI & WPI taken for the control period projections for calculating A&G figures. The value shown for the CPI for FY07 is incorrect and the correct value for FY07 is 4.40. Considering the correct value of 4.40 the average comes to 4.40.

(o) The Board functions as a bundled utility with Transmission, Distribution and Generation functions together. Though the classification of the assets are available, depreciation rate based on past years average are applied to the opening GFA to arrive at depreciation

(p) The depreciation allowed by the Commission is always adjusted against the principal loan repayment during the year as the same has not been separately accounted in the ARR by any SERC. The same practice is being followed in other utilities as well.

(q) Whatever short-term loans have been raised to meet the revenue gap has not been approved by the Commission. The Commission has not considered loans taken to bridge the revenue gap even in the past years' True up orders.

(r) In the historical absence of plant-wise accounting it is difficult to identify expenses related to a particular project and is also not fair to use assumptions/certain basis for allocation of cost at the beginning of control period. Therefore, Board has sought a waiver on the same and requested the Commission to allow the Board to file a combined petition as accurate plant-wise details are not available for the old hydel plants.

(s) The Commission has introduced MYT in the state and devised formats, which are applicable to separate aspects of the business, whereas Board is still operating as one consolidated corporation. The Board would like to highlight that no where in India MYT has been implemented for the bundled utility. It should be appreciated that in spite of such a scenario, Board has made best efforts to furnish information under segregated heads of the business.

(t) The Board had in fact initially contested before the Commission that the MYT be so framed that it is suitable for a bundled utility, while the Commission has gone ahead with MYT framework applicable to segregated units of business. Board, therefore submits that there are certain data sets that cannot be made available due to the inherent complexity and is not attributable to the efficiency of the Board. Most of the issues will also get addressed in the transfer scheme prepared at the time of unbundling of the utility.

(u) The energy quantum available to the Board for banking has been estimated on a lower side as compared to the previous years due to increase in the demand in the state. Moreover, Commission took cognizance of the banking agreement while finalizing the tariff order. However, a copy of banking agreement can be made available, if the objector so desires.

Commission's views

3.6 The Commission is in agreement with the objectors that the tariff petition has many information gaps on many aspects, which has necessitated repeated correspondences with the Board pointing out information deficiencies, which were subsequently supplied by the Board during the course of processing the petition.

3.7 Regarding the MYT principles, the Commission is committed to the principles set out in the Act, the NTP as well as the regulations framed thereunder, and would uphold the spirit of the same. The Commission is concerned at the low generation of some plants and therefore has directed the Board to draw up a plan to increase the PLF of the various plants and initiate RMU of the older plants. For the purpose of this Tariff Order, the Commission has based the generation of Board's own plants on the data of actual generation of the last five years.

3.8 The Commission has exercised prudence checks and taken into consideration the concerns expressed by the various objectors while analyzing and evaluating the data submitted by the Board. The Commission's views have been brought out in the ensuing chapters where the various issues relating to the Board have been discussed in details.

Performance and functioning of the Board

3.9 The Objectors in their submissions cited various shortcomings in the functioning of the Board as well as highlighted operational deficiencies which are as follows:

(a) The actual T&D losses claimed by the Board are higher against the trajectory given by the Commission resulting into a higher purchase cost to the extent of Rs.6 Cr, Rs.7 Cr and Rs.11 Cr respectively during the Control period. The efforts made by the Board to attain reasonable figure of T&D loss and its proposal to reduce it further in a phased manner are appreciable.

(b) The loss level monitoring format for the MYT period indicates abnormal fluctuations in the loss level monitored for FY09 and FY10. There is a high degree of variation in the losses of Shimla, Rampur, Rohru, Nahan and Kangra Circles. The loss levels in respect of Dalhousie, Mandi and Una have been reported the same. The loss level in respect of Kangra district for FY09 has been reported as 92.45 % which shows laxity in submitting these important details. The timeline for loss control be framed for high loss making Circles.

(c) The per unit employee cost has increased in the past and is showing an increasing trend as per the projections made by the Board. The cost, which was Rs.1.07 per unit in FY06, has increased to Rs.1.34 per unit in FY09, whereas the percentage of employee cost to ARR was expected to be brought to a level of 9 to 10% as per the previous Order of the Commission. The Board has relied upon the likely impact of the recommendations of 6th Pay Commission for asking increase in employee cost. But the Commission is not bound to pass on this increase considering the observation made by the Hon'ble Appellate Tribunal for Electricity (ATE) in Appeal Nos. 4, 13, 14.

(d) The Board has projected the equity power purchase at Rs.2.96 per unit against the approved cost of Rs. 2.90 per unit, Rs. 2.92 per unit and Rs. 2.95 per unit for FY09, FY10 and FY11 respectively. No reasons have been given for this escalation. The arguments given by the Board for higher return on equity is that new expansions will be partly out of equity and as per MYT regulations. However, the Commission in its Order of 2008 and 2009 has clarified that the entire funding of the investment in the past many years have been through debt only and has allowed the debt taken to finance expansion. There is no reason for allowing the return on equity as desired by the Board. The actual equity infusion, as per the audited balance sheet for FY09 should be used for allowing return on equity.

(e) The Board has estimated 5% increase in wheeling charges per annum for the MYT Control Period FY09-FY11 which resulted in an increase of 10% in a period of two years. The wheeling charges should be fixed on actual basis.

(f) There is a jump over the approved power purchase cost by 719 Cr for additional 240 MU only. The burden of higher power purchase cost be negated by improving generation of Board's stations, improving T&D losses and through demand side management. The generation cost of Board's own Plants works out to Rs.1.2, Rs.1.76 and Rs.1.67 per unit for FY09, FY10 and FY11 respectively, which is very high. There is scope to bring down this cost through R&M and controlling the cost of new projects under construction by checking cost and time overruns.

(g) The Commission has approved the power purchase cost at Rs. 1345 Cr for FY10, which has been enhanced to Rs. 1529 Cr without assigning any cogent reason. The rate of power from all the sources has been escalated by 5%, which is not justified and may be disallowed. The Board has assumed an increase of 5% in the power purchase cost for FY10 and FY11 from NHPC plants over the actual cost of power purchase for FY09. The proposed increase should be reviewed.

(h) The excess interest on Working Capital to the tune of Rs.75.00 Cr has been claimed by the Board during the control period. The Board has been meeting unapproved expenses through Working Capital and the same should not be allowed.

(i) Though the Standard of Performance Regulations are in operation, the implementation of these are an eye wash since frequency excursions, power restrictions, voltage excursions and tripping in the 132 kV system continue to be experienced.

(j) Despite the capping of A&G expenses, the projections made by the Board are on higher side which are unacceptable. No increase on this account should be passed on to the consumers.

(k) Directions be issued to the Board to complete the Capital Works in progress within the timeframe and projected cost and inefficiencies on this account are not passed on to the Consumers and the projected costs be ceiled as per benchmark and efficient costs.

(l) The amount of recoveries on account of theft of power/mal-practices has substantially come down in FY10 and FY11, meaning thereby that the emphasis on the detection of theft has been reduced. This aspect needs to be examined.

Board's response

3.10 The compilation of the replies to the above issues as filed by HPSEB is as follows:

(a) Based on the T&D loss level of 13.49% in FY08, the Commission has revised the T&D loss trajectory and according to this the Board has to achieve a T&D loss level of 12.49% by the end of control period as against 14.50% approved earlier for the control period. It is difficult to reduce the losses by more than 0.2% p.a., due to low base level of 13.41% in Himachal Pradesh. The Board has therefore, proposed a loss reduction target of 0.2% for FY10 and FY11. The Board would like to discuss this matter with the Commission and arrive at a mutually acceptable loss reduction trajectory for next control period.

(b) The Board humbly accepts the word of appreciation made by the objector towards the efforts made by the Board and the consequent improvement in T&D losses.

(c) There is an inadvertent error in the information provided in the monitoring formats regarding T&D loss level as the data has been filled by various field offices. There has been a substantial reduction in the T&D loss level in the past three years. This can be witnessed by the actual T&D loss level achieved as 13.41% by the Board during FY09. There are certain circles like Rohru, Kangra where the loss level is more than 25% and the Board has taken these circles on priority basis and will try reducing the loss level up to the accepted norms by the beginning of 2nd control period.

(d) The Employee cost per unit of energy sale has come down in the State during FY09, which signifies the fact that there has been improvement in employee's productivity. The major component of the increase in cost is on account of uncontrollable aspects like DA increase, annual increments, merger of DA with DP, increase in terminal benefits on account of retirement etc. The annual revision/increase considered by the Commission in the APR Order is not factoring these uncontrollable aspects which would be more than the Consumer Price Index.

(e) The equity power purchase rate for FY09 has been worked out on the basis of actual payment made against the equity power purchased during FY09. The equity power per unit cost for FY10 has been assumed at the similar level of per unit cost paid by the Board for FY09. For the purpose of projections for FY11, an escalation factor of 5% has been used over the FY10. The Board is planning to invest equity to the tune of Rs. 135 Crore in the existing as well as new generation and transmission schemes during FY10 and FY11. The return on equity earned during the year/ previous years can be invested to fund some of the equity portion of the capital expenditure in the subsequent years. Further, the Board has claimed the return on equity on the capitalized assets which has been funded through equity.

(f) The Board is running in losses and the return on equity cannot be denied as it will only push HPSEB into further losses. Return on Equity is permitted for generation of internal resources and must be distinguished from actual profits especially in the case of an entity, which is reporting losses in its accounts.

(g) The observed increase in the wheeling charges is on account of the refund received from GoHP for the transmission charges paid by the Board for the GoHP power. This refund is booked in the non-tariff income under the head wheeling charges recovery. Therefore, there has been a substantial increase witnessed in the non-tariff income from the FY08 onwards.

(h) The power purchase cost for FY09 includes banking cost of Rs. 497 Cr and the same amount has been considered on the sale of energy under banking to make it cashless transaction. The Board has considered the cost for banking for FY09 because of practice followed by the Board for preparation of Audited Accounts. Therefore, the net increase in the power purchase cost is Rs. 222 Cr for FY09. HPSEB has not considered any financial rates for the banking power projected for the current year and FY11.

(i) The total cost of power purchase approved by the Commission for FY10 is Rs. 1442.82 Cr (Rs. 1345.24 + Rs. 97.58 Cr), which includes Rs. 97.58 Cr for the transmission charges for PGCIL. Whereas, the Board has submitted the revised power purchase cost of Rs. 1529 Cr including Rs. 137 Cr on account of PGCIL charges for FY10. The major reasons for increase in the revised power purchase cost for FY10 are submitted to be: overestimation of energy availability from new plants in FY10, and increase in the cost of available power to meet the growing demand in the region especially in HT category. In order to maintain adequate supply to various categories of consumers, it was necessary for HPSEB to procure such high cost power.

(j) Power purchase cost for FY11 have been considered by the Board based on 5% escalation in the per unit power purchase cost for FY10 to account for normal increase in tariff as compared to increase proposed by the CGS in the range of 30% to 40% as per the revised tariff determination guidelines, in their petitions for the period FY10 to FY11.

(k) The Board acknowledges that the R&M of the old hydel plants at regular intervals will result in additional energy generation as well as the increase the running life of the plant. All possible efforts are made by the Board to increase the generation of the own hydel plants. The Board has started the major R&M work proposed for the two units of the Bassi HEP during FY10 as well as capital maintenance for both the units of Giri.

(l) The Board has computed the working capital requirement for the current and the remaining years of the control period according to the MYT Regulations but has not deducted the power purchase cost for one month. The reason for exclusion of one month power purchase cost is that the Board is actually paying the power purchase bills with in the one week of receipt of the bills. The Working capital requirement has been revised primarily due to increase in receivables projected for the control period. Efficiencies and inefficiencies on account of better / worse working capital management would be to the account of the HPSEB and the impact of the same will not be subjected to true-up in the tariff.

(m) HPSEB is integrated to the NEW GRID i.e. the entire grid of India except Southern Grid which causes the parameters of frequency and voltage to be controlled by the grid and HPSEB has virtually no control over them except some local voltage control by switching ON the capacitor banks or changing the taps of ICTs at the substations. But these changes make no major impact on the voltage profiles.

(n) The power demand in the northern grid is going up day by day, thereby resulting in wide gap in availability and demand. Scheduled load restrictions were imposed during the months of April, May and June 2009 to contain the frequency to the extent possible.

(o) When frequency dipped below 49 HZ during these three months and remained as such for few minutes, for the safety of grid, unscheduled load restrictions were resorted to by ordering the opening of breaker from the feeding substations. It is pertinent to mention that this is the last resort available with SLDC control centre.

(p) The event of low frequency can be treated under the force majeure reasons beyond the control of HPSEB and the Board is expecting that this problem would ease during FY11.

(q) The A&G charges projected by the Board also includes the amount approved by the HPERC for special initiatives in the MYT order under the separate head for the control period. The projected A&G also includes the investment made by the Board on account of free distribution of CFL bulbs in the state.

(r) All possible efforts are made by the Board to complete the existing and proposed schemes in the distribution and transmission sector. However, there have been certain delays in commissioning of generation projects considering the complexity involved in the generation projects and certain schemes in the transmission sector has been delayed due to late disbursement of funds from the lending agencies.

(s) The recoveries from theft are subject to variations, as the same are dependent on many other factors. High recoveries from theft in FY09 shows extra-ordinary efforts put by the Board to control theft, but the same cannot be considered for projecting recoveries in FY10 and FY11 as it is subject to variations. The recoveries of theft has been projected by taking past years average which are subject to true-up at the end of the control period.

Commission's views

3.11 The Commission has continued with the T&D loss trajectory approved in the First APR Order. Further, the Commission has exercised prudence checks and taken into consideration the concerns expressed by various objectors while analyzing and evaluating the data submitted by the Board. The Commission's views have been brought out in the ensuing chapters where the various issues relating to the Board have been discussed in detail.

Regulatory Issues

3.12 The Objectors made the following submissions with respect to the regulatory principles adopted for the petition as well as their requests to the Commission:

(a) The quality of power is not to the desired extent. The standards provided under 'The Distribution Licensee's Standards of Performance Regulations, 2005,' be enforced strictly for the benefit of the consumers and more specifically to the continuous process industries.

Board's response

3.13 The compilation of the replies to the above issues as filed by HPSEB is as follows:

(a) The quality and reliability of power is much better in comparison to the adjoining states. There are no/minimal outage on EHV system and sometimes load shedding is done due to technical reasons.

Commission's views

3.14 The Commission has already finalized the key indices as per the Standards of Performance Regulations for each operation circle of the Board and the quality of supply is being monitored based on the improvement trajectory as decided by the Commission.

Tariff Related Issues

General

3.15 The objectors pointed out the following general issues related to the Tariff petition filed by the Board:

(a) The proposed tariff is anti industry, is not in line with the principle of cost to serve and is going to increase the cross subsidies among the various segments of consumers.

(b) The processing fee is being charged every year for the same peak load sanctioned. The repetitive charging of fee be done away with.

(c) Presently, the tariffs and metering etc. are all based on kVA/kVAh basis, therefore, the categorization of industries for load should also be on kVA basis instead of kW basis.

(d) The level of cross subsidy should not be increased from the present level. Cross subsidy between the various classes of consumers shall be phased out in a time bound manner.

(e) Considering the marginal adjustments necessitated on account of uncontrollable parameters, the tariffs be kept within ± 20% of the average cost of supply. The Board has asked for a phenomenal increase in the tariff structures in almost all the classes of consumers without any rational. The Commission may order adjustments in the tariff to avoid tariff shocks to the different categories. The tariff should be worked out on a prudent cost to serve model basis.

(f) The ATC losses in Kala Amb area are the lowest in the State, which is possible due to the self-discipline and self-policing of the industry in the area. Incentives may be inbuilt for such belts where low line losses or theft is reported and actually recorded. Even the Act does not prohibit carving of different tariffs in different geographical areas.

Board's response

3.16 The compilation of the replies to the above issues as filed by HPSEB is as follows:

(a) The increase in the tariff has been proposed in view of the estimated cost of the Board during the control period. The average cost of supply of HPSEB will increase from Rs. 4.15 per unit in FY09 to Rs. 4.41 per unit in FY11. Considering the revenue gap on the existing tariff, the Board has proposed major increase in tariff for domestic and industrial category in the tariff proposed for FY11.

(b) The fee charges applicable for peak load exemptions are fair and reasonable as such requests from the consumers require certain costs to be incurred by the Board. These are also justified as it encourages genuine consumers whose industrial operations really necessitate such peak load exemption. These charges have been approved by the Commission.

(c) The connected load of the consumer premises is maintained by the Board in kW as per the Supply Code of HPERC based on the standard supply voltages. Further, HPERC had also specified that the connected load has no relevance with respect to the tariffs.

(d) The Board would like the Commission to examine the total costs and allow appropriate increase in tariff to ensure full recovery of approved costs The Commission to take an independent view on this matter.

(e) The increase in the tariff has been proposed in view of the estimated cost of the Board during the control period. The average cost of supply of HPSEB will increase from Rs. 4.15 per Unit in FY09 to Rs. 4.41 per Unit in FY11. Considering the revenue gap on the existing tariff, the Board has proposed major increase in tariff for domestic and industrial category in the tariff proposed for FY11.

(f) The power available from the existing sources is not sufficient to meet the requirement of the consumers in the state especially the growth in sales witnessed in the industrial consumers and therefore the Board has to depend upon short-term market purchases and GoHP power to meet the demand of the industrial consumers through out the state.

(g) The Commission has to allow full recovery of the approved ARR in the regulatory regime, the change in the rebate structure for supply of power at higher voltage level would require an increase in energy charges to maintain overall revenue neutrality. The Commission to take an independent view on this matter.

Commission's views

3.17 While determining tariffs, the Commission would consider all the suggestions in the light of provisions under section 61 of the Electricity Act 2003, the National Electricity Policy, the National Tariff Policy and the MYT principles laid down in the regulations framed by the Commission.

Domestic Consumers

3.18 The objectors pointed out the following issues related to Domestic Consumers in the tariff petition filed by the Board:

(a) The tariff for domestic category has been proposed much below the cost of supply

Board's response

3.19 The compilation of the replies to the above issues as filed by HPSEB is as follows:

(a) The Board has proposed major increase in domestic category considering the existing realization from this category, which is less than the average cost of supply.

Small and Medium Industries

3.20 The objectors pointed out the following issues related to the Small and Medium Industries in the tariff petition filed by the Board:

(a) Standard voltages be fixed on the basis of contract demand rather than on the basis of connected load.

Board's response

3.21 The compilation of the replies to the above issues filed by the Board is as follows:

(a) The contract demand in kVA can be revised twice in a year (within the sanctioned connected load) by the Consumer. This provision has been provided to facilitate the consumers of the state whereas the connected load is on basis of the Standard Voltages for supply as defined by HPERC. Further, HPERC had also specified that the connected load has no relevance with respect to the tariffs.

Large Industrial Power Supply

3.22 The objectors pointed out the following issues relating to Large Industrial Power Supply in the tariff petition filed by the Board:

(a) In the current tariff, the initial consumption is cheaper by 15 paise per unit up to 300 kVAh, which is a big relief to the consumers who run single shift. But the Board has proposed a higher tariff for initial consumption than for subsequent consumption. On the other hand, for the EHT sub-category, the Board has proposed tariffs for the same two slabs in the reverse order. There seems to be no logic in this move.

(b) The Board has proposed a steep hike of 73% and 66% in the energy charges for the LS category, which is unjustified, and violation of the principles of tariff fixation. The proposed hike is not based on any study or logic and is indeed a tariff shock.

(c) The Board has proposed to impose an additional surcharge of Re. 1 per unit on Steel Rolling, Sponge Iron, Ferro Alloys Plants etc. The Board cannot single out a particular type of industry for the surcharge

(d) The period for application of night-time tariff be extended from the present 00.00 Hrs-06.00 Hrs to 22.00 Hrs-06.00 Hrs. since this will go a long way in achieving the demand balance and flatten the load curve.

(e) Complete removal of peak load restrictions for LS category having connecting load up to 100 kW.

(f) The demand charges for power non-availability period in case of power cuts/load restrictions should be billed on proportionate/pro-rata basis.

(g) The peak load exemption charges be made applicable only for new cases or in cases where there is a change in the already sanctioned peak load exemption.

(h) High load factor incentive be granted for keeping a load factor in excess of 75%.

(i) Standard voltages be fixed on the basis of contract demand rather than on the basis of connected load.

(j) Normal load restrictions are imposed which had a deleterious effect on the plant and machinery as well as the captive plant. The reason be given by the Board why these normal load restrictions are imposed when full demand charges are being collected. The Commission to impart necessary directions to ensure that normal load restrictions, if not eliminated, be reduced to a prudent level.

Board's response

3.23 The compilation of the replies to the above issues as filed by the Board is as follows:

(a) The power available from the existing sources is not sufficient to meet the current requirement and the Board has to depend on the short term market purchases and GoHP power to meet the increased demand from industrial consumers. With the decision of the GoHP to sell its power to the Board at the market rate, the Board has proposed to recover this cost from industrial consumers, who are getting major share of power from such sources.

(b) The increase in the tariff has been proposed in view of the estimated cost of the Board during the control period. The average cost of supply of HPSEB will increase from Rs.4.15 per Unit in FY09 to Rs.4.41 per Unit in FY11. Considering the revenue gap on the existing tariff, the Board has proposed major increase in tariff for domestic and industrial category in the tariff proposed for FY11.

(c) The power available from the existing sources is not sufficient to meet the requirement of the consumers in the state especially the growth in sales witnessed in the industrial consumers and therefore the Board has to depend upon short-term market purchases and GoHP power to meet the demand of the industrial consumers through out the state.

(d) The Commission to take a decision on this. (The Board has proposed to impose an additional surcharge of Re. 1 per unit on Steel Rolling, Sponge Iron, Ferro Alloys Plants etc. The Board cannot single out a particular type of industry for the surcharge).

(e) The night time concessions are offered for effective demand side management. The provisions of night time concessions are reviewed periodically based on the power supply situation. The provisions shall be reviewed after commissioning of new plants/ capacity additions during the ensuing years and the concerns of the objector shall get addressed.

(f) Peak load violation charges are levied to act as a deterrent to ensure grid discipline as well as to maintain demand supply situation at the peak hours. Any instance of peak load hour violation cannot be ignored and as such the Board levies the penalty even in case of a single instance of peak load violation.

(g) All possible efforts are made by the Board to ensure uninterrupted power supply to its consumers and power cuts are imposed for reasons beyond its control, which can also be judged by the frequency or duration of power cuts prevalent in the neighbouring states.

(h) Any reduction in demand charges on account of non-availability of power supply would require alternate mode of recovery to ensure full recovery of the approved Annual Revenue Requirement. Under these circumstances, it may not be feasible to make any adjustment in tariff on this account. Further, the Board would like to submit that the power cuts not only affect the consumers but also the Board as it results in loss of revenue

(i) The peak load exemption charges have been approved by the Commission. The fee charges applicable for peak load exemptions are fair and reasonable; as such requests from the consumers require certain costs to be incurred by the Board. These are also justified as it encourages genuine consumers whose industrial operations really necessitate such peak load exemption.

(j) The power factor rebates and surcharge apply to consumption charges. Apart from the separate incentive proposed for maintaining higher power factor, the kVAh base demand charges automatically benefit the consumers who have a higher power factor. However, the Board has proposed this incentive considering such incentives in other states.

(k) The contract demand in kVA can be revised twice in a year (within the sanctioned connected load) by the Consumer. This provision has been provided to facilitate the consumers of the state whereas the connected load is on basis of the Standard Voltages for supply as defined by HPERC. Further, HPERC had also specified that the connected load has no relevance with respect to the tariffs.

(l) The peak load restrictions are imposed to bring discipline to the system and to flatten the load curve. There is no power available in the Grid during peak hours. The provisions of peak load restrictions are reviewed periodically based on the power supply situation. The provisions shall be reviewed after commissioning of new central generating stations (Barh, Koldam, etc) where HPSEB will get additional power and the concerns of the objector shall get addressed in the ensuing year.

Commission's views

3.24 Regarding re-categorisation on kVA basis, the Commission is of the opinion that the data currently available with the Board is insufficient to enable the Commission to correctly assess the impact of re-categorization. Further, in view of the two-part tariff put in place, connected load has no relevance with respect to tariffs.

3.25 While determining tariffs, the Commission would consider all the suggestions in the light of provisions under section 61 of the Electricity Act 2003, the National Electricity Policy, the National Tariff Policy and the MYT principles laid down in the regulations framed by the Commission.

Water and Irrigation Pumping Supply (WIPS)

3.26 The objectors pointed out the following issues relating to Water and Irrigation Pumping Supply in the tariff petition filed by the Board:

(a) In agriculture sector (for water users' associations and individual farmers) the demand charges be exempted up to 50 kW or at least the rates of demand charges be reduced to the level of FY08 i.e. Rs.50 per kVA/month. The energy charges be reduced from Rs.3.20 for the slab above 20 kW to Rs. 1.85 per kVAh (as applicable up to 20kW).

Board's response

3.27 The compilation of the replies to the above issues as filed by the Board is as follows:

(a) The Commission has implemented the existing tariff on the agriculture consumers based on the judgment of Appellate Tribunal. The Appellate Tribunal in its Order dated October 21, 2008 on Appeal no 147/07 and IA no. 153/07 has directed the Commission not to discriminate between the consumer categories – Agriculture and Allied Activities Supply (AAA) and Water Pumping Supply on the basis of ownership. Accordingly, the Commission has re-determined the tariff in its True-up Order for FY 07-08 for WPS and Agriculture and Allied Activities Supply (AAA).

(b) Further, the Board has provided the provision for revision of the contract demand twice in a year (within the sanctioned connected load) to facilitate the consumers of the state. The objector can save certain money on account of existing demand charges by revising the contract demand twice in a year.

(c) The Commission to take an independent view on the existing tariff structure and allow appropriate revision in tariff to ensure full recovery of approved costs.

Commission's views

3.28 While determining tariffs, the Commission would consider all the suggestions in the light of provisions under section 61 of the Electricity Act 2003, the National Electricity Policy, the National Tariff Policy and the MYT principles laid down in the regulations framed by the Commission.

A4: TRUE UP FOR FY09 UNDER THE MYT CONTROL PERIOD (FY09 – FY11)

4.1 The Board has submitted the actual figures for FY09 as part of its revised ARR petition for FY11.The Board has also submitted the audited accounts for FY09 along with the petition.

4.2 The Commission has reviewed the operational and financial performance of the Board for FY09 and has finalised the true up based on the MYT regulations, information submissions, necessary clarifications submitted by the licensee and views expressed by stakeholders.

4.3 As per Clause11 of the Himachal Pradesh Electricity Regulatory Commission (Terms and Conditions for Determination of Wheeling Tariff and Retail Supply Tariff) Regulations, 2007,

"The true up across various controllable and uncontrollable parameters shall be conducted as per principles stated below: -

(1) Variation in revenue / expenditure on account of uncontrollable sales and power purchase shall be trued up every year;

(2) For controllable parameters,

(a) any surplus or deficit on account of O&M expenses shall be to the account of the licensee and shall not be trued up in ARR; and

(b) at the end of the control period –

i. the Commission shall review actual capital investment vis-à-vis approved capital investment.

ii. depreciation and financing cost, which includes cost of debt including working capital (interest), cost of equity (return) shall be trued up on the basis of actual/audited information and prudence check by the Commission."

4.4 The following sections contain the detailed true-up for FY09, based on the audited annual statement of accounts.

Energy Sales & Revenue

4.5 The Board in its revised ARR petition for FY11 has submitted the actual sales for FY09 as 5461 MU as compared to 5782.16 MU approved by the Commission for FY09.

4.6 The sales projected by the Board in the ARR petition for FY09, sales approved by the Commission in the MYT Order, 2008, sales as per audited accounts of FY09, revised sales figures submitted by the Board for FY09, and trued up sales for FY09 are shown in the table below.

Table 29: Energy sales in FY09 within the state (MU)

<table>
<tr><th rowspan="2">Category</th><th colspan="5">FY09</th></tr>
<tr><th>Petition</th><th>Approved</th><th>Accounts</th><th>True-up petition</th><th>True-up</th></tr>
<tr><td>Domestic Supply</td><td>1129.96</td><td>1133.96</td><td rowspan="2">1089.12</td><td>1089</td><td>1089.12</td></tr>
<tr><td>BPL</td><td>1.93</td><td>0.47</td><td>0.60</td><td></td></tr>
<tr><td>Non Domestic Non Commercial Supply</td><td>86.63</td><td>87.77</td><td>80.59</td><td>81</td><td>80.59</td></tr>
<tr><td>Commercial Supply</td><td>266.17</td><td>269.57</td><td>274.66</td><td>275</td><td>274.66</td></tr>
<tr><td>Small & Medium Industrial Power Supply</td><td>198.97</td><td>192.99</td><td rowspan="3">3385.30</td><td>181</td><td rowspan="3">3385.30</td></tr>
<tr><td>Large Industrial Power Supply</td><td>2928.53</td><td>2641.01</td><td rowspan="2">3205</td></tr>
<tr><td>PIU</td><td>492.80</td><td>880.34</td></tr>
<tr><td>Agriculture & Allied Activities</td><td>27.94</td><td>26.61</td><td>28.74</td><td>29</td><td>28.74</td></tr>
<tr><td>Govt. Water Pumping & Irrigation Supply</td><td>363.77</td><td>356.20</td><td>389.33</td><td>389</td><td>389.33</td></tr>
<tr><td>Street Lighting Supply</td><td>12.13</td><td>13.37</td><td>13.01</td><td>13</td><td>13.01</td></tr>
<tr><td>Bulk Supply</td><td>147.44</td><td>151.00</td><td>177.05</td><td>177</td><td>177.05</td></tr>
<tr><td>Temporary Metered Supply</td><td>34.05</td><td>28.89</td><td>22.71</td><td>23</td><td>22.71</td></tr>
<tr><td>Total</td><td>5690.32</td><td>5782.16</td><td>5460.51</td><td>5461</td><td>5460.51</td></tr>
</table>

Revenue from Sale of Power

4.7 Revenue from sale of power includes revenue from sale of power within state (sale of power to own consumers) and revenue from sale of power outside state (sale of surplus power outside state). While analysing the revenue from sale of power submitted by the Board in its petition and shown in its audited accounts, the Commission observed that the Board has included revenue from sale of power through banking in the revenue from sale of power outside state. The Commission further observed that the Board has included power purchased under banking in the power purchase cost. The Commission asked the Board for clarification as banking has been considered in all previous tariff orders as cashless transaction.

4.8 The Board through its clarification dated May 18, 2010 has submitted that the banking may be treated as a cashless transaction.

4.9 Taking into consideration the above facts, the Commission has considered banking as a cashless transaction and accordingly the revenue from sale of power through banking has not been allowed in the outside state sales and the cost of purchase of power through banking has not been considered in the power purchase cost shown in the audited accounts.

4.10 Based on the audited accounts provided by the Board for FY09, the revenue generated from the sale of power within the state and outside the state is presented in the table below.

Table 30: Revenue from sale of power in FY09 (Rs Cr)

Category	FY09 Approved	FY09 Actual	FY09 True-up
Domestic & BPL	314.32	284.03	284.03
Non Domestic Non Commercial Supply (NDNCS)	38.89	42.12	42.12
Commercial Supply	132.04	137.65	137.65
Small & Medium Industrial Power Supply	75.99	78.37	78.37
Large Industrial Power Supply	1248.01*	1078.67*	1078.67*
PIUs			
Agriculture & Allied Activities	5.09	15.96	15.96
Govt. Water Pumping & Irrigation Supply	153.69	169.43	169.43
Street Lighting Supply	4.85	5.59	5.59
Bulk Supply	57.10	68.71	68.71
Temporary Metered Supply	18.51	11.01	11.01
Other (Common Pool)	0.00	5.86	5.86
Total Revenue from Sale of power within State	**2048.50**	**1897.40**	**1897.40**
Revenue from Sale of power outside State	**13.75**	**927.71**	**927.71**
Less: Revenue from sale of power through banking			**315.41**
Total Revenue from sale of power	**2062.25**	**2825.11**	**2509.71**

** This figure also includes revenue from PIU category*

4.11 The Commission approves the revenue of Rs 2509.71 Cr for FY09 arising out of the sale of power both within the state and outside the state.

Power Purchase

4.12 The Petitioner has submitted the details of power purchase from the following sources in FY09 to meet the power requirement of the state;

(a) HPSEB own generating stations

(b) Central-sector generating stations (CGS) owned by NTPC, NHPC and NPC

(c) Nathpa Jhakri, Tehri, BBMB and Baspa IPP

(d) Shared Stations (Shanan, Yamuna and Khara)

(e) Private Micros

(f) Free Power & Equity Power from GoHP

(g) Banking of power with other states

(h) Bilateral purchases from other states like Punjab, Haryana, etc.

4.13 The Board in its revised ARR petition has submitted that the total power purchase quantum (excluding power from own stations) in FY09 was 6057 MU. However as per the audited accounts for FY09 submitted by the Board, the total power purchase quantum excluding own stations is 6047.496 MU. The Commission has considered the power purchase quantum for FY09 as per the audited accounts of the Board.

