MULTI YEAR TARIFF ORDER

FOR

HIMACHAL PRADESH STATE

ELECTRICITY BOARD LIMITED

FOR

THE PERIOD

FY12 TO FY14

Himachal Pradesh Electricity Regulatory Commission

19th July, 2011

BEFORE THE HIMACHAL PRADESH ELECTRICITY REGULATORY COMMISSION AT SHIMLA

CASE NO: 224/2010.

CORAM

SUBHASH CHANDER NEGI

IN THE MATTER OF:

Determination of Aggregate Revenue Requirement (ARR) for the Multi Year Tariff petition of the Second Control Period (FY12 - FY14) under section 62 of the Electricity Act, 2003.

AND

IN THE MATTER OF:

Himachal Pradesh State Electricity Board Limited

… APPLICANT

The Himachal Pradesh State Electricity Board Limited (hereinafter called the 'HPSEBL') has filed a petition with the Himachal Pradesh Electricity Regulatory Commission (hereinafter referred to as 'the Commission' or 'HPERC') for approval of its Aggregate Revenue Requirement (ARR) and determination of Wheeling and Retail Supply Tariff for the Second MYT Control Period (FY12 - FY14) under Sections 62, 64 and 86 of the Electricity Act, 2003 (hereinafter referred to as "the Act"), read with the HPERC (Terms and Conditions for Determination of Wheeling Tariff and Retail Supply Tariff) Regulations, 2011 and the HPERC (Terms and Conditions for Determination of Hydro Generation Tariff) Regulations, 2011.

The Commission having heard the applicant, interveners, consumers, consumer representatives of various consumer groups on May 30, 2011 at Shimla, and having had formal interactions with the officers of the HPSEBL 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 ARR of the HPSEBL for each year of the Second

Control Period (FY12–FY14) under the Multi Year Tariff (MYT) regime and approved the Wheeling and the Retail Supply Tariffs for FY12 in accordance with the guidelines laid down in 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 adjustments on account of allowed variations in uncontrollable parameters.

The Commission has also determined in this Tariff Order the annual fixed charges for each of the stations owned by the HPSEBL for each year of the Control Period (FY12 – FY14) under the Multi Year Tariff regime.

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. 1st April, 2011. The arrears, if any, on account of revised tariffs for the months of April 2011 to June 2011 shall be adjusted in equal instalments in four months.

In accordance with sub-regulation (5) of Regulation 3 of the HPERC (Terms and Conditions for Determination of Wheeling Tariff and Retail Supply Tariff) Regulations, 2011, the tariff determined by the Commission and directions and advisories given in Chapter A9 of the 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 compliance of the directions-cum-orders to the satisfaction of the Commission and 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 3 of the HPERC (Terms and Conditions for Determination of Wheeling Tariff and Retail Supply Tariff) Regulations, 2011, the Wheeling and Retail Supply Tariff shall unless amended or revoked, continue to be in force up to March 31, 2012. In the event of failure on the part of the licensee to file application for true-up for FY11 and approval of Wheeling and Retail Supply Tariff for the ensuing financial year, in terms of Regulation 37 of the HPERC (Terms and Conditions for Determination of Wheeling Tariff and Retail Supply Tariff) Regulations, 2011 on or before November 30, 2011, the tariff determined by the Commission shall cease to operate after March 31, 2012, 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 42 of the HPERC (Terms and Conditions for Determination of Wheeling Tariff and Retail Supply Tariff) Regulations, 2011, 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 notified tariff. The licensee shall, however, make appropriate adjustments in the bills to be raised on 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 HPSEBL is directed to make available the copies of the Tariff Order to all concerned officers up to AE level, and sub-divisions within two weeks of issue of this Order. The HPSEBL 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.

--Sd--

Shimla **(Subhash Chander Negi)**
Dated: 19th July, 2011 **Chairman**

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A1: BACKGROUND

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

1.2 In accordance with provisions of the Act, vide Notification No. MPP-A(3)-1/2001-IV dated 15 June 2009, the functions, assets, properties, rights, liabilities, obligations, proceedings and personnel of Himachal Pradesh State Electricity Board (HPSEB) were vested with the Government of Himachal Pradesh. Also in accordance with the provisions of the Act, vide the 'Himachal Pradesh Power Sector Reforms Transfer Scheme, notified vide No. MPP-A(3)-1/2001-IV, dated 10 June 2010, the above mentioned functions, assets, properties, rights etc earlier vested with the Government of Himachal Pradesh were re-vested into corporate entities by the name of Himachal Pradesh State Electricity Board Limited (HPSEBL) and Himachal Pradesh Power Transmission Corporation Limited (HPPTCL). Thus, the HPSEBL came into being with effect from 10^{th} of June, 2010, from the date of re-vesting, the functions of generation, distribution and trading of electricity shall be undertaken by the HPSEBL

History of Power Sector in Himachal Pradesh

1.3 Electric supply at the time of formation of the State in 1948 was available only in the capital of the erstwhile princely states and the connected load at the time was less than 500 KW. First electrical division was formed in August 1953 under the Public Works Department and subsequently a Department of Multi-Purpose Projects and Power was formed in April 1964 after realizing the need for exploiting the substantial hydel potential available in the river basins.

1.4 Himachal Pradesh State Electricity Board was constituted in accordance with the provisions of Electricity Supply Act (1948) in the year 1971. Thereafter, all functions of the Department of Multi-Purpose Projects and Power such as generation, execution of hydroelectric projects except functions of flood control and minor irrigation were transferred to the Board.

1.5 HPSEB was established in 1971, as a body constituted u/s 5 of the erstwhile Electricity (Supply) Act, 1948 and carried out functions of Generation, Transmission and Distribution for the State of Himachal Pradesh up to 10^{th} June,, 2010, when the Government of Himachal Pradesh, in exercise of the power conferred to it under Section 131 (2), 132, 133 and other applicable provisions of the Electricity Act 2003, transferred the functions of generation, distribution and trading of electricity to Himachal Pradesh State Electricity Board Limited (HPSEBL) and the function of evacuation of power by transmission lines to Himachal Pradesh Power Transmission Company Limited (HPPTCL), vide the Himachal Pradesh Power Sector Reforms Transfer Scheme, 2010.

1.6 On 10^{th} of June 2010 Himachal Pradesh State Electricity Board (HPSEB) was reorganised into a company to be known as Himachal Pradesh State Electricity Board Limited (HPSEBL).

Overview of HPSEBL

1.7 The HPSEBL is a vertically integrated utility and is entrusted with the functions of generation, distribution and trading of power in the State of Himachal Pradesh. The HPSEBL is responsible for the development (planning, designing, and construction), operation and maintenance of power distribution system in Himachal Pradesh. Investigation & exploitation of hydro potential of the State either through State Sector or through Central, Joint and Private Sectors is also entrusted with the HPSEBL. The HPSEBL has share of power in Central Sector stations while it also imports power from neighbouring states.

1.8 Operation and maintenance of the distribution system in the HPSEBL is carried out by its Operation Wing, which has three zones - North, Central and South, each being headed by a Chief Engineer. There are 12 Operation Circles under all the above Operation Wings. The geographical area of the Circles is not strictly as per the territorial jurisdiction of districts.

1.9 The total installed capacity of generation of the HPSEBL is 467 MW and total line length (HT & LT) is approx 82742 km. Despite extreme geographical terrain and climate with the population spread over far- flung and scattered areas, the State has achieved 100 percent electrification of towns and villages in 1988.

1.10 The HPSEBL has filed petition with the Himachal Pradesh Electricity Regulatory Commission (hereinafter referred to as 'the Commission' or 'HPERC') for true-up of FY10 and approval of its Aggregate Revenue Requirement (ARR) and determination of Wheeling and Retail Supply Tariff for the Second MYT Control Period (FY12 - FY14) 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, 2011 and the Himachal Pradesh Electricity Regulatory Commission (Terms and Conditions for Determination of Hydro Generation Tariff) Regulations, 2011 (hereinafter referred to as MYT Regulations, 2011).

1.11 The licensee is required to observe the methodologies and procedures specified by the Commission in the above mentioned Regulations in calculating the expected revenue from charges (viz. Aggregate Revenue Requirement) and in designing tariffs. The calculations relate to each of the licensed business for each financial year of the Control Period regarding:

(1) its expected aggregate revenue from charges under its currently approved tariff; and

(2) its expected revenue gap (if any) and a general explanation on how it proposes to deal with the revenue gap and the application of tariffs for the ensuing

financial years.

1.12 The ARR for the Second Control Period has been segregated based on transfer scheme of Government of Himachal Pradesh according to which, with effect from 6th October, 2010, the transmission function of the HPSEBL has been transferred to the HPPTCL and distribution and generation function to the HPSEBL.

1.13 This Tariff Order relates to the determination of Aggregate Revenue Requirement (ARR) of the HPSEBL's distribution function for each year of the Control Period (FY12 – FY14) under the Multi Year Tariff (MYT) regime and approval of Wheeling and the Retail Supply Tariffs for FY12. Wheeling and Retail Supply Tariff shall be decided every year taking into account adjustments on account of allowed variations in uncontrollable parameters.

1.14 The Commission has also determined in this Tariff Order the annual fixed charges for the generation function for each of the stations owned by the HPSEBL for each year of the Control Period (FY12 – FY14) under the Multi Year Tariff regime.

1.15 The Commission has also reviewed the operational and financial performance of the HPSEBL for FY10 and has finalised this Order based on the review and analysis of the past records, information submissions, necessary clarifications submitted by the licensee and views expressed by the stakeholders.

Multi Year Tariff Framework

1.16 The Commission decided to adopt Multi Year Tariff (MYT) principles for determination of tariffs, in line with the provision of Section 61 of the Act.

1.17 The MYT framework is also designed to provide predictability and reduce regulatory risk. This can be achieved by approval of a detailed capital investment plan for the Petitioner, considering the expected network expansion and load growth during the Control Period. The longer time span enables the Petitioner to propose its investment plan with details on the possible sources of financing and the corresponding capitalization schedule for each investment.

1.18 The HPERC had specified the terms and conditions for the determination of tariff in the year 2004, based on the principles laid down under Section 61 of the Electricity Act 2003. Thereafter, the HPERC had notified 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 the HPERC (Terms and Conditions for Determination of Transmission Tariff) Regulations, 2007 and the previous tariff regulations of 2004 had been repealed.

1.19 Subsequently, the HPERC has notified HPERC (Terms and Conditions for Determination of Wheeling Tariff and Retail Supply Tariff) Regulations, 2011; HPERC (Terms and Conditions for Determination of Hydro Generation Tariff)

Regulations, 2011 and HPERC (Terms and Conditions for Determination of Transmission Tariff) Regulations, 2011 and the previous tariff regulations of 2007 have been repealed.

1.20 The Commission vide notification dated 2nd April 2011, in exercise of the powers conferred by Clause (13) of Regulation 3 of the Himachal Pradesh Electricity Regulatory Commission (Terms and Conditions for Determination of Hydro Generation Tariff) Regulations, 2011 fixed the period of three years starting from 1 April 2011 as the multi-year Control Period.

1.21 The Commission from FY02 to FY08 determined annual tariffs and during this period issued five Tariff Orders. For FY03 to FY04, HPSEB failed to file its ARR and for this period no Tariff Orders were issued by the Commission. In FY2008-09 the Commission came up with its first 3 year MYT Tariff Order for the period FY09 to FY11. During the ongoing period of this first MYT, two Annual Performance Review (APR) Orders were issued by the Commission.

Filing of ARR and Tariff Petition for the Second MYT Control Period (FY12 – FY14)

Procedural Background

1.22 The HPSEBL filed the application for approval of ARR and determination of Wheeling and Retail Supply Tariff as well as ARR and Generation Tariff for the Second Control Period (FY12–FY14), with the Commission on 30th November, 2010. The HPSEBL submitted further details in February 2011.

1.23 Upon notification of the HPERC Tariff Regulations 2011, the Petitioner submitted an Addendum on 16th April, 2011 incorporating changes as per the new MYT Regulations (HPERC Tariff Regulation, 2011).

1.24 PricewaterhouseCoopers Pvt. Ltd. (PwC) were appointed as Consultants to assist the Commission in the assessment of the ARR and determination of the relevant tariffs.

Admission Hearing

1.25 The Commission directed the HPSEBL vide letter No. HPERC/478-A-Vol II/Secy/TFA Section/2011 dated 10th January 2011 to submit details regarding first set of deficiencies discovered during preliminary scrutiny of the ARR, which were submitted by the HPSEBL vide M.A. No. 10 of 2011 dated 2nd January 2011. The Commission held Admissibility Hearing for the admission of the Petition on 7th April 2011 and admitted the petition.

Interaction with the Petitioner

1.26 Since the submission of the petition by the HPSEBL there have been a series of interactions between the HPSEBL 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. The record of interaction with the licensee is provided in Chapter A4: of this Order.

1.27 The Commission also conducted the technical validation session on the petition filed by the HPSEBL on 19th May, 2011 at the Commission's office during which the discrepancies and additional information requirement in the Petition were highlighted.

1.28 The submissions made by the Petitioner, to the clarifications/ information sought by the Commission from time to time, as detailed hereunder, have also been taken on record:

Table 1: Communication with the Petitioner

No	Submission of the Petitioner
1	M.A No 10/2011 dated 2nd February 2011
2	M.A. No 15/2011 dated 22nd February 2011
3	M.A No 17/2011 dated 25th February 2011
4	M.A. No 29/2011 dated 25th March 2011
5	M.A. No 30/2011 dated 26th March 2011
6	M.A. No 34/2011 dated 16th April 2011
7	M.A. No 40/2011 dated 2nd May 2011
8	M.A. No 87/2011 dated 27th May 2011
9	M.A. No 99/2011 dated 17th June 2011
10	M.A. No 101/2011 dated 29th June 2011
11	Letter No HPSEB/CE(Comm)/SERC-2217-A dated 30th April 2011
12	Letter No HPSEB/CE(Comm)/SERC-2733 dated 7th May 2011
13	Letter No HPSEB/CE(Comm)/SERC-MYT/2011-4083 dated 3rd June 2011
14	Letter No HPSEB/CE(Comm)/SERC-4205 dated 7th June 2011
15	Letter No HPSEB/CE(Comm)/SERC-4492 dated 10th June 2011

Public Hearings

1.29 The Commission issued an interim order to the HPSEBL, after admission hearing on 7th April 2011 for publishing a summary of the salient features of the petition for the information of all the stakeholders. In compliance to the order, the HPSEBL published the salient features of the petition in the following newspapers:-

(1) The Tribune (Chandigarh Edition) – 18th April, 2011

(2) The Divya Himachal (Chandigarh Edition) – 18th April, 2011

(3) The Hindustan Times (Chandigarh Edition) – 20th April, 2011

(4) The Amar Ujala (Chandigarh Edition) – 20th April, 2011.

1.30 The Commission invited suggestions and objections from the public on the tariff petition in accordance with Section 64 (3) of the Act subsequent to the publication of initial disclosure by the HPSEBL. The public notice inviting objections/ suggestions was published on in the following newspapers:-

(1) The Tribune (Chandigarh, Jalandhar and Bhatinda Edition) – 21st April, 2011

(2) The Amar Ujala (Chandigarh and Dharamsala Edition).—20th April, 2011

1.31 The interested parties/stakeholders were asked to file their objections and suggestions on the petition by 9th May 2011.

1.32 The Commission received objections from 24 stakeholders by the stipulated date. The HPSEBL filed its replies to the objections/ suggestions set out by various objectors vide M.A No 87/2011 dated 27th May, 2011, a copy of which was also sent to the individual objectors. The objectors were also allowed to file rejoinder, if any, to the Commission with a copy to the Petitioner till 30th May, 2011.

1.33 The Commission issued a public notice informing the public about the scheduled date of public hearing. All the parties, who had filed their objections/ suggestions, were also informed about the date, time and venue for presenting their case in the public hearing.

1.34 Public hearing on the HPSEBL's petition was held on 30th May, 2011 at the Commission's Court Room in Shimla.

1.35 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 ARR AND TARIFF PETITION FOR THE SECOND CONTROL PERIOD (FY12 TO FY14)

2.1 This section summarizes the highlights of the petition filed by the HPSEBL for determination of the Aggregate Revenue Requirement (ARR) and determination of Distribution and Retail Supply Tariff as well as Generation Tariff for the Second MYT Control Period (FY12 to FY14).

2.2 The HPSEBL filed the application for approval of ARR and determination of Wheeling and Retail Supply Tariff as well as ARR and Generation Tariff for the Second Control Period (FY12 to FY14), with the Commission on 30th November, 2010. The HPSEBL submitted further details in February 2011.

2.3 Upon notification of the HPERC Tariff Regulations 2011, the Petitioner submitted an Addendum on 16th April, 2011 incorporating changes as per the new MYT Regulations (HPERC Tariff Regulation, 2011).

Sales Projections

2.4 For the Second Control Period, licensee has projected energy sales by applying the category-wise Compounded Annual Growth Rate (CAGR) of certain years on the estimated sales of FY11, in the following manner:

(1) For Domestic category, the HPSEBL has projected an increase in sales at 5.48%, in line with 3 years' CAGR for sales to this category.

(2) For Non-Domestic Non-Commercial (NDNC) as well as Commercial categories, licensee has projected sales growth at 7.80% and 10.96% respectively, which is 2 years' CAGR for sales under both the categories.

(3) For Small and Medium Supply category, licensee has projected sales growth at 3.99%, which is the 5 years' CAGR for this category.

(4) Under Large Industrial Power Supply category, licensee has projected sales growth for HT and EHT consumers at 6.73% and 9.88% respectively, which is in line with the 2 years' CAGR for these categories.

(5) For Street Lighting, Water Pumping and Agricultural supply and Temporary supply categories, licensee has projected increase in sales by applying 3 years' CAGR under respective categories.

(6) For Bulk Supply consumers, energy sale has been projected by applying 5 years' CAGR.

(7) Accordingly, licensee has estimated the sales of 6267 MUs for FY11 and projected an energy sales of 6774 MU, 7328 MU and 7931 MU for FY12,

FY13 and FY14 respectively, within the State of Himachal Pradesh, as tabulated hereunder:

Table 2: Consumer Category wise Energy Sales

Energy Sales (MU)	FY 10	FY 11	FY 12	FY 13	FY 14
	Actuals	R.E	Projected	Projected	Projected
Domestic	1,112	1,202	1,267	1,337	1,410
Antodya	0.54	0.46	0.49	0.51	0.54
Non Domestic Non Commercial	90	91	98	106	114
Commercial	306	312	346	384	427
Public Lighting	13	18	19	19	20
Small Power	55	63	66	68	71
Medium Power	120	136	141	147	153
Large Supply (HT)	1886	1931	2061	2199	2347
Large Supply (EHT)	1535	1812	1991	2188	2404
Irrigation and Agriculture	37	42	45	48	52
Govt. Irrigation and Water Pump	415	376	408	443	480
Temporary	27	22	25	28	31
Bulk Supply	219	261	306	359	422
Total Energy Sales	**5,814**	**6,267**	**6,774**	**7,328**	**7,931**

Transmission and Distribution (T&D) Loss

2.5 The HPSEBL has proposed to reduce T&D losses by 0.25% in the first year of the Second Control Period and by 0.20% each in the remaining two years, beginning with a loss level of 14.25% for FY11.

2.6 During the first Control Period, the Commission had set a revised T&D loss reduction trajectory of 0.35%, 0.35% and 0.30% for FY09, FY10 and FY11 respectively to reach a level of 12.49% by the end of FY11. However, licensee has pleaded to the Commission that the substantial reduction in losses being reported over the past few years was a result of an error in loss reporting in a few circles and that the actual loss level for FY10 is higher than what was anticipated earlier.

2.7 As per the licensee’s submission, in the past few years, the number of units sold in Shimla, Nahan and Solan Circles of the HPSEBL were booked in KVAh units and these were considered while calculating T&D losses, whereas the remaining circles were including energy in KWh units for computation of T&D losses. In the present ARR submissions, the HPSEBL has converted the reported KVAh energy into KWh energy and accordingly submitted information on T&D losses to the Commission. Due to this anomaly, substantial reduction in losses were reported which were not actually achieved.

2.8 The licensee has now requested the Commission to consider the revised loss level base for fixation of loss reduction trajectory for the Second Control Period, starting from a realistic base line data.

Table 3: Transmission and Distribution Loss

Energy Balance (MU)	FY 10 Actual	FY 11 R.E	FY 12 Projected	FY 13 Projected	FY 14 Projected
Sales within the State (MU)	5814	6267	6774	7328	7931
Proposed T&D Loss within the State (%)	**14.58%**	**14.25%**	**14.00%**	**13.80%**	**13.60%**
Power Requirement for sale within the State (MU)	6806	7308	7877	8501	9180

Energy Availability

Own Hydel Generation

2.9 The HPSEBL has projected energy availability from its own generating stations for the Control Period as tabulated hereunder:

Table 4: HPSEBL Projection - Power Purchase Quantum

Station wise Gross Generation (MU)	FY 11 R.E	FY 12 Projected	FY 13 Projected	FY 14 Projected
Bhaba	622	561	561	561
Bassi	247	300	300	300
Giri	180	177	177	177
Andhra	56	60	60	60
Baner	39	38	38	38
Gaj	33	40	40	40
Binwa	27	28	28	28
Thirot	10	8	8	8
Ghanvi	58	77	77	77
Gumma	3	5	5	5
Holi	10	10	10	10
Larji	625	613	613	613
Khauli	39	39	39	39
Micro's	20	23	23	23
Bhaba Aug	4	26	26	26
Total	**1973**	**2006**	**2006**	**2006**
Less: Auxiliary Consumption	10	14	14	14
Less: GoHP 12 % Share in Larji, Khauli, Baner, Ghanvi, Gaj and Bhaba	96	100	100	100
Net Hydel Generation	**1867**	**1892**	**1892**	**1892**

2.10 Some of the highlights of power availability from own generating stations projected by the HPSEBL are:

(1) The HPSEBL has considered the average generation for the recent three years (FY08, FY09 and FY10) for projecting the own generation for the Second Control Period except for Bassi and Bhaba Augmentation HEP. The HPSEBL has estimated the generation for the current year (i.e. FY11) based on the trend of actual generation during the first six months.

(2) Energy availability projected from Bassi HEP for each year of the Second Control Period is estimated at 300 MU due to the completion of R&M work by the HPSEBL for the two units. The HPSEBL has projected the generation from the Bhaba (augmentation) for the Second Control Period on the basis of the design energy.

(3) Auxiliary consumption has been considered to be 0.7% of the total gross generation projected for the each year of Second Control Period.

(4) GoHP is entitled for 12% of the power in all the projects exceeding 5 MW capacity commissioned by HPSEBL after 1990. Gaj, Baner, Ghanvi, Larji, Khauli and Bhaba Augmentation fall in this category. The 12% free power share of GoHP from these plants has been deducted while projecting the net-generation from own plants for the Control Period

(5) The HPSEBL has also considered the generation from two new hydel plants namely Ghanvi II and Uhl III for the Second Control Period. Both these new plants are the HPSEBL's own projects and therefore 88% of the total generation has been considered in the own generation after deducting the 12% GoHP share. The HPSEBL has considered the generation from Ghanvi II from April 2011 onwards whereas the expected commissioning of Uhl III is considered in April 2013.

Power Purchase Quantum from Other Sources

2.11 The quantum of power availability for the HPSEBL from various sources has been detailed in the table as follows:-

Table 5: HPSEBL Projection - Power Purchase Quantum (MU)

Power Purchase Cost	FY 11 R.E	FY 12 Projected	FY 13 Projected	FY 14 Projected
Stations				
BBMB Old	44	44	44	44
BBMB New	120	115	115	115
Dehar	79	79	79	79
Total	**243**	**238**	**238**	**238**
NTPC Stations				
Anta(LNG)	4	3	3	3
Anta(GF)	82	86	86	86
Anta (LF)	1	1	1	1
Auraiya(LNG)	6	4	4	4

Power Purchase Cost	FY 11 R.E	FY 12 Projected	FY 13 Projected	FY 14 Projected
Auraiya(GF)	120	127	127	127
Auraiya (LF)	1	1	1	1
Dadri(LNG)	6	5	5	5
Dadri(GF)	142	149	149	149
Dadri (LF)	1	1	1	1
Unchahar-I	56	53	53	53
Unchahar-II	96	93	93	93
Unchahar-III	59	63	63	63
Rihand-1 STPS	251	273	273	273
Rihand-2 STPS	269	261	261	261
Kehalgaon	115	119	119	119
Barh I& II	0	21	24	109
Rihand STPP-III			162	243
Total	**1206**	**1259**	**1424**	**1590**
NHPC Stations				
Chamera-I	65	48	48	48
Chamera-II	53	54	54	54
Salal	30	30	30	30
Tanakpur	14	15	15	15
Uri	74	69	69	69
Dhauli Ganga	38	40	40	40
Chamera-III	4	27	27	27
Parbati – III		46	54	86
Parbati II			3	54
Total	**278**	**329**	**340**	**424**
Other Stations				
NAPP	36	49	49	49
RAPP	65	71	71	71
Nathpa Jhakri SoR	163	169	169	169
Kol Dam (SOR)				84
Kasnag I (HPPCL)				218
Shanan	5	5	5	5
Shanan Extn	45	45	45	45
Yamuna (UJVNL)	341	371	371	371
Khara	51	57	57	57
Baspa –II	1050	1050	1050	1050
Baspa II Sec Energy	155	154	154	154
Tehri I	79	71	71	71
Koteshwar	0	17	25	25
Koldam			2	84
Patikari	31	31	31	31
Market Purchase		125	200	0
Total	**2022**	**2215**	**2300**	**2484**
Free Power & Equity Power				
Baira Suil	41	35	35	35
Chamera-I	118	60	60	60
Chamera –II	65	67	67	67

Power Purchase Cost	FY 11 R.E	FY 12 Projected	FY 13 Projected	FY 14 Projected
Shanan Share	3	3	3	3
Ranjeet Sagar Dam	64	61	61	61
Malana	56	38	38	38
Baspa – II	172	143	143	143
Nathpa Jhakri	245	248	248	248
Nathpa Jhakri Equity	694	353	353	353
Parbati II			13	82
Parbati III		51	63	63
Patikari + Toss	11	11	11	11
Ghanvi	7	9	9	9
Baner	5	5	5	5
Gaj	4	5	5	5
Larji	75	74	74	74
Khauli	5	5	5	5
Koldam	0	0	8	77
Kasang I (HPPCL)				13
AD Hydro	13	16	16	16
Karcham Wangtoo			165	165
Budhil			10	10
Chamera III	18	36	36	36
Total	**1594**	**1218**	**1427**	**1577**
Banking Power	821	300	300	300
Unallocated Share	400	608	678	1420
Private Micros	450	518	595	631
UI	182			
Other charges				
Arrears				
PGCIL				
ULDC				
Total	**1853**	**1425**	**1573**	**2350**
Gross Power Purchase	**7196**	**6685**	**7303**	**8664**
External Loss	3.50%	3.50%	3.50%	3.50%
Net Power Purchase	**6944**	**6451**	**7047**	**8361**

2.12 Some of the highlights of power purchase assumptions made by the HPSEBL are:

(1) The quantum of power purchase for the first half of the current year i.e. FY11 is based on the actual bills received from each power purchase source/station.

(2) Power purchase quantum from NTPC stations for the second half of the current year and the Control Period has been calculated based on the installed capacity of each plant and by applying the average of previous three years month-wise PLF (FY08, FY09 and FY10) as mentioned in the REA to calculate the month-wise gross generation, except for Kahalgaon which has been considered at 65% PLF based on the previous years. In case of Barh III and Rihand III, PLF of 90% has been used to calculate the month-wise gross generation. The HPSEBL has also factored the auxiliary consumption based

on the CERC Tariff Order to arrive at the month-wise net generation for each plant. The effective share of the HPSEBL is applied on the total month-wise net generation to estimate the month-wise net energy purchases from the respective stations.

(3) Power purchase quantum from existing as well as new stations (expected to be commissioned during the Control Period) of NHPC, for the second half of the current year and for the years covered under the Second Control Period has been calculated as per the month-wise design energy shown by each plant in their respective water studies (as mentioned in the CERC Orders). The 12% free power share has been considered only during the winter months (October to April) of Control Period to meet the deficit in the State.

(4) Similarly, the power quantum from NAPP has been worked out based on the installed capacity of the plant and by applying the average of previous three years month-wise PLF. The HPSEBL has considered the share from RAPP in the Second Control Period on the PLF of 60%.

(5) Power purchase quantum from Baspa II (Primary energy), Nathpa Jhakri, Tehri and Malana hydel stations for the second half of the current year and the Second Control Period has been calculated as per the month-wise design energy generation shown by each plant in their respective water studies. In case of Baspa II secondary energy has been projected based on previous year trends to the tune of 155 MU.

(6) Power purchase quantum from Khara, Yamuna (UJVNL) has been considered at the last three years average generation level.

(7) The HPSEBL has considered the generation from four new hydel plants namely Parbati-II, Parbati-III, Chamera-III and Koldam during the Second Control Period as per tentative COD based on design energy given in their respective DPRs. The HPSEBL has considered 17.75% share (SoR 2.75% and Unallocated 15%) from these plants. Further, 12% free power GoHP share has also been considered only during the winter months from these four plants.

(8) The HPSEBL's share in Unit I of Barh-II will be available from the beginning of December 2012 and Unit-II in October 2013. HPSEBL has considered a 1.53% share in both these Units from the date of commissioning of each unit. Also, the HPSEBL's share in Unit I of Rihand-III will be available to the HPSEBL in the beginning of March 2012 and Unit-II in December 2012. The HPSEBL has considered a 3.37% share in both these Units from the date of commissioning of each unit as per the allocation from the GoI.

(9) The HPSEBL has also considered the generation from private and State sector hydel projects namely Karcham-Wangtoo, Budhil and Kasang-I (HPPCL) likely to be commissioned during Second Control Period. In Karcham-Wangtoo and Budhil, the HPSEBL does not have any allocation and has only

considered 12% GoHP free power share during the winter months. For Kasang-I, the HPSEBL has considered the 88% allocation (after deducting the GoHP share) for the FY 13-14. The free power GoHP share in Kasang-I is only considered during the winter months.

(10) For the Second Control Period, the HPSEBL has only considered the forward banking to the tune of 300 MUs per annum to meet the winter deficit. Licensee submitted that there has been increase in banking quantum in the recent years due to shortage of energy during winter months and delay in commissioning of new plants, but considering the increase in quantum of energy available from commissioning of new plants in the ensuing years, it expects the banking quantum to reduce in future years.

(11) The unallocated share from the central generating stations for the first two years of Second Control Period has been considered at the same level of unallocated share received during the winter months of FY10. Due to the proposed commissioning of new plants during FY13-14 where the HPSEBL is having unallocated share, the quantum from GoI unallocated share has been considered on a lower side.

(12) Power purchase from private micro hydel plants for the Second Control Period has been increased mainly due to commissioning of new private micros in the State. Power purchase from the Toss is also considered under private micros.

(13) Licensee submitted that though the availability of power shall increase due to additions in allocation of power from various resources, it will have to still procure power from market and other sources to meet its energy requirement during the winter months in current year and first two years of Control Period.

(14) Generation from the new plants has been considered as per the expected COD of each station. In case of delay in the COD of any of the new plants considered during the Second Control Period, it will impact the projected energy availability and the energy deficit within the State will be met through additional market purchase.

Outside State Sales

2.13 Considering the power availability and State's own power requirement during the Control Period, the HPSEBL has projected the surplus power available for sale outside the State as 210 MU, 182 MU and 1160 MU for FY12, FY13 and FY14 respectively.

Table 6: Outside State Sales Projection (MU)

Energy Sales to Outside State	FY 11 R.E	FY 12 Projected	FY 13 Projected	FY 14 Projected
Energy available for sale to consumers outside State	1503	510	482	1460
Less: Banking Power	850	300	300	300
Net Energy Available for Sale Outside State	**653**	**210**	**182**	**1160**

Energy Balance

2.14 Based on the data on estimated and projected sales, own generation and power purchase, the following Energy Balance has been proposed by the HPSEBL to assess T&D losses during the Control Period.

Table 7: HPSEBL Projection - Energy Balance

Energy Balance (MU)	FY 10 Actual	FY 11 R.E	FY 12 Projected	FY 13 Projected	FY 14 Projected
Power Availability					
Net Own Generation Sources	1703	1867	1936	1936	2280
Net Power Purchase Sources (CSGS, Inter-State etc.)	6388	6944	6451	7047	8361
Total Availability	**8090**	**8811**	**8387**	**8983**	**10640**
Sales within the State (MUs)	5814	6267	6774	7328	7931
Proposed T&D Loss % within the State	**14.58%**	**14.25%**	**14.00%**	**13.80%**	**13.60%**
Power Requirement for sale within the State (MUs)	6806	7308	7877	8501	9180
Power available for inter-State sale (MUs)	1284	1503	510	482	1460
Total Sale (within & Outside the State) (MUs)	7098	7770	7284	7810	9392
Overall Losses (MUs) (Total availability less Total sale)	992	1041	1103	1173	1248
Overall T&D Losses %	**12.26%**	**11.82%**	**13.15%**	**13.06%**	**11.73%**

Aggregate Revenue Requirement

Cost of Power Purchase

2.15 The cost of power available from various sources has been projected by the licensee considering the following:

NTPC

2.16 Power purchase cost from central thermal generating stations of NTPC for FY11 and Second Control Period is calculated based on the actual power purchase cost for FY10 and the first six months of FY11. An escalation factor of 5% per year was applied on the actual fixed cost of FY10 while projecting the fixed cost for FY11 and ensuing years. The escalation has been considered based on the anticipated increase in the Employee Cost due to implementation of 5th Pay Commission and impact of new Tariff Regulations FY 2009-14 issued by CERC for computation of tariff for Central Generating Stations.

2.17 Variable cost from each of the NTPC generating stations have been projected based on the actual average variable cost and fuel price adjustment per unit for FY10. An escalation of 5% has been assumed for projecting the variable cost for the current year and Second Control Period keeping in view of the escalation of approximately 5% p.a. on the coal prices over the past ten years.

2.18 As for other charges for NTPC stations for FY11 and Second Control Period, actual power purchase bills received by the HPSEBL during FY10 has been considered as base without any escalation for FY11 and Second Control Period as other charges are expected to remain the same.

NHPC

2.19 Similar to NTPC, the power purchase cost for NHPC stations for FY11 and Second Control Period have been calculated based on the actual cost for FY10 with an escalation factor of 5% per year.

NPCIL

2.20 Power purchase cost from NPCIL stations is based on the actual power purchase bills for FY10 and an escalation of 5% has been applied to it for projecting power purchase cost for FY11 and during the Control Period.

New Generating Stations

2.21 Average cost of Rs. 3 per unit has been considered provisionally for Barh-II and Rihand-III Thermal Power Plant in their respective year of commissioning. For the subsequent years average cost with an escalation of 5% has been considered.

2.22 The average cost of Rs. 3.50 per unit for new hydel projects like Koldam, Kasang, Chamera-III, Parbati-II and III has been provisionally considered in their respective year of commissioning. For the subsequent years average cost with an escalation of 5% has been considered.

2.23 GoHP 12% free power share from the new generating stations has been considered at Rs. 3.19 per unit during the winter months.

Other Generating Stations

2.24 For the shared generations projects namely Bhakra (old), Bhakra (new), Dehar, Shanan BSS, Shanan Ext, Yamuna Share(UJVNL), Khara (UPPCL) the cost for FY11 and Second Control Period has been taken by escalating the actual average per unit cost of FY 10 by 5% every year.