4.14 The Commission approves the power purchase quantum for FY09 based on the audited accounts as shown in the table below:

Table 31: Power purchase quantum for FY09 (MU)

Particulars	FY09		
	True Up Petition	Actual	Approved True Up
BBMB			
BBMB Old	44	43.80	43.80
BBMB New	124	123.630	123.630
Dehar	79	78.840	78.840
NTPC Stations			
Anta (LNG)	1	0.00	0.00
Anta (Liquid)	14	9.610	9.610
Anta (Gas)	69	79.710	79.710
Auriya (Liquid)	5	8.670	8.670
Auriya (Gas)	100	111.020	111.020
Auriya (LNG)	2	0.00	0.00
Dadri (Liquid)	14	20.610	20.610
Dadri (Gas)	112	121.360	121.360
Dadri (LNG)	3		
Unchahar I	51	56.830	56.830
Unchahar II	94	111.140	111.140
Unchahar III	56	67.770	67.770
Rihand I	267	310.140	310.140
Rihand II	272	316.230	316.230
Singrauli		79.880	79.880
Kahalgaon	40	49.490	49.490
NHPC Stations			
Salal	30	29.730	29.730
Tanakpur	14	13.920	13.920
Chamera-1	62	62.090	62.090

Particulars	FY09		
	True Up Petition	Actual	Approved True Up
Chamera-2	50	53.750	53.750
Uri	81	81.380	81.380
Dhauliganga	39	41.390	41.390
Dulhasti	0.00	6.000	6.000
Other Stations			
Tehri-I	88	97.340	97.340
NAPP	18	20.280	20.280
RAPP	0.0	0.00	0.00
Nathpa Jhakri – State of region share	162	171.360	171.360
Shanan 1 MW	5.0	5.260	5.260
Shanan Extn	45.00	45.0	45.0
Yamuna (UJVNL)	420	419.850	419.850
Khara	68	68.200	68.200
Private Micros	271	270.842	270.842
Baspa –II	1050	1131.460	1131.460
Baspa-II (secondary energy)	81	0.00	0.00
Patikari	62	62.000	62.000
Free Power Share			
Baira Suil	134	15.030	15.030
Chamera-I		71.590	71.590
Chamera –II		47.460	47.460
Shanan Share	3	2.630	2.630
Ranjeet Sagar Dam	66	65.990	65.990
Malana	53	53.380	53.380
Baspa – II	154	154.290	154.290
Ghanvi	102	9.799	9.799
Baner		4.643	4.643
Gaj		4.689	4.689
Larji		77.993	77.993
Khauli		4.940	4.940
Nathpa Jhakri	184	184.410	184.410
Patikari	8	8.450	8.450
Equity Power – Nathpa Jhakri	372	372.470	372.470
Banking Power	0.00	724.900	724.90
Power Availability from UI	85	76.160	76.160
Unallocated share	281	0.00	0.00
Market purchase	0.0	0.0	0.0

Particulars	FY09		
	True Up Petition	Actual	Approved True Up
Grand Total	**6057**	**6047.496**	**6047.496**

4.15 The power purchase from Board's own stations as submitted by the Board was 1967 MU in FY09. The Commission approves the power purchase from Board's own generation plant (excluding the Govt. of HP share in HPSEB's projects) at 1967.005 MU as per the audited accounts submitted by the Board.

4.16 The Board has submitted power purchase cost of Rs 1962 Cr for FY09 in the revised ARR petition for FY11. As per the audited accounts for FY09 the power purchase cost is Rs 1953.76 Cr.

4.17 The Commission has analyzed the power purchase cost submitted by the Board for FY09 and observed that the Board has included the cost of power purchased through banking of Rs 495.89 Cr in the power purchase cost shown in the audited accounts as well as in the revised ARR petition for FY11. However based on the subsequent clarification given by the Board and the analysis of the banking agreements, the Commission has considered banking as a cashless transaction.

4.18 The Commission has analysed the data submitted by the Board and the audited accounts for FY09 and has observed that the payment made by the Board to M/s Jaiprakash Hydro Power Ltd. (JHPL) is Rs 389.90 Cr (net of 0.08 Cr adjusted for energy export) as per the jointly reconciled statement prepared by the Board and M/S JHPL for FY09. However the audited accounts of the Board show the power purchase cost from M/s JHPL for FY09 at Rs 411.04 Cr, whereas the Form 4a for FY09 submitted by the Board show the power purchase cost at Rs 432.08 Cr, which includes wheeling charges amounting to Rs 21.04 Cr payable to Power grid and the provision of Rs 21.14 Cr against incentive on account of secondary energy for FY08. The audited accounts of the Board also show the power purchase cost from M/s JHPL for FY09 at Rs 411.04 Cr which includes the provision of Rs 21.14 Cr against incentive on account of secondary energy for FY08 which has not been paid by the Board during FY09, as per the clarification given by the Board officials to the Commission.

4.19 The Commission therefore has approved the power purchase cost for Baspa at Rs 389.90 Cr for FY09, and has not considered provision of Rs 21.14 Cr made by the Board in its audited accounts. The Commission will consider this whenever Board makes this payment.

4.20 The Commission thus approves the power purchase cost for FY09 at Rs. 1436.73 Cr, after deducting the cost of power purchased through banking and the provision of Rs 21.14 Cr against incentive on account of secondary energy for FY08 for M/S JHPL. The approved power purchase cost includes the transmission charges paid to PGCIL also.

Table 32: Power Purchase cost FY09 (Crs)

Power Purchase cost	FY09 True Up Petition	FY09 Actual	FY09 Approved True Up
Power purchase cost	1962	1953.76	1953.76
Less: Power purchase through banking			495.89
Less: Provision against incentive on account of secondary energy for FY07-08 for M/S JHPL included in the power purchase cost of Rs 411.04 Cr from M/S JHPL as shown in audited accounts for FY09			21.14
Total Power purchase cost	**1962**	**1953.76**	**1436.73**

Energy Balance

4.21 The Commission has analyzed the energy balance of the Board based on the sales and power purchase data submitted. The Board has submitted in its petition that the overall T&D losses for FY09 are at 13.40%. However, as per the audited accounts, the overall T&D losses of the Board for FY09 are at 13.17%.

4.22 The energy balance approved for FY09, based on the data submitted by the Board and the audited accounts, is shown in the table below:

Table 33: Energy balance FY09 (MU)

Energy Balance	FY09 True Up Petition	FY09 Approved True-Up
Net own generation	1967	1967.01
Power purchase from outside station	6057	6047.50
PGCIL losses @3.62%	220	218.92
Power Availability	**7804.00**	**7795.58**
Power Sold Outside	1498	1498.21
Net Power Purchase for State	**6306.00**	**6297.37**
Energy Sale	5461	5460.51
T&D loss within state	**13.40%**	**13.29%**

4.23 The Commission has approved overall T&D losses at 13.29% for FY09 which is 0.15% less than the T&D loss reduction target of 13.14% to be achieved at the end of FY09. The Board has achieved a T&D loss reduction of 0.20% in FY09. Hence, the Board is not eligible for any incentive / penalty in the first year of the control period since the loss reduction achieved by the Board lies in the range of 0.20% -0.35%, upon which no incentive/penalty is applicable, as stated in the First Annual Performance Review (APR) Order for MYT Period (FY09-FY11) and Determination of Tariff for FY10 dated August 24, 2009 (hereinafter referred to as the 'First APR Order').

True up of Controllable Parameters

O&M expenses

4.24 The Commission, in the MYT order 2008, had clearly specified that, the O&M trajectory for the Control Period would be trued up once the audited accounts of FY08 is made available and/or the utility is unbundled and/or recommendations of the Sixth Pay Commission are implemented during the Control Period.

4.25 The Commission has already revised the O&M expenses trajectory on account of audited figures for FY08 and availability of CPI and WPI figures for FY08 in the First APR Order issued last year.

4.26 The Commission would however take into account the impact of the Sixth Pay Commission on the basis of the actual payout by the Board.

Employee Expenses

4.27 In the First APR Order, the Commission has approved the net employee expense of Rs 571.92 Cr for FY09. The Board has submitted actual net employee expenses of Rs.612.78 Cr for FY09 as per the audited accounts. This includes the Interim Relief (IR) payout by the Board which will be subsequently adjusted in the payout for Sixth Pay Commission and payment for new recruitment of Rs 8.07 Cr for which a separate provision was made by the Commission in the first APR order.

4.28 The Commission has observed that as per Clause 11 of the Himachal Pradesh Electricity Regulatory Commission (Terms and Conditions for Determination of Wheeling Tariff and Retail Supply Tariff) Regulations, 2007, employee expense is classified as a controllable expense. In the First APR Order, permissible employee expense has been provided for each year of the Control Period as per the methodology prescribed in the MYT Regulations.

4.29 The Commission thus approves net employee expenses for FY09 at Rs 571.92 Cr. as considered in the First APR Order.

4.30 The Commission in MYT Order, 2008 had approved the cost of Rs 5.40 Cr towards the provision for new recruitments by the Board for FY09.The cost under this provision was however subject to true up based on the actual expenditure incurred by the Board at the end of each year of the Control Period.

4.31 The Board has submitted to the Commission in its clarification that against new recruitments done by the Board for FY09 the cost for the new employees recruited is at Rs 8.07 Cr which forms part of the employee cost shown by the Board in the audited accounts. The Commission thus approves the expenses of Rs 8.07 Cr as provision for new recruitments.

4.32 Payment of Interim Relief (IR), after 1-4-2008, has not been considered by the Commission while approving the employee expense for FY09 as the Commission had decided to allow this as part of Sixth Pay Commission pay out only after it is finalised. The summary of the trued up employee expenses for FY09 is given in the table below:

Table 34: Employee expenses for FY09 (Rs Cr)

Particulars	Approved in the APR Order	True up Petition	Approved True-up
Employee Expenses	629.85	653.71	629.85
Less: Capitalisation	57.93	40.93	57.93
Net employee expenses	**571.92**	**612.78**	**571.92**
Provision for New Recruitment	**5.40**		**8.07**

Administrative & General (A&G) Expenses

4.33 In the First APR Order, the Commission has approved net A&G expenses of Rs 29.26 Cr for FY09. The Board has submitted actual net A&G expenses of Rs 49.34 Cr for FY09 as per the audited accounts. The A&G expense submitted by the Board also includes expenditure of Rs 14 Cr incurred on providing cost free CFL bulb to domestic consumers. The Commission has considered the expense on providing cost-free CFL bulbs separately from the A&G cost claimed by the Board.

4.34 As per Clause11 of the Himachal Pradesh Electricity Regulatory Commission (Terms and Conditions for Determination of Wheeling Tariff and Retail Supply Tariff) Regulations, 2007, A&G expense is a controllable parameter and any surplus or deficit on account of actual A&G expense compared to as approved in the First APR Order for the Control Period shall be to the account of the Petitioner and shall not be trued up.

4.35 Accordingly, the A&G expenses are approved at the same level as provided in the First APR Order as shown below:

Table 35: A&G expenses for FY09 (Rs Cr)

Particulars	Approved in the APR Order	True up Petition	Approved True-up
A&G expenses	37.23	52.46	37.23
Less: Capitalisation	7.97	3.12	7.97
Net A&G expenses	**29.26**	**49.34**	**29.26**

Repair & Maintenance (R&M) Expenses

4.36 The Commission has approved net R&M expenses of Rs 33.09 Cr in the First APR Order. The Board has submitted Rs 27.81 Cr as net R&M expenses for FY09 as per the audited accounts.

4.37 The Commission approves R&M expense for FY09 at Rs 33.09 Cr as considered in the First APR Order, since R&M expense is a component of O&M cost which is deemed to be a controllable parameter and hence is not subject to true-up as per Clause 11 of the Himachal Pradesh Electricity Regulatory Commission (Terms and Conditions for Determination of Wheeling Tariff and Retail Supply Tariff) Regulations, 2007.

Table 36: R&M expenses for FY09 (Rs Cr)

Particulars	Approved in the APR Order	True up Petition	Approved True-up
R&M Expenses	**33.09**	**27.81**	**33.09**

Review of Capital Investment & Capitalization

4.38 According to Clause 11 of the Himachal Pradesh Electricity Regulatory Commission (Terms and Conditions for Determination of Wheeling Tariff and Retail Supply Tariff) Regulations, 2007:

(b) at the end of the control period –

iii. the Commission shall review actual capital investment vis-à-vis approved capital investment.

iv. depreciation and financing cost, which includes cost of debt including working capital (interest), cost of equity (return) shall be trued up on the basis of actual/audited information and prudence check by the Commission.

4.39 The Commission has reviewed the capital investment claimed by the Board against the approved capital investment for FY09 as per MYT order, 2008 and has observed that the Board has met only 19.85% of the approved capital expenditure.

Table 37: Review of Capital Investment Plan for FY09 (Rs Cr)

Particulars	Approved in the MYT Order	Actual expenditure incurred by Board	% expenditure
Generation	119.60	29.25	24.46
Transmission	248.00	31.13	12.55
Distribution	359.03	83.85	23.35
Total	**726.63**	**144.24**	**19.85**

4.40 The Commission emphasizes that as per Himachal Pradesh Electricity Regulatory Commission (Terms and Conditions for Determination of Wheeling Tariff and Retail Supply Tariff) Regulations, 2007, any shortfall in actual capital expenditure with respect to the figures considered in the MYT Order shall be considered at the end of the MYT Control Period. Necessary adjustment to various parameters relating to capital expenditure at the end of the Control Period will be done with the carrying cost.

Depreciation

4.41 In the First APR Order, the Commission had approved depreciation of Rs 95.97 Cr for FY09.The Board has submitted claim for depreciation of Rs 96.91 Cr in its Petition.

4.42 The Commission approves depreciation for FY09 at Rs 95.97 Cr in accordance with the principle of Himachal Pradesh Electricity Regulatory Commission (Terms and Conditions for Determination of Wheeling Tariff and Retail Supply Tariff) Regulations, 2007, under which the depreciation has been provided as per the approved capex and the capitalization schedule for the control period, and it will be subject to true up at the end of the control period.

Table 38: Depreciation for FY09 (Rs Cr)

Particular	Approved in the APR Order	True up Petition	Approved True-up
Depreciation	**95.97**	**96.91**	**95.97**

Interest & Financing Charges

4.43 The Commission had approved the interest & financing charges of Rs 177.46 Cr for FY09 in the First APR Order. The Board has submitted interest & financing charges of Rs 247.64 Cr as per audited accounts.

4.44 As per MYT regulations the capex provided to the Board at the start of the control period shall be reviewed at the end of the control period and accordingly the interest & financing charges on the funds required for capital investment shall also be trued up at the end of the control period.

4.45 The Commission has now approved the interest on working capital expenses as per the approved ARR (true up) for FY09 at Rs 24.73 Cr as against Rs 22.60 Cr approved in the First APR Order.

4.46 The Commission has approved the interest and financing charges for FY09 at Rs 162.16 Cr.

4.47 The Board has submitted total interest capitalization of Rs 75.39 Cr for FY09. The Commission has approved the interest capitalization of Rs 17.43 Cr for FY09 as per the First APR Order.

4.48 The approved interest & finance Charges for FY09 is shown in the table below:

Table 39: Interest & Financing expenses for FY09 (Rs Cr)

Particulars	Approved in the APR Order	True up Petition	Approved True-up
Interest & Financing charges	177.46	247.64	179.59
Less: Interest expenses capitalized	17.43	75.39	17.43
Total	**160.03**	**195.71**	**162.16**

Return on Equity

4.49 The Commission had approved return on equity of Rs 43.82 Cr for FY09 in the First APR Order. The Board has submitted return on equity of Rs 53.97 Cr for FY09.

4.50 As per Clause 11 of the Himachal Pradesh Electricity Regulatory Commission (Terms and Conditions for Determination of Wheeling Tariff and Retail Supply Tariff) Regulations, 2007 return on equity shall be subject to true up at the end of the control period on the basis of actual/audited information and prudence check by the Commission.

4.51 Accordingly, the Commission approves the return on equity for FY09 at Rs 43.82 Cr as approved in the First APR Order.

Table 40: Reasonable return for FY09 (Rs in Cr)

Particulars	Approved in the APR Order	True up Petition	Approved True-up
Return on equity	**43.82**	**53.97**	**43.82**

Other Debits & Extra Ordinary Items

4.52 The Board has shown "Other Debits" of Rs 0.43 Cr and "Extra Ordinary Items" of Rs 1.12 Cr as per audited accounts for FY09. The Commission approves expenses towards "Other Debits" as Rs 0.43 Cr and "Extra Ordinary Items" as Rs 1.12 Cr for FY09.

Non Tariff Income

4.53 As per Clause 25 and sub clause (2) of the Himachal Pradesh Electricity Regulatory Commission (Terms and Conditions for Determination of Wheeling Tariff and Retail Supply Tariff) Regulations, 2007,

'The amount received by the licensee on account of non-tariff income shall be deducted from the aggregate revenue requirement in calculating the net revenue requirement of such licensee."

4.54 The above clause indicates NTI, being an integral part of the revenue requirement, shall be trued up at the end of each year of the Control Period.

4.55 In the First APR Order, the Commission had approved non tariff income of Rs 124.59 Cr for FY09. The Board has submitted NTI of Rs 113.81 Cr in which Board has not considered the rebate earned on timely payment of power purchase bills under miscellaneous receipts and the delayed payment charges from the consumer.

4.56 The Commission has analysed the NTI and considers that LPSC and rebate earned on power purchase bills should be considered as part of NTI since Board has been provided working capital requirement separately and accordingly approves non tariff income for FY09 at Rs 140.92 Cr as per the audited accounts of the Board.

Prior Period Adjustment

4.57 The Commission during the analysis of the audited accounts observed that an amount of Rs. 19.31 Cr has been charged to the revenue account as Prior Period expenses in the audited accounts of FY09. The Commission approves the prior period expenditure, adjustment of Rs 19.31 Cr as per the details in the audited accounts of the Board.

Provision for IT and other initiatives

4.58 The Commission in MYT Order, 2008 had approved the cost of Rs 18.16 Cr towards the provision for IT and other initiatives undertaken by the Board for FY09. The cost under this provision was however subject to true up based on the actual expenditure incurred by the Board at the end of each year of the Control Period.

4.59 Since the Board has not submitted actual expenditure incurred on the provision for IT and other initiatives undertaken during FY09, the Commission has thus approved NIL cost towards the provision for FY09.

Baspa Arrears

4.60 The Commission in the First APR Order had provided Rs 49.02 Cr towards payment of arrear to M/s Jaiparkash Hydro Power Ltd. on account of revision in tariff for Baspa II HEP in accordance with the MYT tariff order dated March 30, 2009.

4.61 The Board has submitted in its clarification dated May 18, 2010 that in FY09, Rs 32.12 Cr have been paid as arrears for Baspa II HEP, which is included in the power purchase cost of Rs 389.90 Cr paid to M/S JHPL.

4.62 The Commission has approved the power purchase cost for Baspa at Rs 389.90 Cr for FY09, which includes the payment of arrears of Rs 32.12 Cr, and is included in the overall power purchase cost of the Board approved for FY09.

4.63 The Commission directs the Board to maintain/furnish separate information with respect to Baspa Arrears in its subsequent filing of the tariff petitions.

Expenditure on CFL

4.64 The Board has submitted in its petition as well as audited accounts an expenditure of Rs 14 Cr as a part of A&G cost for providing cost-free CFL bulbs to domestic consumers. The Board also submitted in the public hearing on May 17, 2010, that implementation of the CFL scheme has resulted in direct saving of energy consumption of 121 MU in the domestic consumer category.

4.65 The Commission acknowledges the contribution of CFL bulbs as an energy conservation initiative in reducing the growth of energy consumption for the domestic consumer categories. It is observed that the growth rate of domestic sales in FY10 over FY09 sales is 0.95%, which is much lower compared to the growth rate of 3.61% of FY09 sales over sales in FY08.

4.66 The Commission has further analyzed that the Board will not be able earn any carbon credits by implementing this scheme which could have offset the cost of implementing this scheme, since the scheme has been initiated at the instance of the GoHP. Accordingly, the Commission approves the expense of Rs 14 Cr on providing cost free CFL bulbs.

Aggregate Revenue Requirement

4.67 The Commission herewith approves the Annual Revenue Requirement (ARR) after incorporating the above changes at Rs 2221.31 Cr for FY09.

Table 41: Aggregate Revenue Requirement for FY09 (Rs Cr)

Particulars	FY09		
	Approved in **the** APR Order	True Up Petition	Approved True-up
Power Purchase Expenses (includes PGCIL charges)	1194.07	1962.09	1436.73
Baspa Arrears	49.02	32.12*	32.12*
Operations & Maintenance Expenses	700.17	733.97	700.17
Employee Expenses	*629.85*	*653.71*	*629.85*
R&M Expenses	*33.09*	*27.81*	*33.09*
A&G Expenses	*37.23*	*52.46*	*37.23*
Provision for new recruitments	5.40	-**	8.07
Provision for IT & Other initiatives	18.16	-	-
Expenditure on CFL	-	-***	14.00
Depreciation	95.97	96.91	95.97
Interest Expense	177.46	247.64	179.59
Other Debits	-	-	0.43
Extra Ordinary Items	-	-	1.12
Prior Period Income/ (Adjustments)	-	-	19.31
Net True Up as per True up Order dated August 11, 2009	(53.64)	-	(53.64)
Return on equity	43.82	53.97	43.82
Less: Non Tariff Income	124.59	113.81	140.92
Less: Interest & Expenses Capitalisation	83.34	119.44	83.34
Aggregate Revenue Requirement	**2022.51**	**2884.81**	**2221.31**

* Baspa arrears included in the Power Purchase Expenses

** Provision for new recruitments included in employee expenses

*** A&G expenses include expenditure on CFL

Revenue Surplus/ (Gap)

4.68 The approved revenue surplus for FY09 after the true up is Rs 288.42 Cr as shown in the table below:

Table 42: Revenue Surplus/ (Gap) for FY09 (Rs Cr)

Particulars	FY09		
	Approved	**True Up Petition**	**Approved True-up**
Aggregate Revenue Requirement	2022.51	2884.81	2221.31
Total Revenue from sale of power	2062.25	2825.11	2509.71
GoHP subsidy	-	0.02	0.02
Surplus/(Gap)	**39.74**	**(59.68)**	**288.42**

A5: ANALYSIS OF THE REVISED AGGREGATE REVENUE REQUIREMENT (ARR) OF HPSEB FOR FY10 AND FY11

Introduction

5.1 The Commission has analyzed the revised Aggregate Revenue Requirement (ARR) petition for FY10 and FY11 submitted by the Petitioner (HPSEB) for approval of revised Aggregate Revenue Requirement (ARR) of HPSEB and determination of Wheeling and Retail Supply Tariffs for FY11.

5.2 The Commission held several rounds of technical discussions to validate the data submitted by the Petitioner and sought further clarifications on various issues. For the purpose of determination of tariff, the Commission has considered all information submitted by the Petitioner as part of the review petition, audited accounts for past years and the Petitioner's responses to various queries raised during the Technical Validation session, discussions as well as during the public hearing.

5.3 This section contains detailed analysis of the revised MYT petition and various parameters approved by the Commission for determination of ARR for the Board.

Aggregate Revenue Requirement (ARR) of HPSEB as per the first Annual Performance Review Order

5.4 The Commission had approved the Aggregate Revenue Requirement for the Board for the Control Period (FY09 to FY11) under its MYT Order. However, due to certain discrepancies observed in the T&D loss figures submitted by the Board for FY08, the Commission in the First APR Order revised the T&D loss trajectory for the Control Period based on the actual T&D loss in the base year FY08.

5.5 Consequent to the revision of the T&D loss trajectory for the Control Period, the Commission also revised the energy balance, quantum of power purchase and the corresponding power purchase cost due to quantum in the First APR Order. Since there were significant changes in the base year (FY08) projections made by the Commission in its MYT Order and the values approved by the Commission in the True Up Order for FY08, the Commission also reviewed the trajectory for the following uncontrollable and controllable components in its First APR Order:

(a) Power purchase expenses;

(b) Operation and maintenance expenses;

(c) Interest and finance charges;

(d) Depreciation; and

(e) Non tariff income.

5.6 The revised ARR for the Control Period as approved by the Commission in the First APR Order for FY10 is summarized in the table below:

Table 43: Approved ARR for the Control Period (Rs Cr)

Particulars	FY09	FY10	FY11
Power Purchase Expenses	1112.77	1345.24	1692.02
PGCIL Charges	81.30	97.58	117.78
Baspa Arrears	49.02		
Operation & Maintenance Costs	700.17	739.01	783.06
Provision for New Recruitments	5.40	7.97	7.97
Provision for IT & Other Initiatives	18.16	23.30	1.28
Provision for AMR	-	6.91	-
Interest & Financing Charges	177.46	168.90	173.39
Depreciation	95.97	113.85	129.53
Return on Equity	43.82	43.82	43.82
Less: Interest & Expenses Capitalisation	83.34	75.02	61.56
Less: Non Tariff Income	124.59	130.61	136.93
Net True Up as per True up Order dated August 11, 2009	(53.64)		
Aggregate Revenue Requirement	**2022.51**	**2340.94**	**2750.35**

5.7 The Commission also revised the segregated ARR for Generation, Transmission and Distribution functions of the Board. Since the Board is a bundled entity, its accounts are maintained for the Board as a whole and separate accounts for the three functions, viz. Generation, Transmission and Distribution, are not maintained. Hence, the segregation of assets, liabilities, cost and revenues to the three functions is heavily dependent on the availability of right data and prudent judgment. The segregation of assets, liabilities, cost and revenues to the three functions will only be possible once the Board puts in place separate accounting system for the three functions or is unbundled into three separate entities.

5.8 The segregated ARR for Generation, Transmission and Distribution as revised by the Commission in the First APR is shown below:

5.9 The revised approved ARR for the Generation business for the Control Period as per the First APR Order is summarized in the table below:

Table 44: Total Generation ARR/AFC

Particulars	Units	Control Period		
		FY09	FY10	FY11
Gross Generation	MU	1780.82	1962.11	1962.11
Total Auxiliary	MU	18.71	20.19	20.19
Net Generation at Bus	MU	1762.12	1941.92	1941.92

Particulars	Units	Control Period		
		FY09	FY10	FY11
Less: Free Power to GoHP	MU	89.97	89.97	89.97
Energy available for Sale	**MU**	**1672.15**	**1851.95**	**1851.95**
O&M Expenses	Rs Cr	60.03	63.59	66.37
- Employee Expenses	*Rs Cr*	*46.15*	*48.87*	*51.00*
- R&M Expenses	*Rs Cr*	*5.97*	*6.34*	*6.64*
- A &G Expenses	*Rs Cr*	*7.91*	*8.37*	*8.73*
Depreciation	Rs Cr	40.75	42.01	43.26
Interest Charges	Rs Cr	82.93	75.39	67.40
Return on Equity	Rs Cr	15.16	15.16	15.16
Interest on Notional Loan	Rs Cr	0.00	0.00	0.00
Interest on Working Capital	Rs Cr	6.35	6.31	6.27
Less: Expense Capitalization	Rs Cr	9.73	0.80	2.97
Annual Fixed Charge	**Rs Cr**	**195.49**	**201.66**	**195.49**
Sale Rate of Energy	P/kWh	117	109	106

5.10 The revised segregated ARR for the Transmission business approved by the Commission for the Control Period is given in the table below:

Table 45: ARR of Transmission business for the Control Period (Rs Cr)

Particulars	FY09	FY10	FY11
Operation & Maintenance Costs	67.89	71.61	74.73
Interest & Financing Charges	21.25	26.10	37.82
Depreciation	21.44	25.89	31.16
Return on Equity	11.07	11.07	11.07
Less: Interest & Expenses Capitalised	10.43	9.23	6.56
Aggregate Revenue Requirement	111.23	125.42	148.21

5.11 Based on the ARR approved for transmission function, the Commission revised the transmission charges for the Control Period as per the methodology specified in the MYT Regulations, 2007. The summary of the approved transmission charges for the Control Period is shown below:

Table 46: Approved Transmission Charges for the Control Period

Particulars	FY09	FY10	FY11
Transmission ARR (Rs Cr)	111.23	125.42	148.21
Capacity (MW)[1]	2043.21	2410.50	2616.24

[1] Contracted Capacity which includes total of own generation, PPAs and share in various projects.

Particulars	FY09	FY10	FY11
Transmission Charges (Rs/MW/Month)	45365.71	43358.92	47208.33

5.12 The revised segregated ARR for the Distribution business approved by the Commission for the Control Period is shown below:

Table 47: ARR of Distribution business for the Control Period (Rs Cr)

Particulars	FY09	FY10	FY11
Power Purchase Expenses	1308.27	1546.90	1887.52
Transmission Charges	192.53	223.00	265.99
Baspa Arrears	49.02	0	0
Operation & Maintenance Costs	572.24	603.81	641.97
- Employee Expenses	*530.80*	*557.76*	*589.01*
- R&M Expenses	*15.95*	*20.28*	*25.76*
- A &G Expenses	*25.50*	*25.77*	*27.20*
Provision for New Recruitments	5.40	7.97	7.97
Provision for IT & Other Initiatives	18.16	23.30	1.28
Provision for AMR		6.91	
Interest & Financing Charges	66.93	61.10	61.90
Depreciation	33.78	45.96	55.11
Return on equity	17.59	17.59	17.59
Less: Non Tariff Income	124.59	130.61	136.93
Less: Capitalisation of Interest & Expenses	63.18	64.99	52.04
Net True Up as per True up Order dated August 11, 2009	(53.64)		
Aggregate Revenue Requirement	2022.51	2340.94	2750.35

5.13 As per the MYT Regulations, 2007, the total Distribution ARR for the Control Period has to be allocated between Wheeling and Retail Supply business. The wheeling charges would be calculated on the Wheeling ARR and the Retail Tariffs would be calculated on the Retail Supply ARR.

5.14 The Commission in the First APR allocated the Distribution ARR into Wheeling and Retail Supply business by considering the following allocation:

Table 48: Allocation of ARR of Distribution business for the Control Period

Particulars	Wheeling	Retail Supply
Power Purchase Expenses	0%	100%
Transmission Charges	0%	100%
Baspa Arrears	0%	100%
Employee Expenses	70%	30%
R&M Expenses	90%	10%

Particulars	Wheeling	Retail Supply
A&G Expenses	60%	40%
Provision for New Recruitments	100%	0%
Provision for IT & Other Initiatives	0%	100%
Interest & Financing Charges (other than interest on working capital)	100%	0%
Depreciation	100%	0%
Return on Equity on Wheeling Business	100%	0%
Supply Margin	0%	100%
Non Tariff Income (excluding wheeling charges received from other states)	0%	100%
Wheeling charges received from other states	100%	0%

5.15 Using the above allocation, the Commission approved the Wheeling and Retail Supply ARR for the Control Period as shown below:

Table 49: ARR of Wheeling business for the Control Period (Rs Cr)

Particulars	FY09	FY10	FY11
Operation & Maintenance Costs	401.21	424.15	451.81
Provision for New Recruitments	5.40	7.97	7.97
Interest & Financing Charges	66.72	60.63	59.89
Depreciation	33.78	45.96	55.11
Return on Equity	15.39	15.39	15.39
Less: Non Tariff Income	39.43	41.40	43.47
Less: Capitalisation of Interest & Expenses	48.07	48.90	36.15
Aggregate Revenue Requirement	435.01	463.80	510.55

Table 50: Approved ARR of Retail Supply business for the Control Period (Rs Cr)

Particulars	FY09	FY10	FY11
Power Purchase Expenses	1308.27	1546.90	1887.52
Transmission Charges	192.53	223.00	265.99
Baspa Arrears	49.02	0	0
Operation & Maintenance Costs	171.03	179.67	190.16
Provision for IT & Other Initiatives	18.16	23.30	1.28
Provision for AMR	-	6.91	-
Interest & Financing Charges	0.20	0.47	2.02
Supply Margin	2.20	2.20	2.20
Less: Non Tariff Income	85.16	89.21	93.47
Less: Capitalisation of Interest & Expenses	15.11	16.08	15.89
Net True Up as per True up Order dated August 11, 2009	(53.64)		

Particulars	FY09	FY10	FY11
Aggregate Revenue Requirement	1587.50	1877.15	2239.81

Table 51 Approved Wheeling Charges for the Control Period

Particulars	FY09	FY10	FY11
Wheeling ARR (Rs. Cr)	435.01	463.80	510.55
Energy Sales (MU)	5782.16	6501.48	7156.58
Wheeling Charges (Paise/unit)	**75.00**	**71.00**	**71.00**

Approach of the Second Annual Performance Review for FY11

5.16 Clause 43(1) and 43(4) of the Himachal Pradesh Electricity Regulatory Commission (Terms and Conditions for Determination of Wheeling Tariff and Retail Supply Tariff) Regulations, 2007 state that:

"To ensure smooth implementation of the multi year tariff (MYT) framework, the Commission may undertake periodic reviews of licensees' performance during the control period, to address any practical issues, concerns or unexpected outcomes that may arise."

"The Commission may also lay down any modifications to the forecast of the distribution licensee for the remainder of the control period, with detailed reasons for the same."

5.17 In accordance with these guiding principles governing the MYT framework in the State, the Board has submitted its petition for revised ARR determination for FY10 and FY11 under the MYT framework.

5.18 The Commission in its MYT Order, 2008 and the subsequent First APR Order has fixed the targets for controllable parameters. Any loss due to under performance of the licensee on these controllable parameters would be to its own account. However, any variation on account of factors deemed uncontrollable such as power purchase cost and energy sales is treated as a pass-through expense after due deliberation by the Commission.

5.19 In light of the above, the Commission has considered the revision of ARR for uncontrollable parameters for FY10 and FY11, while other components of costs are considered as per the revised figures approved in the First APR Order.

Sales Forecast

5.20 For projecting the energy sales of the Board for FY10 and FY11, the Commission has used the actual trend of past sales of the Board. The Commission has made use of the statistical tool of Compounded Annual Growth Rate (CAGR) which gives the smooth annualized growth rate of a parameter like energy sales in order to capture fluctuations in the value of that parameter over a period of time. Accordingly, the CAGR was calculated for each consumer category, corresponding to different lengths of time. Depending on the specific characteristics of each category, a particular CAGR has been chosen as the basis of sales projection for that category.

5.21 The Board has projected energy sales for the Domestic, Commercial Supply and Non Domestic Non Commercial Supply (NDNCS), Small & Medium Industrial Power Supply (SMS), Large Industrial Power Supply, Water and Irrigation Pumping Supply (WIPS), Street Lighting, Bulk Supply and Temporary Supply categories by applying the respective CAGR over the estimated sales for FY10, as detailed in the subsequent sections.

5.22 The Board has estimated its energy sales within the state during FY10 at 5,676.33 MU and projected energy sales of 6,082.48 MU for FY11.

5.23 During the Technical Validation session held with the Board officials, the Commission discussed the trends in growth in sales over the years. For checking the rationale behind sales estimation and to get in-depth information on sales, the Commission directed the Board to submit category-wise actual sales for each month of FY09 and FY10 (February), which was complied with by the Board.

5.24 The Commission also asked the Board to provide the details of applications pending for new connections to enable the Commission to examine and assess the growth in sales to each consumer category, which were complied with by the Board.

5.25 The Commission has undertaken a detailed analysis of the sales projected by the Board. The Commission has analyzed the year-on-year variations in sales as well as the short term and long term trends in sales and has computed the CAGR for different lengths of time (2 years, 3 years, 4 years, 5 years, 6 years, 8 years and 10 years). The Commission has approved the total sales of 5,676.33 MU for FY10 and 6,082.48 MU for FY11, which shows a growth rate of 4% and 7% respectively as compared to the previous year.

5.26 For estimating the annual sales of FY10, the Commission has taken into account actual sales till February 2010 and has estimated the energy sold in the last month of FY10, i.e. March 2010, to be the same proportion of sales during the first eleven months of FY10, as the actual sales in the last month of FY09 (i.e. March 2009) were in proportion of sales during the first eleven months of FY09.

5.27 The Commission has approved the sales to each category of consumers as detailed below:

Domestic Supply

(a) The trend analysis of sales to this category shows that the year-on-year variation in sales ranges widely between 0.95% and 10.84%. The actual growth rate of sales in FY09 over FY08 sales was 3.61%. The 2-year CAGR for the category comes out to be 2.27% while the 10-year CAGR is 6.35%. The number of domestic consumers in FY09 increased by 25,142 as compared to FY08.

(b) Considering all this, the Commission has projected domestic sales in FY11 to show an increase of 5.06% over sales of FY10, which is in line with the 3-year CAGR of sales to this category. While projecting sales for FY11, the Commission has considered the estimated sales for FY10 as the base figure.

(c) This demand projection detailed above includes the demand projection for the Antodaya/BPL category too. The Board has estimated sales of 0.94 MU to this category in FY11. For its demand projection, the Commission has estimated sales to this category in FY11 to be the same proportion as the ratio of actual sales to BPL category to total domestic sales in FY10.

(d) On this basis, the Commission has projected total sales of 1155.10 MU to the domestic category in FY11, including sales of 0.59 MU to the Antodaya/BPL category.

NDNCS and Commercial Supply

(a) The NDNCS category was created in the Tariff Order for FY 2001-02. In the absence of segregated data of sales to this category prior to FY 2001-02, the Commission has assessed the trend in sales for the NDNCS and Commercial category together.

(b) An analysis of the trend in sales to the NDNCS and Commercial categories together shows that the year-on-year variation in sales ranges between 13.32% and 0.18%. The long term (10 years) CAGR for sales is 9.10% while the short term (2 years) CAGR is 4.97%. The actual growth rate of sales in the estimated sales of FY10 over FY09 is observed to be 0.18%.

(c) Taking into account the recent recessionary scenario of the economy which is gradually improving, the Commission has decided that using an extremely short-term basis for projection would not be justified. Hence, sales to this category are projected to increase at 8.20% over FY10 sales, which is the 6-year CAGR for sales to the NDNCS and Commercial Supply categories considered together.

(d) Therefore, the Commission has projected sales of 385.09 MU to this category in FY11.

Small & Medium Industrial Power Supply

(a) An assessment of the growth in sales to this category indicates large variations in growth on a year-to-year basis with variation in sales ranging from -36.47% to 13.64%.

(b) The trend in the data is more consistent from FY 02 onwards as it shows continuous increase in consumption except for FY 06 and again during FY10. The Board has projected an increase of 624 consumers in this category for FY11, and an increase in sales at the rate of 7% over estimated sales of FY10.

(c) After detailed analysis of the trend in sales, pending applications for new connections and the economic outlook of the State, for FY11 the Commission has projected an increase in sales to this category at 5.10% which is the 6-year CAGR for this category, over the estimated sales of FY10.

Large Industrial Power Supply (LS)

(a) The Large Industrial Power Supply (LS) category includes the Power Intensive Units (PIU) category that was carved out of the LS category in the Tariff Order for FY07, but was again abolished and merged with the LS category in the First APR Order. An assessment of the growth in sales to this category indicates large variations in growth on a year-to-year basis with variation in sales ranging from 0.90% to 35.93%. The long term (10 years) CAGR for sales is 14.28% while the short term (2 years) CAGR is 7.56%. The actual growth rate in sales in the estimated sales in FY10 over FY09 is observed to be 5.67%.

(b) After detailed analysis of the trend in sales and the economic outlook of the State for the forthcoming year, the Commission has projected an increase in sales to this category in FY11 at 7.56% which is the 2-year CAGR for this category and the lowest of the CAGRs corresponding to different time periods calculated for this category. This is because the Commission is of the opinion that growth in this category would slow down since the incentive offered by the Central Government for setting up industrial units in Himachal Pradesh would end partly in FY10 and completely by 2012-13. Thus, for FY11 the Commission has considered the growth in industrial demand at 7.56% over estimated sales in FY10.

Water and Irrigation Pumping Supply (WIPS)

(a) An analysis of the trend in sales to this category during the last 10 years shows that the year on year variation in sales ranges from -2.88% to 16.23%. The long term (10 years) CAGR for sales is 7.63% while the short term (2 years) CAGR is 7.03%.

(b) Considering the past trend in sales to the two sub-categories that comprise this WIPS category, viz. Water Pumping Supply and Agricultural & Allied Activities Supply, the Commission has projected increase in sales to the Water Pumping category at the 2-year CAGR of 5.71% and to the Agricultural Pumping category at the 5-year CAGR of 7.74%. The sum of projected energy sales to these two sub-categories is taken to the demand projection for the consolidated Water Pumping and Irrigation Supply category for FY11.

Street Lighting Supply

(a) An analysis of the trend in sales to this category shows that the year on year variation in sales ranges from -4.88% to 14.29%. The long term (10 years) CAGR for sales is 4.46% while the short term (2 years) CAGR is -0.93%.

(b) For FY11, the Commission has projected increase in sales to this category at 1.33% which is in line with the 4-year CAGR for this category.

Bulk Supply

(a) The year-on-year variation in sales to this category ranges from -15.44% to 35.92%. The long term (10 years) CAGR for sales is 5.60% while the short term (2 years) CAGR is as high as 17.86%. The actual growth in sales of FY10 over FY09 is also observed to be high at 14.9%.

(b) Considering the recent trends in energy demand by this category for FY11, the Commission has projected increase in sales to this category at 15.63% which is in line with the 5-year CAGR for sales to this category.

Temporary Supply

(a) The Commission has approved the sales to this category in FY11 to be the same as the estimated sales for FY10 i.e. 27.27 MU.

5.28 After detailed scrutiny of the consumer category wise sales, the Commission estimates the following sales to the retail consumers in the state of Himachal Pradesh:

Table 52: Approved sales for Control period (MU)

Category	FY10		FY11	
	Petition	**Revised**	**Petition**	**Approved**
BPL	0.57	0.56	0.94	0.59
Domestic Supply	1090	1098.96	1174	1154.51
Non Domestic Non Commercial	84	72.79	92	78.76
Commercial Supply	298	283.11	312	306.32
Small & Medium Industrial Power	181	171.23	193	179.97
Large Industrial Power Supply	3461	3,386.12	3876	3642.06
Water Pumping and Irrigation Supply	457	420.40	501	445.13
Street Lighting Supply	12	12.38	12	12.54
Bulk Supply	206	203.51	213	235.31
Temporary Supply	26	27.27	30	27.27
Total	**5,816**	**5,676.33**	**6,404**	**6,082.48**

T&D Losses

5.29 For the Control Period, the Commission has considered the revised T&D loss reduction trajectory approved in the First APR Order. The revised T&D loss trajectory specifies a loss reduction target of 0.35%, 0.35% and 0.30% in FY09, FY10 and FY11 respectively in order to ensure that the Board reaches a T&D loss level of 12.49% by the end of the Control Period. The revised T&D loss trajectory that is now being followed by the Commission is shown below:

Table 53: Approved T&D losses for the Control Period

Losses (%)	FY09 **Approved**	FY10 **Approved**	FY11 **Approved**
Opening T&D Loss (%)	13.49%	13.14%	12.79%
T&D Loss Reduction (%)	0.35%	0.35%	0.30%
T&D Losses for the year (%)	**13.14%**	**12.79%**	**12.49%**
Transmission Losses (%)	3.71%	3.71%	3.71%
Distribution Losses (%)	9.79%	9.43%	9.12%

5.30 Hence, for projecting the T&D loss for FY10 and FY11, the Commission has considered the T&D loss targets set for the Board, viz. 12.79% for FY10 and 12.49% for FY11.

5.31 For the purpose of calculating the incentive/penalty on account of over/under achievement of T&D loss reduction target, the Commission would consider the following:

(a) **First year of the Control Period**: The Petitioner shall be eligible for an incentive if the T&D loss reduction in the first year of the Control Period is above 0.35%. Any under recovery in the revenue realized, if the T&D loss reduction in the first year of the Control Period is below 0.20%, shall be to the account of the Petitioner. The Petitioner shall not be eligible for any incentive or penalty if the T&D loss reduction in the first year of the Control Period is between 0.20% and 0.35%.

(b) **Second year of the Control Period**: The Petitioner shall be eligible for an incentive if the cumulative value of loss reduction in that year and in the previous year is over 0.70%. Any under recovery in the revenue realized, if the T&D loss reduction in the second year of the Control Period is below 0.20% and that the cumulative value of loss reduction in that year and in the previous year is below 0.55%, shall be to the account of the Petitioner. The Petitioner shall not be eligible for any incentive or penalty if the cumulative T&D loss reduction in the first and second year of the Control Period is between 0.55% and 0.70%.

(c) **Last year of the Control Period**: The Petitioner shall be eligible for an incentive if the cumulative value of loss reduction at the end of the Control

Period is over 1.0%. Any under recovery in the revenue realized, if the T&D loss reduction in the last year of the Control Period is below 0.20% and that the cumulative value of loss reduction at the end of the Control Period is below 1%, shall be to the account of the Petitioner.. The Petitioner shall not be eligible for any incentive or penalty if the cumulative T&D loss reduction at the end of the Control Period is 1.0%.

5.32 As per the clause 8(3) of MYT Distribution Regulations, the incentives/ profits arising from achieving loss level better than specified in the loss reduction trajectory shall be shared in the ratio of 2/3rd with the licensee and 1/3rd in the contingency reserve for the first Control Period.

Energy Requirement

5.33 The Commission's estimates of energy requirement at distribution periphery for FY10 and FY11 are based on the energy sales figures approved for the respective years in this Order and the T&D loss reduction trajectory approved by the Commission in the second APR Order. The Commission's estimates for energy requirement are tabulated below:

Table 54: Approved Energy Requirement for the Control Period

Energy Requirement	FY10 Approved	FY11 Approved
Sales (MU)	5676.33	6082.48
T&D losses%	12.79%	12.49%
Distribution Losses (%)	9.43%	9.12%
Energy Requirement at distribution periphery (MU)	**6267.33**	**6692.74**

Power Purchase

5.34 The power purchase expense is the single largest component in the ARR. Hence, it is imperative that this element of cost is estimated with utmost care based on the most efficient way of procuring power from the generating stations through long term/short term arrangements or through bilateral purchase agreements.

5.35 The Commission has exercised due caution in re-estimating power purchase cost of the Petitioner for FY10 and FY11. The Commission has made reasonable assumption for PLF, auxiliary consumption and transmission losses to arrive at the quantum of energy available for the Petitioner.

Source of Power

5.36 Following power generating stations have been considered for the purpose of estimation of power availability for the period FY10 and FY11.

(a) HPSEB own generating stations

(b) Purchase from Central Generating Stations of NTPC, NHPC, SJVNL and NPCIL and Tehri

(c) Purchase from Baspa, Patikari HEPs and private SHPs upto 5 MW.

(d) Purchase from BBMB and shared stations

(e) Purchase of Free & Equity power from GoHP

(f) Purchase through bilateral short term arrangements.

(g) New Plants expected to be commissioned during FY10 and FY11

(h) Banking arrangements.

Allocation in Generating Stations

Allocation from HPSEB own stations

5.37 Based on the existing arrangements between HPSEB and GoHP the Commission has considered the following allocation from HPSEB's own generating stations while estimating the power availability to HPSEB from these stations.

Table 55: Allocation from HSPEB own stations

Station	FY10 to FY11 **Allocated**
Bhaba	100.00%
Bassi	100.00%
Giri	100.00%
Andhra	100.00%
Ghanvi	88.00%
Baner	88.00%
Gaj	88.00%
Binwa	100.00%
Thirot	100.00%
Gumma	100.00%
Holi	100.00%
Larji	88.00%
Khauli	88.00%
SHPs	100.00%
Bhabha augmentation	**100.00%**

Allocation from Central Sector Generating Stations (CSGS)

5.38 State has firm allocated share in Central Sector Generating Stations (CSGS) of NTPC, National Hydroelectric Power Corporation (NHPC), Tehri Hydro Development Corporation (THDC), Satluj Jal Vidyut Nigam Limited (SJVNL) and Nuclear Power Corporation of India Limited (NPCIL).

5.39 In addition to the firm share allocation, most of these stations (except Bairasuil, Salal, Tanakpur, Chamera-I and Uri stations of NHPC) have 15% unallocated power. The distribution of this unallocated power among the constituents of Northern Region is decided from time to time, based on the power requirement and power shortage in different States.

5.40 The Commission has considered allocation of firm power of CSGS as per the allocations effective from October 27, 2007 as specified in the notification no. NRPC/SE(O)/Allocations/2008-09 dated April 11, 2008 of Northern Regional Power Committee.

5.41 The Petitioner's share in CSGS unallocated quota varies from time to time based on the allocation made to the state depending upon power requirement and power shortage in different States. Therefore, the Commission has considered monthly share of firm and unallocated power for the state in CSGS based on the submissions made by the Board as per Form 4a for FY09 which was submitted after the technical validation session held on April 20, 2010.

5.42 State's share in Central Sector Generating Stations is summarized below.

Table 56: Firm Allocation from Central Sector Generating Stations (CSGS)

Station	FY10 to FY11 Allocated
NTPC	
Anta GPP	3.58%
Auriya GPP	3.32%
Dadri GPP	3.01%
Unchahar-I	1.67%
Unchahar-II	2.86%
Unchahar-III	3.81%
Rihand-1 STPS	3.50%
Rihand-2 STPS	3.30%
Singrauli STPS	0.00%
Kahalgaon – II	1.53%
NPCIL	
NAPP	3.18%
RAPP (V & VI)	3.40%

Station	FY10 to FY11 Allocated
NHPC	
Salal	0.99%
Tanakpur	3.84%
Chamera I	2.90%
Chamera II	3.67%
Uri	2.71%
Dhauliganga	3.57%
THDC	
Tehri	2.80%
SJVNL	
Nathpa Jhakri HEP (SOR)	2.47%
BBMB	
BBMB (Old)	Fixed[2]
BBMB (New)	2.12%
Dehar	Fixed[3]

Table 57: Unallocated Share from Central Sector Generating Stations (CSGS)

Stations	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar
NTPC												
Anta GPP	0.62%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.95%	1.57%	1.57%	1.57%
Auriya GPP	0.43%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.66%	1.08%	1.08%	1.08%
Dadri GPP	0.29%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.45%	0.73%	0.73%	0.73%
Unchahar-I	0.20%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.30%	0.49%	1.49%	2.49%
Unchahar-II	0.62%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.95%	1.56%	1.56%	1.56%
Unchahar-III	0.61%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.94%	1.53%	1.53%	1.53%
Rihand-1 STPS	0.61%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.95%	1.55%	1.55%	1.55%
Rihand-2 STPS	0.62%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.95%	1.56%	1.56%	1.56%
Singrauli STPS	0.62%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.95%	1.56%	1.56%	1.56%
Kahelgaon – II	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
NPCIL												
NAPP	0.61%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.93%	1.51%	1.51%	1.51%
RAPP (V & VI)	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%

[2] BBMB (old) share: 1.2 LU per day
[3] Dehar share: 15 MW at 60% PLF

Stations	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar
NHPC												
Salal	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Tanakpur	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Chamera I	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Chamera II	1.76%	0.68%	0.00%	0.00%	0.00%	0.00%	0.26%	1.98%	1.98%	1.99%	2.01%	1.88%
Uri	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Dhauliganga	0.62%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.95%	1.56%	1.56%	1.56%
Dulhasti	0.62%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.95%	1.56%	1.56%	1.56%
THDC												
Tehri	0.41%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
SJVNL												
Nathpa Jhakri (SOR)	**0.96 %**	**0.35 %**	**0.00 %**	**0.00 %**	**0.00 %**	**0.00 %**	**0.15 %**	**1.07 %**	**1.09 %**	**1.11 %**	**1.11 %**	**1.04 %**

Allocation from Shared Stations

5.43 State has firm allocated share in Shanan, Shanan (ext), UJVNL and Khara. The allocation from these stations considered by the Commission for FY10 and FY11 is shown below.

Table 58: Allocation from Shared Stations

Station	FY10 to FY11 **Allocated**
Shanan	Fixed[4]
Shanan Ext	Fixed[5]
Yamuna (UJVNL)	24.68%
Khara	20.00%

Allocation from IPPs & Private projects

5.44 The allocation from IPPs and other Private projects as considered by the Commission for FY10 and FY11 is shown in the table below.

Table 59: Allocation from IPPs & Private projects

Station	FY10 to FY11 **Allocated**

[4] Shanan Share: Fixed share of 1000 kW at 60% PLF

[5] Shanan Ext: Fixed share of 45 MU per annum

Station	FY10 to FY11 Allocated
Baspa-II	88.00%
Patikari	88.00%
Private SHPs	100.00%

Allocation from Free & Equity Power

5.45 GoHP has free power & equity power entitlements in several stations as shown in the table below. HPSEB gets free & equity power from GoHP during the winter months.

Table 60: Free & Equity Power Entitlement to GoHP

Station	FY10 to FY11 Allocated
Free Power	
Baira Suil	12.00%
Chamera-I	12.00%
Chamera –II	12.00%
Shanan Share	Fixed[6]
Ranjeet Sagar Dam Share	4.60%
Malana	15.00%
Baspa – II	12.00%
Patikari	12.00%
Nathpa Jhakri	12.00%
Ghanvi	12.00%
Baner	12.00%
Gaj	12.00%
Larji	12.00%
Khauli	12.00%
Equity Power	
Nathpa Jhakri	22.00%

Allocation from New Projects

5.46 The Commission has considered the allocation from the following projects based on CEA "Broad Status Report on Hydro projects" and CEA "Power Scenario at a glance" while projecting the availability to HPSEB from these stations for FY11. The summary of the same is shown in the table below.

[6] Shanan Free Power Share: Fixed share of 500 kW at 60% PLF

Table 61: Allocation from New Projects

Station	FY10 to FY11		
	Allocated	Unallocated	Total
Chamera III	2.75%	15.00%	17.75%
Uri II	3.33%	0.0%	3.33%
Koteshwar	2.51%	0.00%	2.51%

5.47 The Commission has considered allocation of free power from the following upcoming IPP's which are scheduled to be commissioned in FY11. The summary of the same is shown in the table below.

Table 62: Allocation from New Projects (IPP)

Station	FY11
	Allocated
Allain Duhangan	12.0%
Budhil	12.0%
Malana II	12.0%

Energy Availability

Energy Availability from HPSEB own stations

5.48 The Commission has revised the net energy available to the Petitioner during FY10 by considering energy availability based on the provisional Form 4a for FY10 submitted by the Board.

5.49 The Commission has considered the energy availability for FY11 by considering generation as average of last three years of generation for all the stations, except Bhabha augmentation for which the projection of the Board has been considered.

5.50 The Commission has considered the auxiliary consumption of these plants as per the HPERC Generation Regulations, 2007 and as mentioned in the Generation ARR section of the MYT Order, 2008.

5.51 The effective share of the Petitioner is applied on the energy sent out to estimate the energy availability from the respective Stations. Key parameters considered by the Commission to project the energy available from the HPSEB own generating stations during the Control Period and Petitioner's share of energy in each station are summarized in the table below.

Table 63: Energy Available from HPSEB Own Stations in FY10 (MU)

Station	FY10			
	Generation	Aux Consumption	Allocation	HPSEB Share
Bhaba	625.12	1.20%	100.00%	617.62

Station	FY10			
	Generation	Aux Consumption	Allocation	HPSEB Share
Bassi	189.12	0.70%	100.00%	187.80
Giri	110.06	0.70%	100.00%	109.29
Andhra	40.39	1.00%	100.00%	39.99
Ghanvi	70.40	1.20%	88.00%	61.21
Baner	32.00	1.00%	88.00%	27.88
Gaj	35.93	1.00%	88.00%	31.30
Binwa	25.54	0.70%	100.00%	25.36
Thirot	8.03	0.70%	100.00%	7.98
Gumma	0.68	0.70%	100.00%	0.67
Holi	10.62	0.70%	100.00%	10.54
Larji	602.05	1.20%	88.00%	523.45
Khauli	33.47	0.70%	88.00%	29.25
SHPs	20.73	0.92%	100.00%	20.54
Total	**1804.14**	**-**	**-**	**1692.86**

Table 64: Energy Available from HPSEB Own Stations in FY11 (MU)

Station	FY11			
	Generation	Aux Consumption	Allocation	HPSEB Share
Bhaba	560.98	1.20%	100.00%	554.25
Bassi	233.84	0.70%	100.00%	232.20
Giri	177.35	0.70%	100.00%	176.11
Andhra	59.53	1.00%	100.00%	58.93
Ghanvi	76.65	1.20%	88.00%	66.65
Baner	37.97	1.00%	88.00%	33.08
Gaj	40.38	1.00%	88.00%	35.18
Binwa	28.28	0.70%	100.00%	28.09
Thirot	7.95	0.70%	100.00%	7.90
Gumma	5.24	0.70%	100.00%	5.20
Holi	9.93	0.70%	100.00%	9.86
Larji	613.22	1.20%	88.00%	533.16
Khauli	39.95	0.70%	88.00%	34.91
SHPs	23.47	0.92%	100.00%	23.26
Bhabha augmentation	26.00	1.20%	100.00%	25.69
Total	**1940.74**	**-**	**-**	**1824.45**

Energy Availability from the Central Sector Generating Stations (CSGS)

5.52 For the NTPC stations, the Commission has re-estimated available gross generation for FY10 based on the actual PLF achieved by the plants as per Final REA for the month of March 2010.

5.53 For FY11 the Commission has estimated the available gross generation of NTPC stations based on the PLF which is taken as average of three years FY07, FY08 & FY09 for the respective stations. In case of Kahalgaon Stage II the Commission has estimated available gross generation based on the PLF which is taken as average of two years FY09 & FY10.

5.54 Net energy sent out from the NTPC stations is estimated after deducting auxiliary consumption as approved in CERC Tariff Regulations, 2009.

5.55 For NHPC's hydro electric projects, the Commission has taken gross generation for FY10 and FY11 based on the Design Energy of these projects as considered in the MYT Order, 2008.

5.56 Gross generation of Nathpa Jhakri for FY10 has been considered by the Commission based on the provisional Form 4a for FY10 submitted by the Board. For FY 11 the Commission has considered the projection of gross generation based on the design energy as considered in the MYT Order, 2008.

5.57 Gross generation from Tehri hydro project for FY10 and FY11 has been considered based on the CEA generation targets as considered in the MYT Order, 2008. The Commission has, however, considered monthly share of firm and unallocated power for the state in the station based on the submissions made by the Board as per Form 4a for FY09.

5.58 For NPCIL station, the Commission has estimated the energy availability for FY10 and FY11 based on the past performance. The Commission has assumed PLF of 40% for NAPS and 60% for RAPS along with the plant availability of 70% and 90% respectively for projecting the energy availability from these stations.

5.59 In case of RAPS V & VI stations, the Commission has considered the energy availability in FY10 based on the provisional Form 4a for FY10 submitted by the Board.

5.60 The energy available from BBMB (old) and Dehar has been assumed at 1.2 LU per day and 15 MW@60% PLF respectively.

5.61 The energy availability from BBMB (new) for FY11 has been considered based on the CEA program energy as considered in the MYT Order, 2008. The energy availability for FY10 has been considered on the basis of provisional Form 4a for FY10 submitted by the Board.

5.62 The effective share of the Petitioner is applied on the energy sent out to estimate the energy availability for the Petitioner from respective stations. Energy sent out from the CSGS and the Petitioner's share of energy in each station are summarized below in the table:

Table 65: Energy Available from Central Sector Generating Stations (CSGS) FY10

Station	Capacity (MW)	PLF (%)	Aux Consumption	Energy Sent Out (MU)	HPSEB Share (MU)
NTPC					
Anta GPP	419.33	72.33%	3.00%	2577.03	105.63
Auriya GPP	663.36	78.57%	3.00%	4428.81	162.88
Dadri GPP	829.78	76.20%	3.00%	5372.36	174.71
Unchahar-I	420.00	97.65%	9.00%	3269.33	67.98
Unchahar-II	420.00	94.63%	9.00%	3168.41	106.98
Unchahar-III	210.00	103.34%	9.00%	1729.98	74.69
Rihand-1 STPS	1000.00	100.58%	8.50%	8061.65	323.52
Rihand-2 STPS	1000.00	92.47%	6.50%	7573.52	289.03
Singrauli STPS	2000.00	92.68%	6.50%	15182.26	78.39
Kahalgaon – II	1500.00	63.00%	9.00%	6908.72	105.93
NPCIL					
NAPP	440.00	40.00%	9.50%	976.70[7]	36.07
RAPP (V & VI)	440.00	60.00%	9.50%	269.46	13.19
NHPC					
Salal	690.00		1.00%	3020.67	29.90
Tanakpur	94.20		1.00%	443.19	17.02
Chamera I	540.00		1.20%	1624.84	47.12
Chamera II	300.00		1.20%	1464.11	62.79
Uri	480.00		1.20%	2525.66	68.45
Dhauliganga	280.00		1.00%	1109.86	42.26
Dulhasti	390.00		1.20%	1695.41	23.04
THDC					
Tehri	1000.00		1.00%	2745.27	77.39
SJVNL					
Nathpa Jhakri	1500.00		1.20%	6873.51	193.71
BBMB					
BBMB (Old)	1480.30			Fixed	43.80
BBMB (New)	1480.30		1.00%	5475.78	116.09
Dehar	990.00			Fixed	78.84

Table 66: Energy Available from Central Sector Generating Stations (CSGS) FY 11

Station	Capacity (MW)	PLF (%)	Aux Consumption	Energy Sent Out (MU)	HPSEB Share (MU)
NTPC					

[7] NAPS Plant Availability – 70%

Station	Capacity (MW)	PLF (%)	Aux Consumption	Energy Sent Out (MU)	HPSEB Share (MU)
Anta GPP	419.33	73.09%	3.00%	2604.46	106.75
Auriya GPP	663.36	71.05%	3.00%	4005.12	147.30
Dadri GPP	829.78	73.16%	3.00%	5158.49	167.76
Unchahar-I	420.00	94.81%	9.00%	3174.36	66.01
Unchahar-II	420.00	96.15%	9.00%	3219.17	108.69
Unchahar-III	210.00	94.31%	9.00%	1578.72	68.16
Rihand-1 STPS	1000.00	93.28%	8.50%	7477.11	300.06
Rihand-2 STPS	1000.00	98.13%	6.50%	8037.22	306.72
Singrauli STPS	2000.00	88.71%	6.50%	14532.42	75.03
Kahalgaon – II	1500.00	70.47%	9.00%	9565.92	146.68
NPCIL					
NAPP	440.00	40.00%	9.50%	976.70[8]	35.96
RAPP (V & VI)	440.00	60.00%	9.50%	1883.65[9]	64.04
NHPC					
Salal	690.00		1.00%	3020.67	29.90
Tanakpur	94.20		1.00%	443.19	17.02
Chamera I	540.00		1.20%	1624.84	47.22
Chamera II	300.00		1.20%	1464.11	75.56
Uri	480.00		1.20%	2525.66	68.58
Dhauliganga	280.00		1.00%	1109.86	43.84
Dulhasti	390.00		1.20%	1695.41	8.73
THDC					
Tehri	1000.00		1.00%	2745.27	77.39
SJVNL					
Nathpa Jhakri	1500.00		1.20%	6323.20	178.20
BBMB					
BBMB (Old)	1480.30			Fixed	43.80
BBMB (New)	1480.30		1.00%	6286.50	133.27
Dehar	990.00			Fixed	78.84

Energy Available from Shared Stations

5.63 State has fixed allocation from Shanan and Shanan (Ext) i.e. 1 MW@60% PLF and 45 MU respectively. The Commission has considered the same while projecting the availability from these stations for FY10 and FY11.

5.64 In case of UJVNL and UPPCL, the Commission has considered the energy

[8] NAPS Plant Availability – 70%

[9] RAPS Plant Availability – 90%

availability for FY10 based on the provisional Form 4a for FY10 submitted by the Board.

5.65 For FY11, the Commission has considered the energy availability from UJVNL based on the average of last three years.

Table 67: Energy Available from Shared Stations in FY10

Station	Capacity (MW)	Aux Consumption	Energy Sent Out (MU)	HPSEB Share (MU)
Shanan	60.00		Fixed	5.26
Shanan (Ext)	50.00		Fixed	45.00
Yamuna	474.75	1.0%	1194.87	294.89
Khara	72.00	1.0%	299.31	59.86

Table 68: Energy Available from Shared Stations in FY11

Station	Capacity (MW)	Aux Consumption	Energy Sent Out (MU)	HPSEB Share (MU)
Shanan	60.00		Fixed	5.26
Shanan (Ext)	50.00		Fixed	45.00
Yamuna	474.75	1.0%	1563.29	385.82
Khara	72.00	1.0%	286.69	57.34

Allocation from IPPs & Private projects

5.66 For FY10 the total energy available from Baspa-II HEP and Patikari HEP has been considered on the basis of provisional Form 4a for FY10 submitted by the Board.

Table 69: Energy Available from Baspa & Patikari in FY10

Station	Capacity (MW)	Energy available ex Bus (MU)	HPSEB Share (MU)
Baspa-II	300.00	1273.09	1120.32
Patikari	16.00	35.69	31.41

5.67 For FY11 the total energy available from Baspa-II HEP has been considered at design energy of Baspa i.e. 1193 MU and the energy available to HPSEB out of it has been considered as per the existing PPA i.e. 1050.06 MU. The total energy availability from Patikari HEP has been considered at 78.02 MU as per the existing PPA. The energy available to HPSEB from Patikari HEP has been considered at 68.66 MU, after reducing the 12% free power entitlement of GoHP in Patikari HEP.

Table 70: Energy Available from Baspa & Patikari in FY11

Station	Capacity (MW)	Design Energy (MU)	HPSEB Share (MU)
Baspa-II	300.00	1193.25	1050.06
Patikari	16.00	78.02	68.66

5.68 In FY10 the Commission has considered the energy availability from private small hydro projects (SHPs) up to 5 MW based on the energy availability details for FY10 as received from HIMURJA.

5.69 For projecting the energy availability from private small hydro projects (SHPs) up to 5 MW in FY11, the Commission has analyzed the information sought from HIMURJA on the tentative COD of new private SHPs. As per the information submitted, the total capacity of new private SHPs to be tentatively commissioned is 134.25 MW in the year 2011. The Commission is of the opinion that the capacity addition projected by HIMURJA seems be on a very optimistic side. However, the capacity addition in the private SHPs cannot be completely ignored. The Commission has considered the energy available from the new capacities commissioned in a year would be made available in the middle of the year. The energy available from private SHPs during the FY11 as considered by the Commission is shown in the table below.

Table 71: Energy Available from Private SHPs

Station	FY10	FY11
Existing Generation (MU)	271	423
Capacity Addition (MW)		134.25
Additional Generation (MU)	152	203.75
Energy Available (MU)	423	626.75

Energy Available from Free & Equity Power

5.70 The GoHP has 12% free power share in 5 of the HPSEB power plants viz. Ghanvi, Baner, Gaj, Larji & Khauli. The GoHP also has free power share of 12% in three of the NHPC plants (i.e. Baira Suil, Chamera I & Chamera II), Shanan (500 kW), 4.6% in Ranjeet Sagar Dam, 12% in Baspa II & Nathpa Jhakri and 15% in Malana. GoHP also has 22% equity share in Nathpa Jhakri.

5.71 The GoHP has agreed to provide free power from these plants to the Board during October to April, when the Board is deficit in energy. The equity power from Nathpa Jhakri is considered to be made available during the winter months (October to March).

5.72 For FY10 the Commission the energy availability from Ranjeet Sagar Dam has been considered on the basis of provisional Form 4a for FY10 submitted by the Board.

5.73 For FY11 the Commission has considered the energy availability from Ranjeet Sagar Dam by taking the average of energy availability from the station for last three years (FY 07, FY08 and FY09).