2.25 For Baspa II, Naptha Jhakri (SOR) and Tehri HEP the weighted average actual cost of FY10 has been considered for projecting the purchase cost per unit for FY11. Considering the actual rates paid by the HPSEBL in the recent past for Baspa II, and Naptha Jhakri (SOR) and Tehri HEP, no escalation has been considered while projecting the power purchase cost for the Second Control Period.

2.26 For FY11, the equity power from Nathpa Jhakri has been taken as Rs. 4.21 per unit based on the weighted average actual cost of FY10. No escalation has been considered for the Second Control Period.

2.27 The rate of purchase for free power share of GoHP in the existing as well as in the new hydel plants has been considered as Rs. 3.19 per unit as per the rates determined by the Hon'ble Commission in its Order dated 7th June, 2010.

2.28 Power purchase from private micros (existing as well as new) has been calculated at the fixed rate of Rs. 2.95 per unit.

2.29 The HPSEBL has not considered any financial rates for the banking power projected for the current year and Second Control Period.

2.30 The rate for unallocated share has been calculated by using the actual bills received during FY10. For the purpose of projections for Second Control Period, an escalation factor of 5% has been used.

2.31 The short term market purchase rate has been assumed at Rs. 5 per unit for the Second Control Period.

2.32 Surplus power available to the HPSEBL after meeting the State demand has been considered at the rate of Rs.4.50 per unit for estimating the projected revenue from its sale.

2.33 Arrears of Rs. 101 Cr on account of Baspa II and the IPPs commissioned after July 1, 2006 have been claimed separately in FY11.

PGCIL Charges

2.34 Licensee has estimated the inter-State transmission charges, payable to Power Grid Corporation of India Ltd. (PGCIL) for remaining six months of FY11 based on first six months bill for FY11 at the rate of Rs.92000/MW/month.

2.35 For calculation of Inter-State transmission charges payable to PGCIL during the Second Control Period, the HPSEBL has taken into account additional capacity share in the new stations and an escalation of 3% per year on the transmission charges considered for FY11.

2.36 The table as follows summarizes the station wise power purchase costs for current and ensuing year:-

Table 8: HPSEBL Projection - Power Purchase Cost

Power Purchase Cost	FY 11 RE		FY 12 Projected		FY 13 Projected		FY 14 Projected	
	P./U	Rs. Cr	P./U	Rs. Cr	P./U	Rs. Cr	P./U	Rs. Cr
Stations								
BBMB Old	61	3	64	3	68	3	71	3
BBMB New	41	5	43	5	46	5	48	6
Dehar	50	4	53	4	55	4	58	5
Total		**12**		**12**		**13**		**13**
NTPC Stations								
Anta(LNG)	338	1	338	1	46	0	46	0
Anta(GF)	232	19	243	21	255	22	268	23
Anta (LF)	725	1	725	1	725	1	725	1
Auraiya(LNG)	607	3	607	2	607	2	607	2
Auraiya(GF)	189	23	199	25	209	27	219	28
Auraiya (LF)	760	1	760	1	760	1	760	1
Dadri(LNG)	444	2	444	2	444	2	444	2
Dadri(GF)	200	28	210	31	221	33	232	34
Dadri (LF)	793	1	793	1	793	1	793	1
Unchahar-I	251	14	264	14	277	15	290	15
Unchahar-II	263	25	276	26	289	27	303	28
Unchahar-III	302	18	317	20	333	21	349	22
Rihand-1 STPS	193	48	202	55	212	58	222	61
Rihand-2 STPS	221	60	232	61	244	64	256	67
Kehalgaon	261	30	274	33	287	34	302	36
Barh I& II		0	300	6	315	8	331	36
Rihand STPP-III		0		0	300	49	315	77
Total		**274**		**299**		**363**		**434**
NHPC Stations								
Chamera-I	147	10	153	7	161	8	168	8
Chamera-II	337	18	353	19	370	20	387	21
Salal	74	2	78	2	81	2	85	3
Tanakpur	135	2	142	2	149	2	156	2
Uri	175	13	183	13	191	13	200	14
Dhauli Ganga	223	8	233	9	244	10	256	10
Chamera-III	350	1	368	10	386	10	405	11
Parbatti - III			350	16	368	20	386	33
Parbati II					350	1	368	20
Total		**54**		**79**		**87**		**122**
Other Stations								
NAPP	215	8	226	11	237	12	249	12
RAPP	215	14	226	16	237	17	249	18
Nathpa Jhakri SoR	294	48	294	50	294	50	294	50
Kol Dam (SOR)		0		0		0	368	31
Kasnag I (HPPCL)		0		0		0	350	76
Shanan	42	0	44	0	46	0	49	0
Shanan Extn	40	2	42	2	44	2	47	2
Yamuna (UJVNL)	36	12	38	14	40	15	42	16
Khara	39	2	41	2	43	2	45	3

Power Purchase Cost	FY 11 RE		FY 12 Projected		FY 13 Projected		FY 14 Projected	
	P./U	Rs. Cr	P./U	Rs. Cr	P./U	Rs. Cr	P./U	Rs. Cr
Baspa –II	261	274	261	274	261	274	261	274
Baspa II Sec Energy	297	46	297	46	297	46	297	46
Tehri I	572	45	572	40	572	40	572	40
Koteshwar		0	350	6	368	9	386	10
Koldam					350	1	368	31
Patikari	225	7	225	7	225	7	225	7
Market Purchase		0	500	63	500	100		0
Total		**458**		**531**		**575**		**615**
Free Power & Equity Power								
Baira Suil	319	13	319	11	319	11	319	11
Chamera-I	319	38	319	19	319	19	319	19
Chamera –II	319	21	319	21	319	21	319	21
Shanan Share	319	1	319	1	319	1	319	1
Ranjeet Sagar Dam	319	20	319	19	319	19	319	19
Malana	319	18	319	12	319	12	319	12
Baspa – II	319	55	319	46	319	46	319	46
Nathpa Jhakri	319	78	319	79	319	79	319	79
Nathpa Jhakri Equity	421	292	421	148	421	148	421	148
Parbati II				0	319	4	319	26
Parbati III			319	16	319	20	319	20
Patikari + Toss	319	3	319	3	319	3	319	3
Ghanvi	319	2	319	3	319	3	319	3
Baner	319	1	319	1	319	1	319	1
Gaj	319	1	319	2	319	2	319	2
Larji	319	24	319	23	319	23	319	23
Khauli	319	2	319	1	319	1	319	1
Koldam	319	0	319	0	319	3	319	25
Kasang I (HPPCL)		0		0		0	319	4
AD Hydro	319	4	319	5	319	5	319	5
Karcham Wangtoo					319	53	319	53
Budhil					319	3	319	3
Chamera III	319	6	319	12	319	12	319	12
Total		**579**		**424**		**491**		**539**
Banking Power								
Unallocated Share	239	96	251	153	264	179	277	393
Private Micros	295	133	295	153	295	176	295	186
UI	429	78						
Other charges		0		0		0		0
Arrears		101						
PGCIL		160		172		183		209
ULDC		6		6		6		6
Total		**574**		**484**		**544**		**794**
Gross Power Purchase		**1951**		**1830**		**2072**		**2518**

Repair and Maintenance Cost

2.37 Licensee has proposed to use the average of R&M Costs as percentage of Opening GFA of the previous four years i.e. from FY07 to FY10 to calculate the 'K-factor'. The R&M Costs as % age of Opening GFA of the previous four years stands at 1.18%, 0.72%, 0.78% and 0.71% respectively. Taking the average of past four years the 'K-factor' comes to 0.85%.

2.38 For the purpose of projections of R&M expenses for the Second Control Period, 'K-factor' of 0.85% has been used on the opening GFA for the corresponding years of the Control Period.

2.39 The proposed R&M expenses during the Control Period proposed by the HPSEBL are given as follows:-

Table 9: HPSEBL projection- R&M Expenses (Rs Cr)

R&M Expenses	FY 11 RE	FY 12 Projected	FY 13 Projected	FY 14 Projected
Opening GFA	4445.52	4848.61	5440.71	6095.11
K factor	0.85%	0.85%	0.85%	0.85%
R&M Expenses	**37.68**	**41.10**	**46.11**	**51.66**

Employee Cost

2.40 The HPSEBL has considered the actual six monthly employee expenses for FY11 for forecasting the employee expenses for FY11 and the Second Control Period. The licensee has submitted that the pay for employees has been revised as per the recommendations of 5th Pay Commission with effect from 1st November, 2009.

2.41 The basic salary component of the employee expense for Second Control Period has been calculated by escalating the projected basic salary during FY11 as per the methodology prescribed in new MYT Regulations.

2.42 The increase due to 5th Pay Commission has been effective from 1st January, 2006, resulting in payment of arrears for the period 1st January, 2006 to 30th October, 2009 when the salaries were revised. The arrears claimed in the ARR are provisional and licensee has requested the Commission to consider the actual payment made on account of arrears to the employees and pensioners at the time of True-up.

2.43 The Dearness Allowance (DA) for FY11 has been calculated at 48% of the total basic salary and grade pay (after deducting the arrears paid under this head) projected for FY11. Thereafter, further two increments of 6% each in DA is assumed for projecting the DA for subsequent years of Second Control Period. This increase in DA has been estimated considering the past trends of increase in DA for the employees of the HPSEBL and the same is in line with that of State Government employees.

2.44 Medical expense reimbursement, Leave Salary Contribution, LTC, earned leave encashment, staff welfare expenses and payment under Workmen's Compensation Act have been projected to increase by 3-years' average CPI (as per the new Regulations) to cover the cost of inflation. G_n (Growth Factor as per the Regulations) has been assumed as 0.0071. The HPSEBL has projected capitalization at 5% of the gross employee cost during the Second Control Period, considering the capitalization in previous years, i.e. FY09 and FY10.

2.45 The summary of employee expenses proposed by the HPSEBL is shown as follows:-

Table 10: HPSEBL Projection - Employee Cost (Rs Cr)

Employee Costs	FY 11 R.E	FY 12 Projected	FY 13 Projected	FY 14 Projected
Salaries and Allowances				
Salaries (Basic) + Dearness Pay	307.64	338.98	374.74	412.08
Merger of DA with Basic (Proposed)	0.00	0.00	0.00	0.00
Grade pay	86.80	80.00	75.00	70.00
DA	189.33	251.39	323.81	404.95
Arrears due to the Sixth Pay Commission	170.00	**150.00**	**80.00**	**0.00**
Other Allowances	36.74	40.48	34.44	40.40
Overtime	2.23	2.45	2.71	2.98
Bonus	0.00	0.00	0.00	0.00
Salaries – Total	**792.73**	**863.31**	**890.70**	**930.41**
Medical expense Reimbursement	10.11	11.14	12.31	13.54
Fee and Honorarium	0.01	0.01	0.01	0.01
Earned Leave encashment	20.80	22.92	25.34	27.87
Leave Salary Contribution	0.26	0.29	0.32	0.35
Payment under workmen's compensation	0.68	0.75	0.82	0.91
LTC	0.19	0.20	0.23	0.25
Staff Welfare expenses	1.00	1.11	1.22	1.35
Other Staff Costs – Total	**33.05**	**36.42**	**40.26**	**44.27**
Provident Fund Contribution	0.00	0.00	0.00	0.00
Pension	159.46	175.71	194.25	213.60
Gratuity	28.45	31.05	34.32	37.74
Any other items	9.74	10.73	11.86	13.04
Terminal benefits – Total	**197.64**	**217.78**	**240.76**	**264.74**
Gross Employee cost	**1,023.43**	**1,117.51**	**1,171.72**	**1,239.42**
Less: capitalization	42.67	48.38	54.59	61.97
Net Employee costs	**980.75**	**1,069.14**	**1,117.13**	**1,177.45**

Administrative and General Expenses

2.46 A&G Expenses during the Control Period have been projected on the basis of the methodology as per MYT Regulations, 2007. Based on past trends, the HPSEBL has estimated the growth in WPI Index is summarized as follows:-

Table 11 Inflation considered by HPSEBL for projection of A&G expenses

Year	Projected Growth in WPI index
2009-10	3.85%
2010-11	5.63%
2011-12	5.97%
2012-13	5.15%
2013-14	5.58%

2.47 The new MYT Regulations lay down the following methodology for projection of A&G expenses:

$A\&G_n = (A\&G_{n-1})*(WPI_{inflation})$

2.48 However, the HPSEBL has submitted that there has been sudden growth in WPI in the past two years. Thus, the average of growth in CPI and WPI index has been used to calculate the inflation factor for the Second Control Period.

2.49 The HPSEBL has also considered yearly payment of Rs.14 crores during FY11, FY12 and FY14 for repayment of loan taken from GoHP for free distribution of CFL bulbs to domestic consumers. The summary of proposed A&G expenses is provided below

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

Administration & General Costs	FY 11 R.E	FY 12 Projected	FY 13 Projected	FY 14 Projected
Administration Charges				
Rent, Rates and Taxes	1.04	1.10	1.15	1.22
Telephone, Postage and Telegrams	2.75	2.91	3.06	3.23
Consultancy Charges	2.00	3.00	3.00	3.00
Conveyance and Travel	15.11	16.01	16.83	17.77
Regulatory Expenses	3.50	3.00	3.00	3.00
Income Tax Updating Charges	0.04	0.04	0.05	0.05
Consumer Redressal Forum	0.51	0.54	0.56	0.60
Insurance	0.00	0.00	0.00	0.00
Other Charges	0.60	0.64	0.67	0.71
IT and other initiative	12.00	2.00	2.00	2.00
Sub Total	**37.54**	**29.23**	**30.33**	**31.58**
Other Charges				
Fees and Subscriptions, Books and Periodicals	0.32	0.34	0.35	0.37
Printing and Stationery	1.62	1.71	1.80	1.90
Advertisement Expenses	0.61	0.65	0.68	0.72
Electricity Charges	3.61	3.83	4.03	4.25
Water Charges/ Cold weather expenses	0.24	0.26	0.27	0.29
Miscellaneous Expenses	2.13	2.26	2.38	2.51

Administration & General Costs	FY 11 R.E	FY 12 Projected	FY 13 Projected	FY 14 Projected
Legal Charges	1.19	1.26	1.33	1.40
Audit Fee	4.23	4.48	4.71	4.97
Freight Material related Expenses	2.90	3.08	3.24	3.42
Entertainment Charges	0.06	0.06	0.06	0.07
Training to Staff	0.14	0.15	0.15	0.16
Public Interaction Program	0.41	0.55	0.55	0.55
Public Expenses/ Other professional charges	0.15	0.16	0.16	0.17
GIS/GPS expenses related to High level Committee				
Cost Free Bulb to DIS Consumers	14.00	14.00	14.00	-
DSM program	0.47	0.47	0.47	0.47
A&G Expenses – Total	**69.62**	**62.48**	**64.52**	**52.83**
Less: Capitalization	3.48	3.12	3.23	2.64
Net A&G Costs	**66.14**	**59.36**	**61.29**	**50.19**

Depreciation

2.50 Depreciation is charged on the basis of straight-line method, on the fixed assets in use at the beginning of the year. Depreciation for FY11 and Second Control Period is determined by applying FY10 actual depreciation rate on the average of opening and closing balance of GFA during FY12, FY13 and FY14. HPSEBL has provided depreciation costs as summarized in the table as follows:-

Table 13: HPSEBL Projection – Depreciation (Rs Cr)

Depreciation	FY 11 R.E	FY 12 Projected	FY 13 Projected	FY 14 Projected
GFA - Opening Balance				
Generation	2224.49	2343.23	2491.41	2641.28
Distribution	2221.03	2505.37	2949.30	3453.83
Others	0.00	0.00	0.00	0.00
Total	**4445.52**	**4848.61**	**5440.71**	**6095.11**
Net Additions during the Year				
Generation	118.74	148.18	149.87	121.74
Distribution	284.34	443.92	504.53	417.36
Others	0.00	0.00	0.00	0.00
Total	**403.085**	**592.104**	**654.4**	**539.104**
GFA - Closing Balance				
Generation	2343.23	2491.41	2641.28	2763.02
Distribution	2505.37	2949.30	3453.83	3871.19
Others	0.00	0.00	0.00	0.00
Total	**4848.61**	**5440.71**	**6095.11**	**6634.21**
Depreciation for the Year				

Depreciation	FY 11 R.E	FY 12 Projected	FY 13 Projected	FY 14 Projected
Generation	57.10	60.43	64.16	67.55
Distribution	59.08	68.18	80.04	91.56
Others	0.00	0.00	0.00	0.00
Total	**116.18**	**128.62**	**144.20**	**159.12**
Depreciation Rate %				
Generation	2.50%	2.50%	2.50%	2.50%
Distribution	2.50%	2.50%	2.50%	2.50%

Interest and Finance Charges

2.51 The HPSEBL has assumed interest rate for new loans based on the average of actual interest rate being paid by the HPSEBL for FY10 and is in the range of 9%-10% depending upon the nature and tenure of various loans. As for the existing loans the interest payments have been projected based on the actual interest rate for FY11 and planned repayment schedule for future years. Cost of raising finances has been calculated based on the new bank loans required for funding the proposed capital expenditure plan. Interest on working capital has been assumed at 12.25%.

2.52 The Licensee has proposed the following interest expenses based on the existing loan agreements and proposed capital expenditure plan for the Control Period.