5.74 The table below shows the Commission's estimates of energy availability to HPSEB plant-wise for FY10 and FY11:

Table 72: Energy Available Free Power in FY10 (MU)

Station	Total Energy Available	Aux Consumption	Energy Sent Out	Free Power Available to GoHP	Free Power Available to HPSEB (Oct - Apr)
Baira Suil	726.36	1.00%	719.09	86.29	32.81

Station	Total Energy Available	Aux Consumption	Energy Sent Out	Free Power Available to GoHP	Free Power Available to HPSEB (Oct - Apr)
Chamera –I	1644.58	1.20%	1624.84	194.98	59.57
Chamera –II	1481.89	1.20%	1464.11	175.69	65.86
Shanan Share	2.63	Fixed	2.63	2.63	1.53
Ranjeet Sagar Dam	942.86	1.00%	933.43	42.94	15.03
Malana	350.00	1.00%	346.50	51.98	17.61
Baspa – II	1294.35	1.64%	1273.09	152.77	45.28
Patikari	35.69	0.00%	35.69	4.28	1.31
Nathpa Jhakri	6956.99	1.20%	6873.51	824.82	290.46
Ghanvi	70.40	1.20%	69.56	8.35	3.40
Baner	32.0	1.00%	31.68	3.80	1.61
Gaj	35.93	1.00%	35.57	4.27	1.83
Larji	602.05	1.20%	594.83	71.38	21.86
Khauli	33.47	0.70%	33.24	3.99	1.61
Total	**14209.19**		**14037.75**	**1628.17**	**559.77**

Table 73: Energy Available Equity Power in FY10 (MU)

Station	Total Energy Available	Aux Consumption	Energy Sent Out	Equity Power Available to GoHP	Equity Power Available to HPSEB (Nov - Mar)
Equity Power	6956.99	1.20%	6873.51	1512.17	352.24

Table 74: Energy Available Free Power in FY11 (MU)

Station	Total Energy Available	Aux Consumption	Energy Sent Out	Free Power Available to GoHP	Free Power Available to HPSEB (Oct - Apr)
Baira Suil	726.36	1.00%	719.09	86.29	32.81
Chamera-I	1644.58	1.00%	1624.84	194.98	59.57
Chamera –II	1481.89	1.00%	1464.11	175.69	65.86
Shanan Share	2.63	Fixed	2.63	2.63	1.53
Ranjeet Sagar Dam	1531.28	1.00%	1515.97	69.73	24.41
Malana	350.00	1.00%	346.50	51.98	17.61
Baspa – II	1213.18	1.64%	1193.25	143.19	42.44
Patikari	78.02	0.00%	78.02	9.36	2.87
Nathpa Jhakri	6400.00	1.20%	6323.20	758.78	267.21
Ghanvi	76.65	1.20%	75.73	9.09	3.70
Baner	37.97	1.00%	37.59	4.51	1.91
Gaj	40.38	1.00%	39.98	4.80	2.06
Larji	613.22	1.20%	605.86	72.70	22.27

Station	Total Energy Available	Aux Consumption	Energy Sent Out	Free Power Available to GoHP	Free Power Available to HPSEB (Oct - Apr)
Khauli	39.95	0.70%	39.67	4.76	1.92
Total	**14236.11**		**14066.44**	**1588.49**	**546.15**

Table 75: Energy Available Equity Power in FY11 (MU)

Station	Total Energy Available	Aux Consumption	Energy Sent Out	Equity Power Available to GoHP	Equity Power Available to HPSEB (Nov - Mar)
Equity Power	6400.00	1.20%	6323.20	1391.10	324.04

Energy Available from New Projects

5.75 The Commission has considered the commissioning schedule of the future stations based on the data available from CEA. COD for the hydro stations has been considered after 1 month from the commissioning schedule as given in the CEA "Broad Status Report on Hydro Projects".

5.76 Energy available from the future stations has been considered as per the allocation share specified earlier in this section. The Commission has assumed PLF of 80% for thermal and design energy for hydro plants respectively. Auxiliary consumption has been assumed at 9% for coal fired thermal projects and 1% for hydro projects (including 0.5% transformational loss).

5.77 Energy availability to the Petitioner in FY11 from future projects as considered by the Commission is summarized below:

Table 76: Energy Available from New Projects (MU)

Station	FY10	FY11
Uri II	0.00	0.65
Koteshwar	0.00	30.66

5.78 Energy availability to the Petitioner in FY11 from upcoming IPPs in the state as considered by the Commission is summarized in the table below:

Table 77: Energy Available from New Projects-IPPs (MU)

Station	FY11
Allain Duhangan	27.30
Budhil	12.60
Malana II	18.00

Other Sources, Bilateral and Short Term Arrangements and Banking

5.79 For the purpose projecting the power purchase from Bilateral, short term arrangements and Banking, the Commission has carried out a month-wise demand supply analysis for each year of the Control Period. The summary of the same is shown below:

Table 78: Monthly Demand Supply position (MU) in FY10

Month	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Total
Total Sales (MU)	426.70	467.53	471.51	456.63	476.09	459.02	471.56	453.11	483.81	499.68	504.43	506.27	**5676.33**
Distribution Losses (MU)	44.43	48.68	49.09	47.54	49.57	47.79	49.10	47.18	50.37	52.02	52.52	52.71	**591.00**
Demand at Distribution Periphery (MU)	471.13	516.21	520.60	504.17	525.66	506.81	520.65	500.29	534.18	551.70	556.95	558.98	**6267.33**
Power Purchase Outside State (MU)	381.42	299.01	399.33	447.65	464.26	363.75	335.93	366.15	390.40	402.44	381.33	461.53	**4693.20**
PGCIL Transmission Losses (MU)	13.60	10.73	14.23	15.93	16.51	12.98	12.02	13.07	13.92	14.35	13.58	16.41	**167.33**
Balance Available at HP Periphery (MU)	367.82	288.29	385.10	431.72	447.75	350.77	323.92	353.08	376.47	388.10	367.75	445.11	**4525.87**
Power Purchase within State (MU)*	201.44	243.01	240.54	278.07	327.26	256.37	170.01	107.55	96.54	82.72	83.70	143.47	**2230.68**
Intra State Transmission Losses (MU)	21.12	19.71	23.21	26.33	28.75	22.52	18.32	17.09	17.55	17.47	16.75	21.84	**250.67**
Net Availability at Distribution Periphery (MU)	548.13	511.59	602.43	683.46	746.25	584.61	475.61	443.55	455.47	453.35	434.69	566.75	**6505.88**
Deficit at Distribution Periphery (MU)	0.00	4.63	0.00	0.00	0.00	0.00	45.05	56.74	78.71	98.36	122.26	0.00	**405.75**
Surplus at Distribution Periphery (MU)	77.01	0.00	81.83	179.29	220.59	77.80	0.00	0.00	0.00	0.00	0.00	7.77	**644.30**

**Includes those stations whose power is not routed through the PGCIL network*

Table 79: Monthly Demand Supply position (MU) in FY11

Month	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Total
Total Sales (MU)	450.75	482.15	490.69	505.49	500.93	509.26	511.57	497.35	515.21	530.91	537.12	551.07	**6082.48**
Distribution Losses (%)	45.22	48.37	49.23	50.72	50.26	51.09	51.33	49.90	51.69	53.27	53.89	55.29	**610.26**
Demand at Distribution Periphery (MU)	495.98	530.52	539.92	556.20	551.18	560.35	562.90	547.25	566.90	584.18	591.01	606.35	**6692.74**
Power Purchase Outside State (MU)	402.68	311.74	406.82	457.11	477.15	376.73	357.37	373.64	395.67	406.89	381.38	465.47	**4812.65**
PGCIL Transmission Losses (MU)	14.44	11.27	14.59	16.36	17.06	13.53	12.87	13.43	14.21	14.60	13.67	16.65	**172.69**
Balance Available at HP Periphery (MU)	388.24	300.47	392.23	440.75	460.09	363.20	344.50	360.21	381.46	392.29	367.71	448.82	**4639.96**
Power Purchase within State (MU)*	235.01	275.43	269.78	320.45	381.12	302.02	199.12	126.64	117.28	99.26	103.29	176.97	**2606.36**
Intra State Transmission Losses (MU)	23.12	21.37	24.56	28.24	31.21	24.68	20.17	18.06	18.50	18.24	17.47	23.22	**268.84**
Net Availability at Distribution Periphery (MU)	600.13	554.53	637.46	732.96	810.00	640.54	523.45	468.79	480.23	473.31	453.52	602.57	**6977.48**
Deficit at Distribution Periphery (MU)	0.00	0.00	0.00	0.00	0.00	0.00	39.44	78.46	86.67	110.87	137.49	3.79	**456.71**
Surplus at Distribution Periphery (MU)	104.15	24.01	97.54	176.76	258.81	80.19	0.00	0.00	0.00	0.00	0.00	0.00	**741.46**

**Includes those stations whose power is not routed through the PGCIL network*

5.80 As shown in the tables above, HPSEB is power deficit in winter months and power surplus in summer months. Thus, it is considered that the Board would be entering into banking arrangements with other states during the summer months to partly offset the deficit in the winter months. Any deficit, if remaining after banking arrangement, has been considered to be purchased from short term arrangements/ market purchase.

5.81 The Board has also submitted in its clarification dated May 18, 2010 with respect to the banking that the Board has been doing forward banking (settled in next year)and contra banking (settled in same year) , the details of which are tabulated as under:

Table 80: Power Purchase through Banking by the Board (MU)

FY09				FY10			
Sale Return of Previous Year		**Purchase Forward banking to be returned next year**		**Sale Return of Previous Year**		**Purchase Forward banking to be returned next year**	
PSEB	85.98	PSEB	88.69	PSEB	97.57	PSEB	200.71
NDPL	159.09	HPGCL	80.66	HPGCL	78.74	HPGCL	78.32
HPGCL	35.55	BYPL	154.41	BYPL	155.05	BYPL	37.55
		BRPL	84.99	BRPL	88.89	BRPL	66.04
Total	**280.62**	**Total**	**408.75**	**Total**	**420.25**	**Total**	**382.62**
Supplied under contra banking		**Return received for Contra**		**Supplied under contra banking**		**Return received for Contra**	
PSEB	204.23	PSEB	204.41	PSEB	195.32	PSEB	195.32
HPGCL	59.52	HPGCL	59.52	HPGCL	77.28	HPGCL	77.28
HPGCL (4/2008)	24.53	HPGCL (4/2008)	24.53	BYPL	37.62	BYPL	37.21
BRPL	29.31	BYPL	27.69	BRPL	69.82	BRPL	69.12
				PSEB (4/2009)	45	PSEB (4/2009)	45
Total	**317.59**		**316.15**	**Total**	**425.04**		**423.93**
G.Total	**598.21**	**G.Total**	**724.9**	**G.Total**	**845.29**	**G.Total**	**806.55**

5.82 The summary of banking and short term power purchase approved by the Commission for FY10 and FY11 taking into consideration the forward banking already done by the Board in FY10 and the surplus energy available as per monthly energy balance for respective years is shown below.

Table 81: Power Purchase through Banking & Short Term Arrangements (MU)

Particulars	FY10	FY11
Total Deficit at Distribution Periphery (MU)	405.75	456.71
Intra State Transmission Losses (%)	3.71%	3.71%

Particulars	FY10	FY11
Inter State Transmission Losses (%)	3.50%	3.50%
Total Deficit at Ex-Bus (MU)	**436.66**	**491.51**
Deficit Power Procured through -		
Banking	382.62	400.00
Market Purchase & Bilateral Arrangements	54.04	91.51

Power Purchase Cost

Generation cost of HPSEB own stations

5.83 Since the Board is still a bundled entity, the cost of generation from the Board's own generating stations are being shown as the part of Board's expenses under various heads such as employee cost, R&M cost, A&G cost, interest cost, deprecation etc. Thus, the Commission has not considered the generation cost of Board's own generating stations as part of the power purchase cost in the total ARR of the Board.

Cost of Power of Central Sector Generating Stations (CSGS)

NTPC

5.84 The Commission has derived annual fixed charges (in proportion to the Petitioner's share) applicable in FY10 for various central sector generating stations from the relevant Tariff Orders issued by CERC taking into consideration the revised Annual Fixed Cost for FY 2004-09 as approved by CERC for various plants.

5.85 Taking into consideration the fact that CERC has not yet come out with the Tariffs for the existing CSGS stations under the CERC Tariff Regulations, 2009, the Commission has provided an additional 7% increase in fixed cost over and above the fixed cost considered for FY10, to account for revision of Return on Equity, higher escalation in O&M costs, etc

5.86 The variable cost including Fuel Price Adjustment (FPA) for FY10 has been based upon the provisional Form 4a for FY10, submitted by the Board.

5.87 For FY11 the variable cost including Fuel Price Adjustment (FPA) has been estimated by applying an escalation of 4% for thermal plants over the variable cost considered for FY10 taking into consideration the clean energy cess of Rs. 50 per tonne on domestic as well as imported coal. In case of variable cost for gas based plants the Commission has considered an escalation of 3% over the variable cost considered for FY10.

5.88 Other charges for FY10 have been considered based on the provisional Form 4a for FY10 submitted by the Board. For FY11 other charges have been considered at the same level as considered in FY10.

5.89 In case of Kahalgaon–II, the Commission has considered the average cost of generation at bus bar for FY10 as submitted by the Board in provisional Form 4a for FY10. For FY11 the Commission has considered the average cost of generation by applying an escalation of 4% over the average cost of generation for FY10.

5.90 The summary of the variable charges (including FPA), fixed charges and other charges considered by the Commission for NTPC stations for the Control Period is shown in the table below.

Table 82: Variable Charges (P/unit) considered for NTPC Stations

Station	FY10	FY11
Anta GPP	181.45	188.71
Auriya GPP	160.58	167.00
Dadri GPP	159.89	166.29
Unchahar-I	173.39	180.33
Unchahar-II	175.06	182.06
Unchahar-III	174.66	181.65
Rihand-1 STPS	116.52	121.18
Rihand-2 STPS	122.58	127.48
Singrauli STPS	112.02	116.50
Kahalgaon – II*	248.11	258.03

**Average cost of generation*

Table 83: Fixed & Other Charges considered for NTPC Stations for the Control Period

Station	Fixed Charges (Rs Cr)		Other Charges (P/ unit)
	FY10	**FY11**	
Anta GPP	91.16	101.96	1.78
Auriya GPP	136.87	136.87	0.00
Dadri GPP	185.40	185.40	0.00
Unchahar-I	142.46	145.17	4.73
Unchahar-II	177.87	177.87	4.28
Unchahar-III	148.10	148.10	5.81
Rihand-1 STPS	344.02	343.77	5.49
Rihand-2 STPS	526.68	551.89	0.00
Singrauli STPS	352.49	352.49	4.19

NHPC

5.91 For FY10 Annual Fixed Cost(AFC), as specified in the respective CERC tariff orders and the revised approved Annual Fixed Cost for FY 2004-09 of various plants, has been considered and the net charges payable has been derived after deducting the free share of power, if any, in the respective stations.

5.92 Taking into consideration the fact that CERC has not yet come out with the Tariffs for the existing Hydro stations under the CERC Tariff Regulations, 2009, the Commission has provided an additional 7% increase in Annual Fixed Cost over and above the approved AFC of various plants, to account for revision of Return on Equity, higher escalation in O&M costs, etc. The net charges payable have been derived after deducting the free share of power, if any, in the respective stations.

5.93 The summary of the fixed charges considered by the Commission for NHPC stations for the period FY10 and FY11 is shown in the table below:

Table 84: Fixed Charges considered for NHPC Stations for the FY10 and FY11

Station	Fixed Charges (Rs Cr)	
	FY10	**FY11**
Salal	176.74	188.98
Tanakpur	46.82	50.48
Chamera I	199.53	214.15
Chamera II	327.37	371.69
Uri	274.17	293.48
Dhauliganga	177.02	190.70
Dulhasti	497.40	903.48

NPCIL

5.94 For FY10 the Commission has considered the power purchase cost from NPCIL plants, based on provisional Form 4a for FY10 submitted by the Board.

5.95 For FY11 the Commission has estimated the tariff of NPCIL plants with 1% annual escalation over the tariff considered for FY10.

5.96 The summary of the composite variable charges considered by the Commission for NPCIL stations for the Control Period is shown in the table below.

Table 85: Variable Charges (P/unit) considered for NPCIL Stations

Station	FY10	FY11
NAPS	201.95	203.97
RAPS V & VI	291.21	294.12

THDC

5.97 For Tehri HEP, the Commission has considered composite variable rate of 571.76 P/unit for FY10 based on the provisional Form 4a for FY10 submitted by the Board. For FY11, the Commission has estimated the tariff of 588.91 P/unit by considering an escalation of 3% over the composite variable rate considered for FY10.

SJVNL (Nathpa Jhakri)

5.98 For Nathpa Jhakri HEP the annual fixed charge for FY10 has been considered at Rs 1312.43 Cr and annual fixed charges for FY11 at Rs 1404.30 Cr by considering an escalation of 7% over the fixed cost for FY10.The net charges payable in respective years have been derived after deducting the free share of power.

BBMB

5.99 As per the power purchase agreement with BBMB stations, HPSEB bears proportionate O&M charges towards cost of energy. For BBMB (old), the Commission has considered the variable charges (O&M charges) payable by the Board in FY10 based on the provisional Form 4a for FY10 submitted by the Board.

5.100 For BBMB (new) and Dehar, the Commission has considered variable charges (O&M charges) paid by the Board in FY10 based on the provisional Form 4a for FY10 submitted by the Board.

5.101 For FY11 the Commission has estimated the cost of energy from BBMB (old), BBMB (new) and Dehar stations by considering an escalation of 3% in the variable charges(O&M charges) as considered for the respective stations in FY10 .

5.102 The summary of the variable charges considered by the Commission for BBMB stations for the Control Period is shown in the table below.

Table 86: Variable Charges (P/unit) considered for BBMB Stations

Station	FY10	FY11
BBMB (old)	58.48	60.23
BBMB (new)	37.64	38.77
Dehar	52.75	54.33

Cost of Power from Shared Stations

5.103 The cost of power from Shanan and Shanan (ext) has been considered at 40 P/unit and for Khara HEP at 37 P/unit as per the existing practice. For UJVNL, the Commission has considered the Tariff Order (FY09) for UJVNL and has derived the pooled cost of power payable to UJVNL.

Table 87: UJVNL Variable Charges Calculation

	Total AFC approved less RoE and Interest Charges (Rs Cr)	Salable Primary Energy (MU)	Primary Energy Charges (P/unit)
Chibroo	22.13	743.25	29.77
Khodri	13.80	342.58	40.28
Dhalipur	8.25	190.66	43.29
Dhakrani	5.59	155.78	35.88
Kulhal	5.32	152.83	34.81
Pooled Average	**55.09**	**1585.1**	**34.76**

Table 88: Variable Charges (P/ unit) considered for Shared Stations

Station	FY10	FY11
Shanan	40.00	40.00
Shanan (Ext)	40.00	40.00
Yamuna (UJVNL)	34.76	34.76
Khara	37.00	37.00

Cost of Power from IPPs & Private projects

5.104 The Commission has considered the Annual Fixed Cost for Baspa at Rs 264.63 Cr in FY10 and at Rs 277.26 Cr in FY11 respectively on the basis of the recent tariff order for the plant.

5.105 For Patikari, the Commission has considered energy charges of 225 P/unit as specified in its PPA.

5.106 Cost of power from private SHPs has been considered at two different rates. The energy rate for private SHPs having PPA with the Board prior to July 2006 has been considered at 250 P/unit and the energy rate for private SHPs having PPA after July 2006 with the Board has been considered at 294.40 P/unit as per the recent order of the Commission.

Cost of Power of Free & Equity Power

5.107 As per the Commission's Order dated June 7, 2010 the rate of free power available to the Board from GoHP has been fixed at 319 P/unit for FY11.

5.108 For projecting the rate of equity power, annual fixed charges of Nathpa Jhakri for FY10 has been considered based on the recent CERC orders. Further, the Commission has considered the variable charges paid by the Board on account of equity power in FY10 based on the provisional Form 4a for FY10 submitted by the Board.

5.109 For FY11 the Commission has estimated the fixed cost of Nathpa Jhakri by considering an escalation of 7% over the fixed cost considered for FY10. The variable charges have been escalated by 3% over the variable charges considered for FY10.

Cost of power from New Projects

5.110 The Commission has considered the rate of energy purchased from the new projects during FY11 at the same rate as specified by the Commission in the MYT Order, 2008.

5.111 The summary of composite rate considered by the Commission for the new projects is shown in the table below.

Table 89: Variable Charges (P/unit) of New Projects

Station	FY11
Uri	300.00
Koteshwar	300.00

Cost of Power Purchase from Other Sources, Bilateral, Short Term Arrangements and Banking

5.112 The Commission has analyzed the power purchase data submitted by the Board for FY09. The Commission has observed that the Board has purchased power through UI at an average rate of Rs. 5.60/ unit in FY09. Thus, for FY10, the Commission has considered the bilateral/market purchase from inter-state sources at Rs 5.50 per unit, however for FY11 the Commission has considered the rate of power purchase at Rs 5.0 per unit taking into consideration the fact that the deficit power will be drawn by the Board during winters and in recent years there has been a decline in the market rates of power during winters. For contra banking no cost has been assumed as both the transactions, sale & purchase are happening in the same financial year. However for forward banking the Commission has not considered any cost based on the clarification dated May 18, 2010 submitted by the Board, wherein the Board has asked the Commission to consider entire banking as a cashless transaction. Further analysis of banking agreements submitted by the Board reveal that banking has been considered as a cashless transaction in the agreements.

5.113 The Commission has analyzed the power sold by the Board in FY10 based on the provisional Form 4a for FY10 submitted by the Board. The Commission has observed that Board has sold surplus power at a rate of Rs 5.05/ unit. The Commission has, thus, considered the rate of sale of surplus power available to the Board at a rate of Rs 5.00/ unit for FY10 and FY11.

5.114 The summary of power purchase cost approved by the Commission for the Control Period is shown in the table below.

Table 90: Approved Power Purchase Cost (Rs Cr) for the Control Period

Station	FY10		FY11	
	Quantum (MU)	Cost (Rs Cr)	Quantum (MU)	Cost (Rs Cr)
NTPC				
Anta GPP	105.63	23.09	106.75	24.81
Auriya GPP	162.88	31.19	147.30	29.98
Dadri GPP	174.71	33.96	167.76	34.35
Unchahar-I	67.98	15.07	66.01	15.44
Unchahar-II	106.98	25.19	108.69	26.68
Unchahar-III	74.69	19.87	68.16	19.62
Rihand-1 STPS	323.52	53.28	300.06	52.77
Rihand-2 STPS	289.03	55.53	306.72	61.64
Singrauli STPS	78.39	10.93	75.03	11.00
Kahelgaon – II	105.93	26.28	146.68	37.85
NPCIL				
NAPS	35.96	7.26	35.96	7.33
RAPS	13.19	3.84	64.04	18.84
NHPC				
Salal	29.90	1.99	29.90	2.13
Tanakpur	17.02	2.04	17.02	2.20
Chamera I	47.12	6.58	47.12	7.06
Chamera II	62.79	15.95	62.79	18.11
Uri	68.45	8.44	68.45	9.04
Dhauliganga	42.26	7.66	42.26	8.25
Dulhasti	23.04	7.68	24.11	14.60
THDC				
Tehri	77.39	44.25	77.39	45.58
BBMB				
BBMB Old	43.80	2.56	43.80	2.64
BBMB New	116.09	4.37	133.27	5.17
Dehar	78.84	4.16	78.84	4.28
Shared Stations				
Shanan	5.26	0.21	5.26	0.21
Shanan Ext	45.00	1.80	45.00	1.80

Station	FY10		FY11	
	Quantum (MU)	**Cost (Rs Cr)**	**Quantum (MU)**	**Cost (Rs Cr)**
Yamuna	294.89	10.25	385.82	13.41
Khara	59.86	2.21	57.34	2.12
SJVNL				
Nathpa Jhakri (SOR)	193.71	42.03	178.20	44.97
IPPs				
Baspa – II	1120.32	264.63	1050.06	277.26
Patikari	31.41	7.07	68.66	15.45
Private SHPs				
Old PPA	271	67.75	423	105.75
New PPA	152	44.75	203.75	59.98
Free Power				
Baira Suil	32.81	9.42	32.81	10.47
Chamera-I	59.57	17.10	59.57	19.00
Chamera –II	65.86	18.90	65.86	21.01
Shanan Share	1.53	0.44	1.53	0.49
Ranjeet Sagar Dam Share	15.03	4.31	24.41	7.79
Malana	17.61	5.05	17.61	5.62
Baspa – II	45.28	13.00	42.44	13.54
Patikari	1.31	0.38	2.87	0.91
Nathpa Jhakri	290.46	83.36	267.21	85.24
Ghanvi	3.40	0.98	3.70	1.18
Baner	1.61	0.46	1.91	0.61
Gaj	1.83	0.53	2.06	0.66
Larji	21.86	6.27	22.27	7.10
Khauli	1.61	0.46	1.92	0.61
Equity Power				
Nathpa Jhakri	352.24	104.00	324.04	102.07
New Projects				
Uri II	0.00	0.00	0.65	0.19
Koteshwar	0.00	0.00	30.66	9.20
Allain Duhangan	0.00	0.00	27.30	8.71

Station	FY10		FY11	
	Quantum (MU)	**Cost (Rs Cr)**	**Quantum (MU)**	**Cost (Rs Cr)**
Budhil	0.00	0.00	12.60	4.02
Malana II	0.00	0.00	18.00	5.74
Banking	382.62	0.00	400.00	0.00
Bilateral	54.04	29.72	91.51	45.76
HPSEB own Stations	1692.86	0.00	1824.45	0.00
Grand Total	7360.54	1146.26	7910.53	1330.23

Periodic Review & True up of Power Purchase Cost

5.115 As per the MYT Regulations, power purchase is an uncontrollable parameter and needs to be trued up every year based on actual. Hence, any variation in the power purchase cost shall be trued up at the end of every year of the Control Period.

Energy Balance

5.116 The month wise energy balance for the Board for FY10, FY11 is shown in the tables below.

Table 91: Energy Balance for FY10 (MU)

Month	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Total
Power Purchase from Outside the State	381.42	299.01	399.33	447.65	464.26	363.75	335.93	366.15	390.40	402.44	381.33	461.53	**4693.20**
Bilateral & Banking Power Purchase	0.00	4.98	0.00	0.00	0.00	0.00	48.48	61.07	84.71	105.85	131.57	0.00	**436.66**
Total Purchase from outside the State	381.42	303.99	399.33	447.65	464.26	363.75	384.42	427.22	475.11	508.29	512.90	461.53	**5129.86**
Surplus Power Sold Outside State	79.98	0.00	84.98	186.20	229.09	80.80	0.00	0.00	0.00	0.00	0.00	8.07	**669.12**
Net Power Purchased for the State	301.44	303.99	314.35	261.45	235.16	282.95	384.42	427.22	475.11	508.29	512.90	453.46	**4460.74**
Less: PGCIL Losses	13.60	10.90	14.23	15.93	16.51	12.98	13.71	15.20	16.89	18.05	18.19	16.41	**182.61**
Balance Available	287.84	293.09	300.12	245.52	218.66	269.97	370.70	412.01	458.22	490.24	494.71	437.04	**4278.13**
Power Purchase within State*	201.44	243.01	240.54	278.07	327.26	256.37	170.01	107.55	96.54	82.72	83.70	143.47	**2230.68**
Total Power Available at State Periphery	489.28	536.10	540.66	523.59	545.91	526.33	540.71	519.57	554.76	572.96	578.41	580.52	**6508.81**
Less: Intra State Transmission Losses	18.15	19.89	20.06	19.43	20.25	19.53	20.06	19.28	20.58	21.26	21.46	21.54	**241.48**
Net Available for sale within the State	471.13	516.21	520.60	504.17	525.66	506.81	520.65	500.29	534.18	551.70	556.95	558.98	6267.33

**Includes those stations whose power is not routed through the PGCIL network*

Table 92: Energy Balance for FY11 (MU)

Month	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Total
Power Purchase from Outside the State	402.68	311.74	406.82	457.11	477.15	376.73	357.37	373.64	395.67	406.89	381.38	465.47	**4812.65**
Bilateral & Banking Power Purchase	0.00	0.00	0.00	0.00	0.00	0.00	42.45	84.44	93.27	119.32	147.96	4.07	**491.51**
Total Purchase from outside the State	402.68	311.74	406.82	457.11	477.15	376.73	399.82	458.08	488.94	526.21	529.34	469.54	**5304.17**
Surplus Power Sold Outside State	108.16	24.94	101.30	183.57	268.78	83.28	0.00	0.00	0.00	0.00	0.00	0.00	**770.03**
Net Power Purchased for the State	294.52	286.81	305.53	273.54	208.36	293.46	399.82	458.08	488.94	526.21	529.34	469.54	**4534.14**
Less: PGCIL Losses	14.44	11.27	14.59	16.36	17.06	13.53	14.35	16.38	17.47	18.78	18.85	16.79	**189.89**
Balance Available	280.08	275.53	290.94	257.18	191.30	279.92	385.47	441.69	471.46	507.43	510.49	452.75	**4344.25**
Power Purchase within State*	235.01	275.43	269.78	320.45	381.12	302.02	199.12	126.64	117.28	99.26	103.29	176.97	**2606.36**
Total Power Available at State Periphery	515.09	550.96	560.72	577.63	572.42	581.94	584.59	568.33	588.74	606.69	613.78	629.72	**6950.61**
Less: Intra State Transmission Losses	19.11	20.44	20.80	21.43	21.24	21.59	21.69	21.09	21.84	22.51	22.77	23.36	**257.87**
Net Available for sale within the State	495.98	530.52	539.92	556.20	551.18	560.35	562.90	547.25	566.90	584.18	591.01	606.35	6692.74

**Includes those stations whose power is not routed through the PGCIL network*

PGCIL Charges

5.117 For approving the PGCIL charges for FY10 and FY11, the Commission has considered transmission charges of Rs 86048/MW/month, based on the actual transmission charges paid as per PGCIL bill raised for the month of February, 2010. The Commission has further considered 5% escalation on transmission charges and the addition in capacity on account of share in the new stations.

5.118 The summary of the PGCIL Charges approved by the Commission for FY10 and FY11 are shown in the table below.

Table 93: Approved PGCIL Charges (Rs Cr) for the Control Period

	FY10	FY11
PGCIL Charges	144.04	154.53

5.119 The Commission, however, would true up the PGCIL charges for each year of the Control Period based on the actual amount paid at the end of each year.

Operation and Maintenance (O&M) Expenses

5.120 The Commission in its MYT Order, 2008 had specified that the O&M trajectory for the Control Period would be trued up once the audited accounts of FY08 are made available and/or the utility is unbundled and/or the recommendations of the Sixth Pay Commission are implemented during the Control Period. After the Board submitted the audited accounts for FY08 as part of the first Annual Performance Review process, and on the basis of availability of CPI & WPI figures for FY08, the Commission in the First APR Order revised the O&M expenses approved for the Board for the Control Period.

Employee Expenses

5.121 The revised employee cost for the Control Period approved by the Commission in the First APR Order are shown in the table below:

Table 94: Approved Employee Expenses for the Control Period (Rs Cr)

Particulars	FY10	FY11
Index(n)/ Index (n-1)	1.0500	1.0516
Total Employee Cost approved	**661.33**	**695.46**
Less: Capitalisation	55.66	56.39
Net Employee Cost approved	**605.67**	**639.08**

5.122 Hence, for FY10 and FY11, the Commission has approved Rs. 661.33 Cr and Rs. 695.46 Cr respectively as employee cost.

5.123 The impact of Sixth Pay Commission has been dealt with separately in the subsequent sections of this order.

Administrative and General (A&G) Expenses

5.124 The summary of A&G expenses approved by the Commission for the Control Period in the First APR Order on the basis of approved True-up for FY08 is shown below:

Table 95: Approved A&G Expenses for the Control Period (Rs Cr)

Particulars	FY10	FY11
Index(n)/ Index (n-1)	1.0511	1.0518
Total A&G Cost Approved	**39.13**	**41.16**
Less: Capitalisation	4.63	5.18
Net A&G Cost approved	**34.50**	**35.98**

5.125 Hence, for FY10 and FY11, the Commission has approved Rs 39.13 Cr and Rs 41.16 Cr respectively as A&G expenses.

Repairs and Maintenance (R&M) Expenses

5.126 The summary of R&M Expenses approved by the Commission for the Control Period in the First APR Order is as shown below:

Table 96: Approved R&M Expenses for the Control Period (Rs Cr)

Particulars	FY10	FY11
GFA (Opening)	4130.84	4977.54
K Factor	0.93%	0.93%
R&M Expenses	**38.54**	**46.44**

5.127 Therefore, the Commission approves Rs 38.54 Cr for FY10 and Rs 46.44 Cr for FY11 as R&M Expenses.

Periodic Review and True up of O&M Expenses

5.128 As per the MYT Regulations, O&M expenses (viz. Employee expenses, A&G expenses and R&M expenses) is a controllable factor and hence the O&M expenses projected for the Control Period, as per the methodology specified in the MYT Regulations, 2007 are not subjected to truing-up in the ARR. Further, any surplus or deficit on account of O&M expenses shall be to the account of the licensee and shall not be trued up in ARR.

Impact of the Sixth Pay Commission

5.129 The Board had submitted its projections of the impact of the Sixth Pay Commission recommendations as shown in Table 11 of Chapter A2. In order to conduct due verification of the claimed expenditure, the Commission directed the Board to submit a detailed working of all the expenses claimed under the head of Sixth Pay Commission.

5.130 Subsequently, the Board submitted the detailed working of all the expenses claimed on account of Sixth Pay Commission. The Board gave details of arrears on account of revision of pay scale of existing employees including impact of new recruitments on contract/regular basis, revision of DA, revised pension expenditure/liabilities including gratuity and commutation liabilities, and the net liability of overall arrears due to the Sixth Pay Commission.

5.131 The working as submitted by the Board is summarized in Table 97 and Table 98 given below.

5.132 The Board has submitted that the total amount payable on account of revision in basic pay applicable since December 1, 2009 and consequently the Dearness Allowance (DA) of existing employees comes to a total of Rs 203.62 Cr. The computation involved in arriving at this amount, as provided by the Board, is shown in Table 97 below.

5.133 Further, the Board has provided the amount of total liabilities outstanding on account of revision in pension expenditure including gratuity and commutation liability to be Rs. 278.69 Cr, as shown in Table 98 below.