Table 14: HPSEBL Projection – Interest Expenses (Rs Cr)

Interest Costs	FY11 R.E	FY 12 Projected	FY 13 Projected	FY 14 Projected
RGGVY	2.54	4.00	6.00	6.00
LIC	4.00	20.00	18.00	18.00
REC	30.00	41.00	37.00	37.00
PFC	70.00	69.45	71.00	71.00
Bonds	19.60	0.67	0.00	0.00
Bank Loans	54.56	46.90	72.35	72.35
Interest on State govt. loan	1.81	1.81	1.61	1.61
Non SLR Bonds	7.25	7.25	15.61	15.61
Other Negotiated Loan	0.00	0.00	0.00	0.00
Interest on Overdraft	0.00	0.00	0.00	0.00
Interest on GPF	0.00	0.00	0.00	0.00
Cost of raising finances	0.10	0.11	0.10	0.10
Other Charges	0.00	0.00	0.00	0.00
Interest on Security Deposits	0.00	0.00	0.00	0.00
Charges payable to CTU/NLDC	0.00	0.00	0.00	0.00
Rebate allowed for timely payment	0.00	0.00	0.00	0.00
Interest on WC borrowing and Other Charges	60.44	65.36	70.51	76.23
Interest and Finance Charges - Total	**250.30**	**256.55**	**292.18**	**297.90**

Interest Costs	FY11 R.E	FY 12 Projected	FY 13 Projected	FY 14 Projected
Less: Interest capitalized	75.09	76.96	87.65	89.37
Net Interest and Financing Costs	**175.21**	**179.58**	**204.53**	**208.53**

Working Capital Requirement

2.53 The HPSEBL has calculated the working capital requirement for FY11 and the Second Control Period as per the MYT Regulations, 2011.

Table 15: HPSEBL Projection- Working Capital Requirement (Rs Cr)

Working Capital Requirement	FY11 R.E	FY12 Projected	FY13 Projected	FY14 Projected
2/12 of Receivables	401.77	434.74	472.04	513.94
1/12 of O&M	90.38	97.47	102.04	106.61
Maintenance spares @ 40% of R&M	1.26	1.37	1.54	1.72
Total working capital	**493.41**	**533.58**	**575.62**	**622.27**
Interest on WC @ 12.25%	**60.44**	**65.36**	**70.51**	**76.23**

Return on Equity

2.54 The HPSEBL has proposed return on equity for the Generation and Distribution functions in accordance with the MYT Regulations, 2011.

Table 16: HPSEBL projection- Return on Equity (Rs Cr)

Return on Equity	FY11 R.E	FY12 Projected	FY13 Projected	FY14 Projected
Generation (15.5%)	107.85	124.92	131.81	138.78
Distribution (16%)	32.23	36.78	43.88	51.95
Total	**140.08**	**161.70**	**175.70**	**190.74**

Non Tariff Income and Other Income

2.55 Non Tariff and Other Income as shown in Table that follows, is estimated to increase at around 5% p.a. An escalation of 5% p.a. is applied on FY10 actual figures for the future projections:

Table 17: HPSEBL Projection – NTI and Other Income (Rs Cr)

Non-Tariff Income	FY11 R.E	FY12 Projected	FY13 Projected	FY14 Projected
a) Meter Rent/Service line rentals	31.94	33.54	35.21	36.98
b) Recovery for theft of power/malpractices	30.60	32.13	33.73	35.42
c) Wheeling Charges recovery	46.21	48.52	50.95	53.49
d) Miscellaneous charges from consumers	3.97	4.17	4.38	4.59
Non Tariff Income – Total	**112.72**	**118.35**	**124.27**	**130.48**

Non-Tariff Income	FY11 R.E	FY12 Projected	FY13 Projected	FY14 Projected
Other Income				
a) Interest on Staff loans and advances	0.66	0.69	0.73	0.77
b) Income from Investments	11.40	11.97	12.57	13.20
c) Interest on loans and advances to licensees	0.00	0.00	0.00	0.00
d) Delayed payment charges from consumers	0.00	0.00	0.00	0.00
e) Interest on advances to suppliers/contractors	0.21	0.22	0.23	0.24
f) Interest on banks (other than on fixed deposits	0.00	0.00	0.00	0.00
g) Income from trading	1.32	1.39	1.46	1.53
h) Income from staff welfare activities	0.07	0.08	0.08	0.09
i) Miscellaneous receipts	42.08	42.08	42.08	42.08
Total	**55.75**	**56.43**	**57.15**	**57.90**
Total Non Tariff Income and Other Income	**168.47**	**174.79**	**181.42**	**188.39**

Aggregate Revenue Requirement

2.56 The table as follows summarizes the licensee's ARR for the Second Control Period:-

Table 18: HPSEBL Projection - Aggregate Revenue Requirement (Rs Cr)

Aggregate Revenue Requirement	FY11 R.E	FY12 Projected	FY13 Projected	FY14 Projected
Costs				
Power Purchase Cost (+ PGCIL Charges)	1,951.00	1,829.59	2,072.13	2,517.62
Employee Cost	980.75	1,069.14	1,117.13	1,177.45
Repairs and Maintenance Cost	37.68	41.10	46.11	51.66
Admin and General Cost	66.14	59.36	61.29	50.19
Interest Cost	175.21	179.58	204.53	208.53
Depreciation	116.18	128.62	144.20	159.12
Total Costs	3,326.96	**3,307.38**	**3,645.39**	**4,164.57**
Add: Return on Equity	161.70	175.70	190.74	203.08
Add: Recovery of Prior Period Gap		-	-	-
Less: Non-Tariff Income	168.47	174.79	181.42	188.39
Aggregate Revenue Requirement	**3,320.20**	**3,308.29**	**3,654.71**	**4,179.25**

Revenue from Sale of Power at Existing Tariffs

2.57 Revenue from sale of power for the current year as well as the Second Control Period is determined based on the estimates of energy sales by the HPSEBL and category wise tariff approved by the Commission in its APR Order for FY11.

2.58 The table as follows, summarizes licensee's estimates of the revenue realized at current tariff for the Control Period:-

Table 19: HPSEBL projection- Revenue from Sale of Power at Existing Tariff (Rs. Cr)

Revenue at Existing Tariff	FY11 R.E	FY12 Projected	FY13 Projected	FY14 Projected
Domestic (DS)	348.28	367.23	385.66	405.06
Non Domestic Non Commercial	46.34	49.95	54.16	58.72
Commercial Supply	163.60	181.53	199.14	218.61
Small and Medium Supply	75.53	78.54	79.10	85.02
Large Supply (HT)	864.22	922.34	998.34	1,081.24
Large Supply (EHT)	621.31	682.69	751.28	826.80
Street Lighting	7.26	7.51	7.76	8.03
Water and Irrigation Pumping	154.19	167.21	181.20	196.36
Bulk Supply	112.77	132.29	153.60	178.45
Temporary Supply	17.13	19.15	22.01	25.36
Total Revenue	**2,410.62**	**2,608.44**	**2,832.24**	**3,083.64**

Revenue Gap

2.59 Licensee proposed the revenue gap of Rs. 604.56 Cr, Rs. 740.35 Cr and Rs 573.43 Cr during the Control Period as summarized in Table as follows:-

Table 20: Revenue Gap during the Control Period (Rs. Cr)

ARR, Revenue at Existing Tariff, Revenue Gap	FY11 R.E	FY12 Projected	FY13 Projected	FY14 Projected
Annual Revenue Requirement	**3,320.20**	**3,308.29**	**3,654.71**	**4,179.25**
Covered by				
Revenue @ Existing Tariff	2,410.62	2,608.44	2,832.24	3,083.64
Revenue from Sale outside State	150.00	95.2861	82.1249	522.1884
GoHP Subsidy				
Revenue @ Existing Tariff + GoHP Subsidy	**2,560.62**	**2,703.73**	**2,914.36**	**3,605.83**
Revenue Gap/(Surplus)	**759.58**	**604.56**	**740.35**	**573.43**

Tariff Proposal

2.60 The HPSEBL has proposed to increase the retail tariff for FY12 as the existing retail tariff is not adequate to meet the ARR projected for the FY12. The category wise proposed increase in tariff for FY12 is summarized in Table as follows:-

Table 21: Tariff Proposal

Category-wise Consumers	Current Tariff Components			Proposed Tariff for FY12			Increase	
	Energy Charges	Consumer Service Charge	Demand Charges	Energy Charges	Consumer Service Charge	Demand Charges	% Increase	Per unit Increase
	Rs/KWh	Rs/con/M	Rs/KVA/M	Rs/KWh	Rs/con/M	Rs/KVA/M	%	P/KWh
Domestic (DS)								
(a) BPL	1.80	0		1.80	0		0%	0.00
(b) Others								
0-150	2.20	25		2.45	25		12%	0.25
151 & above	3.45	25		3.70	25		7%	0.25
NDNCS								
0 - 20 KW	4.45	60		4.45	60		0%	0.00
Above 20 KW	3.70	120	100.00	3.70	120	100.00	0%	0.00
Commercial								
0 - 20 KW	4.60	60		4.60	60		0%	0.00
20 - 100 KW	3.95	120	75.00	3.95	120	75.00	0%	0.00
Above 100 KW	3.75	240	100.00	3.75	240	100.00	0%	0.00
Small Medium Industrial Supply								
0 - 20 KW	3.70	60		3.85	60		4%	0.15
Above 20 KW	3.05	120	50.00	3.20	120	50.00	5%	0.15
Large Industrial Supply								
HT upto 300 KVAh/KVA	2.80	250	225.00	4.05	250	225.00	45%	1.25
HT Balance	3.00	250	225.00	4.18	250	225.00	39%	1.18
Large Industrial Supply								
EHT upto 300 KVAh/KVA	2.60	350	185.00	3.85	350	185.00	48%	1.25
EHT Balance	2.80	350	185.00	3.98	350	185.00	42%	1.18
Water and Irrigation Pumping Supply								
WPS Upto 20 KW	1.85	25		1.94	25		5%	0.09
WPS (Above 20 KW)								
LT	3.20	120	50.00	3.52	120	50.00	10%	0.32
HT	3.65	120	150.00	3.83	120	150.00	5%	0.18
EHT	3.10	120	120.00	3.41	120	120.00	10%	0.31
Street Light								
SLS	4.00	60		4.00	60		0%	0.00
Bulk Supply								
LT	4.05	120	200.00	4.05	120	200.00	0%	0.00
HT	3.15	120	150.00	3.40	120	150.00	8%	0.25
Temporary								
TM I Part	6.50	120		6.83	120		5%	0.33
TM II Part	4.95	120	300.00	5.20	120	300.00	5%	0.25

*Note: Incase of KVAh tariff, the same will be applicable for computing the energy charges of consumer category.

2.61 Salient features of tariff proposal filed by the licensee are as follows:-

(1) Licensee proposes no increase in the rates of Demand charges, Consumer Service Charges and Night time charges for various categories of consumers which are presently being allowed by the Commission in the APR Order for FY11.

(2) Licensee proposes no increase in tariff for NDNC, Commercial and street supply category for FY12 considering the existing realization from these categories against the average cost of supply.

(3) Licensee proposes to retain the PLEC and PLVC charges on the pattern adopted by the Commission i.e. double and thrice the rate of normal tariff for all the categories covered under Two-part Tariff in the APR Order for FY11.

(4) Licensee proposes to cover all the religious places under domestic category as they are presently covered under NDNC/Domestic category depending on the sanctioned load. Except religious places, there will be no change in the schedule of General Service charges presently being charged for FY11 as per the APR Order for first Control Period for the FY12 also.

(5) Considering the present demand in the State of HP, licensee submits to the Commission to take into account the morning peak from 7:30 AM to 10:30 AM while approving the tariff for FY12.

(6) Licensee has received an application from the Northern Railway for availing 66 KV supply from its substation at Parwanoo for the proposed Railway traction substation at Parwanoo. Therefore, licensee has requested the Commission to approve and create a separate category for Railway Traction from FY12. The HPSEBL has also proposed the tariff for the railway traction for the FY12 as tabulated hereunder:

Table 22: Proposed Tariff for Railway Traction

	Energy Charges (Rs. KVAh)	Consumer Service Charges (Rs./Consumer/Month)	Demand Charges (Rs./ KVA/ month
Railway Traction	4.00	200	185

(7) The HPSEBL has estimated a revenue surplus of Rs.0.75 crores on the proposed tariff, as tabulated hereunder:

Table 23: Details of Revenue Assessed with Proposed Tariff (Rs Cr)

ARR, Revenue @ Existing Tariff, Revenue Gap	FY 12
Annual Revenue Requirement	3261.61
Covered by	
Revenue @ Existing Tariff	2608.44
Revenue from Sale outside State	95.28
Revenue @ Existing Tariff + GoHP Subsidy	2703.73

ARR, Revenue @ Existing Tariff, Revenue Gap	FY 12
Revenue Gap/(Surplus) at existing Tariff	557.88
Covered by	
Additional Revenue @ Proposed Tariff	558.63
Net Gap/(Surplus) to be addressed	(0.75)

Segregation of ARR for the Control Period

2.62 Segregation of the ARR for the Second Control Period is based on transfer scheme of GoHP. With effect from 6th October, 2010 the transmission function of the erstwhile HPSEB has been transferred to the HPPTCL and distribution and generation function to the HPSEBL. Thus, the ARR for the Second Control Period of the HPSEBL has been segregated into Distribution and Generation functions. Due to transfer of transmission function to the HPPTL, the HPSEBL expects the segregation to be close to actuals and to improve in future due to better allocation of cost and revenues.

(1) The segregation of expenses (R&M, A&G, Employee Cost, Depreciation) incurred by the HPSEBL for FY11, as well as first Control Period, is primarily based on the circle wise information and HQ cost is allocated in proportion of Generation and Distribution cost.

(2) Power purchase costs have been fully allocated to the distribution function.

(3) Interest and Finance charges for FY10 have been allocated in principle of allocated loans (scheme specific). Interest and Finance charges for FY11 and the Second Control Period have been allocated based on outstanding principle amount against loans raised for specific schemes, according to the capital expenditure plan.

(4) Gross Fixed Assets and accumulated depreciation have been allocated to various functions on the basis of the audited annual accounts for FY10 and the capitalization schedule of the capital expenditure plan.

(5) Consumer contribution has been fully allocated to the distribution business. Capital subsidies have been allocated based on the nature of the subsidy. Interest on security deposits has been fully allocated to the distribution business.

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

(7) Expenses capitalised under various expense items have been allocated based on actual capitalization for FY10. Interest capitalised has been allocated based on the gross interest for that particular segment of the business.

(8) 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 been allocated to Distribution entirely.

2.63 The Table as follows, summarises the segregated ARR for the Control Period for generation, transmission and distribution respectively:-

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

Generation	FY11 R.E	FY12 Projected	FY13 Projected	FY14 Projected
Employee Cost	141.71	155.23	160.84	170.29
Net R&M Expenses	13.87	15.13	16.97	19.01
A&G Expenses	9.13	6.18	6.49	6.83
Depreciation	57.10	60.43	64.16	67.55
Interest and Finance Charges	162.30	180.87	186.93	190.14
Less: Interest and Finance Capitalized	42.17	43.22	49.22	50.18
Less: Other Expenses Capitalized	5.90	6.58	7.38	8.25
Return on Equity	124.92	131.81	138.78	144.44
Less: Non Tariff Income	12.23	12.59	12.97	13.37
Total ARR	**448.74**	**487.27**	**504.59**	**526.46**

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

Generation	FY11 R.E	FY12 Projected	FY13 Projected	FY14 Projected
Power Purchase Cost	1951.00	1829.59	2072.13	2517.62
Employee Cost	881.71	961.88	1010.56	1068.78
Net R&M Expenses	23.81	25.97	29.14	32.65
A&G Expenses	60.70	56.62	58.79	47.08
Depreciation	59.08	68.18	80.04	91.56
Interest and Finance Charges	88.00	75.67	105.25	107.76
Less: Interest and Finance Capitalized	32.93	33.75	38.43	39.19
Less: Other Expenses Capitalized	40.26	44.92	50.43	56.36
Return on Equity	36.78	43.88	51.95	58.63
Less: Non Tariff Income	156.23	162.19	168.45	175.02
Total ARR	**2871.67**	**2820.93**	**3150.55**	**3653.51**

Wheeling Tariff for the Second Control Period

2.64 Wheeling Tariff has been calculated by the HPSEBL by deducting the power purchase cost (including PGCIL charges) from total distribution cost.

Table 26: Transmission and Wheeling Charges

Particulars	FY 12	FY 13	FY 14
	Projected	Projected	Projected
Distribution ARR (Rs Cr)	2820.93	3150.55	3653.51
Sales (MU)	6774	7328	7931
Wheeling Charges (P/ unit)	**146**	**147**	**143**

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

3.1 There were 27 objectors who filed written objections to the Multi-Year Tariff petition for FY12 – FY14 filed by the HPSEBL. The objectors listed at serial. No.(9) to (11) and serial No.(12) to (15) have filed their objections jointly. The list of objectors is as follows:-

(1) Sh. Tirath Ram S/o Sh. Murlidhar, Village Bhatgra

(2) Sh. Tek Chand S/o Sh. Kahan Chand, Village Bhatgra

(3) Sh. Dola Ram S/o Sh. Tulsi Ram, Village Bhatgra

(4) Sh. Ganesh Dutt Sharma, Representative Swayam Sahayta Smooh, Village Katyara

(5) The Manali Hoteliers' Association

(6) The Kullu Hotels and Guest House Association

(7) The Himachal Hotels Association, Shimla

(8) The Laghu Udyog Bharati, Baddi

(9) M/s H.M. Steel Ltd., Kala Amb

(10) M/s J.B. Rolling Mills (P) Ltd., Kala Amb

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

(12) The Confederation of Indian Industry (CII), Chandigarh

(13) The Baddi Barotiwala Nalagarh Industries Association, Baddi

(14) The Parawnoo Industries Association (PIA), Parwanoo

(15) The Kala Amb Chamber of Commerce and Industry (KACCI), Kala Amb

(16) Sh. Prem Prakash Sharma, President, Nalagarh Industrial Association, Panchkula

(17) M/s ACC Ltd., Barmana

(18) M/s Auro Spinning Mills, Baddi

(19) M/s Ambuja Cement Ltd., Arki

(20) M/s Reliance Communications Ltd., Chandigarh

(21) M/s Karan Synthetic (India) Pvt. Ltd., Nalagarh

(22) M/s Karan Polypack Pvt. Ltd., District Nalagarh

(23) M/s Samrat Plywood Ltd., Chandigarh

(24) M/s C.B. Health Care, Nalagarh

(25) M/s Yamada Automation Pvt. Ltd., Nalagarh

(26) M/s THEON Pharmaceuticals Ltd., Nalagarh

(27) Er. P. N. Bhardwaj, Consumer Representative

3.2 The public hearing was held on 30th May, 2011 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 in Table as follows:-

Table 27: List of Objectors present during Public Hearing

S. No.	Objector/Organization	Represented by
1	M/s H.M.Steels, Sri Ram Steels and J.B.Rolling Mills	Sh. P.C. Deewan
2	M/s ACC Ltd, Barmana	Sh. D.R.Sood
3	Himachal Hotels Association	Sh. Umesh Akre
4	CII, PIA, BBNIA and KACCI	Sh. Rakesh Bansal
5	Manali Hoteliers Association, Manali	Sh. Raghu Nath Sood
6	The Kullu Hotels and Guesthouses Association	Sh. Jaganath Sharma
7	Swayam Sahayata Smooh, Village Katara	Sh. Ganesh Dutt Sharma
9	Consumer, WIPS Category, Village Bhatgra, Kullu	Sh. Tirath Ram
10	Consumer, WIPS Category, Village Bhatgra, Kullu	Sh. Dola Ram
11	Auro Spinning Mills, Baddi	Sh. DR Sharma
12	Ambuja Cementm Ltd, Arki	Sh. A.K.Mittal
13	Reliance Communication Ltd, Chandigarh	Sh. Ashish Handa

3.3 Issues raised by the objectors in their written submission and during the public hearing, along with replies given to the objections by the HPSEBL and views of the Commission are mentioned in succeeding paras of this chapter:

General Comments on Petition filed by the Petitioner

3.4 The objectors raised the following issues related to the Multi Year Tariff petition filed by the HPSEBL:

(1) The Petitioner has adopted regressive approach and proposed a massive increase for EHT category of consumers with no connection with the cost of supply.