5.134 Hence, the total claim of the Board on account of the Sixth Pay Commission comes to Rs. 482.31 Cr.

Table 97: Board's submission of amount payable on account of revision of pay scale due to 6th Pay Commission (Rs. Cr)

Emoluments Drawn (Rs. Cr)						Emoluments payable on revision of pay scale (Rs. Cr)					
Year	Basic Pay	Dearness Pay	Interim Relief (I.R.)	Total D.A.	Total	Pay by multiplying 1.86% with basic pay	27% hike in basic pay for the purpose of grade pay	Total pay	D.A.	Impact of increment in pay & DA	Difference (Amount payable)
FY06 (January – March 2006)	42.45	21.23		15.28	78.96	78.96	21.32	100.28	0.00	100.28	**21.32**
FY07	177.02	93.80	13.44	83.58	367.84	329.26	88.90	418.16	10.45	428.61	**60.77**
FY08	187.60	93.80	19.77	117.61	418.78	348.94	94.21	443.15	39.89	483.04	**64.26**
FY09	170.93	90.93	35.42	152.07	449.35	317.93	85.84	403.77	66.62	470.39	**21.04**
FY10 (April – November 2009)	121.63	60.81	36.49	118.22	337.15	226.23	61.08	287.31	72.19	359.50	**22.35**
FY10 (December 2009 – March 2010)	60.81	30.40	18.24	59.10	168.55	113.11	30.54	143.65	38.79	182.44	**13.89**
Total FY10	182.44	91.21	54.73	177.32	505.70	339.34	91.62	430.96	110.98	541.94	**36.24**
TOTAL	**760.44**	**390.97**	**123.36**	**545.86**	**1820.63**	**1414.42**	**381.89**	**1796.31**	**227.94**	**2024.25**	**203.62**

Table 98: Board's submission of total liabilities outstanding on account of revision in pension, gratuity & commutation liabilities (Rs. Cr)

Year	Actual Pension Expenditure	Actual Gratuity	Total Actual Expenditure	Pension Liabilities	Gratuity & Commutation Liability	Total Liabilities
1-1-2006 to 31-3-2006	28.66	5.52	34.18	10.00	5.00	15.00
2006-07	88.28	22.27	110.55	40.00	19.75	59.75
2007-08	100.92	23.82	124.74	40.00	24.00	64.00
2008-09	115.58	22.93	138.50	40.00	30.00	70.00
2009-10	129.00	24.20	153.20	30.00	39.94	69.94
Total	**462.44**	**98.74**	**561.17**	**160.00**	**118.69**	**278.69**

5.135 The Commission has analysed the data furnished by the Board with respect to the payout on account of the Sixth Pay Commission and has observed that the information supplied by the Board is inconsistent. Hence, the Commission has provisionally worked out the impact of the Sixth Pay Commission on account of the following:

(a) Impact of IR over and above the 5% base IR already considered in the base employee cost in the First APR Order.

(b) Impact of revision in pay scale effective from December 2009

(c) Impact of the GoHP Finance (Pay Revision) Department Order dated March 19, 2010 whereby an amount up to Rs. 10,000, out of the pay arrears accrued on account of revision of pay scales, may be paid by the Board to employees in month of March, 2010. In case of employees who have retired from Government service and employees who are covered under the Contributory Pension Scheme, the arrears may be paid in cash after deducting the income tax.

(d) Impact of GoHP Finance (Pension) Department Order dated March 29, 2010 whereby 10% of the pension/ family pension arrears accrued to pre-2006 pensioners/ family pensioners w.e.f. January 1, 2006 to September 30, 2009 on account of revision of pension/family pension, may be released by the Board at the earliest.

(e) Impact on account of payout of commutation and gratuity benefits to pensioners who retired post January 2006.

5.136 The Commission has provisionally worked out the impact on account of revision in pay scale in FY11 to be Rs. 57.31 Cr, and impact on account of revision in IR to be Rs. 47.66 Cr. Further, the Commission allows Rs. 27 Cr to the Board on account of the GoHP Orders dated March 19, 2010 and March 29, 2010 and an additional Rs. 36.85 Cr in order to meet a part of the commutation, gratuity and pension liabilities towards pensioners post January 2006. These expenses are allowed on a provisional basis and are subject to true-up based on actual payouts/audited accounts.

5.137 The summary of the provisional expenses allowed by the Commission on account of the Sixth Pay Commission is shown below.

Table 99: Summary of provisional expenses on account of Sixth Pay Commission allowed by the Commission (Rs. Cr)

Particulars	Commission's Allowance
Revision of pay scale and IR	47.66
Revision in pay scales in FY11	57.31
Terminal benefits	36.85

Particulars	Commission's Allowance
Arrears on account of GoHP Orders	27.00
Total	168.82

Special Provisions

5.138 The Commission has retained the provision for new recruitment during the Control Period and the provision for IT & Other initiatives (GIS/GPS based asset mapping, MIS implementation for centralized billing & CRM and CoS Study & segregation of accounts into Generation, Transmission and Distribution) being undertaken by the Board as approved in the MYT Order last year. The summary of approved expenses under these heads is shown as under:

Table 100: Provision for New Recruitment Approved for FY10 and FY11 (Rs. Cr)

Particulars	FY10	FY11
AEs		
Additions	93	0
Cumulative Additions	144	144
Salary per month (Rs)	20000	20000
Total Salary for the year (Rs Cr)	3.46	3.46
JEs		
Additions	0	0
Cumulative Additions	232	232
Salary per month (Rs)	15000	15000
Total Salary for the year (Rs Cr)	4.18	4.18
MBAs		
Additions	14	0
Cumulative Additions	14	14
Salary per month (Rs)	20000	20000
Total Salary for the year (Rs Cr)	0.34	0.34
Grand Total (Rs Cr)	7.97	7.97

Table 101: Provision for IT & other initiatives approved for FY10 and FY11 (Rs Cr)

Particulars	FY10	FY11
GIS/ GPS mapping	15.00	0.00
MIS implementation	7.50	0.38
CoS Study, Segregation of accounts etc	0.80	0.90
Total	23.30	1.28

5.139 The Commission has also approved the expense for implementation of Automatic Meter Reading (AMR) to encourage AMR as a step in the direction of creating

Advanced Metering Infrastructure (AMI) in the state. The approval of expense as submitted by the Board as per the indicated timelines for the implementation shall be Rs 6.91 Cr for FY10.

5.140 With regard to provision for public interaction, the Board has submitted a sum of Rs. 17.00 lakhs for FY10 and Rs. 40.69 lakhs for FY11. This provision is intended to cover the expenses incurred in the Board's outreach with the public in an attempt to spread more awareness regarding the Board's activities, functioning etc. The Commission observes that although the Board is required to submit a plan for allowance of new expenses at the beginning of the financial year, the Board made its submission for making a provision for public interaction only in February, 2010. Hence, the Commission has not allowed any provision for public interaction in the ARR for FY10. For FY11, however, the Commission has approved the Board's submission of Rs. 40.69 lakhs on this account.

Table 102: Provision for public interaction allowed by the Commission (Rs. Cr)

Particulars	FY10	FY11
Provision for public interaction	**0.00**	**0.41**

5.141 The Commission intends to develop a comprehensive Energy Efficiency and Demand Side Management (EE & DSM) plan for the power sector in the State of Himachal Pradesh. The EE & DSM plan would be supported by load research, load profiling, demand forecast for the next five years, preparation of benchmarks/ baseline data and regulations for DSM & EE for the State. On this account, the Commission approves Rs. 87 lakhs as expense on the EE & DSM programme initiated by the Commission, to be recovered as part of the Board's ARR in FY11.

Table 103 Provision for Demand Side Management programme allowed by the Commission (Rs. Cr)

Particulars	FY10	FY11
Provision for EE & DSM programme	**0.00**	**0.87**

5.142 The Commission would, however, true-up all the provisions detailed above at the end of each year of the Control Period, based on the actual expenditure incurred by the Board/ incurred on the project.

Capital Investment

5.143 The capital investment of the Board for the Control Period shall be the same as approved in the MYT Order, which however shall be trued up at the end of the Control Period based on the actual capital expenditure incurred by the Board.

5.144 A mid-term review of the capex plan approved for the control period, as shown in the table below, clearly indicates that the Board has slipped in utilizing the capex approved and the slippage has been particularly alarming with respect to transmission schemes. Though the Commission is not undertaking any revision of capex at this stage, in line with the MYT principles set out, it would take this opportunity to highlight that the poor performance by the Board with respect to capex is likely to affect its services and also put a question mark on its capabilities in implementing capital schemes, and the Commission would be well within its rights to prune the capex the Board may propose for the next control period, if it wishes to do so. Therefore, the Board needs to make all-out efforts to cover up for the slippage during the current year.

5.145 The table below shows the capital investment plan approved for FY09 and FY10 as part of the MYT Control Period and actual expenditure incurred by the Board thereof.

Table 104: Capital investment plan approved for FY09 and FY10 and expenditure incurred thereof

S.No.	Name of Project / Scheme	Total allocation for MYT		
		Allocation (Rs Cr)	**Expenditure during FY09 and FY10 (Rs Cr)**	**% Expenditure**
I.	**Generation Schemes**			
	Projects under HPSEB			
a)	Bhabha Aug. P/house	16	20.87	130.43%
b)	Ghaanvi-II	34.52	20.33	58.89%
c)	Completed Projects*	0	0	
d)	R/M of Power House	76.97	64.62	83.95%
e)	Survey & Investigation	67.02	17.43	26.01%
	IDC	15.33	0.00	
	Generation Total	**209.84**	**123.25**	**58.74%**
II.	**Transmission Schemes**	**593**	**61.13**	**10.31%**
III.	**Distribution Schemes**	**636.26**	**258.53**	**40.63%**
Total - I, II, III		1439.10	442.92	30.78%

** No allocation was made by the Commission for "Completed Projects" under Generation business. Therefore, the expenditure incurred by the Board on this account has been deducted from total expenditure.*

Asset capitalization

5.146 The asset capitalization for the Control Period shall be the same as approved in the MYT Order.

5.147 The Commission would like to highlight that the capitalization approved is provisional and the same would be subjected to true-up at the end of the Control Period.

Depreciation

5.148 The summary of the GFA & depreciation approved by the Commission for the Control Period is shown below:

Table 105: Approved GFA & Depreciation for the Control Period (Rs Cr)

Particulars	FY07	FY08	FY09	FY10	FY11
Opening	**2322.34**	**3375.29**	**3546.97**	**4130.84**	**4977.54**
Generation	723.68	1630.01	1630.01	1630.01	1730.53
Transmission	668.66	726.68	789.80	925.69	1145.18
Distribution	930.00	1018.60	1127.16	1575.14	2101.83
Addition	**1070.74**	**172.15**	**583.87**	**846.70**	**407.34**
Generation	906.33	0.00	0.00	100.52	0.00
Transmission	58.02	63.12	135.89	219.49	202.20
Distribution	106.39	109.03	447.98	526.69	205.15
Reduction	**17.79**	**0.47**	**0.00**	**0.00**	**0.00**
Generation	0.00	0.00	0.00	0.00	0.00
Transmission	0.00	0.00	0.00	0.00	0.00
Distribution	17.79	0.47	0.00	0.00	0.00
Closing	**3375.29**	**3546.97**	**4130.84**	**4977.54**	**5384.88**
Generation	1630.01	1630.01	1630.01	1730.53	1730.53
Transmission	726.68	789.80	925.69	1145.18	1347.38
Distribution	1018.60	1127.16	1575.14	2101.83	2306.97
Depreciation Rate					
Generation		2.50%	2.50%	2.50%	2.50%
Transmission		2.50%	2.50%	2.50%	2.50%
Distribution		2.50%	2.50%	2.50%	2.50%
Depreciation		**84.38**	**95.97**	**113.85**	**129.53**
Generation		40.75	40.75	42.01	43.26
Transmission		18.17	21.44	25.89	31.16
Distribution		**25.47**	**33.78**	**45.96**	**55.11**

Working Capital Requirement

5.149 The Commission has determined the working capital requirement for each of the three functions viz. generation, transmission and distribution separately. The working capital expense for generation, transmission and distribution functions has been determined by allowing one month of O&M expense, receivables' equivalent to two months of average billing and 40% of R&M expense of one month of the Board for maintenance spares respectively for each of the functions of the Board.

5.150 The Commission has added up the working capital requirement for all the three functions to determine the total working capital requirement of the Board for the Control Period. The summary of same is shown below:

Table 106: Working Capital Requirement approved for FY10 and FY11 (Rs Cr)

Particulars	FY10	FY11
Working Capital Approved for Generation	51.49	51.18
Working Capital Approved for Transmission	27.27	33.69
Working Capital Approved for Distribution	59.03	157.53
Total Working Capital Approved	137.79	242.40

Interest & Financing Charges

5.151 For the purpose of calculating the interest expenses for the Control Period at the time of issuing the First APR Order, the Commission prepared a source-wise loan schedule. For this, the Commission considered the outstanding loans at the end of FY08 as approved by the Commission in the True-up for FY08 and the repayment schedule of the respective loans in the Control Period.

5.152 The Commission analyzed the means of finance for all three functions separately and considered the following for approving the means of finance of the Board for the Control Period:

(a) As per the MYT Regulations, debt or equity would be allowed only on the capitalized assets and not on the capital works in progress. Thus, the Commission has considered the assets capitalized for each function in each year as the funding requirement for that year of the Control Period.

(b) The Commission has thereby reduced the consumer contribution from the funding requirement determined above. For this, the Commission has considered the consumer contribution submitted by the Board and has adjusted the same in the proportion of funding requirement approved by the Commission and that submitted by the Board.

(c) The balance has been considered to be funded through debt and/or equity. As per the MYT Regulations, the equity has been capped at a maximum of 30%; however, there is no cap on the debt funding. The Commission has analyzed the funding pattern of Board for the past projects and has observed that the most of the projects taken up by the Board have been funded entirely through debt. Thus, the Commission has considered 100% debt funding for the future projects as well. However, this is subject to true-up at the end of the control period.

5.153 The means of finance and debt requirement for each of the three functions viz. Generation, Transmission and Distribution stands at the same level as approved in the MYT Order, 2008. The summary of means of finance approved by the Commission for HPSEB as a whole is shown in the table below:

Table 107: Means of Finance approved by the Commission for FY10 and FY11 (Rs Cr)

Particulars	FY10	FY11
Funding Requirement	420.14	407.34
Less: Consumer Contribution	100.71	122.02
Balance Remaining	319.42	285.32
Funded through Debt	319.42	285.32
Funded through Equity	0.00	0.00

5.154 The summary of the loans approved (source wise) by the Commission for the Control Period taking into account the approved figures in True-up for FY08 is shown in the table below:

Table 108: Loan Schedule approved for the Control Period (Rs Cr)

Closing Balance	FY07	FY08	FY09	FY10	FY11
LIC					
Opening	24.78	20.66	16.61	12.76	9.44
Addition	0.00	0.00	0.00	0.00	0.00
Repayment	4.11	4.06	3.84	3.33	3.33
Closing	20.66	16.61	12.76	9.44	6.11
PFC					
Opening	807.20	804.27	744.25	658.46	577.02
Addition	14.37	13.09	3.96	3.74	0.00
Repayment	17.29	73.11	89.74	85.19	90.57
Closing	804.27	744.25	658.46	577.02	486.45
REC					
Opening	126.16	155.21	212.72	170.90	134.12
Addition	57.34	80.59	0.00	0.00	0.00
Repayment	28.29	23.09	41.82	36.77	19.57
Closing	155.21	212.72	170.90	134.12	114.56
RGGVY					
Opening	0.00	0.75	0.75	0.67	0.60
Addition	0.75	0.00	0.00	0.00	0.00
Repayment	0.00	0.00	0.07	0.07	0.07
Closing	0.75	0.75	0.67	0.60	0.52
Bank Loan					
Opening	255.56	250.21	371.44	175.00	127.00
Addition	0.00	300.00	0.00	0.00	0.00
Repayment	5.35	178.76	196.45	48.00	48.00
Closing	250.21	371.44	175.00	127.00	79.00

Closing Balance	FY07	FY08	FY09	FY10	FY11
Non NSLR Bonds					
Opening	762.38	333.61	333.61	267.79	201.97
Addition	0.00	0.00	0.00	0.00	0.00
Repayment	428.77	0.00	65.82	65.82	87.76
Closing	333.61	333.61	267.79	201.97	114.21
State Govt Loans					
Opening	20.13	20.13	18.40	17.35	16.30
Addition	0.00	0.00	0.00	0.00	0.00
Repayment	0.00	1.73	1.05	1.05	1.05
Closing	20.13	18.40	17.35	16.30	15.25
Market Bonds					
Opening	35.49	35.49	29.99	23.31	10.00
Addition	0.00	0.00	0.00	0.00	0.00
Repayment	0.00	5.50	6.68	13.31	4.50
Closing	35.49	29.99	23.31	10.00	5.50
Short Term Loans					
Opening	0.00	0.00	3.12	1.52	0.0
Addition	0.00	3.12	0.00	0.00	0.0
Repayment	0.00	0.00	1.60	1.52	0.0
Closing	0.00	3.12	1.52	0.0	0.0
New loans taken for Capex					
Opening		0.0	0.0	94.41	371.40
Addition		0.0	104.90	319.42	285.32
Repayment		0.0	10.49	42.43	70.96
Closing		0.0	94.41	371.40	585.76
Total (Closing)					
Opening	2031.69	1620.33	1730.88	1422.18	1447.85
Addition	72.45	396.80	108.86	323.16	285.32
Repayment	483.82	286.25	417.57	297.49	325.81
Closing	1620.33	1730.88	1422.17	1447.85	1407.36

5.155 For approving the Interest and Financing charges for the Control Period, the Commission has considered the following:

(a) For calculation of interest charges, the Commission has considered the interest rate of the respective loans. The interest on new loans has been considered at 10.25% and the interest on working capital loans has been considered at 12.25%.

(b) For capitalization of Interest expenses for the Control Period, the Commission has considered the capitalization of interest expenses proposed by the

Petitioner and has adjusted the same in the ratio of approved capital works in progress (CWIP) and that proposed by the Petitioner.

5.156 Based on the loans and interest rates approved for the Control Period, the interest and financing charges approved by the Commission are tabulated below:

Table 109: Interest Charges approved for FY10 and FY11 (Rs Cr)

Particulars	FY10	FY11
LIC	1.00	0.70
PFC	58.03	50.01
REC & RGGY	15.02	12.25
Bank Loan	13.52	9.20
Non NSLR Bonds	24.28	16.43
State Govt Loans	1.96	1.83
Market Bonds	1.94	0.92
Short Term Loans	0.07	0.0
New loans for Capex	23.87	49.05
Interest on Consumer Deposit	5.21	5.73
Interest on Working Capital	16.88	29.69
Total Interest Charges	**161.78**	**175.82**
Less: Capitalisation	14.73	0.00
Net Interest Charges Approved	147.06	175.82

Return on Equity

5.157 For FY09, the audited accounts submitted by the Board show the equity capital of the Board at Rs 372.23 Cr. However, from the analysis of the audited accounts, the Commission observed that the increase in equity contribution is on account of the Himachal Pradesh Government’s share of Rs. 69.84 Cr in equity participation of Uhl-III HEP and Sawra Kuddu HEP which have been transferred to Beas Valley Corporation Ltd. and HP Power Corporation Ltd. respectively, which has resulted in overstatement of equity as well as investment and this has been pointed out by the CAG as well.

5.158 Hence, for determining the return on equity for FY10 and FY11, the Commission has retained the overall equity base for the Board at Rs. 297.27 Cr as approved in the First APR Order.

5.159 The Commission has approved ROE to the generation, transmission and distribution businesses based on the true-up done for FY09, at the rate of 14%, 14% and 16%, respectively, in accordance with its Tariff Regulations, as detailed in the table below:

Table 110: Approved ROE for the Control Period (Rs Cr)

Particulars	FY10	FY11
Equity	**297.27**	**297.27**
Generation	108.27	108.27
Transmission	79.05	79.05
Distribution	109.95	109.95
Rate		
Generation	14.00%	14.00%
Transmission	14.00%	14.00%
Distribution	16.00%	16.00%
Approved ROE	**43.82**	**43.82**
Generation	15.16	15.16
Transmission	11.07	11.07
Distribution	17.59	17.59

Non Tariff Income (NTI)

5.160 The non tariff income approved by the Commission for FY10 and FY11 has been kept at the same level as approved in the First APR Order.

Table 111: Approved NTI for the Control Period (Rs Cr)

Particulars	FY10	FY11
Interest Income from Investments	0.00	0.00
Interest on loans and Advances to staff	0.77	0.81
Interest on Advances to Suppliers / Contractors	0.04	0.04
Income from Trading (other than Electricity)	1.25	1.32
Income/Fee/Collection against staff welfare activities	0.04	0.05
Miscellaneous receipts	39.66	41.64
Delayed payment charges from consumers	7.83	8.22
Meter Rent	31.81	33.40
Recovery from theft of energy	4.16	4.16
Wheeling charges	41.40	43.47
Misc. charges from consumers	3.66	3.84
Total NTI	130.61	136.93

Baspa Arrears

5.161 HPSEB is liable to pay arrears to M/s Jaiparkash Hydro Power Ltd. on account of revision in tariff for Baspa II HEP. The Commission has provisionally considered Rs

90 Cr towards payment of arrears in FY11, which shall be subject to true-up based on the audited accounts.

Aggregate Revenue Requirement of HPSEB

5.162 The table given below provides a summary view of the Aggregate Revenue Requirement as approved by the Commission for the Control Period.

Table 112: Approved ARR for the Control Period (Rs Cr)

Particulars	FY10	FY11
Power Purchase Expenses	1146.26	1330.23
PGCIL Charges	144.04	154.53
Baspa Arrears	0.00	90.00
Operation & Maintenance Costs	739.01	783.06
Impact of Sixth Pay Commission	0.00	168.82
Provision for New Recruitments	7.97	7.97
Provision for IT & Other Initiatives	23.30	1.28
Provision for Public interaction	0.00	0.41
Provision for EE & DSM Programme	0.00	0.87
Provision for AMR	6.91	0.00
Interest & Financing Charges	161.78	175.82
Depreciation	113.85	129.53
AAD	0.00	0.00
Return on Equity	43.82	43.82
Less: Capitalisation	75.02	61.56
Less: Non Tariff Income	130.61	136.93
Net True up as per FY09 True-up	(288.42)	-
Aggregate Revenue Requirement	**1892.89**	**2687.84**

Segregation of ARR for the Control Period

5.163 The Commission had carried out the exercise of determination of ARR for the Generation, Transmission and Distribution business of the Board as it is a prerequisite for implementation of the Multi Year Tariff regime. As the Board is a bundled entity the accounts are maintained for the Board as a whole and separate account for the three functions, namely, Generation, Transmission and Distribution are not maintained. Hence, the segregation of assets, liabilities, cost and revenues to the three functions is very much dependent on the availability of right data and prudent judgment. The segregation of assets, liabilities, cost and revenues to the three functions will only be possible once the Board puts in place separate accounting system for the three functions or is unbundled into three separate entities.

5.164 Thus, the Commission has first determined and approved the ARR for total HPSEB as a whole and thereby allocated the total ARR into Generation, Transmission and

Distribution functions.

5.165 The Commission has used the following approach while determining the ARR for Generation, Transmission and Distribution functions.

5.166 The Commission has not determined the revised ARR for each generating stations separately and then aggregating the same. The Commission shall re-determine the plant-wise generation cost after the unbundling of the Board and the successor generation entity files for the plant-wise ARR.

5.167 The Commission observes that the Board has tried to sneak in tariff petitions for Larji and Khauli generating stations, as part of the response submitted on February 5, 2009, to the deficiencies pointed out by the Commission. The Commission has already directed the Board on several occasions to submit separate and proper tariff petitions for these two Hydro Generating Plants, as per the MYT Regulations and Conduct of Business Regulations, which would be thereafter put in public domain and heard, since consumer interest is involved in view of the very high cost of these two plants.

5.168 For determining the ARR for generation, transmission and distribution function the Commission has considered the following:

(a) **Power Purchase**: Power purchase costs have been fully allocated to Distribution business.

(b) **O&M Expenses**: The Commission has arrived at the O&M expenses for the generation business by apportioning the increase/decrease in each component of revised O&M expenses for the Control period (with respect to the approved O&M expenses in last MYT Order) to the approved O&M expenses for generation function in the last MYT Order in the ratio of weights of individual components of O&M expenses to the overall O&M expenses as approved in the MYT Order. For allocating the O&M expenses into transmission and distribution business, the Commission has first reduced the O&M expenses allocated to generation from the total O&M expenses approved and has allocated the balance using the following methodology:

(i) **Employee Expenses**: Employee expenses have been allocated between transmission and distribution in the same ratio as proposed by the Petitioner in its petition.

(ii) **R&M Expenses**: R&M expenses have been allocated between transmission and distribution in the ratio of assets allocated into transmission and distribution business for each year of the Control Period.

(iii) **A&G Expenses**: A&G expenses have been allocated between transmission and distribution in the same ratio as proposed by the Petitioner in its petition.

(c) **Interest & Finance Charges**: Interest & Finance charges have been allocated in principle of allocated loans (scheme-specific) and based on the loans allocated their respective repayment schedule and interest rates; the Commission has determined the interest charges. For new loans taken during the Control Period, the Commission has considered the investment plan and capitalization schedule of the respective functions.

(d) **Depreciation**: Gross Fixed Assets & depreciation have been allocated to various functions on the basis of the Audited Accounts for FY09 and the capitalization schedule of the capital expenditure plan.

(e) **Return on equity**: The total equity of the Board was considered for the control period is Rs. 297.27 Cr. The Commission has first determined the amount of equity invested in the generation business and the rest has been allocated to transmission and distribution functions in the ratio of the asset base of the respective functions in FY07.

(f) **Special Provisions**: The special provisions made for new recruitments, public interaction, EE & DSM Programme and IT & other initiatives in the total ARR of HPSEB have been fully allocated to the distribution business.

(g) **Impact on account of Sixth Pay Commission in FY11**: The impact on account of the Sixth Pay Commission recommendations (Interim Relief ,revised pay scale, pension benefits) has been allocated among the three functions viz. Generation, Transmission and Distribution, in the same proportion as the allocation of employee cost among the three functions.

(h) **Non Tariff Income**: Non Tariff income has been fully allocated to the distribution business.

(i) **Consumer Contribution**: Consumer contribution and interest on security deposits has been fully allocated to the distribution business.

5.169 The Commission would like to highlight that the ARR approved for Generation, Transmission and Distribution functions are based on certain assumptions as the accounts of HPSEB are not segregated and that the Commission would true up or revisit the ARR of all the three functions once the accounts are segregated and/or the Board is unbundled and the successor entities of the Board come with the review petitions for the same.

Approved Total Generation ARR/AFC

5.170 The revised approved aggregate generation ARR is shown in the table below. Considering the total loan repayment and the accumulated depreciation for the total generation business, there is no requirement for providing for AAD in FY10 and FY11.

Table 113: Total Generation ARR/AFC

Particulars	Units	FY10	FY11
Gross Generation	MU	1804.14	1940.74
Total Auxiliary	MU	19.49	20.43
Net Generation at Bus	MU	1784.65	1920.30
Less: Free Power to GoHP	MU	91.79	95.86
Energy available for Sale	**MU**	**1692.86**	**1824.45**
Operation & Maintenance Costs	Rs Cr	63.59	66.37
- Employee Cost	Rs Cr	*48.87*	*51.00*
- R&M Cost	Rs Cr	*6.34*	*6.64*
- A&G Cost	Rs Cr	*8.37*	*8.73*
Impact of Sixth Pay Commission	Rs Cr	0.00	12.38
Interest & Financing Charges	Rs Cr	81.70	73.67
Depreciation	Rs Cr	42.01	43.26
AAD	Rs Cr	0.00	0.00
Total Expenditure	Rs Cr	**187.30**	**195.68**
Return on Equity	Rs Cr	15.16	15.16
Less: Capitalisation	Rs Cr	0.80	2.97
Aggregate Revenue Requirement	**Rs Cr**	**201.66**	**207.88**

Aggregate Revenue Requirement (ARR) of Transmission Business

5.171 The table given below provides a summary view of the Aggregate Revenue Requirement of Transmission business as approved by the Commission for the Control Period.

Table 114: Approved ARR of Transmission business for the Control Period (Rs Cr)

Particulars	FY10	FY11
Operation & Maintenance Costs	71.61	74.73
Impact of Sixth Pay Commission	0.00	13.46
Interest & Financing Charges	26.10	38.10
Depreciation	25.89	31.16
Return on Equity	11.07	11.07
Less: Interest & Expenses Capitalised	9.23	6.56
Aggregate Revenue Requirement	**125.42**	**161.95**

Transmission Charges

5.172 Based on the ARR approved for transmission function, the Commission has determined the transmission charges for the Control Period as per the methodology specified in the MYT Regulations, 2007. The summary of the approved transmission charges for the Control Period is shown below:

Table 115: Approved Transmission Charges for the Control Period

Particulars	FY10	FY11
Transmission ARR (Rs Cr)	125.42	161.95
Capacity (MW)[10]	2023.10	2077.38
Transmission Charges (Rs/MW/Month)	51,661.83	64,967.43

5.173 The Annual Transmission Service Charge (ATSC) shall be divided between Beneficiaries of the Transmission System on monthly basis based on the Allotted Transmission Capacity or Contracted Capacity, as the case may be and the transmission losses would be borne by the beneficiary(ies).

5.174 The charges from short term open access customers, if any, shall be recovered in line with the provisions mentioned in the MYT Regulations.

5.175 The transmission service charge shall be recovered fully, only if the transmission system availability is above 98%, as specified in the MYT Regulations. The charges shall be recovered on a pro rata basis in case the availability is lower than the target level.

Aggregate Revenue Requirement (ARR) of Distribution Business

5.176 The table given below provides a summary view of the Aggregate Revenue Requirement of Distribution business as approved by the Commission for the Control Period.

Table 116: Approved ARR of Distribution business for the Control Period (Rs Cr)

Particulars	FY10	FY11
Power Purchase Expenses	1347.91	1538.10
PGCIL Charges	144.04	154.53
Transmission Charges	125.42	161.95
Baspa Arrears	0.00	90.00
Operation & Maintenance Costs	603.81	641.97
- Employee Cost	*557.76*	*589.01*
- R&M Cost	*20.28*	*25.76*
- A&G Cost	*25.77*	*27.20*
Impact of Sixth Pay Commission	0.00	142.98
Provision for New Recruitments	7.97	7.97

[10] Contracted Capacity which includes total of own generation, PPAs and share in various projects.

Particulars	FY10	FY11
Provision for IT & Other Initiatives	23.30	1.28
Provision for AMR	6.91	0.00
Provision for Public Interaction	0.00	0.41
Provision for EE & DSM Programme	0.00	0.87
Interest & Financing Charges	53.99	64.05
Depreciation	45.96	55.11
Return on equity	17.59	17.59
Less: Non Tariff Income	130.61	136.93
Less: Capitalisation of Interest & Expenses	64.99	52.04
Net True up as per FY09 True-up	(288.42)	-
Aggregate Revenue Requirement	**1892.89**	**2687.84**

Allocation of Distribution ARR into Wheeling and Retail Supply

5.177 As per the MYT Regulations, 2007, the total Distribution ARR for the Control Period has to be allocated between Wheeling and Retail Supply business. The wheeling charges would be calculated on the Wheeling ARR and the Retail Tariffs would be calculated on the Retail Supply ARR.

5.178 The Commission has allocated the Distribution ARR into Wheeling and Retail Supply business by considering the following allocation:

Table 117: Allocation of ARR of Distribution business for the Control Period

Particulars	Wheeling	Retail Supply
Power Purchase Expenses	0%	100%
Transmission Charges	0%	100%
Baspa Arrears	0%	100%
Employee Expenses	70%	30%
R&M Expenses	90%	10%
A&G Expenses	60%	40%
Provision for New Recruitments	100%	0%
Provision for IT & Other Initiatives	0%	100%
Provision for AMR	0%	100%
Provision for Public Interaction	0%	100%
Provision for EE & DSM Programme	0%	100%
Interest & Financing Charges (other than interest on working capital)	100%	0%
Depreciation	100%	0%
Return on Equity on Wheeling Business	100%	0%
Supply Margin	0%	100%
Non Tariff Income (excluding wheeling	0%	100%

Particulars	Wheeling	Retail Supply
charges received from other states)		
Wheeling charges received from other states	**100%**	**0%**

5.179 The summary of Wheeling and Retail Supply ARR for the Control Period is shown below:

Table 118: Approved ARR of Wheeling business for the Control Period (Rs Cr)

Particulars	FY10	FY11
Operation & Maintenance Costs	424.15	451.81
Impact of Sixth Pay Commission	0.00	100.09
Provision for New Recruitments	7.97	7.97
Interest & Financing Charges	53.99	61.97
Depreciation	45.96	55.11
Return on Equity	15.39	15.39
Less: Non Tariff Income	41.40	43.47
Less: Capitalisation of Interest & Expenses	48.90	36.15
Aggregate Revenue Requirement	**457.16**	**612.72**

Table 119: Approved ARR of Retail Supply business for the Control Period (Rs Cr)

Particulars	FY10	FY11
Power Purchase Expenses	1347.91	1538.10
PGCIL Charges	144.04	154.53
Transmission Charges	125.42	161.95
Baspa Arrears	0.00	90.00
Operation & Maintenance Costs	179.67	190.16
Impact of Sixth Pay Commission	0.00	42.89
Provision for New Recruitments	0.00	0.00
Provision for IT & Other Initiatives	23.30	1.28
Provision for AMR	6.91	0.00
Provision for Public interaction	0.00	0.41
Provision for EE & DSM Programme	0.00	0.87
Interest & Financing Charges	0.00	2.08
Supply Margin	2.20	2.20
Less: Non Tariff Income	89.21	93.47
Less: Capitalisation of Interest & Expenses	16.08	15.89
Net True Up as per FY09 True up Order	(288.42)	
Aggregate Revenue Requirement	**1435.74**	**2075.12**

Wheeling Charges

5.180 Based on the ARR approved for Wheeling business, the Commission has determined the Wheeling charges for the Control Period as per the methodology specified in the MYT Regulations, 2007. The summary of the approved Wheeling charges for the Control Period is shown below:

Table 120: Approved Wheeling Charges for the Control Period

Particulars	FY10	FY11
Wheeling ARR (Rs Cr)	457.16	630.38
Energy Sales (MU)	5676.33	6082.48
Wheeling Charges (Paisa/unit)	80.54	100.73

5.181 The above charges are applicable to all consumers connecting to distribution network and the distribution losses approved by the Commission would be borne by the beneficiary in kind.

A6: TARIFF PHILOSOPHY & DESIGN

Cost to Serve

6.1 In this section, the Commission has elaborated on the detailed methodology and assumptions used for determination of the cost of supply.

6.2 In the earlier Tariff Orders, the Commission has consistently made an effort to reduce the extent of cross-subsidies in the system by reducing the differential between the average revenue realisation and the cost of supply at the respective voltage level. The Commission has also tried to ensure that no consumer category is subject to a tariff shock and has thus attempted to reduce cross-subsidies in a gradual manner.