(2) Continued and proven inefficiencies must be controlled and penalised

(3) Generation has been understated to project higher gap between demand and availability to secure allowance of higher purchases of energy. At many places design energy is considered whereas at other places the actual ones are taken. Whatever figure is lower has been assumed

(4) Generation from certain power projects is highly understated, as shown as follows:-

(i) When Ghanvi II with 10 MW capacity can give 44 MU why should UHL III with a capacity of 100 MW not give 440 MU?

(ii) Similarly, Baspa II has been assumed to supply 143 MU in the MYT period whereas it has actually supplied 155 MU in FY 10 and is assumed to give 172 MU in FY 11.

(iii) The generation of Bhabha and Giri Generating Plants has been assumed at a much lower level. Reason for lower projections may be given.

(iv) Bhabha augmentation plant is under implementation for the last nearly 15 years. Its present progress should be shared with other stake holders. Only 26 MU has been proposed to be generated in the coming years, which appears to be quite low.

(5) Higher auxiliary consumption has been considered for power purchase projections for FY12 – FY14.

(6) Different basis of projection have been assumed for different categories to inflate the future energy requirement.

(7) The HPSEBL may please justify taking escalation in coal prices of approximately 5% p.a. over the past 10 years instead of the past three years as is usually the practice.

(8) For projecting R&M expenses, the K-factor has been worked out as 0.85% by taking the average of four years whereas considering the average of past 3 years it comes to 0.74%.

(9) The burden of yearly payment of Rs. 14 Cr for repayment of loan taken from the GoHP for distribution of free CFL lamps to the domestic consumers should be borne by the State Government instead of transferring it to the HPSEBL.

(10) The rate of depreciation should be actual depreciation on the average of opening and closing balance of Gross fixed assets, as proposed.

(11) Interest and Finance Charges have been projected at very high levels for the Control Period. It seems the efforts are lacking in the restructuring. The interest and finance charges have been estimated to grow on year to year basis without the proportionate growth in business, which is not justified.

(12) Capitalisation of interest cost during the Control Period should also take into account the schedule of completion of projects besides the actual capitalization rate.

(13) The action of the HPSEBL in making timely payment of the power purchase bills and thus earning a rebate thereon is commendable. The Commission may allow rebate as an incentive earned on timely payment of power purchase bills, instead of the other alternative of not considering one month's power purchase cost in the working capital.

(14) In the event some Transmission assets continue to be with the HPSEBL under the Distribution system, it should be ensured that there are no separate Wheeling Charges for such component of Transmission assets.

(15) It needs to be clarified whether the figure of Rs. 125.94 Cr corresponds to 30% of the gross total capital expenditure for purposes of computation of ROE of generation business of the HPSEBL

(16) The return on equity is highly exaggerated. It is feared that it has been eroded by the cumulative losses over the past period and as such no return on equity may be allowed. For clarity, the audited balance sheet and annual financial statement for FY11 and FY10 for the HPSEBL as a whole may be supplied.

(17) The figures of Rs. 262.52 Cr and Rs. 64.06 Cr mentioned in para 5 do not reflect the requisite figures of Return on Equity at the prescribed rates in Table 17 or in Table 5 of the Agenda. This needs to be checked up and clarified. For FY10, the utility is claiming RoE of Rs. 140.08 Cr which is higher than the approved figure of Rs. 43.82 Cr.

(18) Non Tariff Income should increase and not remain the same for each year of the Control Period. Late Payment Surcharge (LPSC) should be considered as part of the Non Tariff Income and included in the ARR.

(19) The basis of considering the rate of sale of power outside the State at Rs. 4.50

has not been given.

(20) The HPSEBL has not complied with most of the directives issued by the Commission under the various Tariff orders from FY 2002 onwards. The compliance of these directives be made time-bound by the Commission or else the HPSEBL may be imposed a penalty for non-compliance.

(21) The utility has estimated the banking power at 300 MU for all the three years of the Control Period as against 800MU to 900MU in the past years. Continuity of power can only be ensured if adequate banking is done during surplus periods. The banking power must be estimated at 800 MU at least for continuity of the supply to all consumers. The difference in generation pointed above and the savings from lower T&D losses taken together will make available more power for banking.

(22) Figures of past years when HPSEB was a single entity (for generation, transmission and distribution) are being used as the basis for projecting A&G expenses. The expenditure allowed under various heads should be apportioned in the appropriate ratio between the HPSEBL and the HPPTCL.

(23) There is no fixed asset register so far supplied by the HPSEBL, so the gross fixed assets cannot be evaluated. The Commission may kindly not allow any depreciation until the fixed assets of the HPSEBL are supported by the asset register and due diligence is carried out on the same.

(24) The interest on working capital has been assumed on the basis of PLR which is very high whereas as per the concept paper of the MYT it is to be charged on the normative basis.

(25) The losses in the EGT sector are barely 2%. Besides, requirement of staff for reapplying energy at this voltage level is also low. Therefore, the cost allocated to this sector needs to be allocated keeping these factors in view and the tariffs needs to be worked out accordingly.

(26) Substation wise data of energy received and energy billed in not given in the ARR petition.

(27) An incentive may be inbuilt for such belts where low line losses or less theft is reported and actually recorded.

(28) There is over projection of capital expenditure by the HPSEBL. In previous tariff orders the Commission has made it clear that only actual expenses incurred on capitalized assets will be allowed to pass on to consumers and consumers cannot be burdened with expenses associated with benefits accruing in future. However, the HPSEBL has been making investment plans with no reference to the Commission’s decision.

(29) Absence of balance sheet makes it difficult to ascertain costs. If liabilities exceed the assets, it is apparently a case of funds having been borrowed to meet revenue expenses rather than for creating assets for servicing consumers. In this case the cost (i.e. interest) of such borrowings cannot be lawfully passed on to consumers. The Commission is requested to scrutinize the past balance sheets of the HPSEBL and in case funds are found diverted from Capital to Revenue account, cost of such funds may please be disallowed.

(30) Projections for cost related with the inflation are over estimated.

(31) While new projects have to be undertaken to meet the growing demand for power, it is imperative that the projects are completed within the time frame and projected cost. This has not been happening and as a result, inefficiencies of the utility are forced upon the consumers, especially industries.

(32) In order to help the HPSEBL infuse funds as equity or as loan, licensee to suggest as to how it proposes to come out of this debt trap.

(33) Regulation 3(5) of the Tariff Regulations, 2011 states that the tariff determined by the Commission and the directions given in the tariff orders shall be quid pro quo and mutually inclusive. However, there are many directions that are yet to bear fruit.

(34) The ARR petition for the Second Control Period has no continuity with the MYT trajectories fixed up during the first Control Period.

(35) Bills are being distributed in certain areas at intervals of more than four months and consumers find it difficult to pay such huge accumulated amounts.

(36) It is recommended that the Commission considers another slab for domestic consumers whose consumption is greater than 300 units per month. The tariff for the third slab should be near the LT cost of service. No subsidy to the consumers falling in this slab. Subsidy may extend only up to the first slab.

(37) An amount of Rs.87 lakhs was approved towards Energy Efficiency and Demand Side Management (EE&DSM) initiatives which formed a part of ARR for FY11. There is no mention of this in the petition nor has any progress been indicated.

(38) The rate of power purchase by a consumer in the peak hours is double in the State of Himachal Pradesh. The energy during peak hour is no doubt costlier but it is 10% to 50% of the normal charges. As a matter of fact there should be no differential charge because the pooled rate for purchase of energy and sale of energy are worked out for the entire chunk of power over the year irrespective of the TOD. This issue needs to be examined.

(39) The Commission may think of introducing a nominal rebate of 2 to 5 paise per

unit, if the payment of the bill is made within a week of presentation of the bill to the industry. The interest earned by the HPSEBL on prompt payment may offset the incentive given.

(40) The HPERC may introduce such incentive on high load factor up to 5 paise per unit for keeping a load factor in excess of 75%. This encourages the consumer to better utilise his machinery thus reducing the demand on the power system.

Petitioner's Response:

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

(1) The HPSEBL has been following the Average Cost of Supply model for determination of tariff and is making efforts to shift to category-wise cost of supply with time. Most other states are also following Average Cost of Supply model for determination of tariff. The HPSEBL, through its constant endeavours during filing of tariff petitions, is trying to bring the level of cross subsidy to ±20% as per the National Tariff Policy. HPSEBL also wishes to emphasize that in order to cater to rapidly increasing consumer base and sales in Industrial Category, majority of capital expenditure incurred is for capacity augmentation and building new infrastructure for these consumers only. The HPSEBL has stated that tariff of subsidized class of consumers should also be brought to 80% of the average cost of supply.

(2) The HPSEBL would like to submit that the directions issued by the Commission have been adhered with. Further, regular inputs are being provided to the Commission in this regard. The HPSEBL understands the criticality of these directions for better performance of the utility and makes its best and constant efforts to comply with these directions.

(3) Power purchase quantum from existing as well as new stations (expected to be commissioned during the Control Period) of the NHPC has been calculated as per the month-wise design energy shown by each plant in their respective water studies. Some common factors that were taken into consideration while making power purchase projections have been summarised as follows:-

(i) Fall in discharge as compared to hydrology, with which the projects were planned, due to the environmental and climatic changes.

(ii) Due to decline in efficiency of the machines as compared to original efficiency.

(iii) In the DPRs, power potential at the given head and discharge have been treated as the design energy assuring the plant availability factor is 100% and no generation loss due to flooding and system disturbances have been taken into consideration.

(iv) Mandatory release of 15% water as per Environmental and Pollution Control Board requirement is also now one of the reasons in decline of generation.

(v) Generation of Bassi Power House is adversely affected whenever any machine at Shanan Power House (PSEB) breaks down as tailrace of Shanan Power House is being utilised to run Bassi Power House.

(4) There is no scientific basis of projecting the hydel generation. The generation for the power projects mentioned by the Objectors has been done on the following basis:

(i) Despite the same MW capacity, hydel generation can vary with the level of snowfall and rainfall in a particular year. Further, actual generation is also dependent on the PLF which varies from plant to plant. Hence, it is not right to say that per MW energy generation is same for all the plants.

(ii) Regarding Baspa-II, the objector is referring to the Secondary Energy generated from the station. This may be noted that the secondary energy is generation over and above the Design Energy and depends on the various factors such operating efficiency of generator, hydrology conditions. It is not expected to increase every year and beyond a certain level. There has been considerable decrease in generation over the years for most of the older plants, it is more appropriate to consider average of past few years for projection for coming years to have more realistic figures. Further, as there is increase in generation from some plants like Larji etc. (which is more than their design energy), the same has been considered accordingly.

(iii) The average generation for past three years from Bhabha HEP is 561 MU which has been taken as the basis for projecting generation for Control Period. In fact, the average generation from FY03 to FY10 is 560 MUs only. Similarly, the average generation for past three years from Giri HEP is 177 MU which has been taken as the basis for projecting generation for Control Period. In fact, the average generation from FY03 to FY10 is 173 MUs only.

(iv) As far as Bhabha Augmentation is concerned, it is only 4MW plant and is expected to generate 26 MUs approximately. This plant is expected to be commissioned by June 2011.

(5) HPSEBL has considered 0.7% as auxiliary consumption of the total hydel generation (14 MU) which is significantly lower than the auxiliary consumption norms specified of the Commission.

(6) There is no scientific method for computation of energy sales. Further, it is an uncontrollable parameter and eventually will be trued up every year by the

Commission. The Commission has also considered shorter CAGR (2-year period) in the past two Tariff Orders. In Non-Domestic Non-Commercial (NDNC) category, the 3-years CAGR comes out to 12.35%. Considering the nature of consumers served in this category and past trends, such a high increase was not anticipated and hence 2-years CAGR of 7.8% was taken as basis of projection. So far as Commercial category is concerned, 2-years CAGR is 10.96% while 3-years CAGR is 10.62% and hence consideration of either of two will not make substantial difference in the projections. For HT and EHT category, 3-years CAGR is 9% and 18% respectively which is on the higher side considering the fact that growth in industries in Himachal Pradesh will not be as aggressive as it used to be in the past years due to withdrawal of certain incentives by the Government. Hence, a more realistic growth of 7% and 10% has been assumed in line with 2-years CAGR.

(7) The HPSEBL submits that as Coal India does not increase the cost every year so they have considered the past 10 years' figures for projections.

(8) Though the Repairs and Maintenance (R&M) expenses in the past few years have been low, HPSEBL intends to increase the R&M expenses for its assets. Further, the proposed R&M is necessary for proper maintenance and strengthening of the system and quality of supply in the region in order to ensure consumer satisfaction. This is quite nominal considering the increased loading of consumers and connected load in the coming years on the existing network.

(9) Expenses for distribution of free CFL bulb were initially incurred by the Government of Himachal Pradesh (GoHP) but later the amount incurred under this scheme was transferred to the HPSEBL from the GoHP. The same has been presently recovered from the HPSEBL in form of interest free loan from the Government, for which the HPSEBL is paying an amount of Rs. 14 Cr per annum. Thus the distribution of free CFL has been a form of investment for the HPSEBL, the benefits of which can be seen in form of negligible growth witnessed in domestic consumption.

(10) Since asset mapping is still underway, the actual depreciation cannot be calculated. The HPSEBL requests the Commission to approve the depreciation as per the current methodology only.

(11) The HPSEBL submits that the there have been continuous efforts on its part to restructure its loan. Further the HPSEBL would like to submit that in the past:

(i) The HPSEBL was not allowed to recover genuine interest cost on loans taken up for generation projects.

(ii) The tariff allowed by the Commission was not adequate to meet the costs of the HPSEBL.

(iii) The Commission has not approved the carrying cost for the gaps approved in the previous true-up orders.

(12) The interest cost not allowed in the past has affected the financial health of the HPSEBL and it was constrained to raise loans to fund its losses to continue its operations. However, the HPSEBL has tried to curtail its costs wherever possible. The HPSEBL is not in a position to control interest cost at the level approved by the Commission and the borrowed funds are used to meet these expenses.

(13) Capitalisation of interest cost during Control Period is projected in line with the actual capitalization rate for previous years. Further, the actual schedule of completion of projects has already taken into consideration. As already explained in the addendum itself, apart from a small inadvertent error of double entry of interest charges for new Capex (which has been rectified), no significant deviation has been observed from the original submission.

(14) Through efficient working capital management, the HPSEBL has been able to pay its power purchase bills before the due date and has been allowed a rebate. Any additional cost arising due to inefficient management of working capital requirement is borne by the HPSEBL and is not passed through in the ARR. Further, rebate earned by the HPSEBL due to the better management of working capital has also been included for the determination of the ARR.

(15) Assets worth Rs 199.09 Cr have been transferred to the HPPTCL. However, there are certain assets (especially EHV) which have been retained by the HPSEBL and earlier classified as transmission assets have now been classified as distribution assets as they cater to HT and EHT consumers.

(16) The figure of Rs 125.94 Cr is the 30% equity on normative basis for the Capex proposed by the HPSEBL for generation projects.

(17) The HPSEBL is running into losses and the Return on Equity cannot be denied as it will only push it into further losses. Return on equity is allowed under the Act and majority of the SERCs like Rajasthan, Kerala, Punjab, Chattisgarh, etc. are allowing the return irrespective of the accumulated losses of the utility. The return on equity earned during the year or previous years can be invested to fund some of the equity portion of the capital expenditure in the subsequent years. As per provisions in the Act, the HPSEBL has full liberty to invest equity in any project up to 30%. The return on equity earned (through MYT) during the year can be invested to fund some of the equity portion of the capital expenditure in the subsequent years. The Commission should not disapprove the equity investment for the Control Period based on funding pattern adopted by the HPSEBL in the previous years.

(18) The figures of Rs 262.52 Cr and Rs 64.06 Cr refer to the equity infusion in MYT Control period and FY11 respectively on the basis of proposed

capitalization of Capex. Regarding RoE for FY10, as per the Audited Accounts of FY10 the total equity of the company stands at Rs. 971.77 Cr. This increase in equity of Rs. 575.24 Cr during FY10 is mainly on account of equity invested by the HPSEBL in the past years for its own hydel plants, which is capitalized during the year.