6.3 The tariffs proposed by the Board in its ARR petition have little scientific basis as they are neither based on average cost nor on voltage wise cost of supply.

6.4 The Commission has developed a Cost to Serve Model based on information provided by the Board. In subsequent sections, the method of computation of the cost-of-supply for FY11 has been explained, along with details of the assumptions taken by the Commission.

6.5 The Commission in the previous tariff orders has given directions to the Board to submit relevant data to enable computation of the voltage level cost of supply in a more scientific and robust manner, the Board has however not submitted any additional data accordingly, the Commission has had to apply its own basis and assumptions to determine the voltage level cost of supply. It would be pertinent to point out that the in light of the discussion above, the Commission may review the Cost to Serve Model for the next control period.

Assumptions

6.6 The Commission has considered the following assumptions:

(a) Energy Input: Only the energy input into the state transmission system is considered for intra-state consumption. Hence, the Commission has not considered energy sale outside the state for its cost-of-supply computation.

(b) Energy flows through each voltage level to reach Low-Tension (LT) consumer. So the losses and costs at higher voltages are shared at lower voltages. This assumption was made due to lack of load flow study information and accurate power flow diagram outlining the flow of energy from one voltage to another.

(c) Category-wise sales have been allocated to different voltages proportionately based on past information, except for categories where sales data at different voltages is available, such as Large Industrial Power, Water and Irrigation Pumping, and Bulk Supply.

(d) As the Board has failed to submit authentic information on losses at different voltage level, the losses at EHT level have been estimated at 3.71%, similar to the past year. The overall losses in the Board system for sales within the state have been benchmarked at 12.49% for FY11. Losses at 11 kV and above (HT) have been considered as 7.50% and resultant losses at voltage levels below 11 kV (LT) have been estimated at 9.25%.

(e) Data on cost segregation across voltage levels and consumer category wise is not available with the Commission. Hence, segregation has been done based on information provided by the Board in the past.

Methodology

6.7 Power Cost - The unit cost of generation and power purchase has been determined by dividing the total generation and power purchase cost with the total energy input into the system for the state's own consumption.

6.8 Cost of Supply to consumers at 66 kV and above has been determined by allocating the losses and cost according to the sales in this network (66 kV and above) and power wheeled through this network. Similarly, losses have been apportioned according to the sale at this level and the power wheeled through this system.

6.9 Cost of Supply to consumers at High Tension (11 kV and above) has been estimated by allocating costs and losses according to the sales to HT consumers and power wheeled to reach the LT network. It also proportionally includes the cost and losses incurred during the wheeling of power at 66 kV and above network.

6.10 Cost of Supply for the consumers at Low Tension (below 11 kV) level has been estimated by ascertaining the distribution cost (below 11 kV), losses (below 11 kV) and sales to LT consumers. It also includes the proportional costs (and losses) incurred for wheeling the power at higher voltage levels (from 220 kV till 11 kV).

Sales at various voltage levels

6.11 The sales at various voltage levels have been estimated based upon assumptions mentioned above, and are reproduced in the table below:

Table 121: Sales at Different Voltage Levels (MU)

S. No	Category	Total Sales (MU)	EHT (≥66kV)	HT (>11kV)	LT (<11kV)
1	Domestic	1155.10	0.00	0.00	1155.10
2	NDNCS	78.76	0.00	23.63	55.13
3	Commercial	306.32	0.00	45.95	260.38

S. No	Category	Total Sales (MU)	EHT (≥66kV)	HT (>11kV)	LT (<11kV)
4	Small & Medium Industrial Power	179.97	0.00	0.00	179.97
5	Large Industrial Power Supply (LIPS)	3642.06	1404.21	2237.85	0.00
6	Water and Irrigation Pumping	445.13	0.00	123.64	321.50
7	Street Lighting	12.54	0.00	0.00	12.54
8	Bulk supply	235.31	0.00	150.32	84.99
9	Temporary Supply	27.27	0.00	0.00	27.27
	Total (inside State)	**6082.48**	**1404.21**	**2581.38**	**2096.89**

Losses at various voltage levels

6.12 As discussed earlier, the losses at each voltage level have been assessed on the basis of certain assumptions. The losses at each voltage level are brought out in the table below:

Table 122: T&D Losses at Different Voltage Levels

S. No	Particulars	T&D Loss (MU)
1	66 kV and above (EHT)	257.87
2	11 kV and above (HT)	396.64
3	Below 11 kV (LT)	213.62
	Total	868.13

Cost Segregation

6.13 All the costs are divided into Generation, Transmission, and Distribution, in the following manner.

(a) **Generation and Power purchase cost:** The Commission has considered the approved generation and power purchase cost at Rs 1782.64 Cr.

(b) **Transmission cost:** The Commission has approved transmission cost of Rs. 166.95 Cr, (Transmission ARR of Rs 161.95 Cr plus Rs 5 Cr towards metering, billing and collection which is reflected in the distribution cost). This cost has been apportioned to the sale to industrial consumers, the power wheeled through this system and loss incurred in this network.

(c) **Distribution cost:** For arriving at the CoS, the Commission has considered the distribution cost of Rs 738.25 Cr after deducting Rs 5 Cr towards the metering, billing and collection cost incurred for the consumers in the transmission system from the Wheeling and Retail Supply cost of Rs 743.25 Cr. The distribution cost has further been divided into HT and LT network costs, according to the proportion of sales in these networks.

Table 123: Cost Allocation

Cost Head	Energy Wheeled (Excluding Losses) (MU) A	Cost Allocation (Rs Cr) B	Unit Cost (Rs/Unit) (B/A*10)	Applicable Categories
Generation & Power Purchase cost	6950.61	1782.64	2.56	EHT, HT and LT
Transmission cost	6082.48	166.95	0.27	EHT, HT and LT
Distribution Cost ≥ 11 kV	4678.27	407.35	0.87	HT and LT
Distribution Cost < 11 kV	2096.89	330.90	1.58	LT
Total		2687.84		

Table 124: Loss Allocation

Loss	Energy Wheeled (MU) A	Loss (MU) B	Loss (%) C = (B/A)*100	Gen Cost*C (Rs/unit)	Applicable Categories
Transmission Loss	6082.48	257.87	4.24%	0.11	EHT, HT and LT
Distribution Loss (≥ 11 kV)	4678.27	396.64	8.48%	0.22	HT and LT
Distribution Loss (< 11 kV)	**2096.89**	**213.62**	**10.19%**	**0.26**	**LT**

6.14 The approved CoS at different voltage levels for determination of tariff is shown in the table below:

Table 125: Cost to Serve

S. No.	Particulars	Generation bus bar	EHT (≥66 kV)	HT (≥11 kV)	LT (<11 kV)	Total
1	Energy Input (MU)	6950.61	6950.61	5288.53	2310.51	
2	Loss (MU)		257.87	396.64	213.62	868.13
3	Sales at respective level (MU)	0.00	1404.21	2581.38	2096.89	6082.48
4	Cost at respective level (Rs Cr)	1782.64	166.95	407.35	330.90	2687.84
5	Generation and Power Purchase Cost (Rs/unit)	2.56				
6	**Cost Allocation (Rs/unit)**					
	Generation Cost		2.56	2.56	2.56	
	Transmission Cost		0.27	0.27	0.27	
	Distribution Cost (≥ 11 kV)			0.87	0.87	
	Distribution Cost (< 11 kV)				1.58	
7	**Loss Allocation (Rs/unit)**					
	Transmission Loss Allocation		0.11	0.11	0.11	
	Distribution Loss Allocation (≥11 kV)			0.22	0.22	
	Distribution Loss Allocation (<11 kV)				0.26	
8	**Cost of Supply (Rs/unit)**		**2.95**	**4.04**	**5.88**	**4.42***

**Rs 4.42 per unit is the average cost of supply*

Tariff Principles

6.15 The philosophy of tariff determination is primarily guided by the principles enshrined in Section 61 of the Electricity Act, 2003, Himachal Pradesh Electricity Regulatory Commission (Terms and Conditions for Determination of Tariff) Regulations, 2004 and the National Electricity Policy issued by Ministry of Power, GoI on February 12, 2005. The guiding principles as laid down in Section 61 of the Act are reproduced below:

(a) the principles and methodologies specified by the Central Commission for determination of the tariff applicable to generating companies and transmission licensees;

(b) the generation, transmission, distribution and supply of electricity are conducted on commercial principles;

(c) the factors which would encourage competition, efficiency economical use of the resources, good performance and optimum investments;

(d) safeguarding of consumers' interest and at the same time, recovery of the cost of electricity in a reasonable manner;

(e) the principles rewarding efficiency in performance;

(f) multi-year tariff principles;

(g) that the tariff progressively, reflects the cost of supply of electricity, and also reduces cross-subsidies;

(h) the promotion of co-generation and generation of electricity from renewable sources of energy;

(i) the National Electricity Policy and Tariff Policy.

6.16 Apart from these principles, the National Electricity Policy has also laid down emphasis on Multi-Year Tariff framework, segregation of technical and commercial losses, incentives for the use of pre-paid meters, putting in place the governance structure in distribution needed for ensuring recovery of cost of service from consumers, minimum level of support for consumers of poor categories, need to correct the imbalance on account of cross subsidy progressively and gradually without giving tariff shock to the consumers and above all, to promote competition which is the very essence of the Electricity Act. The National Electricity Policy also emphasizes that advance subsidy be given by the State Government as per Section 65 of the Act to the power utility and mentions that necessary budgetary provision be made in advance so that the utilities do not suffer financial problems. The Electricity Policy further mentions of the need to make efforts to ensure that subsidies reach the targeted beneficiaries in the most transparent and efficient way.

6.17 The Commission is guided by the principles as mentioned above. Based on the analysis of the cost to serve it is seen that the average cost of supply as determined for FY11 has increased considerably in comparison to the average cost of supply determined for FY10 in the First APR Order. The Commission observes that the average cost of supply for FY11 is Rs. 4.42 per unit, whereas the average realization from revenue at existing tariffs in FY11 is estimated to be only Rs. 3.42 per unit.

6.18 Further, at existing tariffs, the revenue gap of the Board as estimated by the Commission would be Rs. 411.46 Cr in FY11. The consolidated revenue gap for FY10 and FY11 at the end of the control period would stand at Rs. 225.08 Cr, if the existing tariff were retained.

Table 126 Projection of revenue in FY11 at Existing Tariff (Rs. Cr)

Category	Board's Submission	Commission's Analysis
Domestic	308.53	303.43
BPL		
NDNCS	42.77	36.62
Commercial Supply	153.76	148.19
Small & Medium Supply	71.94	68.90
Large Industrial Power Supply	1322.58	1,253.60
Water & Irrigation Pumping Supply	202.58	163.60
Street Lighting	4.46	4.56
Bulk Supply	82.94	86.13
Temporary Supply	20.27	17.65
Total	**2,209.85**	**2,082.68**

Table 127 Commission's Analysis of the Revenue-Expenditure position of the Board in FY10 and FY11 at Existing Tariff (Rs. Cr)

Parameters	FY10	FY11
Aggregate Revenue Requirement	2181.31	2687.84
Net true up for FY09 (Surplus)	(288.42)	
Revenue From Sale of Power within state	1954.84	2082.68
Revenue from sale of power outside state	124.43	193.70
Revenue Surplus/(Gap)	**186.38**	**(411.46)**
Cumulative Surplus/(Gap) for FY10 and FY11	**(225.08)**	

6.19 Hence, in view of the substantial revenue gap at existing tariff and in line with the increased cost of supply, the Commission has increased the tariff for FY11, taking into consideration the cross-subsidy levels for the various consumer categories.

6.20 The category-wise tariffs approved for FY11 are as follows:

Approved Tariff

DS: Domestic Supply

6.21 The existing schedule is applicable to consumers using electrical energy for lights, fans, heaters, cooking ranges, ovens, refrigerators, air conditioners, stereos, radios, televisions, mixers, grinders, electric iron, sewing/embroidery/knitting machines, domestic pumping sets and other domestic appliances in a single private house/flat or any other residential premises, religious places with connected load up to 5 kW, Monasteries, Panchayat Ghars and Patwarkhanas up to 2 kW, Orphanages, homes for old people and destitute, Working Women Hostels, Hostels attached to the educational institutions if supply is given separately to each hostel and the electricity charges are recovered from the students based on actual consumption, Leprosy Homes run by charity and un-aided by the Government and "Home Stay Units" in rural areas duly registered with the District Tourism Development Officer.

6.22 The Board has proposed the following for the consumers in the domestic category :

a) No increase in tariff for BPL consumers

b) Increase of 21% in energy charges for consumers consuming up to 150 units per month

c) Increase of 14% in energy charges for consumers consuming above 150 units per month

6.23 The comparison of existing tariff, tariff proposed by the Board and that approved by the Commission for domestic category is given below:

Table 128: Existing, Proposed and Approved Tariff for Domestic Category

Description	Existing		Proposed		Approved by Commission	
Units/month	Energy Charges (Rs./kWh)	Consumer Service Charges (Rs./con/month)	Energy Charges (Rs./kWh)	Consumer Service Charges (Rs./con/month)	Energy Charges (Rs./kWh)	Consumer Service Charges (Rs./con/month)
BPL Consumer (Up to 50 units per month)	1.80	Nil	1.80	Nil	1.80	Nil
0-150	1.90	25.00	2.30	25.00	2.20	25.00
Above 150	3.15	25.00	3.60	25.00	3.45	25.00
Pre-paid meter	1.90		-	-	2.20	

6.24 The applicable rebates and surcharges for this category have been detailed in Annexure II of this Order.

Non Domestic Non Commercial Supply

6.25 This schedule is applicable to Government and semi Government offices, Government Hospitals, Educational Institutions viz. Schools, Universities; I.T.Is, Colleges, Government Sports Institutions, Government Mountaineering Institutions and allied sports, Government Libraries, Centre for Institute of Engineers, Hostels and residential quarters attached to the educational institutions if supply is given at a single point; Religious places such as Temples, Gurudwaras, Mosques, Churches with connected load greater than 5 kW, Sainik and Government Rest Houses, Anganwari workers training centres; Mahila mandals, village community centers, Hospitals run on charity basis; Sarais and Dharamsalas run by Panchayats and Municipal Committees or on donations and those attached with religious places; and Panchayat Ghars and Patwar Khana greater than 2 kW.

NOTE: In the case of residences attached to the Government as well as private Institutions, the same shall be charged at the 'Domestic tariff' where further distribution to such residential premises is undertaken by the Board and the Board provides meters for individual consumers.

6.26 The Board has proposed to retain the current energy charges for the 0-20 kW slab, while proposing a hike of 40 Paisa per kVAh for the NDNCS slab above 20 kW.

6.27 The comparison of existing tariff, tariff proposed by the Board and that approved by the Commission is given in the tables below:

Table 129: Existing, Proposed and Approved Tariff for NDNCS Category (Up to 20kW)

Existing		Proposed		Approved by Commission	
Energy Charges (Rs./kWh)	Consumer Service Charges (Rs./con/mth)	Energy Charges (Rs./kWh)	Consumer Service Charges (Rs./con/mth)	Energy Charges (Rs./kWh)	Consumer Service Charges (Rs./con/mth)
4.05	60	4.05	60	4.45	60

Table 130: Existing, Proposed and Approved Tariff for NDNCS Category (Above 20kW)

Existing			Proposed			Approved by Commission		
Energy Charges Rs/kVAh	Consumer Service Charges (Rs/con/mth)	Demand Charge Rs/kVA/mth	Energy Charges Rs/kVAh	Consumer Service Charges (Rs/con/mth)	Demand Charge Rs/kVA/mth	Energy Charges Rs/kVAh	Consumer Service Charges (Rs/con/mth)	Demand Charge Rs/kVA/mth
3.30	120	100	3.50	120	100	3.70	120	100

6.28 The applicable rebates and surcharges for this category have been detailed in Annexure II of this Order.

Commercial Supply (CS)

6.29 This schedule is applicable to consumers for lights, fans, appliances like pumping sets, central air conditioning plants, cold storages, lifts, heaters, embroidery machines, printing press, power press and small motors in all Commercial premises such as shops, business houses, cinemas, clubs, banks, private offices, private hospitals, petrol pumps, hotels/motels, welding sets, service stations, private nursing homes, private rest/guest houses, private research institutions, private coaching institutions, private museums, dry cleaning, garages and private auditoriums, departmental stores, restaurants, lodging and boarding houses. This schedule will also include all other categories, which are not covered by any other tariff schedule.

6.30 The Board has retained the existing tariff structure in its petition and proposed to retain the energy charges for the 0-20 kW slab. For the two remaining slabs, the Board has proposed a hike of:

a) 40 Paisa per kVAh for the 20 kW-100 kW slab

b) 40 Paisa per kVAh for the above 100 kW slab

6.31 The existing tariff, tariff proposed by the Board and tariff approved by the Commission are given in the tables below:

Table 131: Existing, Proposed and Approved Tariff for CS Category (Up to 20kW)

Existing		Proposed		Approved by Commission	
Energy Charges (Rs./kWh)	Consumer Service Charges (Rs./con/mth)	Energy Charges (Rs./kWh)	Consumer Service Charges (Rs./con/mth)	Energy Charges (Rs./kWh)	Consumer Service Charges (Rs./con/mth)
4.30	60	4.30	60	4.60	60

Table 132: Existing, Proposed and Approved Tariff for CS Category (Above 20kW)

Slab	Existing			Proposed			Approved by Commission		
	Energy Charges Rs/kVAh	**Service Charges Rs/con/mth**	**Demand Charge Rs/kVA/mth**	**Energy Charges Rs/kVAh**	**Service Charges Rs/con/mth**	**Demand Charge Rs/kVA/mth**	**Energy Charges Rs/kVAh**	**Service Charges Rs/con/mth**	**Demand Charge Rs/kVA/mth**
20-100 kW	3.55	120	75	3.95	120	75	3.95	120	75
Above 100kW	3.35	240	100	3.75	240	100	3.75	240	100

6.32 In case of mobile welding sets, the consumer will pay Rs 200 per day, in addition to the energy charges.

6.33 The applicable rebates and surcharges for this category have been detailed in Annexure II of this Order.

Small and Medium Industrial Power Supply (SMS)

6.34 This schedule is applicable to Industrial consumers with connected load not exceeding 100 kW including pumps (other than irrigation pumping), poultry farms and sheds, Atta Chakkies, and also for supply to Information Technology Industry, limited only to IT Parks recognised by the State/Central Government. The Industrial type of

Agricultural loads with connected load falling in the above-mentioned range and not covered by Schedule "WIPS" shall also be charged under this schedule.

6.35 The Board has retained the existing tariff structure in its petition, along with the existing energy charges for the 0-20 kW slab. The Board has proposed an increase of 45 Paisa per kVAh for the above 20 kW slab.

6.36 The existing tariff, tariff proposed by the Board and tariff approved by the Commission are given in the tables below.

Table 133: Existing, Proposed and Approved Tariff for SMS Category (Up to 20kW)

Existing		Proposed		Approved by Commission	
Energy Charges (Rs./kWh)	Service Charges (Rs./con/mth)	Energy Charges (Rs./kWh)	Service Charges (Rs./con/mth)	Energy Charges (Rs./kWh)	Service Charges (Rs./con/mth)
3.70	60	3.70	60	3.70	60

Table 134: Existing, Proposed and Approved Tariff for SMS Category (Above 20kW)

Existing			Proposed			Approved by Commission		
Energy Charges (Rs/kVAh	Service Charges Rs/con/mth	Demand Charge Rs/kVA/mth	Energy Charges (Rs/kVAh	Service Charges Rs/con/mth	Demand Charge Rs/kVA/mth	Energy Charges (Rs/kVAh	Service Charges Rs/con/mth	Demand Charge Rs/kVA/mth
3.05	120	50	3.50	120	50	3.05	120	50

6.37 The applicable rebates and surcharges for this category have been detailed Annexure II of this Order.

6.38 All consumption for bona fide factory lighting, i.e., energy consumed in factory premises including factory building, its offices, stores, time keeper office, canteen, library, staff dispensary, welfare centre and factory yard lighting shall be charged under this tariff schedule. The consumption for bona fide use of residential/staff quarters and street lighting of the colony shall also be charged under this tariff schedule if the supply is not taken separately but taken at the same single supply point of the industry. Such consumption shall be charged for the energy consumed at the following rates, irrespective of whether the consumer has opted for peak time consumption or not:

(a) During normal times: normal rate

(b) During peak times: the PLEC rate

(c) During night time: the night time rate

6.39 If supply for colony lighting/ residences is taken separately than the same shall be charged as per the relevant category under this schedule of tariff.

Large Industrial Power Supply (LIP)

6.40 This schedule is applicable to all industrial power consumers with connected load exceeding 100 kW including the Information Technology industry (limited only to IT parks recognized by the State/Central Government) and not covered by the schedule "WIPS".

6.41 The Board has proposed the following in its petition:

(a) Increase of 160 Paisa in energy charges for EHT up to 300 kVAh/ kVA per month

(b) Increase of 155 Paisa in energy charges for EHT balance kVAh during the month

(c) Increase of 165 Paisa in energy charges for HT up to 300 kVAh/ kVA per month

(d) Increase of 140 Paisa in energy charges for HT balance kVAh during the month

6.42 The existing tariff structure and the tariffs proposed by the Board for the LIP categories are given in the table below:

Table 135: Existing, Proposed and Approved Tariff for Large Industrial Power Supply Category

Slab	Existing			Proposed			Approved by Commission		
	Energy Charges Rs/kVAh	Service Charges Rs/con/mth	Demand Charge Rs/kVA/mth	Energy Charges Rs/kVAh	Service Charges Rs/con/mth	Demand Charge (Rs/kVA/mth)	Energy Charges Rs/kVAh	Service Charges Rs/con/mth	Demand Charge (Rs/kVA/mth)
EHT									
Up to 300 kVAh/kVA/ month	2.20	350	185	3.80	350	185	2.60	350	185
Balance kVAh during the month	2.35	350	185	3.90	350	185	2.80	350	185
HT									
Up to 300 kVAh/kVA/ month	2.35	250	225	4.00	250	225	2.80	250	225
Balance kVAh during the month	2.50	250	225	3.90	250	225	3.00	250	225

6.43 The applicable rebates and surcharges for this category have been detailed Annexure II of this Order.

Bulk Supply

6.44 This schedule is applicable to general or mixed loads to M.E.S and other Military establishments, Railways, Central PWD Institutions, Hospitals, Departmental colonies, A.I.R Installations, Aerodromes, construction power to hydroelectric projects and other similar establishments where further distribution to various residential and non-residential buildings is to be undertaken by the consumers for their own bonafide use and not for resale to other consumers with or without profit. However, in case of MES, this schedule shall continue to apply till such time M.E.S. do not avail open access.

6.45 The Board has proposed a hike of 10 Paisa per kVAh in energy charges for LT consumers, 55 Paisa per kVAh for HT consumers and 45 Paisa per kVAh for EHT consumers.

6.46 The existing tariff, tariff proposed by the Board and tariff approved by the Commission is given in the table below:

Table 136: Existing, Proposed and Approved Tariff for Bulk Supply Category

Slab	Existing			Proposed			Approved by Commission		
	Energy Charges Rs/kVAh	Service Charges Rs/con/mth	Demand Charge Rs/kVA/mth	Energy Charges Rs/kVAh	Service Charges Rs/con/mth	Demand Charge Rs/kVA/mth	Energy Charges Rs/kVAh	Service Charges Rs/con/mth	Demand Charge Rs/kVA/mth
LT	3.55	120	200	3.65	120	200	4.05	120	200
HT	2.65	120	150	3.20	120	150	3.15	120	150
EHT	2.55	120	140	3.90	120	140	3.05	120	140

6.47 The applicable rebates and surcharges for this category have been detailed Annexure II of this Order.

Street Lighting Supply

6.48 This schedule is applicable for Street Lighting system including traffic control signal systems on roads and Park lighting in Municipalities, Panchayats and Notified Committee areas.

6.49 The Board has proposed to retain the energy charge for this category.

6.50 The existing tariff, tariff proposed by the Board and tariff approved by the Commission is given in the table below:

Table 137: Existing, Proposed and Approved Tariff for Street Lighting Supply Category

Existing		Proposed		Approved by Commission	
Energy Charges (Rs./kWh)	Consumer Service Charges (Rs./con/mth)	Energy Charges (Rs./kWh)	Consumer Service Charges (Rs./con/mth)	Energy Charges (Rs./kWh)	Consumer Service Charges (Rs./con/mth)
3.60	60	3.60	60	4.00	60

6.51 The applicable rebates and surcharges for this category have been detailed Annexure II of this Order.

Temporary Metered Supply

6.52 This schedule is applicable to all loads of temporary nature including exhibitions, touring talkies, circuses, fairs, melas, marriages, festivals, temporary supply for construction purposes including civil works by Government departments and other similar purposes for temporary needs only. However, this tariff is not applicable to wheat threshers and paddy threshers which shall be covered under Water & Irrigation Pumping Supply (WIPS) even for temporary connection.

6.53 The Board has proposed an increase of 20 Paisa/kWh for the slab up to 20 kW and by 25 Paisa/kVAh for consumers above 20 kW connections.

6.54 The existing, proposed and the tariff approved by the Commission is given as under:

Table 138: Existing, Proposed and Approved Tariff for Temporary Meter Category (Up to 20 kW)

Existing		Proposed		Approved by Commission	
Energy Charges (Rs./kWh)	Consumer Service Charges (Rs./con/mth)	Energy Charges (Rs./kWh)	Consumer Service Charges (Rs./con/mth)	Energy Charges (Rs./kWh)	Consumer Service Charges (Rs./con/mth)
6.30	120	6.50	120	6.50	120

Table 139: Existing, Proposed and Approved Tariff for Temporary Meter Category (above 20 kW)

Existing			Proposed			Approved by Commission		
Energy Charges (Rs/kVAh)	Service Charges Rs/con/mth	Demand Charge Rs/kVA/mth	Energy Charges (Rs/kWh)	Service Charges Rs/con/mth	Demand Charge Rs/kVA/mth	Energy Charges (Rs/kWh)	Service Charges Rs/con/mth	Demand Charge Rs/kVA/mth
4.75	120	300	5.00	120	300	4.95	120	300

6.55 The applicable rebates and surcharges for this category have been detailed Annexure II of this Order.

Water and Irrigation Pumping Supply (WIPS)

6.56 The earlier categories of WPS and AAAS were merged together in the first APR Order issued by the Commission and are now collectively termed as Water and Irrigation Pumping Supply (WIPS).

6.57 The existing schedule is applicable to Government connections for water and irrigation pumping. The schedule also covers all consumption for bona fide Pump House lighting.

6.58 This schedule shall also be applicable to private Irrigation Pumping loads. This schedule shall also be applicable to green houses, poly houses, processing facilities for agriculture, pisciculture, horticulture, floriculture and sericulture etc. where all such activities are undertaken by farmers only under this category. This schedule will also be applicable to temporary agricultural loads such as wheat threshers, paddy threshers, tokas, and cane crushers.

6.59 The Board has proposed no change in tariff for any slab of the WIPS category.

6.60 The existing, proposed and the tariff approved by the Commission for the WIPS category is given as under:

Table 140: Tariff for WIPS up to 20 kW

Existing		Proposed		Approved by Commission	
Energy Charges (Rs./kWh)	Service Charges (Rs./con/mth)	Energy Charges (Rs./kWh)	Service Charges (Rs./con/mth)	Energy Charges (Rs./kWh)	Service Charges (Rs./con/mth)
1.85	25	1.85	25	1.85	25

6.61 The two-part tariff applicable for WIPS for connected load above 20 kW shall be as shown in the table below:

Table 141: Tariff for WIPS above 20 kW

Slab	Existing			Proposed			Approved by Commission		
	Energy Charges Rs/kVAh	Service Charges Rs/con/mth	Demand Charge Rs/kVA/mth	Energy Charges Rs/kVAh	Service Charges Rs/con/mth	Demand Charge Rs/kVA/mth	Energy Charges Rs/kVAh	Service Charges Rs/con/mth	Demand Charge Rs/kVA/mth
LT	3.20	120	200	3.20	120	200	3.20	120	50
HT	3.05	120	150	3.05	120	150	3.65	120	150
EHT	2.50	120	120	2.50	120	120	3.10	120	120

6.62 The applicable rebates and surcharges for this category have been detailed Annexure II of this Order.

Revenue Projection at Approved Tariff

6.63 The following sections summarize the Commission's revenue projection at the revised tariff now approved in this Tariff Order.

Revenue from Sale of Power within State

6.64 For calculation of projected revenues for each category of consumers along with its slabs and sub-categories, actual past data has been taken into account for each consumer category. For other categories, estimation has been done to split sales across slabs and sub categories as proposed by the Board.

6.65 For projection of sales from WIPS category in the absence of data, 30% of sales under WPS at less than 11 kV have been considered at tariff applicable for less than 20 kW consumers under the revised WIPS category.

6.66 The Commission has calculated the revenue from sale of power across each consumer category at the revised approved tariff as shown in the table below:

Table 142: Projection of Revenue from Sale of Power within State for FY11 (Rs. Cr)

Category	Board's Submission		Commission's Analysis		Revenue Mobilization as per Commission's Analysis
	Existing Tariff	Proposed Tariff	Existing Tariff	Approved Tariff	
Domestic and BPL	308.53	356.72	303.43	338.06	34.64
NDNCS	42.77	43.98	36.62	39.99	3.37
Commercial Supply	153.76	159.77	148.19	159.40	11.21
Small & Medium Supply	71.94	82.33	68.90	68.90	0.00
Large Industrial Power Supply	1322.58	1,991.62	1,253.60	1,455.09	201.48
Water & Irrigation Pumping Supply	202.58	201.25	163.60	154.43	-9.16
Street Lighting	4.46	4.46	4.56	5.06	0.50
Bulk Supply	82.94	91.62	86.13	99.20	13.07
Temporary Supply	20.27	20.92	17.65	18.19	0.55
Total	**2,209.85**	**2,952.84**	**2,082.68**	**2,338.33**	**255.66**

Revenue from sale of power outside State

6.67 The Board in its petition has projected the net energy available for sale outside the State as 103 MU, which takes into account banking power return of 400 MU. The proposed revenue from sale of power outside the State is Rs 61.80 Cr.

6.68 The Commission has projected the power available for sale outside the state (ex-bus) during FY11, the summary of the same is shown below:

Table 143: Surplus Power Available for Sale in FY10 and FY11 (MU)

Particulars	FY10	FY11
Total Surplus at Distribution Periphery (MU)	644.30	741.46
Intra State Transmission Losses (%)	3.71	3.71
Total surplus at Ex- Bus (MU)	**669.12**	**770.03**

6.69 The Commission has considered that out of the surplus power of 770.03 MU in FY11, the Board would have to return banking power of 382.62 MU and the balance surplus power i.e. 387.41 MU would be sold in the short term market.

6.70 As the banking power has been considered as a cashless transaction, hence, neither the cost nor the revenue has been considered against the banking power.

6.71 The cost of power purchase for sale of power outside state, revenue and profit from it are tabulated below:

Table 144: Revenue Projection for Sale of Power outside State for FY10 and FY11

Parameters	FY10	FY11
Power sold in the short term market (MU)	248.87	387.41
Sale Rate (Rs per unit)	5.00	5.00
Revenue from sales of power outside state (Rs Cr)	**124.43**	**193.70**

Overall Revenue–Expenditure Position of HPSEB at Approved Tariff

6.72 The overall revenue and expenditure position of HPSEB at approved tariff is given in the table below:

Table 145: Overall Revenue-Expenditure position of the Board in FY10 and FY11 at Approved Tariffs (Rs. Cr)

Parameters	FY10	FY11
Aggregate Revenue Requirement	1892.89*	2687.84
Revenue From Sale of Power within state	1954.84	2338.33
Revenue from sale of power outside state	124.43	193.70
Revenue Surplus/(Gap)	**186.38**	**(155.81)**
Cumulative Surplus/(Gap) for FY10 and FY11	**30.57**	

**Includes net true up for FY09 i.e. surplus of Rs 288.42 Cr*

6.73 The Commission has kept aside surplus of Rs 30 Cr in FY11 for the Board to meet the expenses arising on account of restructuring of the Board, increase in tariffs of Central Sector generating stations on account of the CERC 2009 Tariff regulations and to meet any unforeseen expenses. The above amount of Rs 30 Cr shall be subject to true up based on the actual expenses incurred by the Board for FY11.

A7: DIRECTIONS

7.1 The Commission had issued directions to the Board in the previous tariff orders which if followed sincerely would have gone a long way in improving its efficiency and productivity and providing better quality supply & service to consumers. The Commission has been regularly reviewing the progress in implementation of these directions. The directions imparted by the Commission under various tariff orders were reviewed during the hearing on March 6, 2010 and an interim order was issued accordingly.

7.2 All such directions, which have not been complied with to the satisfaction of the Commission, are reiterated and the Commission directs that these shall be implemented meticulously by the Board and its unbundled successor entities, during the first control period and shall be monitored as controllable parameters. The directions of previous tariff orders, which are still not fully complied with to the satisfaction of the Commission, are carried forward and are rationalized and regrouped on the basis of existing areas of activities/ business in the Board, to facilitate the implementation of these directions as well as for timely compliance of these directions by the concerned sections. These are as given below:

Finance

a) Unbundled Costs (FY 2001-02) and (FY 2007-08)

b) Financial Restructuring (FY 2001-02)

c) Valuation of Assets (FY 2004-05)

d) Debt sustainability Study (FY 2006-07)

e) Inconsistency / non-reconciliation of data (FY 2009-10)

Manpower

a) Employees Cost (FY 2004-05)

b) Manpower Planning (FY 2006-07) and (FY 2007-08)

c) Rationalization of staff, redeployment, training & specialization in key activities ((FY 2006-07)

d) Change in R&P Rules ((FY 2006-07)

Consumer Services

a) Public Interaction Programme (FY2001-02)

b) Market Survey (FY 2008-09)

c) Consumer services for senior citizens (FY 2005-06)

Management

a) Power Sector Reforms (FY 2001-02)

b) Prioritization of Deliverables from ASCI (FY 2004-05)

c) E-governance (FY 2004-05)

d) Decision Making Process (FY 2006-07)

e) Data base management & Management Information System (FY 2007-08)

f) Benchmark study (FY 2007-08)

Distribution

a) T&D Losses (FY 2004-05)

b) Material Management (FY 2004-05)

c) Metering, Billing & Collection Efficiency and stream lining the system (FY 2004-05)

d) Procurement of Long Term Power (FY 2005-06)

e) High Voltage Distribution system (FY 2005-06)

f) Ratio of single and two phase lines to three phase LT Lines (FY 2005-06)

g) Replacement of defective/dead stop meters ((FY 2005-06)

h) Unmanning of sub-stations and feasibility of extending the scope of SCADA to integrate control of several substations at single control centre (FY 2005-06)

i) Reduction of Commercial Losses (FY 2006-07)

j) Quality of supply ((FY 2007-08))

k) Trading Strategies and Systems (FY 2006-07)

l) Energy Audit (FY 2008-09)

m) Loss Making Circles and Feeders (FY 2008-09)

n) Break-up of voltage-wise losses and assets in Distribution Network (FY 2008-09)

o) New Projects (FY 2008-09)

p) Share from Ultra-Mega Power Projects (FY 2008-09)

q) Power Purchase Agreements (FY 2008-09)

r) Implementation of Automatic Meter Reading (FY 2009-10)

s) Demand side management (FY 2009-10)

Transmission

a) Creation of Separate Protection Unit (FY 2006-07)

b) Best Practices for restructuring the project implementation units of the Board and its Special Purpose Vehicles Companies (SPVs) (FY 2006-07)

c) Transmission network in the State (FY 2006-07)

Generation

a) Capital Projects, Time & Cost Overrun (FY 2004-05)

b) Declining Generation of Board's own stations (FY 2005-06)

c) Best Practices for restructuring the project implementation units of the Board and its Special Purpose Vehicles Companies (SPVs) (FY 2006-07)

d) O&M of generation projects in tribal area (2005-06)

e) Accelerated programme for renovation, modernization and up-gradation (FY 2006-07)

f) Separate O&M Wing for the existing generating stations (FY 2006-07)

g) Determination of Generation Tariff of Board's own projects (FY 2006-07)

h) Survey and Investigations Schemes (FY 2008-09)

Miscellaneous

a) Quality of Business Plan (FY 2007-08)

b) Investment Plan (FY 2007-08)

c) Capital Investments Transmission and Distribution Schemes (FY 2008-09)

d) Ring fencing of the SLDC (FY 2009-10)

New Directions

Smart Grids

Keeping in view the growing focus on smart grids at both national and international level and the numerous potential benefits flowing out of it, the Commission feels that the process with respect to smart grids in the State should kick-start now. The Board, therefore, is directed to initiate steps for development of smart grid vision for the state of HP after exploring the possibilities of its deployment; assessment of potential benefits specific to State's context and lay down a broad road map for this initiative with due sensitization and consensus. In tandem with these actions, well thought out pilot project(s) based on proper cost benefit analysis may also be started to discover the business case and to establish the technology. The road map/report shall be submitted within six months.

Setting up ALDC

The Commission, keeping in view the Ministry of Power, GOI recommendations, in its last tariff order, had issued directions for ring fencing the SLDC. The SLDC at present, in the unbundled set up, has been performing inter alia the task of scheduling of power, coordinating with NRLDC, regulating the drawals by the distribution utility and imposing restrictions on various feeders, as and when necessary. With the imminent unbundling of the Board, the successor distribution company needs to set up on priority Area Load dispatch Centre(s) (ALDC(s)) to co-ordinate with the SLDC and undertake the related functions falling under the purview of the distribution utility.. The distribution licensee is directed to submit a comprehensive plan in respect of establishment of ALDC(s), within four months.

A8: STRATEGIC ISSUES

8.1 The Commission will complete a decade of public service in 2011, during which time it has made a major shift in its strategic focus. The concept of migrating from a pure cost plus tariff structure to an incentive template has been carried out to provide a base for greater innovation in the coming years. The Commission has made an effort to persuade governance structures to move forward to a restructuring phase. Although this has taken a long time, the first baby steps are seen to be taken.

8.2 Initiatives for mainstreaming renewable sources of energy in order to facilitate larger investments in the sector and to increase the share of renewable in the overall electricity market have been undertaken. Mitigated transmission resources for this segment have been provisioned for, although the utilities have been inept and unenthusiastic on pushing these forward. Reliability parameters have been drawn and regulations prescribing standards of performance drawn up. These should go a long way in ensuing greater efficiency in any unbundled entity, which is evolved this year. Open Access Regulations have been reformulated and an impetus given to ensuring greater focus on power export. Cross subsidies have been perceptibly reduced and consumer facilitation upgraded.

8.3 The major challenge still remains convincing the State on the efficacy of pressing forward on power sector reforms. Since the gains of these are in the future the bureaucratic attitude is to continue with the status quo or remain at least common denominator status. Concepts like competition, non-discriminatory open access, efficiency parameters and grid augmentation and access are given short shrift in a system which does not understand organisational hiatus, statist decontrol and institutional degrades. Decision makers at all levels are in advanced stages of self-denial as far as the institutional breakdown of the bundled entity is concerned. While regulatory capture continues to some extent, capture of governance structures by the utility is all pervasive. The symptomology of all these vests in almost all aspects of Energy Management in the State but a few examples are useful-

a. Just 30% of funds approved by the Commission for infrastructure development have been utilised. Just 10% of Transmission Sector allocations have been spent. In fact, the impact on stability, maintenance and protection functions of the system is colossal. Resultant breakdowns and outages are the order of the day. The utility will have to pay large deemed costs in the future if it does not build requisite infrastructure and this will be at the cost of the consumer.

b. The vertically integrated utility continues to build hydro projects at Rs.12 crore per megawatt. The private sector still builds at half that scale. The impact on consumer tariffs is mind-boggling. Cost escalation in the Public Sector need to be addressed with greater urgency.

c. Large dichotomies exist in the overall sector. The state has created parallel entities leading to major cost surges in every field.. Tenurial instability in the utility leads to skewed policy initiatives and a total lack of focus and accountability.

8.4 A pious hope remains that with restructuring on the horizon; perhaps there would be some light at the end of the tunnel. However, past experience does not give great credibility to such a hope.

8.5 The Commission is disappointed with the attitude of the State with regard to giving functional focus to an overall balanced policy for development of transmission resources. The State is functional in a co-terminus phase with the utility whereas it should work out a Regional Planning Process in which, in addition to cost allocation and pricing, prescription of corridor provisions is a sine qua non, and there is an attempt to undertake cost spreading instead of a historical 'beneficiary pays' system. Thus a suitable transmission tariff framework for intra-State conveyance needs to be developed such that it is sensitive to distance, direction and quantum, the ultimate objective being to get the transmission system users to share costs in proportion to their actual utilisation while suitably discouraging non-optimal transmission investment. Additionally the Regulator also needs to undertake necessary studies to establish allowable level of system loss for the overall network configuration and for leveraging adequate capital investments in new assets for up-gradation. A large component of these new assets need to be built as PPP partnerships between the STU and private players.

8.6 The SLDC in the State today is fully controlled by the HPSEB. The operationalization of open access can only be undertaken if the SLDC is insulated from other entities, which are today given preferential treatment. Essentially non-discriminatory, non-partisan, unbiased decision making by the SLDC is only possible if it is ring fenced and there is absolute and effective separation of management in real terms between the entities undertaking different businesses. The State needs to undertake this quickly and efficiently so as to ensure the above principles are upheld.

8.7 Nearly 30% of the cost of the HPSEB today is focussed on employees. This compares extremely unfavourably with almost all the other utilities in the country. Despite this, employee output and efficiency parameters are low. This is so because a large employee base is unskilled or semi-skilled. Skill level upgrades required to run the system efficiently are just not available in spite of vehement advice from the Commission over the last four years to rectify a fast deteriorating situation. Technically - proficient staff inculcation is required on a regular basis. Evaluation of the needs of the unbundled entities needs to be undertaken expeditiously, the unskilled staff transferred to a pool under the holding Company and exact numbers with necessary skill sets deployed on to the TRANSCO, GENCO and DISCOM. The GENCO skill sets are special and need to be continuously re-assessed so that we don’t lose proficiency over time. A programme for re-training in collaboration with the Technical Education Directorate needs to be worked out on a war footing.

Annexure-I

SCHEDULE OF GENERAL AND SERVICE CHARGES

S. No.	Description	Approved by the Commission
1.		
A. Meter Inspection and Testing Charges (Challenge of Correctness of Meter by Consumer)		
(i)	Single Phase	Rs. 55/- per meter
(ii)	Poly phase (LT)	Rs. 225/-
(iii)	HT or special meter (MDI or Trivector Meter)	Rs. 550/-
		Rs. 1,100/ with CT/ PT combined unit
Note: This amount shall be deposited by the consumer along with his application for the inspection of the meter and will be refunded to him in case the meter is not found to be correct with in the prescribed limits.		
B. Testing Charges of Transformers or other equipment of consumer or private party		
(I)	Protective Relays:	
	Testing including current and Time Setting of protective relays	Rs. 1,100/- per Relay
(II)	Power and Distribution Transformers	
(a)	Insulation resistance tests of winding	Rs. 770/- per Transformer
(b)	General checking of breather & other accessories	Rs. 400/- per Transformer
(c)	Dielectric strength test of oil	Rs. 220/- per Transformer
(d)	Testing of buchuolz relay and temperature indicators functioning	Rs. 800/- each
(III)	Circuit Breaker 400 volts and 11/33kV	
	General checking of breaker and testing of the tripping mechanism	Rs. 800/- each
(IV)	Current transformer and Potential transformers and meters:	
(a)	Testing of single phase LT current transformer	Rs.165/- each
(b)	Current Testing of 3 phase LT current transformer	Rs. 440/- each
(c)	Testing of single phase 11kV & 33kV CTs	Rs. 550/- each
(d)	Testing of three phase 11kV & 33kV CTs	Rs. 1,100/- each
(e)	Testing & recalibration of single phase LT energy meter	Rs. 90/- per meter
(f)	Testing & recalibration of three phase energy meter w/o CT	Rs. 330/- per meter
(g)	Testing & recalibration of three phase energy meter With CT	Rs. 660/- per meter
(h)(i)	Testing & recalibration of HT/EHT metering equipment	Rs. 2,000/- per meter
(h)(ii)	With CT/PT combined unit	Rs. 2,500/- per unit
(i)	Testing & recalibration of maximum demand indicator	Rs. 660/- per meter
(j)	Testing & adjustment of voltmeter/ ammeter	Rs. 165/- each
(V)	Checking of Capacitors (other than initial checking) on consumer's request:	
(a)	At 400 volts	Rs. 110/- per job

S. No.	Description	Approved by the Commission
(b)	At 11kV and above	Rs. 110/- per job
(VI)	General	
(a)	Dielectric strength of oil of various equipment	Rs. 220/- per sample
(b)	Earth test of substation	Rs. 220/- per earth
(c)	Insulation resistance of cables/ insulation of various equipment/ installations	Rs. 220/- per cable/ equipment
C. Testing charges at the time of routine periodical inspections or first test and inspection of new installation which includes protection and control of complete sub-station (including Transformers, Capacitor Banks, Meter and Metering equipment having connected load >50 kW and/or supply voltage 11 kV or higher) and inclusive of all manpower required		
(i)	11/22 kV	Rs. 10,000/-
(ii)	33 kV	Rs. 15,000/-
(iii)	66 kV	Rs. 50,000/-
(iv)	132 kV	Rs. 1,00,000/-
(v)	220 kV	Rs. 3,00,000/-
D. Visiting charges		
	Visiting charges for Officers & staff to Consumers premises for testing of equipments(other than C above)	Rs. 3,500/- per day for complete team PLUS actual journey charges as per out turn of vehicle
Remarks:		
(i) Visiting charges mentioned under D above include the visiting charges of M&T staff as well.		
(ii) Charges for Board's maintenance/testing Vans or Trucks if needed for the purpose will be extra. All Charges shall be got deposited before undertaking the testing work.		
(iii) Complete testing of 11kV, 22kV and 33 kV connections as per item C above shall be conducted before the release of HT connection.		
iv) Test reports on suitable forms will be issued by the operation sub-divisions/M&T Lab, which will be produced by the prospective consumer along with the wiring Contractor's test report.		
v) The insulation, earth and oil tests as well as general checking and inspection should be performed by the operation sub-division. Other tests requiring M&T Lab. facilities shall be arranged by the operation sub-division/division in the nearest M&T Lab., or by arranging the visit of the M&T staff to the consumer's premises.		
vi) The requests for testing shall be entertained by the concerned operation sub-division which will be responsible for arranging all tests including tests by the M&T Lab and also for the recoveries of all the charges, including those of M&T Lab		
vii) The amount recovered from consumers for testing carried out by the M&T Lab shall be adjusted through inter divisional adjustment between the operation divisions and the M&T divisions.		
2. Changing the position of meter at the request of consumer		
(i)	Single phase	Rs. 45/-
(ii)	Poly phase (LT) without CT	Rs. 220/-
	Poly phase (LT) with CT	Rs. 440/-

S. No.	Description	Approved by the Commission
(iii)	HT or special meter	Rs. 1100/-
3. Resealing charges		
(i)	Meter cup board	Rs. 25/-
(ii)	Meter Cover or Terminal Cover (single phase)	Rs. 110/- for meter terminal cover & full cost of the meter where M&T seal is found broken.
(iii)	Meter cover or terminal cover (three phase)	Rs. 350/- for meter terminal cover & full cost of the meter where M&T seal is found broken.
(iv)	Cutout (where it has been independently sealed)	Rs. 25/-
(v)	Maximum demand indicator	Rs. 550/-
(vi)	Potential fuse(s) time switch/CT chamber	Rs. 550/-
4. Monthly meter/equipment rentals:		
(i)	Single phase energy meter low tension	Rs. 12/- per month
(ii)	Polyphase energy meter low tension (up to 50 Amps.)	Rs. 30/- per month
(iii)	a) Polyphase low tension meters with CTs (up to 20 kW)	Rs. 35/- per month
	b) Polyphase low tension meters with CTs(above 20 kW)	Rs. 50/- per month
(iv)	Polyphase 11kV meter with CT/PT without any breaker of HPSEB	Rs. 550/-per month
(v)	Polyphase 11kV meter with CT/PT with one 11kV breaker of HPSEB	Rs. 4000/- per month
(vi)	Single phase Pre Paid energy meter low tension	Rs 50/- per month
(vi)	Polyphase 33,22 kV meter with CT/PT without any 33, 22 kV breaker of HPSEB	Rs. 800/- per month
(vii)	Polyphase 33,22 kV meter with CT/PT with one 33, 22 kV breaker of HPSEB	Rs. 7000/- per month
(viii)	Polyphase meter with CT/PT with or without circuit breaker of voltage 66 kV and above	
(a)	Polyphase 66 kV with CT/PT without any 66 kV circuit breaker of HPSEB	Rs. 1300/- per month
(b)	Polyphase 66 kV with CT/PT with 66 kV circuit breaker of HPSEB	Rs. 13500/- per month
(c)	Polyphase 132 kV with CT/PT without any 132 kV circuit breaker of HPSEB	Rs. 2500/- per month
(d)	Polyphase132 kV with CT/PT with 132 kV circuit breaker of HPSEB	Rs. 20000/- per month
5. Reconnection of supply		
(I)	Industrial consumers (connected load ≤ 50 kW)	Rs. 100/-
(ii)	Industrial consumers (connected load > 50 kW and ≤ 100 kW)	Rs. 500/-
(iii)	Large power industrial consumers (connected load > 100 kW)	Rs. 1000/-
(iv)	All other categories of consumers	Rs. 40/-

S. No.	Description	Approved by the Commission
6. Fuse replacement:		
	Replacement of fuse(s) pertaining to the Board/ Consumer	Rs. 5/-
7. Testing consumer's installation:		
(i)	The first test and inspection of a new installation or of an extension to the existing installation	Nil
(ii)	For every subsequent visit for the test and inspection of a new installation or of an extension to the existing installation	
(a)	Single Phase LT	Rs. 60/-
(b)	Three phase (LT)	Rs. 100/-
(c)	Three phase (HT)	Rs. 500/-
	Note:- These charges shall be deposited by the consumer in advance before every subsequent visit for inspection of installation	
8. Replacement of meter card:		
(i)	Domestic/NDNCS/Commercial	Rs.10/- in each case
(ii)	All other categories of consumers	Rs.10/- in each case
9. Replacement of meter glass:		
(i)	Replacement of broken glass of meter cup board when the consumers is considered to have broken it	Rs. 50/-
(ii)	Replacement of broken or cracked glass of meter when there is no evidence of consumer having broken it or tempered with the meter	Rs. 50/-
(iii)	Replacement of broken glass of meter when the consumer has tempered with or broken by consumer:	
(a)	Single phase	*Rs. 500/- or the actual cost of meter which ever is higher
(b)	Three phase	Rs. 1500/-* or the actual cost of meter, which ever is higher.
	Note-1: This amount will be charged without prejudice to the right of the board to take any other action or impose penalty on the consumer as per the prevailing rules. Since in such cases, the meter has to be sent to M&T lab, the meter changing charges shall be levied additionally.	
	* This is without prejudice to the Board's right to recover the estimated cost of theft of energy. Principles of natural justice shall invariably be followed and opportunity of being heard given to the consumer before levying such charge.	
10. Supply of duplicate copies of the bills/ review of bills:		
(i)	Review of bills (all Categories)	Nil
(ii)	Supply of duplicate copies of bills	
(a)	Domestic/NDNCS/Commercial	Rs. 5/-
(b)	Medium & large power supply	Rs. 5/-
(c)	All other categories	Rs. 5/-
(iii)	Supply of duplicate copies of Demand notice:	

S. No.	Description	Approved by the Commission
(a)	Domestic consumers	Rs. 10/-
(b)	Non residential consumers	Rs. 10/-
(c)	Small Industrial & Agriculture consumers	Rs. 10/-
(d)	Medium Industrial consumers	Rs. 10/-
(e)	Large Industrial and other categories of consumers	Rs. 10/-
(iv)	Supply of detailed print out of the meter recording	Rs. 50/-
11. Attendants for functions		
	Deputing attendants (line staff) for all functions.	
	(Per Attendant per day per function limited to 8 hours/day)	Rs. 250/-
12. Cost of Application/Agreement Form and wiring Contractor's test report forms:		
(i)	Domestic Supply	Rs. 15/- per copy per form
(ii)	Industrial supply (Small, Medium and Large)	Rs. 15/- per copy per form
(iii)	For all other categories	Rs. 15/- per copy per form
13. Processing fee for PLE and for change in contract demand		
i)	Fee for change in Contract Demand (CD)	Rs. 25/- per kVA of the changed quantum of CD
ii)	Fee for seeking peak load exemption (PLE)	Rs. 50/- per kVA of the quantum of load for which PLE sought. The fee is to be charged once in a financial year.

ANNEXURE-II

HIMACHAL PRADESH STATE ELECTRICITY BOARD

NOTIFICATION

NO.	DATED: -

In pursuance of the tariff order dated 10 June 2010 issued by the Himachal Pradesh Electricity Regulatory Commission, the Himachal Pradesh State Electricity Board is pleased to notify the following Schedule of Tariff and the general conditions of tariff for supply of electricity to various categories of consumers in Himachal Pradesh with effect from **April 1, 2010.**

PART - I GENERAL

A. This schedule may be called the **'Himachal Pradesh State Electricity Board Schedule of Electricity Tariff, 2010'.**

B. This Schedule of Tariff shall come into force with effect from **April 1, 2010** and will be applicable through out the state of Himachal Pradesh. The arrears, if any, on account of revised tariffs for the months of April and May 2010 shall be adjusted in the bills for the months of July and August 2010 respectively.

C. The rates mentioned in this Schedule of Tariff are exclusive of electricity duty, taxes and other charges already levied or as may be levied by the government of Himachal Pradesh from time to time.

D. This tariff automatically supersedes the existing tariff that was in force with effect from 1 September, 2009 except in such cases where 'Special Agreements' have otherwise been entered into for a fixed period, by HPSEB with its consumers. Street Lighting Agreements shall however, not be considered as 'Special Agreements' for this purpose and revised tariff as per schedule **'SLS'** of this Schedule of Tariff shall be applicable.

E. This Schedule of Tariff is subject to the provisions of related **Regulations** notified by the HP Electricity Regulatory Commission, from time to time**,** and the **'Schedule of General and Service Charges'**.

F. <u>Force Majeure Clause</u> - In the event of lockout, fire or any other circumstances considered by the Board to be beyond the control of the consumer, he shall be entitled to proportionate reduction in consumer service charge, demand charge or any other fixed charge, if applicable, provided he serves at least 3 days notice on the supplier for shut down of not less than 15 days duration.

G. Standard Supply Voltage - The standard of supply voltage, as existing on the relevant network system, in kV, to be followed by HPSEB, based on the connected load measured in kW, as specified under each consumer category of this 'Schedule of Tariff', in respect of supply of electricity to prospective consumers OR at the time of change of supply voltage on request of existing consumer OR at the time of application of 'Lower Voltage Supply Surcharge' and 'Higher Voltage Rebate' respectively to its existing consumer categories in their bills.

H. Single Point Supply - The various tariffs referred to in this Schedule are based on the supply being given at a single voltage and through a single delivery and metering point. Supply given at other voltages and through other points, if any, shall be separately metered and billed.

I. Lower Voltage Supply Surcharge (LVSS) – Consumers availing electricity supply at a voltage lower than the 'Standard Supply Voltage' as specified under the relevant category, shall be charged a 'Lower Voltage Supply Surcharge' at the following rates on only the amount of energy charges, billed, for each level of specified step down (as given in table below) from the 'Standard Supply Voltage' to the level of Actually Availed Supply Voltage.

Standard Supply Voltage	Actually Availed Supply Voltage	LVSS
11kV or 15kV or 22 kV	1Ø 0.23 kV or 3Ø 0.415kV OR 2.2 kV	5%
33 kV or 66 kV	11 kV or 15kV or 22 kV	3%
≥ 132 kV	33 kV or 66 kV	2%

Note:

1. *In such cases the tariff applicable to the lower voltage (i.e. voltage at which connection is actually availed) shall be applicable and the LVSS shall be levied in addition to the said tariff.*

2. *LVSS shall not be applicable to such EHT consumers (66 kV and above) which were existing on 1.12.2007 and have been given connection at 66 kV even if the standard voltage in their case was 132 kV or above. However, in case any extension of load is sanctioned in such cases after 1.12.2007 the LVSS shall be applicable as per the normal conditions.*

J. Higher Voltage Supply Rebate (HVSR) – A consumer availing electricity supply at a voltage higher than the 'Standard Supply Voltage' as specified under the relevant category, shall be given a 'Higher Voltage Supply Rebate' at the following rates on only the amount of energy charges, billed, for each level of specified step up from the 'Standard Supply Voltage' to the level of Actually Availed Supply Voltage.

Standard Supply Voltage	Actually Availed Supply Voltage	HVSR
1Ø 0.23 kV or 3Ø 0.415 kV OR 2.2 kV	11kV or 15kV or 22 kV	5%
11kV or 15kV or 22 kV	33 kV or 66 kV	3%
33 kV or 66 kV	≥ 132 kV	2%

Note: *In such cases the tariff applicable to the higher voltage (i.e. voltage at which connection is actually availed) shall be applicable and the HVSR shall be allowed on such tariff.*

K. Lower Voltage Metering Surcharge (LVMS) - In respect of consumers, for whom the metering for maximum demand or energy consumption or both, is done on the lower voltage side of the transformer, instead of higher voltage side at which the supply has been taken by the consumer, on account of non-availability of the higher voltage metering equipment or its unhealthy operation, the consumer shall be charged "Lower Voltage Metering Surcharge" at the rate of 2% on the amount of only the energy charges billed.

L. Late Payment Surcharge (LPS) **-** Surcharge for late payment shall be levied at the rate of 1% per month or part thereof, on the outstanding amount excluding electricity duty/taxes of for all consumer categories.

M. Peak Load Exemption Charge (PLEC) - Electricity Supply shall, normally, not be available to the consumers covered under the categories 'Small and Medium Industrial Power Supply' (SMS), 'Large Industrial Power Supply (LIP) and 'Water and Irrigation Pumping Supply' (WIPS), of this schedule of tariff during the peak load hours of the day. The duration of peak load hours in summers and winters shall be for a period of three hours in the evening. The duration of peak hours shall be as follows

a) Summer (April to October) 7.00 PM to 10.00 PM

b) Winter (November to March) 6.30 PM to 9.30 PM

However, where the above categories of consumers want to avail of exemption to run their unit during the peak load hours for any special reason, a separate sanction for the exemption (in kW or computed in kVA assuming 0.9 power factor), for running the unit (full load or part thereof), from the Board shall be required. This sanction (for full load or part thereof) shall be issued at the request of the consumer and shall be subject to availability of power in the area during the above specified peak hours.

Consumers requesting for peak load exemption (PLE) must be provided with suitable tri-vector meters which are capable of recording the maximum demand for every 30 minute block in twenty four (24) hours of the day for a whole month, apart from recording the energy consumption. However, any consumer possessing sanction for peak load exemption (for full load or part thereof) and without an installed tri-vector meter or a suitable meter, would also need to get the meter installed within three months of issue of this notification.

Where sanction for running of unit (for full load or part thereof) during peak load hours is already issued, no further sanction shall be required to the extent of the load for which the exemption has already been obtained. All consumers who have been given exemption to run their units (for full load or part thereof) during the peak load hours shall be charged a 'Peak Load Exemption Charge', as separate demand charge and energy charges (In Rs./kVA/month and Rs./kVAh/month respectively) for the energy consumption during peak load hours in a month, at the rate specified in the relevant category of this schedule of tariff.

Provided that the lighting load of such consumers shall be deemed to have been exempted and no separate approval shall be required. The lighting load as per the 'Test Report' alone shall be deemed to have been exempted.

N. Peak Load Violation Charge (PLVC) –Consumers who do not have the peak load exemption but are found using the electricity during peak hours will have to pay PLVC on the total consumption during the peak hours or consumers who have the exemption but are found exceeding the exempted load during peak load hours will have to pay 'Peak Load Violation Charge' on the quantum of load in excess of the exempted load as specified under the relevant schedule of tariff. Consumers who have the peak load exemption but are found exceeding the exempted load shall be deemed to have used energy, calculated prorata on the basis of the load in excess of the exempted load, for the days of violation only. Violation in excess of five times in a year shall result in disconnection of the defaulting consumer without prejudice to recover such charges. No Higher Voltage Supply Rebate (HVSR) shall be applicable/achievable in respect of the peak hours of the day.

In case the Consumers covered under single part tariff, without an installed meter capable of recording energy during different times of the day, are found violating the peak load hour restriction, one half of the consumption for the month shall be billed at the specified PLVC rate which shall be three times the normal energy charges (Rs./kWh)Demand Charge (DC) – Consumers billed on the basis of kVAh tariff as applicable for the relevant category under this Schedule of Tariff, shall in addition to the kVAh charges per month, be also charged at the rate specified, the 'Demand Charges' per month per kVA, calculated on [the actual Maximum Demand (in kVA) recorded on the energy meter during any consecutive 30 minute block period of the month] OR [90 % of the Contract Demand (in kVA) or {in the absence of Contract Demand 80% of the Connected Load (computed in kVA assuming 0.9 power factor)] whichever is higher.

P. Contract Demand Violation Charge (CDVC) – In the event of the Maximum Demand (in kVA) is recorded on the energy meter during any consecutive 30 minute block period of the month, exceeds the Contract Demand (in kVA) OR in the absence of the Contract Demand 80% of the Connected Load (computed in kVA assuming 0.9 power factor), the consumer shall be charged 'Contract Demand Violation Charges' at the rate of Rs. 300/- per month per kVA to the extent the violation has occurred in excess of the Contract Demand OR in the absence of the Contract Demand 80% of the Connected Load (computed in kVA assuming 0.9 power factor).

Q. Disturbing Load Penalty (DLP) - In case where there is unauthorized use of mobile welding sets, the consumer will pay by way of penalty, Rs. 20 per kVA of the load rating of welding, set per day, in addition to the energy charges.

NOTE: authorization shall mean authorization (temporary or permanent) to a consumer by the designated office of the licensee/HPSEB in whose area the supply to the consumer exists and shall not be assumed as authorization of any form from local or other bodies.

R. Night Time Concession (NTC) – Night Time Concession on consumption of energy from 00:00 hours to 06:00 hours, and shall be applicable to consumers with connected load greater than 20 kW, at the rate specified in the relevant consumer category under this Schedule of Tariff. However such consumers must be provided with suitable tri-vector meters capable of recording energy during different times of the day.

S. Seasonal industries - In this schedule, unless the context otherwise provides, seasonal industries mean the industries which by virtue of their nature of production, work only during a part of the year, continuously or intermittently up to a maximum period of 7.5 months in a year, such as atta chakkies, saw mills, tea factories, cane crushers, irrigation water pumping, rice husking/hullers, ice factories, ice candy plants and such other factories as may be approved and declared as seasonal by the Board from time to time. Seasonal industries shall be governed under the following conditions: -

i) The consumer shall intimate in writing to the concerned Sub-Divisional Officer of the Board, one month in advance, the months or the period of off-season during which he will close down his plant(s).

ii) The minimum working period for a seasonal industry in a year shall be taken as 4 (four) months.

iii) During the off-season, the entire energy consumption and the power utilised for maintenance and overhauling of the plant and the factory lighting will be charged at "commercial supply" tariff.

iv) The consumer service charge, demand charge or any other fixed charge shall be levied for the seasonal period only.

T. Power Factor Surcharge (PFS) -

i) If at any point of time the power factor of consumers specified under the relevant category of schedule of charges having connected load up to and including 20 kW is checked by any means and found to be below 0.90 lagging, a surcharge @ 10% on the amount of energy charges irrespective of voltage of supply shall be charged from the consumer from the month of checking and will continue to be levied till such time the consumer has improved his power factor to at least 0.90 lagging by suitable means under intimation to the concerned Sub Divisional Officer who shall immediately get it checked.

ii) Should the monthly power factor fall below 0.85, it must be brought up to minimum of 0.90 by the consumer through suitable means within a period of 3 months, failing which, the connection shall be disconnected.

iii) The monthly average power factor will be calculated on readings of Tri-Vector Meter/Bi-Vector Meter/Two Part Tariff Meters as per formula given below and shall be rounded up to two decimal places.

POWER FACTOR = kWh / kVAh

In case of defective tri-vector meter/bi-vector meter/two part tariff meter, power factor will be assessed on the basis of average power factor recorded during last three consecutive months when the meter was in order. In case no such readings are available then the monthly average power factor of three months obtained after installation of correct tri-vector meter/bi-vector meter/two part tariff meter shall be taken for the purpose of power factor surcharge during the period the tri-vector meter/bi-vector meter/ two part tariff meter remained defective.

iv) The said power factor surcharge shall be independent of the supply voltage.

v) The consumer service charge, demand charge or any other fixed charge shall not be taken into account for working out the amount of power factor surcharge, which shall be levied on the amount of kWh energy charges only.

vi) No new supply to L.T. installations with induction motor(s) of capacity above 3 H.P and/or welding transformers above 2.0 kVA shall be given unless shunt capacitors of appropriate ratings are installed to the entire satisfaction of the Board.

U. <u>Replacement of Defective/Missing/Damaged Shunt Capacitors</u> -

i) It will be obligatory on the part of the consumer to maintain capacitors in healthy conditions and in the event of its becoming burnt/damaged he shall have to inform the Sub Divisional Officer concerned immediately in writing and also to get the defect rectified within a maximum period of one month from the date the capacitor has gone defective.

ii) In case shunt capacitor(s) is/are found to be missing or inoperative or damaged, one month notice shall be issued to the consumer for rectification of the defect and setting right the same. In case the defective capacitor(s) is/are not replaced / rectified within one month of the issue of the notice, a surcharge @ 10% per month on bill amount shall be levied w.e.f the date of inspection to the date of replacement of defective/damaged missing capacitors.

V. In case any dispute regarding interpretation of this tariff order and/or applicability of this tariff arises, the decision of the Commission will be final and binding.

DEFINITIONS

1. **Act:** means The Electricity Act, 2003 as amended from time to time.

2. **Average Power Factor:** means the ratio of kWh (kilo Watt hour) to the kVAh (kilo Volt Ampere hour) registered during a specific period.

3. **Board:** means the Himachal Pradesh State Electricity Board.

4. **Commission:** shall mean the Himachal Pradesh Electricity Regulatory Commission.

5. **Connected Load:** expressed in kW, means aggregate of the manufacturer's rated capacities of all energy consuming devices or apparatus connected with the distribution licensee's service line, on the consumer's premises, which can be simultaneously used;

6. **Consumer Service Charges:** shall mean the fixed amount to be paid by the consumer as defined in the respective tariff schedule.

7. **Contract demand:** expressed in kVA units means the maximum demand contracted by the consumer in the agreement with the licensee and in absence of such contract, the contract demand shall be determined in accordance with the Tariff Order.

8. **Demand Charges:** for a billing period shall mean the amount chargeable based upon the recorded maximum demand in kVA or the contract demand; whichever is higher and shall be calculated as per the procedure laid down in this Tariff Order;

9. **Energy Charges:** expressed in Rupees per kWh/kVAh for a billing period shall mean the amount chargeable in rupees based on the quantity of electricity supplied in kWh/kVAh and as calculated as per the procedure prescribed in this Tariff Order. The demand/fixed charges, wherever applicable, shall be in addition to the energy charges.

10. **Maximum Demand:** means the highest load measured in kVA or kW at the point of supply of a consumer during consecutive period of 30 minutes or as laid down by the Commission, during the month;

11. **Rules:** means the Indian Electricity Rules, 1956 to the extent saved by the Act and the rules made under the Act thereafter.

12. **Sanctioned Load:** means the load expressed in kW/kVA of the consumer, which the licensee has agreed to supply, from time to time, in the agreement.

13. **Schedule:** shall mean this Tariff Schedule.

14. **State**: means the State of Himachal Pradesh;

15. **Supplier:** shall mean the Himachal Pradesh State Electricity Board.