(19) The actual miscellaneous receipts since FY04 are shown as follows. As these receipts do not show any pattern of growth or decline, 4 years' average has been assumed for Second MYT Control Period:

FY04	FY05	FY06	FY07	FY08	FY09	FY10
Actuals	Actuals	Actuals	Actuals	Actuals	Actuals	Actuals
23.02	23.85	38.04	35.12	54.61	32.44	46.14

(20) Regarding LPSC, any benefit or loss on account of early or delayed payment is to the account of the HPSEBL. Further, it is submitted that LPSC is levied on consumers who do not make payment within the credit period allowed for payment. The LPSC charges compensate the HPSEBL for the additional interest cost that is incurred on the additional working capital requirement due to non-payment of the consumer dues on time. Therefore, it would not be appropriate to consider the LPSC charges in the determination of the ARR of the HPSEBL during the Second Control Period.

(21) Though actual power sale rate for first 6 months of FY 11 comes out to be Rs 3.37 per unit, keeping in view the past trend (which is in fact decreasing as evident from table above), a reasonable sale rate of Rs 4.50 per unit was assumed.

(22) The HPSEBL would like to submit that it complies with the directions of the Commission and provides regular updates on status of compliance to the Commission time to time. Further, in case the HPSEBL has not been able to comply with any of the directions of the Commission for time being, the same is also intimated to the Commission along with reasons thereof.

(23) Estimated banking of power has been reduced to 300 MUs for all the three years due to the following reasons:

(i) Increase in demand of power in the State.

(ii) No addition in the quantum of power supply especially from Central Power Generating Stations.

(iii) Lower short term power rates during a few months of winter season.

(iv) Low surplus during summer season, making it difficult for the HPSEBL to supply power as per banking contract.

(24) Given these reasons, due to reduction of surplus available during summers, less energy has been estimated energy for banking.

(25) A&G expenditure has not actually reduced in proportion to the assets transferred to the HPPTCL which is attributable to the fact that mostly EHV assets have been transferred to the HPPTCL on which A&G expenditure is almost negligible as compared to distribution.

(26) HPSEBL likes to submit that since asset mapping is still underway, the actual depreciation cannot be calculated. The HPSEBL requests the Commission to approve the depreciation as per the current methodology only.

(27) Rate of Interest on working capital has been taken in accordance with the regulations notified by the Commission which states that: "Rate of interest on working capital to be computed as provided hereinafter in these regulations shall be on normative basis and shall be equal to the Short-Term Prime Lending Rate of the State Bank of India as on April 1 of the relevant year." Detailed Capex Plan as per the new MYT regulations has been finalized and will be submitted to the Commission shortly after the approval of the Management.

(28) Increase in sales is more prominent in industrial category. For industrial category, % share sales within the State have grown from 44% in FY 2002-03 to nearly 60% in FY10. The HPSEBL would like to point out that the power available from existing sources is not sufficient to meet the requirement of consumers in the State especially with the growth in sales witnessed in industrial consumers. The increase in average power purchase cost leading to high tariff has been due to purchase of short-term market purchase.

(29) The substation wise energy input and energy output is readily available. However, considering the fact that not all the energy is billed at substation level, information of energy billed cannot be provided for individual substations.

(30) The HPSEBL welcomes the proposal for providing incentives to the areas which are having losses less than the losses approved for the HPSEBL as a whole.

(31) Higher capital expenditure is required on account of following reasons:

(i) Network augmentation and building new infrastructure for the rapidly increasing consumer base especially the industrial consumer base and as such require high capital infusion.

(ii) Further, the reliability standards have become much more stringent and to comply with Standard of Performance Regulations, substantial expenditure is required to ensure continuous Quality and Reliability of Supply.

(32) The losses have come down drastically over the past decade and to incrementally decrease the losses further requires infusion of substantial capital.

(33) Sufficient copies of both unaudited and audited Balance Sheets of FY10 have been made available to the Commission over a period of time. However, short term loans are being taken to cover the gap in the ARR and moreover, to comply with the directions/orders of the Commission with respect to arrears of the power purchase cost of IPPs (especially Baspa) and to meet the Employee Cost over and above that approved by the Commission. To meet immediate material requirement, centralized material procurement is being done through Short term Loans which are capitalized later.

(34) In the current scenario with oil prices rising almost on monthly basis, the inflation is only bound to increase. Further, in the new regulations issued by the Commission recently, average of last 3 years for CPI and WPI has been taken as the basis for projecting the costs like Employee Cost, A&G expenses etc. Further, the 5% increase in per unit power purchase cost from CPSUs has been taken to partially accommodate the prospective increase due to tariff orders that are anticipated to be issued shortly as per the CERC tariff guidelines for FY 2009-14.

(35) Though there have been slippages in execution of Capex Plan in the 1st MYT Control Period, the Capex Plan prepared for the Second MYT Control Period takes care of shortcomings and difficulties observed during the execution stage. As such, it is requested that Capex Plan for the Second MYT Control Period be approved by the Commission after consideration of all the factors.

(36) Request to GoHP has been made to offset accumulated losses with GoHP equity. GoHP has also been requested for waiver of pending payment of Electricity Duty and Royalty. The HPSEBL requests the Commission to kindly advise the concerned quarters in this regard for the benefit of the HPSEBL and its end consumers.

(37) The HPSEBL likes to submit that the Directions issued by the Commission have been adhered with. Further regular inputs are being provided to the Commission in this regard. The HPSEBL understands the criticality of these directions for better performance of the utility and makes its best and constant efforts to comply with these directions. Further, the asset valuation will be over within this year and Call Centre has already been established and is fully functional.

(38) The trajectory of targets should be fixed on the basis of actual performance of the base year i.e. FY11 so that these targets are realistically achievable. Further, since different regulations are applicable for First and Second Control Period, it is not appropriate to continue a trajectory set on a different regulation as basis for parameters derived under different regulations.

(39) Barring a few exceptions, bills are being distributed on time as per the billing schedule notified for rural and urban/industrial areas. As per information collected from various circles, nearly 80% bills are being generated and distributed on time as per the revised schedule which is monthly and bi-monthly now. The factors delaying timely distribution of remaining bills are being analyzed and addressed on priority basis.

(40) The HPSEBL appreciates the suggestion and requests the Commission to consider the same during the finalization of tariff for the FY12.

(1) The DSM project has been initiated by the Commission with the assistance of the HPSEBL. Consultants were hired for preparation of detailed plan for implementation of DSM in the State. Report was submitted to the Commission in this regard, based on which the DSM Regulations were framed. Complete details in this regard are available with the Commission.

Commission's Observations:

3.6 The tariff petition has many information gaps on several aspects, which necessitated repeated correspondences with the HPSEBL, pointing out information deficiencies, which were largely supplied by the HPSEBL during the course of processing the petition.

3.7 The Commission is in agreement with objectors that continued and proven inefficiencies must be controlled and penalized. Hence, the Commission has laid down certain principles and provided certain directions in subsequent chapters of this tariff order to ensure the same.

3.8 The Commission is concerned at the low generation of some plants and therefore has directed the HPSEBL 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 projections for the HPSEBL's own plants on the actual generation achieved by the station in the past three years. However, for the purpose of recovery of annual fixed charges the Commission has considered the design energy of the respective stations, in accordance to the HPERC Generation Tariff Regulations, 2011.

3.9 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 HPSEBL. The Commission's views have been brought out in the ensuing chapters where various issues relating to the HPSEBL have been discussed in detail.

3.10 Peak load charges are levied at double the rate of normal energy charges in order to ensure grid discipline and to maintain the demand supply situation during peak hours. The Commission feels it necessary to continue with these charges in order to keep the load profile of the State in control during peak hours.

3.11 The two-part tariff regime rewards consumers for maintaining a high load factor. A higher load factor for any contracted load means more energy units of energy consumed for same connected load. Thus, effective fixed charges paid by the Consumer with high load factor for per unit of energy will reduce as fixed charges are linked with the contracted load.

Performance and Functioning of the Petitioner

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

(1) Normal day load restrictions have been imposed on ACL. These long restrictions are contrary to the demand that the utility is legally bound to fulfil. There were 41 instances of power failure on the EHV as experienced by ACL.

(2) There is no control over frequency. Being a continuous process industry, this causes heavy production loss. Also, there are voltage variations beyond the agreed limits. The Commission should fix responsibility for the utility's inability to bring about system improvement to improve power quality.

(3) T&D loss for FY10 has increased to 14.58% as against the actual figure of 13.41% during FY09. There is no reason for allowing increased T&D losses for the MYT period FY12 to FY14 than approved for the preceding years.

(4) The employee cost is still on the higher side and is going up beyond Rs. 1.50 as against the Rs. 1.33 approved by the Commission for FY11. Under no circumstances this should be allowed to go higher than Rs. 1.33 in future. The percentage of Employee Cost to ARR was expected to be brought to 9-10% whereas during the Second MYT Control Period it has again gone up above 30%. On an average 900 persons are due to retire every year. Providing for new appointments of 250 persons in a year leaves us with a fall of 650 persons in strength per year. In spite of this the salary and wages cost is growing in the ARR. The Commission is not bound to pass on the increase in employee cost due to 5th Pay Commission recommendations to the consumers and it should be borne by the HPSEBL or the Government. Requisite steps to reduce the same should be taken by the HPSEBL in accordance with directions of the Commission in previous Tariff Orders.

Petitioner's Response:

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

(1) Instances of these normal load restrictions are expected to reduce in coming years when the HPSEBL shall have extra allocation of power from new plants proposed in the petition.

(2) The HPSEBL is a part of the integrated 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. The HPSEBL has virtually no control over them except some local voltage control by switching on the capacitor banks or changing the taps of ICTs at sub-stations. The problem has been further compounded by delayed monsoon and less discharge in hydel stations which are supporting the grid to keep critical parameters like frequency within permissible limits. Hence, load restrictions were imposed to contain the frequency to the extent possible. It is pertinent to mention that the orders for opening of breaker are the last resort available with SLDC control centre. The directions of SLDC (being the apex body to ensure integrated operation of the State grid) needs to be implemented by all including the distribution licensee.

(3) The HPSEBL has already pleaded in various submissions to the Commission that the revision of the T&D loss trajectory on the basis of actual FY09 loss level was inappropriate as for the past two to three years in Shimla, Nahan and Solan circles of the HPSEBL, the number of units sold were booked in KVAh and the same was considered while calculating the T&D losses. However, the remaining circles of the HPSEBL were taking KWh energy for computation of T&D losses. This was one of the main reasons contributed in the substantial reduction of the T&D losses of the HPSEBL during FY09. It is submitted to the Commission that the T&D loss trajectory for Second Control Period should not have any dependency on the previous trajectory and should be based on the actual as on date so that the targets are more realistic and genuine efforts can be made to achieve these targets.

(4) Employee Cost claimed by the HPSEBL is as per actual only and the upward revision in per unit employee cost as projected is primarily on account of recommendations of the 5^{th} Pay Commission. Discoms of other States have similarly claimed a hike in allowed expenses for employee cost on the basis of the new Pay Commission recommendations. Also, non-payment of these arrears can lead to potential industrial unrest. This is also submitted that the after the complete payout of the arrears, the employee cost will substantially reduce. The HPSEBL on its part have already taken a number of steps to curtail Employee Costs. This may also be worthwhile to mention that there is absolutely no increase in number of employees in past many years, except those allowed by the Commission. This is quite appreciable as distribution network and consumer profile has increased considerably over the past few years, which has been managed by the HPSEBL through judicious use of existing manpower only.

Commission's Observations:

3.14 The Commission has laid down the T&D loss trajectory for the Second Control Period after exercising prudence checks, accounting for the capital investment planned by the utility on loss reduction schemes and taking into consideration the concerns expressed by various objectors. The Commission's views have been brought out in the ensuing chapters where the various issues relating to the HPSEBL have been discussed in detail.

3.15 The Commission is concerned over the employee cost incurred by the Petitioner, especially the increase in the per unit employee cost which is an indicator of the efficiency of any utility. While approving the employee cost for the Second Control Period, the Commission has taken into account the need for reducing the per unit employee cost incurred by the Petitioner.

Regulatory Issues

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

(1) Targets for controllable elements for MYT Control Period (FY12 – FY14) now need to be fixed in line with previous target trends in order to improve the efficiency of the utility.

(2) There is no revenue gap arising out of the true up for FY10. Instead there is surplus of Rs. 260.78 Cr to be carried forward for future years. The revenue gap in the actual result was mainly on account of controllable parameters and because of the previous year surplus of Rs. 288.42 Cr. That was not accounted for by the utility in the ARR estimates.

(3) There are major inconsistencies in the revenue projected from sales outside the State. The Commission may please note that in the FY11 the realization is estimated at just Rs. 2.20 per unit.

(4) Categorisation of industries and character of service to be on load in KVA instead of KW basis.

(5) This cross subsidy is affecting the industries in the State the most as the tariff burden of other categories is being passed on to the Industries in the State which is not justifiable.

(6) Reliance Communications Ltd. requested for incorporation of communication industry in the Industrial Category instead of the current Commercial category, in concurrency with the IT Policy.

(7) Exemption of Electricity Duty on power generation from DG sets installed at BTS/ towers for Captive Consumption.

(8) Category wise cost of supply should be worked out and cross subsidy level should be determined accordingly.

Petitioner's Response:

3.17 The compilation of the replies to the above issues as filed by the HPSEBL is as follows:-

(1) The Commission had determined surplus to the tune of Rs. 288 Cr at the time of truing up of FY09 and the same was deducted from the total ARR approved for FY10. The HPSEBL would like to point out that in the existing scenario, banking rates are only considered by the HPSEBL for accounting purpose and in actual banking is a cashless transaction. Therefore, the surplus of Rs. 288 Cr determined by the Commission for FY09 has not been realized by HPSEBL on account of cashless banking sale and other deductions made by the Commission under the head O&M cost, Interest cost, non tariff income, etc for FY09.

(2) Though actual power sale rate for first 6 months of FY11 comes out to be Rs 3.37 per unit, keeping in view of past trends and considering the fact that actual sale rate of electricity in the power exchanges have dipped alarming recently, sale rate of Rs 2.20 per unit was assumed for FY11.

(3) Though the licensee shall compile and provide the KVA data to the Hon'ble Commission, it has been mentioned by the objector himself that the in the Tariff Order for FY10, the Commission specified that the connected load has no relevance with respect to the tariffs. The connected load of the consumer premises is maintained by the HPSEBL in KW as per the Supply Code of the Commission based on the standard supply voltages.

(4) The HPSEBL has been making effort to reduce cross subsidy which is evident from the increase in tariff for domestic consumers last year and the proposed increase in the petition.

(5) Change in definition of a category is in the purview of the Commission. The HPSEBL requests the Commission to take an independent view and make appropriate decision in this regard.

(6) Electricity Duty is levied by the Government of Himachal Pradesh and the HPSEBL has no control over it.

(7) Concerns of all the consumers are of great importance to the HPSEBL and we shall shift to the category-wise cost of supply in due course of time.

Commission's Views:

3.18 The Commission has exercised prudence checks and taken into consideration the concerns expressed by various objectors while analyzing and evaluating the projections/submissions made by the HPSEBL. The Commission has also taken into consideration the need for encouraging efficiency in all aspects of operation and functioning of the HPSEBL while approving expenses and setting down targets for performance parameters. The Commission's views have been brought out in the ensuing chapters where various issues relating to the HPSEBL have been discussed in detail.

3.19 The National Tariff Policy provides that the tariff should properly reflect the cost of supply of electricity and to start with the same are to be brought within ±20% of the average cost of supply. The Commission is already moving in this direction and is likely to meet this requirement fully shortly.

Tariff Related Issues

General

3.20 The objectors pointed out the following general issues related to the Tariff petition filed by the Petitioner:

(1) The tariff proposal appears to be highly biased, discriminatory and anti-industry. In spite of the tariff principles being already there for years, the utility is proposing tariff changes largely based on average cost of supply model instead of cost to serve.

(2) The HPSEBL has proposed a hike of 25% to 100% in the schedule of general and service charges. There should be no increase in these charges. On the other hand it is requested to do away with the cost of Application and Agreement Forms and instead put these forms on the website of the HPSEBL for free downloads.

(3) Tariff of subsidized class of consumers should be brought to 80% of the average cost of supply.

(4) Minimum demand charges should be 80% of the contract demand because it is difficult to control the fluctuating load so as to keep it within the sanctioned contract demand.

(5) There is no need to charge fee for already sanctioned peak load every year. Only an incremental increase in sanction for peak load applied for may be asked for the deposit the fee at the prescribed rate.

Petitioner's Response:

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

(1) The HPSEBL has been following the average Cost of Supply model for determination of tariff and is making efforts to shift to the category-wise cost of supply in due course of time. Most other states are also following average

Cost of Supply model for determination of tariff. The HPSEBL is trying to bring the level of cross subsidy to ±20% as per the National Tariff Policy.

(2) Only a nominal hike has been proposed in the General and Service Charges despite the fact that there has been substantial hike in material cost over the past few years due to inflation. Further, except minor increase in meter rent charges, there has been no change in General and Service Charges since 2001.

(3) The tariff proposed for FY12 is already in line with the norms stipulated in National Tariff Policy i.e. tariff should be within ±20% of Average Cost of Supply. Except Domestic Category, tariff of all categories is within this range. In fact hike has been proposed in Domestic Category also to progressively reach this level within next 2-3 years. However, HPSEBL would like the Commission to take an independent view on this matter.

(4) There is provision of revision of contract demand twice a year to suit the requirement of a particular consumer on the basis of actual consumption. As such, the provision of demand charges at 90% of the contract demand is quite reasonable as the consumer has the flexibility of reducing or enhancing the demand in case he is not able to meet the contract demand sanctioned earlier.

(5) These charges have already been approved by the Commission through a clarificatory Order. The fee charges applicable for peak load exemptions are fair and reasonable as such requests from consumers require certain costs to be incurred by the HPSEBL. These costs include assured arrangement of additional power to the consumer and costs towards maintenance of energy record at substation/field office during peak hours. These charges are also justified as it encourages genuine consumers whose industrial operations really necessitate such peak load exemption.