16. For the purpose of this tariff order, the voltage wise categorization shall be as follows:

    a) **EHT** means the voltage, which exceeds 33,000 volts; under normal conditions subject, however, to the percentage variation allowed under electricity rules;

    b) **HT** means the voltage higher than 400 volts but not exceeding 33,000 volts under normal conditions, subject, however, to the percentage variation allowed under the electricity rules;

    c) **LT** means the voltage, not exceeding 230 volts between phase and neutral and 400 volts between phases under normal conditions, subject, however, to the percentage variation allowed under electricity rules;

PART – II - SCHEDULE OF TARIFF

SCHEDULE - DOMESTIC SUPPLY (DS)

1 Applicability

This schedule is applicable to the following consumers:

a) Consumers using electrical energy for lights, fans, heaters, cooking ranges, ovens, refrigerators, air conditioners, stereos, radios, televisions, mixers, grinders, electric iron, sewing/embroidery/knitting machines, domestic pumping sets and other domestic appliances in a single private house/flat or any other residential premises;

b) Religious places with connected load up to 5 kW;

c) Orphanages, homes for old people and homes for destitute;

d) Working Women Hostels, Hostels attached to the educational institutions where supply is given separately to each hostel and the electricity charges are recovered from the students based on actual consumption;

e) Leprosy Homes run by charity and un-aided by the Government; and,

f) Panchayat Ghars and Patwar Khanas with connected load up to 2 kW.

g) Monasteries

h) "Home Stay Units" in rural areas duly registered with the District Tourism Development Officer

Note:

(i) Where a portion of the dwelling is used regularly for the conduct of a business, the consumption in that portion shall be separately metered and billed under the appropriate Commercial or Industrial power tariff whichever is applicable. If separate circuits are not provided, the entire supply will be classified under "Commercial Supply."

(ii) Resale and supply to tenants, other flats etc. is strictly prohibited.

(iii) No compounding will be permissible. For residential societies which wish to take a single point supply, this would be permitted, and the energy charges would be divided by the number of such units to determine the relevant slab. Thus if there are 10 dwelling units in a society and the energy consumption in a month is 3000 units, the first 1500 (150x10) units would be charged at Rs 1.90 per kWh, the remaining 1500 units (150x10) units at Rs.3.15 per kWh. Consumer service charge shall be Rs. (20x10).

2 Character of Service

Connected Load (kW)	Standard Supply Voltage (AC 50 Hz)
≤ 50 kW	(1Ø 0.23 kV or 3Ø 0.415 kV) OR 2.2 kV
51 kW up to 2000 kW	11 kV or 15 kV or 22 kV
2001 kW up to 10000 kW	33 or 66 kV

3 Single Part Tariff

a) Consumer Service Charge (Charges-1)

Description	Consumer Service Charge (Rs./Month)
Below Poverty Line (BPL)	NIL
Other consumers	25

b) Energy Charge (Charges-2a) [Other Than Pre-Paid Metered]

Description	Slabs (kWh per month)	Energy Charge (Rs./kWh)
Below Poverty Line (BPL)	Up to 50 kWh	1.80
Others	0-150	2.20
	Above 150	3.45

Note: *In the case of* ***Below Poverty Line*** *beneficiaries the concessional tariff will be available for use of electricity by these families up to a maximum of 50 units per month. In case this limit is exceeded, the normal domestic tariff will apply for the entire consumption.*

c) Energy Charge (Charges-2b) [Prepaid Meter]

Description	Slabs (kWh per month)	Energy Charge (Rs./kWh)
Prepaid meter consumers	Entire consumption	2.20

Note: *Subsidy given by GoHP shall apply to prepaid meter consumers also. Should the GoHP decide to maintain the tariffs at the current levels after subsidy, then the prepaid consumers shall be deemed to be placed at the lowest slab of consumers, other than BPL, in respect of entire consumption after State Government subsidy.*

4. **Higher Voltage Supply Rebate (HVSR):** *Applicable as specified under 'Part-1 General of this Annexure II'.*
5. **Lower Voltage Supply Surcharge (LVSS):** *Applicable as specified under 'Part-1 General of this Annexure II'.*
6. **Lower Voltage Metering Surcharge (LVMS):** *Applicable as specified under 'Part-1 General of this Annexure II'.*
7. **Late Payment Surcharge (LPS):** *Applicable as specified under 'Part-1 General of this Annexure II'.*

8. **Night Time Concession (NTC):** *Not Applicable*.

9. **Power Factor Surcharge (PFS):** *Not Applicable.*

10. **Disturbing Load Penalty (DLP):** *Applicable as specified under 'Part-1 General of this Annexure II'.*

SCHEDULE - NON-DOMESTIC NON-COMMERCIAL SUPPLY (NDNCS)

1. Applicability

This schedule is applicable to the following consumers:

a. Government and semi Government offices

b. Educational Institutions viz. Schools, Universities, I.T.Is, Colleges, Centre for Institute of Engineers, Sports Institutions, Mountaineering Institutions and allied sports and Libraries Hostels and residential quarters attached to the educational institutions if supply is given at single point.

c. Religious places such as Temples, Gurudwaras, Mosques, Churches etc. with connected load greater than 5 kW.

d. Sainik and Govt. Rest Houses, Anganwari workers training centers, Mahila mandals, village community centres

e. Government Hospitals, primary health centers, dispensaries and veterinary hospitals.

f. Panchayat Ghars and Patwar Khanas with connected load greater than 2kW.

g. Sarais and Dharamsalas run by Panchayats and Municipal Committees or on donations and those attached with religious places, subject to the condition that only nominal and token amount to meet the bare cost of upkeep and maintenance of the building etc. is being recovered and no rent as such is charged.

Note: *In the case of residences attached to the Institutions, as at (b) and (f) above, the same shall be charged at the Domestic tariff, in cases where, further distribution to such residential premises is undertaken by the Board and the Board provides meters for such consumers.*

2. Character of service

Connected Load (kW)	Standard Supply Voltage (AC 50 Hz)
≤ 50 kW	(1Ø 0.23 kV or 3Ø 0.415 kV) OR 2.2 kV
51 kW up to 2000 kW	11 kV or 15 kV or 22 kV
2001 kW up to 10000 kW	33 or 66 kV
>10000 kW	≥ 132 kV

3. Single Part Tariff for connected load ≤ 20 kW

a) Consumer Service Charge (Charges-1)

Consumer Service Charge (Rs/month)	60

b) Energy Charge (Charges-2)

Energy Charge (Rs./kWh/month)	4.45

4. Two Part Tariff for connected Load > 20 kW

a) Consumer Service Charge (Charges-1)

Consumer Service Charge (Rs/month)	120

b) Energy Charge (Charges-2)

Energy Charge (Rs./kVAh)	3.70

c) Demand Charge (Charges-3)

Demand Charge (Rs/kVA/month)	100

Note: *Demand charges would be levied on the actual maximum recorded demand in a month in any 30 minute interval in a month or 90% of the contract demand, whichever is higher.*

5. **Higher Voltage Supply Rebate (HVSR):** *Applicable as specified under 'Part-1 General of this Annexure II'.*
6. **Lower Voltage Supply Surcharge (LVSS):** *Applicable as specified under 'Part-1 General of this Annexure II'.*
7. **Lower Voltage Metering Surcharge (LVMS):** *Applicable as specified under 'Part-1 General of this Annexure II'.*
8. **Late Payment Surcharge (LPS):** *Applicable as specified under 'Part-1 General of this Annexure II'.*
9. **Contract Demand Violation Charge:** *Applicable as specified under 'Part-I General of Annexure II'*
10. **Night Time Concession (NTC):** *Applicable* @ 20 p/kVAh *as specified under 'Part-1 General of this Annexure II'.*
11. **Power Factor Surcharge (PFS):** *Not Applicable.*
12. **Disturbing Load Penalty (DLP):** *Applicable as specified under 'Part-1 General of this Annexure II'.*
13. **Peak Load Exemption Charges (PLEC):** *Not Applicable.*
14. **Peak Load Violation Charges (PLVC):** *Not Applicable.*

SCHEDULE – COMMERCIAL SUPPLY (CS)

1 Applicability

This schedule is applicable to consumers for lights, fans, appliances like pumping sets, central air conditioning plants, cold storages, lifts, heaters, embroidery machines, printing press, power press and small motors in all commercial premises such as shops, business houses, cinemas, clubs, banks, private offices, private hospitals, petrol pumps, hotels/motels, welding sets, servicing stations, private nursing homes, private rest/guest houses, private research institutions, private coaching institutions, private museums, dry cleaning, garages and private auditoriums, departmental stores, restaurants, lodging and boarding houses.

This schedule will also include all other categories, which are not covered by any other tariff schedule.

Note: *Resale to tenants, adjoining houses and to other parties is strictly prohibited.*

2. Character of service

Connected Load (kW)	Standard Supply Voltage (AC 50 Hz)
≤ 50 kW	(1Ø 0.23 kV or 3Ø 0.415 kV) OR 2.2 kV
51 kW up to 2000 kW	11 kV or 15 kV or 22 kV
2001 kW up to 10000 kW	33 or 66 kV
>10000 kW	≥ 132 kV

3. Single Part Tariff for connected load ≤ 20 kW

a) Consumer Service Charge (Charges-1)

Consumer Service Charge (Rs/month)	60

b) Energy Charge (Charges-2)

Energy Charge (Rs./kWh)	4.60

4. Two Part Tariff for connected Load > 20 kW

a) Consumer Service Charge (Charges-1)

Consumer Service Charge (Rs/month)	
20 – 100 kW	120
Above 100 kW	240

b) Energy Charge (Charges-2)

Description	**Energy Charge (Rs./kVAh)**
20 -100 kW	3.95
Above 100 kW	3.75

c) Demand Charge (Charges-3)

Demand Charge (Rs/kVA/month)	
20 -100 kW	75
Above 100 kW	100

Note: *Demand charges would be levied on the actual maximum recorded demand in a month in any 30 minute interval in a month or 90% of the contract demand, whichever is higher.*

5. **Higher Voltage Supply Rebate (HVSR):** *Applicable as specified under 'Part-1 General of this Annexure II'.*
6. **Lower Voltage Supply Surcharge (LVSS):** *Applicable as specified under 'Part-1 General of this Annexure II'.*
7. **Lower Voltage Metering Surcharge (LVMS):** *Applicable as specified under 'Part-1 General of this Annexure II'.*
8. **Late Payment Surcharge (LPS):** *Applicable as specified under 'Part-1 General of this Annexure II'.*
9. **Contract Demand Violation Charge:** *Applicable as specified under 'Part-1 General of this Annexure II'*
10. **Night Time Concession (NTC):** *Applicable @ 20 p/kVAh as specified under 'Part-1 General of this Annexure II'.*
11. **Power Factor Surcharge (PFS):** *Not Applicable.*
12. **Disturbing Load Penalty:** *Applicable as specified under 'Part-1 General of this Annexure II'.*
13. **Peak Load Exemption Charges (PLEC):** *Not Applicable.*
14. **Peak Load Violation Charges (PLVC):** *Not Applicable.*

SCHEDULE - SMALL AND MEDIUM INDUSTRIAL POWER SUPPLY (SMS)

1. Applicability

This schedule is applicable to Industrial consumers with connected load not exceeding 100 kW including pumps (other than irrigation pumping), tokas, poultry farms and sheds, cane crushers, Atta Chakkies, and also for supply to Information Technology Industry (limited only to IT Parks recognised by the State/Central Government). The Industrial type of Agricultural loads with connected load falling in the abovementioned range and not covered by Schedule "WIPS" shall also be charged under this schedule.

2. Character of service

Connected Load (kW)	Standard Supply Voltage (AC 50 Hz)
≤ 50 kW	(1Ø 0.23 kV or 3Ø 0.415 kV) OR 2.2 kV
51 kW up to 100 kW	11 kV or 15 kV or 22 kV

3. Single Part Tariff for connected load ≤ 20 kW

a) Consumer Service Charge (Charges-1)

Consumer Service Charge (Rs/month)	60

b) Energy Charge (Charges-2)

Energy Charge (Rs./kWh)	3.70

4. Two Part Tariff for connected Load > 20 kW

a) Consumer Service Charge (Charges-1)

Consumer Service Charge (Rs/month)	120

b) Energy Charge (Charges-2)

Energy Charge (Rs./kVAh)	3.05

c) Demand Charge (Charges-3)

Demand Charge (Rs/kVA/month)	50

Note: *Demand charges would be levied on the actual maximum recorded demand in a month in any 30 minute interval in a month or 90% of the contract demand, whichever is higher.*

5. Peak load exemption charges (PLEC) and peak load violation charges (PLVC)

a) Peak Load Exemption Charge (PLEC)

Description	Additional Demand Charge on exempted load	Energy Charge
	(Rs./kVA/month)	(Rs./kVAh)
> 20 kW	50	6.10

b) Peak Load Violation Charge (Charge-2)

Description	Demand Charge	Energy Charge
	PLVC (Rs./kVA/month)	PLVC (Rs./kVAh)
	300	9.15

Note

i) The Peak Load Violation Charges shall be applicable to the demand as well as the consumption recorded during the peak load hours only.

ii) Demand charge for peak load violation shall be calculated on the basis of the maximum demand during peak hours, in excess of the exempted load.

iii) Consumers who have the peak load exemption but are found exceeding the exempted load shall be deemed to have used energy, calculated prorata on the basis of the load in excess of the exempted load, for the days of violation only.

6. **Higher Voltage Supply Rebate (HVSR):** *Applicable as specified under 'Part-1 General of this Annexure II'.*

7. **Lower Voltage Supply Surcharge (LVSS):** *Applicable as specified under 'Part-1 General of this Annexure II'.*

8. **Lower Voltage Metering Surcharge (LVMS):** *Applicable as specified under 'Part-1 General of this Annexure II'.*

9. **Late Payment Surcharge (LPS):** *Applicable as specified under 'Part-1 General of this Annexure II'.*

10. **Contract Demand Violation Charge:** *Applicable as specified under 'Part-1 General of this Annexure II'*

11. **Night Time Concession (NTC):** *Applicable @ 20 p/kVAh as specified under 'Part-1 General of this Annexure II'.*

12. **Power Factor Surcharge (PFS):** *Applicable as specified under 'Part-1 General of this Annexure II'.*

13. **Disturbing Load Penalty (DLP):** *Not Applicable.*

14. **Factory lighting & colony supply:** All consumption for bonafide factory lighting i.e. energy consumed in factory premises including factory building, its offices, stores, time keeper office, canteen, library, staff dispensary, welfare centre and factory yard lighting shall be charged under this tariff schedule. The consumption for bonafide use of residential/staff quarters and street lighting of the colony shall also be charged under this tariff schedule if the supply is not taken separately but taken at the same single supply point of the industry. Such consumption shall be charged for the energy consumed at the following rates, irrespective of whether the consumer has opted for peak time exemption or not:

a. During normal times and night time: normal rate subject to the condition that the night time concession as per 10 above shall be given on the consumption during night time.

b. During peak times: the PLEC rate

If supply for colony lighting / residences is taken separately then the same shall be charged as per the relevant category under this schedule of tariff.

SCHEDULE - LARGE INDUSTRIAL POWER SUPPLY (LIPS)

1. Applicability

This schedule is applicable to all other industrial power consumers with connected load exceeding 100 kW including the Information Technology industry (limited only to IT parks recognized by the State/Central Govt.) and not covered by the schedule "WIPS".

2. Character of Service

Connected Load (kW)	Standard Supply Voltage (AC 50 Hz)
101 kW to 2000 kW	11 kV or 15 kV or 22 kV
2001 kW to 10000 kW	33 or 66 kV
>10000 kW	≥132 kV

Note: *Minimum voltage level for PIUs with load less than 1 MW shall be standard voltage mentioned above and not 33 kV*

3. Two Part Tariff

a) Consumer Service Charge (Charges-1)

Description	Consumer Service Charge (Rs/month)
EHT	350
HT	250

b) Energy charge (Charges-2)

Description	Energy Charge (Rs./kVAh)
EHT	
1. Up to 300 kVAh/kVA of contract demand per month	2.60
2. Remaining energy during the month	2.80
HT	
1. Up to 300 kVAh/kVA of contract demand per month	2.80
2. Remaining energy during the month	3.00

c) Demand Charge (Charges-3)

Description	Demand Charge (Rs/kVA/month)
EHT	185

Description	Demand Charge (Rs/kVA/month)
HT	225

Note: *Demand charges would be levied on the actual maximum recorded demand in a month in any 30 minute interval in a month or 90% of the contract demand, whichever is higher.*

4. Peak load exemption charges (PLEC) and peak load violation charges (PLVC)

a) Peak Load Exemption Charge (Charge-1)

Description	Additional Demand Charge on exempted load	Energy Charge
	(Rs./kVA/month)	(Rs./kVAh)
EHT	50	5.20
HT	50	5.60

b) Peak Load Violation Charge (Charge-2)

Description	Demand Charge	Energy Charge
	PLVC (Rs./kVA/month)	PLVC (Rs./kVAh)
EHT	300	7.80
HT	300	8.40

Note

i) *The Peak Load Violation Charges shall be applicable to the demand as well as the consumption recorded during the peak load hours only.*

ii) *Demand charge for peak load violation shall be calculated on the basis of the maximum demand during peak hours, in excess of the exempted load.*

iii) *Consumers who have the peak load exemption but are found exceeding the exempted load shall be deemed to have used energy, calculated prorata on the basis of the load in excess of the exempted load, for the days of violation only.*

5. **Higher Voltage Supply Rebate (HVSR):** *Applicable as specified under 'Part-1 General of this Annexure II'.*
6. **Lower Voltage Supply Surcharge (LVSS):** *Applicable as specified under 'Part-1 General of this Annexure II'.*
7. **Lower Voltage Metering Surcharge (LVMS):** *Applicable as specified under 'Part-1 General of this Annexure II'.*
8. **Late Payment Surcharge (LPS):** *Applicable as specified under 'Part-1 General of this Annexure II'.*
9. **Contract Demand Violation Charge:** *Applicable as specified under Part-1 General of this Annexure II'*
10. **Night Time Concession (NTC):** *Applicable @ 20 p/kVAh as specified under 'Part-1 General of this Annexure II'.*
11. **Power Factor Surcharge (PFS):** Not Applicable.

12. **Disturbing Load Penalty (DLP):** *Not Applicable.*

13 **Factory lighting & colony supply:** All consumption for bonafide factory lighting i.e. energy consumed in factory premises including factory building, its offices, stores, time keeper office, canteen, library, staff dispensary, welfare centre and factory yard lighting shall be charged under this tariff schedule. The consumption for bonafide use of residential/staff quarters and street lighting of the colony shall also be charged under this tariff schedule if supply is taken at a single point. Such consumption shall be charged for the energy consumed at the following rates, irrespective of whether the consumer has opted for peak time consumption or not:

   a. During normal times and night time: normal rate subject to the condition that the night time concession as per 10 above shall be given on the consumption during night time.

   b. During peak time: the PLEC rate

   If supply for colony and/or its residences is taken separately then the same shall be charged as per the relevant consumer category of this schedule of tariff.

SCHEDULE - WATER AND IRRIGATION PUMPING SUPPLY (WIPS)

1 Applicability

This schedule is applicable to connections for water and irrigation pumping and also covers all consumption for bonafide Pump House lighting. This schedule is also applicable to Private Irrigation loads in individual/ society's names, green houses, poly houses, processing facilities for agriculture, fisheries, horticulture, floriculture and sericulture etc. where all such activities are undertaken by agricultural land holders and temporary agricultural loads such as wheat threshers, paddy threshers

2 Character of service

Connected Load (kW)	Standard Supply Voltage (AC 50 Hz)
≤ 50 kW	(1Ø 0.23 kV or 3Ø 0.415 kV) OR 2.2 kV
51 kW up to 2000 kW	11 kV or 15 kV or 22 kV
2001 kW up to 10000 kW	33 or 66 kV
>10000 kW	≥ 132 kV

3 Single Part Tariff for connected load ≤ 20 kW

a) Consumer Service Charge (Charges-1)

Description	Consumer Service Charge (Rs/month)
All consumers	25

b) Energy Charge (Charges-2)

Energy Charge (Rs./kWh)	1.85

4. Two Part Tariff for connected load above 20 kW

a) Consumer Service Charge (Charges-1)

Consumer Service Charge (Rs/month)	
LT	120
HT	120
EHT	120

b) Energy Charge (Charges-2)

Description	Energy Charge (Rs./kVAh)
LT	3.20
HT	3.65
EHT	3.10

c) Demand Charge (Charges-3)

Maximum Demand Charge (Rs/kVA/month)	
LT	50
HT	150
EHT	120

Note: *Demand charges would be levied on the actual maximum recorded demand in a month in any 30 minute interval in a month or 90% of the contract demand, whichever is higher.*

5. Peak load exemption charges (PLEC) and peak load violation charges (PLVC)

a) Peak Load Exemption Charge (Charge-1)

Description	Additional Demand Charge on exempted load	Energy Charge
	(Rs./kVA/month)	(Rs./kVAh)
LT	50	6.40
HT	50	7.30
EHT	50	6.20

b) Peak Load Violation Charge (Charge-2)

Description	Demand Charge	Energy Charge
	PLVC (Rs./kVA/month)	PLVC (Rs./kVAh)
LT	300	9.60
HT	300	10.95
EHT	300	9.30

Note:

i) The Peak Load Violation Charges shall be applicable to the demand as well as the consumption recorded during the peak load hours only.

ii) Demand charge for peak load violation shall be calculated on the basis of the maximum demand during peak hours, in excess of the exempted load.

iii) Consumers who have the peak load exemption but are found exceeding the exempted load shall be deemed to have used energy, calculated pro-rata on the basis of the load in excess of the exempted load, for the days of violation only.

6. **Higher Voltage Supply Rebate (HVSR):** *Applicable as specified under 'Part-1 General of this Annexure II'.*

7 **Lower Voltage Supply Surcharge (LVSS):** *Applicable as specified under 'Part-1 General of this Annexure II'.*

8. **Lower Voltage Metering Surcharge (LVMS):** *Applicable as specified under 'Part-1 General of this Annexure II'.*

9. **Late Payment Surcharge (LPS):** *Applicable as specified under 'Part-1 General of this Annexure II'.*

10. **Contract Demand Violation Charge:** *Applicable as specified under 'Part-1 General of this Annexure II'*

11. **Night Time Concession (NTC):** *Applicable @ 20 p/kVAh as specified under 'Part-1 General of this Annexure II'.*

12. **Power Factor Surcharge (PFS):** *Applicable as specified under 'Part-1 General of this Annexure II'.*

13. **Disturbing Load Penalty (DLP):** *Applicable as specified under 'Part-1 General of Annexure II'.*

SCHEDULE - BULK SUPPLY (BS)

1 Applicability

This schedule is applicable to general or mixed loads to M.E.S and other Military establishments, Railways, Central PWD Institutions, Construction power for Hydro-Electric projects, Hospitals, Departmental/private colonies, group housing societies, A.I.R Installations, Aerodromes and other similar establishments/institutions where further distribution to various residential and non-residential buildings is to be undertaken by the consumer, for its own bonafide use and not for resale to other consumers with or without profit. However, in case of MES, this schedule shall continue to apply till such time MES do not avail Open Access.

2 Character of service

Connected Load (kW)	Standard Supply Voltage (AC 50 Hz)
≤ 50 kW	(1Ø 0.23 kV or 3Ø 0.415 kV) OR 2.2 kV
51 kW up to 2000 kW	11 kV or 15 kV or 22 kV
2001 kW up to 10000 kW	33 or 66 kV
>10000 kW	≥ 132 kV

3. Two Part Tariff

a) Consumer Service Charge (Charges-1)

Consumer Service Charge (Rs/month)	
LT	120
HT	120
EHT	120

b) Energy Charge (Charges-2)

Description	Energy Charge (Rs./kVAh)
LT	4.05
HT	3.15
EHT	3.05

c) Demand Charge (Charges-3)

Demand Charge (Rs/kVA/month)	
LT	200
HT	150
EHT	140

Note: *Demand charges would be levied on the actual maximum recorded demand in a month in any 30 minute interval in a month or 90% of the contract demand, whichever is higher.*

4. **Higher Voltage Supply Rebate (HVSR):** Applicable as specified under 'Part-1 General of this Annexure II'.

5. **Lower Voltage Supply Surcharge (LVSS):** Applicable as specified under 'Part-1 General of this Annexure II'.

6. **Lower Voltage Metering Surcharge (LVMS):** Applicable as specified under 'Part-1 General of this Annexure II'.

7. **Late Payment Surcharge (LPS):** Applicable as specified under 'Part-1 General of this Annexure II'.

8. **Contract Demand Violation Charge:** Applicable as specified under 'Part-1 General of this Annexure II'

9. **Night Time Concession (NTC):** Applicable @ 20 p/kVAh as specified under 'Part-1 General of this Annexure II'.

10. **Power Factor Surcharge (PFS):** Not Applicable.

11. **Disturbing Load Penalty (DLP):** Not Applicable.

12. **Peak Load Exemption Charges (PLEC):** Not Applicable.

13. **Peak Load Violation Charges (PLVC):** Not Applicable.

SCHEDULE - STREET LIGHTING SUPPLY (SLS)

1 Applicability

This schedule is applicable for Street Lighting system including traffic control signal systems on roads and Park lighting in Municipalities, Nagar Panchayats, SADA areas and Panchayats.

2 Character of service

Connected Load (kW)	Standard Supply Voltage (AC 50 Hz)
≤ 50 kW	(1Ø 0.23 kV or 3Ø 0.415 kV) OR 2.2 kV
>50 kW	11 kV or 15 kV or 22 kV

3. Single Part Tariff

a) Consumer Service Charge (Charges-1)

Consumer Service Charge (Rs/month)	60

b) Energy Charge (Charges-2)

Energy Charge (Rs./kWh)	4.00

4. Line maintenance and lamp renewal charges

Where the bulbs, tubes etc. are to be provided and replaced at the cost of the Board, Line Maintenance and lamp renewal charges shall be charged in addition to the energy charges. These charges shall be charged at the following rates:

Description	Charge (Rs./point/month)
(a) Bulbs all wattage	14
(b) Mercury vapour lamps up to 125 watt	40
(c) Mercury vapour lamps 126 watt to 400 watt	95
(d) Fluorescent 2 ft. 20 watt single tube fixture	21
(e) Fluorescent 2 ft. 20 watt double tube fixture	35
(f) Fluorescent 4 ft. single tube fixture	35
(g) Fluorescent 4 ft. double tube fixture	48

Note:

i) *For special type of fixtures like sodium and neon vapour lamps, fittings or any other fixtures not covered above, the material for maintenance of the fixtures and the lamps for replacement shall be provided by the Public Lighting consumers themselves and only replacement charges shall be levied.*

ii) *When the bulbs/Mercury vapour lamps/tubes and other accessories are provided by the Public Lighting consumers and only replacement is to be done by the Board, Line Maintenance and lamp renewal charges shall be as under:*

Description	Charge (Rs./point/month)
Bulbs	7
Tubes and MVL etc	12
Sodium/ Neon Vapour lamps or any other special fixture not covered above	18

5. **Higher Voltage Supply Rebate (HVSR):** *Applicable as specified under 'Part-1 General of this Annexure II'.*
6. **Lower Voltage Supply Surcharge (LVSS):** *Applicable as specified under 'Part-1 General of this Annexure II'.*
7. **Lower Voltage Metering Surcharge (LVMS):** *Applicable as specified under 'Part-1 General of this Annexure II'.*
8. **Late Payment Surcharge (LPS):** *Applicable as specified under 'Part-1 General of this Annexure II'.*
9. **Night Time Concession (NTC):** *Not Applicable.*
10. **Power Factor Surcharge (PFS):** *Not Applicable.*
11. **Disturbing Load Penalty (DLP):** *Not Applicable.*

SCHEDULE - TEMPORARY METERED SUPPLY (TMS)

1 Applicability

This schedule is applicable to all loads of temporary nature including exhibitions, touring talkies, circuses, fairs, melas, marriages, festivals, temporary supply for construction purposes including civil works by Government departments and other similar purposes for temporary needs only.

2 Character of service

Connected Load (kW)	Standard Supply Voltage (AC 50 Hz)
≤ 100 kW	(1Ø 0.23 kV or 3Ø 0.415 kV) OR 2.2 kV
101 kW up to 2000 kW	11 kV or 15 kV or 22 kV
2001 kW up to 10000 kW	33 or 66 kV
>10000 kW	≥ 132 kV

3 Single Part Tariff for connected load ≤ 20 kW

a) Consumer Service Charge (Charges-1)

Consumer Service Charge (Rs/month)	120

b) Energy Charge (Charges-2))

Energy Charge (Rs./kWh)	6.50

4 Two Part Tariff for connected Load > 20 kW

a) Consumer Service Charge (Charges-1)

Consumer Service Charge (Rs/month)	120

b) Energy Charge (Charges-2)

Energy Charge (Rs./kVAh)	4.95

c) Demand Charge (Charges-3)

Demand Charge (Rs/kVA/month)	300

5 **Higher Voltage Supply Rebate (HVSR):** *Applicable as specified under 'Part-1 General of this Annexure II'.*

6 **Lower Voltage Supply Surcharge (LVSS):** *Applicable as specified under 'Part-1 General of this Annexure II'.*

7 **Lower Voltage Metering Surcharge (LVMS):** *Applicable as specified under 'Part-1 General of this Annexure II'.*

8 **Late Payment Surcharge (LPS):** *Applicable as specified under 'Part-1 General of this Annexure II'.*

9 **Contract Demand Violation Charge:** *Applicable as specified under ''Part-1 General of this Annexure II'*

10 **Night Time Concession (NTC):** *Applicable @ 20 p/kVAh as specified under 'Part-1 General of this Annexure II'.*

11 **Power Factor Surcharge (PFS):** *Not Applicable.*

12 **Disturbing Load Penalty (DLP):** *Not Applicable.*

13 **Peak Load Exemption Charges (PLEC):** *Not Applicable*.

14 **Peak Load Violation Charges (PLVC):** *Not Applicable.*

LIST OF ABBREVIATIONS

The abbreviations and acronyms used in this tariff order shall have the following respective meanings unless the context requires otherwise

S. No.	Abbreviation/ Acronym	Meaning
1	A&G	Administrative & General
2	AAAS	Agriculture & Allied Activities Supply
3	AAD	Advance Against Depreciation
4	Act	The Electricity Act, 2003
5	AMI	Advanced Metering Infrastructure
6	APDRP	Accelerated Power Development and Reform Program
7	APR	Annual Performance Review
8	ARM	Automatic Meter Reading
9	ARR	Aggregate Revenue Requirement
10	ATSC	Annual Transmission Service Charge
11	BBMB	Bhakra Beas Management Board
12	Board	Himachal Pradesh State Electricity Board
13	BPL	Below Poverty Line
14	CAGR	Compounded Annual Growth Rate
15	CDVC	Contract Demand Violation Charge
16	CEA	Central Electricity Authority
17	CERC	Central Electricity Regulatory Commission
18	CGS	Central Generating Stations
19	COD	Date of Commercial Operation
20	CoS	Cost of Supply
21	CPI	Consumer Price Index
22	CPSUs	Central Public Sector Undertakings
23	CS	Commercial Supply
24	CWIP	Capital Works in Progress
25	DA	Dearness Allowance
26	DC	Demand Charge
27	DLP	Disturbing Load Penalty
28	DS	Domestic Supply
29	DSM	Demand Side Management
30	EE	Energy Efficiency
31	EHT	Extra High Tension

S. No.	Abbreviation/ Acronym	Meaning
32	FPA	Fuel Price Adjustment
33	FY	Financial Year
34	GFA	Gross Fixed Assets
35	GIS	Geographic Information System
36	GoHP	Government of Himachal Pradesh
37	GOI	Government of India
38	GPF	General Provident Fund
39	HEP	Hydro Electric Project
40	HPSEB	Himachal Pradesh State Electricity Board
41	HT	High Tension
42	HVSR	High Voltage Supply Rebate
43	IPPs	Independent Power Producers
44	IR	Interim Relief
45	ITIs	Industrial Training Institutes
46	JHPL	Jaiprakash Hydro Power Ltd.
47	kV	Kilo Volt
48	kVA	Kilo Volt-Ampere
49	kVAh	Kilo Volt-Ampere Hour
50	kW	Kilo Watt
51	kWh	Kilo Watt Hour
52	LIP	Large Industrial Power Supply
53	LPS	Late Payment Surcharge
54	LT	Low Tension
55	LTC	Leave Travel Concession
56	LVMS	Lower Voltage Metering Surcharge
57	LVSS	Lower Voltage Supply Surcharge
58	MU	Million Units
59	MW	Mega Watt
60	MYT	Multi Year Tariff
61	NDNCS	Non-Domestic Non-Commercial Supply
62	NFA	Net Fixed Assets
63	NHPC	National Hydro-Electric Power Corporation
64	NJPC	Nathpa Jhakri Power Corporation
65	NPCIL	Nuclear Power Corporation of India Ltd.
66	NTC	Night Time Concession

S. No.	Abbreviation/ Acronym	Meaning
67	NTI	Non-Tariff Income
68	NTP	National Tariff Policy
69	NTPC	National Thermal Power Corporation
70	PFS	Power Factor Surcharge
71	PGCIL	Power Grid Corp. of India Ltd.
72	PLEC	Peak Load Exemption Charge
73	PLVC	Peak Load Violation Charge
74	PPA	Power Purchase Agreement
75	PSEB	Punjab State Electricity Board
76	R&M	Repair & Maintenance
77	ROE	Return on Equity
78	SERC	State Electricity Regulatory Commission
79	SHP	Small Hydro Projects
80	SJVNL	Satluj Jal Vidyut Nigam Ltd.
81	SMS	Small & Medium Industrial Power Supply
82	State Govt.	Government of Himachal Pradesh
83	T&D	Transmission & Distribution
84	THDC	Tehri Hydro Development Corporation
85	ToD	Time of Day
86	UJVNL	Uttaranchal Jal Vidyut Nigam Limited
87	UPSEB	Uttar Pradesh State Electricity Board
88	WIPS	Water &Irrigation Pumping Supply
89	WPI	Wholesale Price Index