Small Industries

3.22 The objectors pointed out the following issues related to the Tariff petition for small industries filed by the Petitioner:

(1) MSME industry should be exempted from peak load restriction. Contract demand should be abolished up to 100 KW.

(2) Single tariff up to 100 KW load may be introduced.

(3) Straight line method of calculation in the billing should be followed and no other charges should form the part of the bill.

(4) Low voltage charges may please be revoked on the connection up to the 100 KW.

Petitioner's Response:

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

(1) The HPSEBL recognizes the contribution made by MSME sector towards regional development. However, there is no rationale for clubbing small and medium power together, as by doing this there would be no difference in electricity charges applicable to consumers drawing energy at different loads. The difference in tariff is important so that consumers having high connected load should be benefited by moving to higher voltage levels.

(2) The loss of revenue on account of removal of demand charges would need an increase in the energy charge for this category to maintain overall revenue neutrality. This would mean that the high end users with in this category would be deprived of the benefit of lower effective tariff. Such tariff structure may result in blockage of capacity. The provision for fixed/demand charges prevails in most states introducing two-part tariffs to ensure a minimum level of revenue against load commitment made by the consumer to the utility and the utility in turn arranging requisite facilities and infrastructure for provision of supply.

(3) The revision in tariff proposed for the small and medium power based on the connected load is reasonable and quite nominal. The HPSEBL would like the Commission to examine the costs and allow appropriate increase in tariff to ensure full recovery of approved costs.

Large Industries including Power Intensive Units

3.24 The objectors pointed out the following issues relating to Large Industries (including Power Intensive Units) in the tariff petition filed by the Petitioner:

(1) Abnormal increase in the tariff proposed for Large Industrial Power supply is unjustified.

(2) Night Period Tariff be made applicable from 22.00 hours to 6.00 hours instead of existing 00.00 hours to 06.00 hours.

(3) Proportionate demand charges be levied according to the load allowed (on pro-rata basis).

(4) Contract Demand sanctioned should be in KVA instead in KW.

(5) Corresponding reduction in Peak Load Exemption Charges on pro-rata basis should be allowed.

(6) Need to rationalize the Peak Load Violation Charges – Violation penalty to be

imposed with the frequency of defaults.

(7) The utility has proposed to introduce morning peak hour restriction, which is not required.

(8) Fixed Charges are supposed to be paid on monthly basis on contract demand. However, if any machinery is replaced/ changed without putting any impact on total contract demand, there should not be any necessity to disclose the machine-wise load data. Penalty should only be imposed in case load exceeds the sanctioned contract demand.

Petitioner's Response:

3.25 The compilation of the replies to the above issues as filed by the Petitioner is as follows:-

(1) The increase in tariff has been proposed in view of the estimated increased costs of the HPSEBL during the Second Control Period. The average cost of supply of HPSEBL is anticipated to increase from Rs. 4.54 per unit in FY10 to Rs. 4.67 per unit in FY12. There has been 40% increase in power purchase cost which is an uncontrollable parameter. Considering the revenue gap on existing tariff, The HPSEBL has proposed major increase in tariff for industrial category (which accounts for nearly 60% of the total sales within State). The HPSEBL has proposed increase in other categories as well, considering the consumption pattern as well as existing realization from other key categories. The HPSEBL has also proposed an increase in domestic tariff and the proposed increase would enhance revenue realization to 67% of average cost of supply.

(2) 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.

(3) A reduction in demand charges for non-availability period is not feasible and this would require an alternate mode of recovery to ensure full recovery of the approved annual revenue requirement.

(4) Billing of industrial consumers is on the basis of contract demand which is measured in KVA. The connected load of the consumer premises is maintained by the HPSEBL in KW as per the Supply Code of the HPERC based on standard supply voltages.

(5) The existing power supply constraints in Himachal Pradesh do not permit system where consumers can freely choose their consumption pattern because of shortages in peak capacity. Industrial, water irrigation and agriculture pumping consumers are normally not permitted to use electricity during peak

load hours. In some cases, where exemption is granted to use electricity during peak hours, a charge called the peak load exemption charge (PLEC) is applied.

(6) Peak Load violation charges are levied to act as a deterrent to ensure grid discipline. Any violation during peak load restrictions cannot be ignored.

(7) Considering the present demand in the State of HP, the HPSEBL had requested the Commission to take into account the morning peak from 7:30 AM to 10:30 AM while approving the tariff for FY12. Same is necessitated as there is considerable shortfall in power currently.

(8) At the stage of load sanctioning, the connected load and contracted demand is sanctioned separately. The licensee has to build up infrastructure on the basis of connected load as the consumer can vary his contract demand up to the allowed connected load. Therefore any change in connected load by way of replacement/ change in machinery without prior sanction are not allowed.

Hotel Establishments

3.26 The objectors pointed out the following issues:

(1) Single part tariff be made applicable with connected load up to 200 KW, especially for commercial consumers.

(2) If two part tariff has to be made applicable for Hotel Industry then instead of commercial supply tariff, small and medium industrial power supply tariff should be made applicable to Hotel establishments.

(3) Very high tariff suggested by the HPSEBL for next three financial years be reduced drastically.

(4) Lower voltage supply surcharge (LVSS) for old consumers availing supply for 10-15 years needs to be struck down. LVSS is justified for new consumers

Petitioner's Response:

3.27 The reply of the above issues filed by the Petitioner is as follows:-

(1) The introduction of single part tariff with connected load up to 200 KW would mean that the high end users within this category would be deprived of the benefit of lower effective tariff. Such tariff structure may result in blockage of capacity, as there will be no disincentive for taking higher sanctioned load.

(2) There is no rationale for charging differential tariff for the categories under commercial supply as under this category the consumers use electricity for the same purpose i.e. business purposes.

(3) The HPSEBL would like to bring to the objector's notice that the HPSEBL has not proposed any hike in the Commercial Category which is applicable to Hotels also.

(4) As per Supply Code clause 2.1.6.2, existing consumers have the option to convert to the standard supply voltage, provided that if the consumer continues to avail supply at existing lower voltages, he shall be and continue to be liable to pay LVSS in accordance with the prevailing Tariff Order.

Agriculture

3.28 The objectors pointed out the following issues:

(1) Demand charges on agricultural connections either be abolished or be charged uniformly from all agriculture, consumers.

(2) The proposal of the HPSEBL for enhancing the consumer service charges to Rs. 100/- is not fair.

Petitioner's Response:

3.29 The reply of the above issues filed by the Petitioner is that there is no rationale for clubbing various slabs together, as by doing this there would be no difference in electricity charges applicable to consumers drawing energy at different loads. The difference in tariff is also important so that consumers having high connected load should be benefited by moving to higher voltage levels. Further, this would mean that high end users within this category would be deprived of the benefit of lower effective tariff.

Commission's Views:

3.30 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.

3.31 Regarding re-categorisation on KVA basis, the Commission is of the opinion that the data currently available with the HPSEBL is insufficient to enable the Commission to correctly assess the impact of re-categorization. In cases where two-part tariff is put in place connected load has only little relevance (i.e. for categorisation of tariff).

A4: INTERACTION WITH OFFICERS AND MEMBERS OF HIMACHAL PRADESH STATE ELECTRICITY BOARD

4.1 In order to highlight important concerns of the Commission and to gain insight into the present day organizational / operational problems engulfing the Power Sector Utilities like the HPSEBL, the Commission held interactive sessions with the Management and senior Officers of HPSEBL. These interactive sessions were intended to further enable the Commission to understand the difficulties being experienced by them and evoke suggestions/ solutions from them for the better performance of these Utilities.

4.2 Schedule of formal interactions with the Whole time Directors and Officers of the HPSEBL was as follows:-

Table 28: Schedule of interactions

S. No.	Date	Time	Officer
1.	20/05/2011	1:30 pm	Chief Engineer Operation (South Zone, North Zone and Centre Zone), Chief Engineer (MM), Chief Engineer (Electrical System), Chief Engineer (Commercial) and Chief Engineer (System Planning).
2	21/05/2011	10:30 am	Managing Director (BVPCL), Chief Engineer (Projects), Chief Engineer (Generation), Chief Engineer (I&P), Chief Engineer (System Operation) and Chief Engineer (Commercial).
3	23/05/2011	11:00 am	CMD cum Managing Director and other Whole Time Directors HPSEBL.

4.3 The agenda for discussions were circulated before hand for these interactive sessions. Written responses from the Officers and the Management on the agenda items were submitted at the time of the interactive session by them, to the Commission. Their responses to the questionnaires are on record of the Commission.

4.4 The deliberations on issues those were raised by the various officers of the HPSEBL and the Commission during these interactions are summed up as follows:-

Interaction with the Chief Engineers (Operation North, South and Centre Zones) / Material Management (MM) / System Planning (SP) / Electrical System (ES)):

4.5 The HPSEBL officers briefed the Commission on the implementation of R-APDRP programme. The Commission informed that in order to enable the HPSEBL to make 100% loan conversion into grant, the schemes sanctioned under R-APDRP had to be completed by 2012 and that the Commission will not allow as pass through in its Tariffs of any financial implication arising out of non-conversion of the said loan to grant. Therefore, the HPSEBL needed to ensure the completion of all Part A (R-APDRP) schemes, by December, 2011. In order to enable the HPSEBL to avail the benefit of 90% grant in respect of Part B (R-APDRP), the Commission brought in more clarity to the Officers of the HPSEBL on the terms of eligibility and performance contained in this Scheme. The Commission informed that in order to avail 90% grant component, the scheme under Part B (R-APDRP) be executed at the earliest so as to bring down the performance target of T&D loss to less than 15% from 2012 and to sustain this loss level for the next five (5) years. If the targeted T&D loss level is not maintained in any one of the above mentioned five (5) years, then the grant component shall be reduced on pro rata basis in Part B (R-APDRP). It was re-iterated by the Commission that the Commission will not allow as pass through in its Tariffs of any financial implication arising out of non-conversion of the said loan to grant.

Rajiv Gandhi Grameen Vidyutikaran Yojna (RGGVY)

4.6 The HPSEBL officers informed the Commission that all the schemes will be completed in FY11.

Replacement of Wooden Poles

4.7 It was also suggested by the Commission that all wooden poles be replaced by steel poles to ensure un-disrupted access to electricity in most vulnerable areas such as Tribal areas, Backward area (Backward Blocks), S.C. concentration areas through TASP/BASP/SCP support and borrowings.

High Rate of Failure of Distribution Transformers

4.8 The Commission expressed concern over the high rate of failure of distribution transformers in the HPSEBL. It was informed by the HPSEBL officers that the primary reasons for this were over loading, poor maintenance and unbalanced loading. The high rate of failure of distribution transformers was also attributed to the use of repaired / rewound distribution transformers in the field which are most prone to failure. The Commission suggested that suitable measures be taken to reduce the failure rate of distribution transformers.

Status of Pending Applications from Consumers

4.9 The Commission also enquired from Chief Engineers (Operation) about the status of pending applications for new connections and asked the HPSEBL's officers to submit the status of these pending applications suitably segregated into that due to fault on the part of applicant (incomplete applications) and that due to fault on the part of the HPSEBL (shortage of material, delays in sanctioning of load cases etc).

Reduction in AT&C Losses

4.10 It was observed by the Commission that Aggregate Technical and Commercial (AT&C) losses were to be maintained at levels below 15%. The Commission suggested that using special diagnostic methods for identification of Electrical Divisions of the HPSEBL with high loss levels say above 25%, reduction of these losses be carried out to levels less than 15% through strategic planning and by making investments. Such Electrical Divisions of the HPSEBL with losses greater than 25% adversely reflect upon governance and should be selected for reduction in these AT&C losses. Investments in meters and metering equipments and in augmentation of existing electrical distribution system on this front should be included in the HPSEBL Capex Plan.

Improvement in Collection Efficiency

4.11 Another area of concern expressed by the Commission was in the improvement of collection efficiency. It was suggested to the HPSEBL to increase the collection efficiency through additional modes of collection e.g. Banks, Post Offices, e-payments etc.

Security Deposit from BPL Consumers

4.12 During the interactive session, it was observed that the Security Deposit required from BPL categories is on a higher side, especially where the billing cycle being followed by HPSEBL was greater than bi-monthly. The Commission suggested to the HPSEBL to accordingly submit a proposal for reduction in this Security Deposit required from BPL families.

Metering

4.13 The Commission also enquired from Chief Engineers (Operation) about the status of replacement of electro-mechanical meters with electronic meters, promotion of pre-paid metering and introduction of Automatic Remote Metering. The Commission suggested that the HPSEBL may consider replacing all electro mechanical meters with efficient electronic meters in one go and incorporate in the Capex Plan accordingly.

4.14 The Commission observed that the concept of prepaid metering was not being taken up actively by the HPSEBL. The HPSEBL's officers intimated that the tariff for prepaid metered consumers being low was a disincentive to the HPSEBL. The Commission advised the HPSEBL's officers to submit a comprehensive proposal to the Commission in respect of prepaid metering.

4.15 The Commission also suggested that remote metering should be taken more expeditiously and that the HPSEBL should try and include consumers above 50 KW for this purpose.

Standards of Performance

4.16 On implementation of Standards of Performance Regulations (SOP) regulations by the HPSEBL, the officers informed that new reliability indices, which are consumer based, can be implemented only if the existing IT package gets fully implemented.

Empanelment of Suppliers for Uninterrupted Supply of Equipment

4.17 The issue of non-availability of essential equipment and material in the field such as 22 kV transformers and 3 phase 4 wire meters also came up for discussion and it was suggested by the Commission that empanelment of suppliers for procurement of 22 kV transformers and 3 phase 4 wire meters be considered so as to ensure regular and uninterrupted supply of equipment and material.

Recovery of Expenditure

4.18 On implementation of Recovery of Expenditure regulations it was agreed that Chief Engineer (Commercial) shall submit a suitable proposal to the Commission.

Morning Peak Load Hours

4.19 During the interaction, the HPSEBL informed about the existence of peak load during the morning hours in addition to the evening hours. Therefore the HPSEBL requested for introduction of peak load exemption charges for the morning hours.

Signing of Interconnection Agreement

4.20 The Commission advised the HPSEBL to enforce the signing of interconnection agreement within 6 months from the date of signing of PPA. The PPA and IA details should also be shared with the HPPTCL for better co-ordination and updation of Transmission Master Plan.

Setting-Up of Protection & Communication Facilities

4.21 The Commission was informed by Chief Engineer (Electrical system) on the progress of core EHV schemes. The Commission asked the HPSEBL to set up proper protection and communication facilities integrating the transmission and distribution control points, so that the faults can be located quickly and the fault clearing is done by the responsible agency at earliest.

Beas Valley Power Corporation

4.22 The Managing Director of Beas Valley Power Corporation (BVPC) informed the Commission on the progress being made in respect of UHL stage III project. It was informed that the scheduled date of commissioning of UHL project is March, 2012. The Commission advised that suitable measures be taken to prevent time and cost over run for the reason that at the time of tariff determination by the Commission, the time and cost over runs would have to be justified adequately by the HPSEBL and that the Commission shall consider only the prudent cost. Suitable accounting procedure should be laid well in advance. It was stressed that accounts as well as the works be closed immediately after the completion of works to avoid any unnecessary Interest During Construction (IDC). It was made amply clear that if the employee cost exceeds the CEA norms, such excess cost may not be allowed and therefore, suitable measures be taken to keep a check on this cost.

Projects

4.23 It was informed by Chief Engineer (Projects) that the first unit of Bhaba Augmentation will be commissioned with in a month and that the commissioning of Ghanvi-II is scheduled for September, 2011. The Commission informed the Chief Engineer (Projects) that suitable measure to reduce the employee cost be taken and the surplus staff should be clearly mentioned in the records. The process of closure of accounts and works should be initiated immediately after the completion of works and outer time limit for closure of accounts be firmed up to avoid IDC.

Investigation & Planning

4.24 The Chief Engineer (I&P) informed the Commission that approximately Rs. 467 Cr is to be received from various Independent Power Producers (IPPs) and other agencies on account of payments for preparation of Pre-Feasibility Reports (PFRs), Detailed Project Reports (DPRs) and Survey and Investigations. The Commission asked the Board to make correspondence with IPPs along with the bills for the recovery of amount due towards the HPSEBL on account of preparation of PFRs, DPRs etc. Further the Commission suggested that such claims needed to be made to the IPPs within three months of signing of respective Implementation Agreements (IAs) as per provisions of IAs.

Generation

4.25 The Commission also informed the Chief Engineer (Generation) that there are shortcomings in the accounting system in so far as wrong postings take place rather frequently. This is detrimental at the tariff determination stage. The Commission suggested that it was essential that each generating station be treated as a separate profit centre and therefore accounts, balance sheets and other details for each project were required to be prepared and maintained separately.

4.26 Chief Engineer (Generation) was also informed that reasons for higher operating costs in each project need to be identified and suitable measures need to be taken to control those costs for the reason that the Commission at the time of tariff determination would approve costs only on normative basis. The Commission also suggested to the Chief Engineer (Generation) that in order to enhance the performance of various projects, he shall be required to make concerted efforts for their Repair and Maintenance (R&M) by undertaking expenditure of the nature of R&M as specified in the tariff regulations for hydro generation.

4.27 The Commission suggested that owing to wide variation between the actual generation & design energy, a suitable study be carried out and revised design energy be re-ascertained where ever required.

System Operation

4.28 The Commission stressed that there is a need for having in place a proper strategy to deal with short term purchases and sales arising on account of variation in short term market prices, abrupt change in weather conditions or other unforeseen events. It was also suggested by the Commission that in order to avoid any undue monetary losses due to short term power purchases under Unscheduled Interruption (UI) charging regime, power purchases outside the day-ahead / hour ahead Schedules should be kept at a minimum. The Commission also stressed on having a specialized cell for managing the sale and purchase of short term power during real time operation of the power system based on modern tools like short term load forecast etc.

Interaction with the Managing Director and Whole Time Directors of HPSEBL

Governance and Reforms

4.29 I.T. applications – Executions of I.T. packages – Computerised billing, assets mapping and valuation, R-APDRP Part-A, MIS, ERP etc. in a qualitative and time bound manner.

4.30 R-APDRP

(1) Reduction of AT&C losses to below 15% level every year for 5 years starting from 2012 in the project areas each.

(2) Reduction of AT&C losses in the Sate by 1.5% every year.

4.31 Hence, the HPSEBL was suggested to complete PART-A R-APDRP by December, 2011 and award tenders of PART-B R-APDRP by July/ August, 2011 and complete works by 2012.

4.32 High T&D Loss systems - Special diagnostic exercise and strategic planning for reduction of high T&D Losses in Divisions; says above 25%, which reflects adversely upon the governance. Investment to be encouraged though Capex Plan.

4.33 Replacement of electro mechanical meters by efficient electronic meters in the State in one go.

4.34 Replacement of wooden poles and inefficient conductors, providing of breakers, DTRs etc. to ensure access to electricity in the most vulnerable areas like Tribal areas, Backward area (Backward Blocks) S.C. areas through TASP/BASP/SCCP support and borrowings.

4.35 Restructuring decision process for approvals, financing etc. for efficiency and accountability.

Customer/Consumer Service

4.36 Investment in critical infrastructure for access to quality power-industry (EHV systems) and domestic (66 kV/33kV/11kV) and timely completion.

4.37 Evacuation of power – 33kV/11 kV system for open access and procurement by HPSEBL. Prepare and execute sub-plan for each basin by integrating with transmission master plan.

4.38 O&M – Earmarking funds for R&M under the O&M provisions and authorisation to HODs without needing to go to Finance Wing in Head Quarter for funds/approvals for quality supply and efficiency.

4.39 Efficient procurement of material and supplies by continuously updating the procurement procedure.

4.40 Grievances redressal – by various institutions i.e. Board/Forum/Ombudsman etc.

Commercial

4.41 Managing power deficits -

(1) Short term – U.I. and Exchange operations need structural framework for decision and operation so that we purchase on less than average price of purchase and sell power on more than average purchase cost.

(2) Case-I bidding to explore IPP going for REC mechanism

(3) REC mechanism

(4) 15% unallocated share in NTPC and NHPC projects in HP and signing of agreements/obtaining GoI approvals in time.

4.42 PPAs execution be carried by the HPSEBL as per I.A. provisions required.

4.43 Rapid recovery of expenditure incurred on a/c of Survey & Investigation from IPPs. Standard procedure and framework to be provided for raising claims and effecting recoveries.

4.44 Billing and Collection: Monthly in municipal and industrial towns, to be ensured. Encourage franchises, Lok Mitra, banks, prorata billing etc.

4.45 Liquidity problems: Investment/expenditure in activities other than distribution to be judicious – Ensure separate accounts including borrowings (current/O.D./W.C etc.)

4.46 Losses – Govt. support w.r.t. pre- restructuring losses/liabilities be requested.

Other activities/ business of HPSEBL

4.47 Approval of Commission as per Act.

4.48 Generating stations – The Commission observed that generation is big strength to the HPSEBL yet separate account for each station be maintained and the collective generation business to support distribution in real cash surpluses.

4.49 New generation projects – the Commission informed that cost of new generating project that be strictly as per tariff policy and our disallowance to be adjusted against returns/depreciations.

4.50 Case-II bidding for new projects as an option be explored.

4.51 Solar projects by the HPSEBL - The Commission suggested the HPSEBL to hire an agency to study the sites of hydro generating stations of Board for solar generations.

4.52 Closure of account of completed projects i.e. Larji and Bhaba to be ensured by fixing timelines and deployment of staff.

4.53 I&P - Important for State and hence it should continue on self sustaining basis. Amount recoverable for services rendered in past be identified and strategy to recover the same be put in place.

4.54 Directions of the Commission – The Commission informed that adequate follow-up action be taken up.

4.55 Safety Issues – Due consideration for safety issue be given.

4.56 Fresh recruitments on continuing basis be made.

Interaction with Principal Secretary (Power)

4.57 An interaction was held with Principal Secretary (Power), Sh. Deepak Sanan and Chairman-cum-Managing Director, HPSEBL Sh. R.D.Dhiman on 28th June, 2011 at 12.15 PM, in which following issues were discussed:

(1) Need for clearing the balance sheet of the Board in view of mounting losses, debt liabilities, liquidity issues so that the restructured entity begins its operations with robust financial health. One time grant assistance to Board to meet the arrears of pay revision.

(2) Need for power procurement planning for cost effective sourcing.

(3) Activation of processes for moving towards REC framework.

(4) Steps for meeting Solar RPO as per tariff policy.

(5) Pension obligations management.

(6) Continuation of GoHP subsidies for domestic and agriculture water pumping consumers.

(7) Execution of centrally sponsored programmes like RGGVY, R-APDRP, Finance Commission Grants for border areas etc.

(8) D.S.M. and energy conservation measures.

A5: TRUE UP FOR FY10 UNDER THE FIRST MYT CONTROL PERIOD (FY09 – FY11)

5.1 The HPSEBL has submitted the true-up petition for FY10 along with the MYT petition for the Second Control Period based on the actual operational and financial information of FY10. It has also submitted the audited accounts of FY10 along with the petition.

5.2 The Commission has reviewed the operational and financial performance of the Petitioner for FY10 and has finalised the true up based on the MYT Regulations, 2007.

5.3 Regulation11 of the Himachal Pradesh Electricity Regulatory Commission (Terms and Conditions for Determination of Wheeling Tariff and Retail Supply Tariff) Regulations, 2007, specifies the following:

"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."

5.4 The following sections contain the detailed true up for FY10, based on the audited annual statement of accounts, information submissions, necessary clarifications submitted by the Petitioner and views expressed by various stakeholders and prudence check by the Commission.

Energy Sales and Revenue

5.5 In its true up petition the Petitioner has submitted that it has registered actual sales of 5814.33MU during FY10 as against 5676.33MU approved by the Commission in the

Second APR Order. The sale of energy being an uncontrollable factor, the Commission approves the actual sales registered by the Petitioner during FY10.

5.6 The sales projected by the Petitioner and that approved by the Commission during Second APR, sales as per audited accounts of FY10, revised sales figures submitted by the Petitioner for the purpose of true up and trued up sales for FY10 are shown in the table as follows:-

Table 29: Energy Sales in FY10 within the State (MU)

<table>
<tr><th>Category</th><th>Approved in APR Order</th><th>True-up petition</th><th>Audited Accounts FY10</th><th>True-up by Commission</th></tr>
<tr><td>Domestic Supply</td><td>1098.96</td><td>1111.58</td><td rowspan="2">1112.13</td><td>1111.58</td></tr>
<tr><td>BPL</td><td>0.56</td><td>0.54</td><td>0.54</td></tr>
<tr><td>Non-Domestic Non-Commercial Supply</td><td>72.79</td><td>89.88</td><td>89.88</td><td>89.88</td></tr>
<tr><td>Commercial Supply</td><td>283.11</td><td>305.65</td><td>305.65</td><td>305.65</td></tr>
<tr><td>Small and Medium Industrial Power Supply</td><td>171.23</td><td>175.52</td><td>175.52</td><td>175.52</td></tr>
<tr><td>Large Industrial Power Supply</td><td>3386.12</td><td rowspan="2">3872.83</td><td rowspan="2">3872.83</td><td rowspan="2">3872.83</td></tr>
<tr><td>Water Pumping and Irrigation Supply</td><td>420.40</td></tr>
<tr><td>Street Lighting Supply</td><td>12.38</td><td>12.54</td><td>12.54</td><td>12.54</td></tr>
<tr><td>Bulk Supply</td><td>203.51</td><td>218.73</td><td>218.73</td><td>218.73</td></tr>
<tr><td>Temporary Metered Supply</td><td>27.27</td><td>27.06</td><td>27.06</td><td>27.06</td></tr>
<tr><td>Total</td><td>5676.33</td><td>5814.33</td><td>5814.33</td><td>5814.33</td></tr>
</table>

Revenue from Sale of Power

5.7 Revenue from sale of power includes both revenue from sale of power within the State and revenue from sale of power outside State.

5.8 The Petitioner has submitted that purchase and sale of power under banking arrangements has been considered as cashless transaction and hence not considered either in revenue from sale of power nor in power purchase cost. However, during the interaction with the Petitioner, it came to the knowledge of the Commission that revenue from sale of banking power includes an amount of Rs.1.39 Cr, being the amount of penalty recovered as a result of default committed by the PSPCL under banking arrangement. The Commission has decided to consider Rs.1.39 Cr under revenue for sale of power for the purpose of true up.

5.9 The revenue generated from the sale of power as per the audited accounts of the Petitioner for FY10, is tabulated hereunder:

Table 30: Revenue from sale of power in FY10 (Rs Cr)

Revenue form Sale of Power	Approved in APR Order	True-up petition	Audited Accounts FY10	True-up by Commission
Within State	1954.84	2047.04	2047.04	2047.04
Outside State (excluding Banking Power)	124.43	216.02	216.02	216.02
Amount recovered from PSPCL	-	-	-	1.39
Total Revenue from sale of power	**2079.27**	**2263.26**	**2263.26**	**2264.45**

Power Purchase

5.10 The Petitioner has submitted the details of power purchase from the following sources during FY10:

(1) The HPSEBL own generating stations

(2) Central Sector Generating Stations (CSGS) owned by NTPC, NHPC and NPC

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

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

(5) Private Micros

(6) Free Power and Equity Power from GoHP

(7) Banking of power with other States

(8) Bilateral purchases from other States like Punjab, Haryana, etc.

5.11 In its true-up petition, the Petitioner has submitted that total power purchase quantum (excluding power from own stations) during FY10 was 6619 MU. However, as per the audited accounts for FY10, the total power purchase quantum (excluding power from own stations) is coming out to be 6616.35 MU. The Commission has considered the power purchase quantum (excluding power from own stations) for FY10 as per the audited accounts of the Petitioner, as tabulated hereunder:

Table 31: Power purchase quantum for FY10 (MU)

Source	Approved in APR Order	True-up petition	Audited Accounts FY10	True-up by Commission
BBMB				
BBMB Old	43.80	44	43.80	43.80
BBMB New	116.09	103	102.81	102.81
Dehar	78.84	79	78.840	78.840
NTPC Stations				

Source	Approved in APR Order	True-up petition	Audited Accounts FY10	True-up by Commission
Anta (LNG)	105.63	8		
Anta (Liquid)		2	12.56	12.56
Anta (Gas)		50	62.99	62.99
Auriya (Liquid)	162.68	5	8.56	8.56
Auriya (Gas)		119	135.22	135.22
Auriya (LNG)		2		
Dadri (Liquid)	174.71	5	10.06	10.06
Dadri (Gas)		122	135.92	135.92
Dadri (LNG)		4		
Unchahar I	67.98	55	10.06	10.06
Unchahar II	106.98	92	62.65	62.65
Unchahar III	74.69	67	115.69	115.69
Rihand I	323.52	283	339.41	339.41
Rihand II	289.03	248	306.59	306.59
Singrauli	78.39		113.73	113.73
Kahalgaon	105.93	81	96.53	96.53
NHPC Stations				
Salal	29.90	30	29.93	29.93
Tanakpur	17.02	16	15.99	15.99
Chamera-I	47.12	59	58.66	58.66
Chamera-II	62.79	50	56.09	56.09
Uri	68.45	73	72.55	72.55
Dhauliganga	42.26	40	43.67	43.67
Dulhasti	23.04		9.71	9.71
Other Stations				
Tehri-I	77.39	54	71.29	71.29
NAPP	35.96	21	24.66	24.66
RAPP	13.19	9	13.19	13.19
Nathpa Jhakri – State of region share	193.71	172	186.72	186.72
Shanan 1 MW	5.26	5	5.26	5.26
Shanan Extn	45.00	45	45	45
Yamuna (UJVNL)	294.89	300	300.48	300.48
Khara	59.86	50	50.26	50.26
Private Micros	423	392	392.04	392.04
Baspa –II	1120.32	1050	1139.03	1139.03
Baspa-II (secondary energy)	-	89		
Patikari	31.41	31	31.41	31.41
Free Power Share				
Baira Suil	32.81	23	23.43	23.43

Source	Approved in APR Order	True-up petition	Audited Accounts FY10	True-up by Commission
Chamera-I	59.57	86	86.08	86.08
Chamera –II	65.86	164	163.76	163.76
Shanan Share	1.53	3	2.63	2.63
Ranjeet Sagar Dam	15.03	47	47.12	47.12
Malana	17.61	45	45.39	45.39
Baspa – II	45.28	155	155.32	155.32
Ghanvi	3.40	95	8.43	8.43
Baner	1.61		3.83	3.83
Gaj	1.83		4.30	4.30
Larji	21.86		72.09	72.09
Khauli	1.61		4.00	4.00
Nathpa Jhakri	290.46	259	259.41	259.41
Patikari+Toss	1.31	4	4.28	4.28
Equity Power – Nathpa Jhakri	353.24	390	389.78	389.78
Banking Power	382.62	809	549.76	549.76
Power Availability from UI	54.04	287	286.99	286.99
Unallocated share		394	-	-
Grand Total	**7360**	**6619**	**6616.35**	**6616.35**

5.12 The details as provided by the Petitioner in its true-up petition and the figures of power purchase as per the audited accounts of the Petitioner is due to the fact that Petitioner has considered unallocated shares under one head while in the audited accounts it is shown under the individual stations.

5.13 Net availability of power from own stations as submitted in true-up petition amounts to 1703 MU. However, the Commission had approved the net availability from own generation plants (excluding the Govt. of HP share in the HPSEBL's projects) at 1705.89 MU in accordance with the audited accounts of the Petitioner for FY10.

5.14 The Petitioner has submitted in its true-up petition the power purchase cost of Rs. 1629.18 Cr for FY10, excluding power purchase cost of banking power amounting to Rs. 552.26 Cr. The total power purchase cost, however, includes an amount of Rs. 10.05 Cr to be recovered from tariff in view of the Commission's Order dated 29th August 2009 in case no. 149/09, whereby, it has been decided that out of the total expenses of Rs. 49.12 Cr incurred by BBNIA DG set due to transformer failure, Rs. 20.50 Cr is expected to be generated by sale of power outside the State and the balance amount of Rs. 28.62 Cr is proposed to be realised as follows:-

(1) 50% i.e. Rs. 14.31 Cr to be shared and borne by BBNIA; and

(2) Balance 50% i.e. Rs.14.31 Cr would be borne by the State Government or the HPSEBL as pass through in ARR

5.15 The Commission approves the power purchase cost of Rs. 1629.18 Cr for FY10, including an amount of Rs. 10.05 Cr discussed above, for the purpose of true up. The approved power purchase cost includes inter-State transmission charges paid to PGCIL.

Table 32: Power purchase cost for FY10 (Rs. Cr)

Power Purchase cost	Approved in APR Order	True-up petition	Audited Accounts FY10	True-up by Commission
Power purchase cost	1290.30	1629.18	1619.13	1629.18

Energy Balance

5.16 The Commission has analysed the energy balance submitted by the Petitioner based on the sales and power purchase data submitted by the Petitioner. The Petitioner has submitted the overall T&D losses of 14.58% during FY10. The Petitioner has submitted that the overall T&D losses have increased in comparison to previous year as a result of reporting of actual sales in KWh units.

5.17 The Commission observes that in the First Multi Year Tariff Order for the Control Period (FY09 - FY11) dated May 30, 2008, the following trajectory was prescribed based on the original data made available by the HPSEBL:

Table 33: Approved T&D losses for the Control Period

Losses (%)	FY09		FY10		FY11	
	Petition	Approved	Petition	Approved	Petition	Approved
Opening T&D Loss (%)	17.50%	16.50%	17.00%	15.75%	16.50%	15.00%
T&D Loss Reduction (%)	0.50%	0.75%	0.50%	0.75%	0.50%	0.50%
T&D Losses for the year (%)	17.00%	15.75%	16.50%	15.00%	16.00%	14.50%
Transmission Losses (%)	3.71%	3.71%	3.71%	3.71%	3.71%	3.71%
Distribution Losses (%)	13.80%	12.50%	13.28%	11.72%	12.76%	11.21%

5.18 Subsequently, based on the performance referred by the HPSEBL for FY08, the Commission prescribed the following trajectory in the First Annual Performance Review (APR) Order for MYT Period (FY09 - FY11) dated August 24, 2009:

Table 34: Revised T&D losses for the Control Period

Losses (%)	FY09	FY10	FY11
	Approved	Approved	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%

5.19 Subsequently, the HPSEBL submitted that the loss figures earlier submitted contained an error to the extent that the KVAh consumption for the three circles namely Shimla, Solan and Nahan have been inadvertently accounted for as KWh consumption. This resulted into wrong computation of losses:

5.20 In view of above, the HPSEBL has requested that the targets fixed by the Commission based on the incorrect data may be reviewed. The Commission observes that that even though the actual performance of the HPSEBL in this regard is better than the targets fixed originally but does not meet the targets based on the data, which is now being claimed as incorrect by the HPSEBL. The Regulations provide for incentive and disincentive mechanism based on the actual performance vis-à-vis targets. In this case since the HPSEBL has sought the revision in target fixed by the Commission, the Commission shall take a final view for incentive and disincentive at the time of true up of the First Control Period after validating the data now submitted by the HPSEBL and other relevant aspects. The Commission, however, pending a decision about the disincentive aspect, provisionally approves the energy balance based on above details

5.21 KWThe energy balance approved for FY10, on the basis of approved purchase and sale of power and in accordance with the audited accounts of the Petitioner, is tabulated hereunder:

Table 35: Energy balance FY10 (MU)

Energy Balance	Approved in APR Order	True-up petition	True-up by Commission
Net own generation	1692.86	1703	1705.89
Power purchase from outside stations	5667.68	6619	6616.35
PGCIL losses @3.50%	182.61	231.67	231.57
Power Availability	**7177.93**	**8090.34**	**8090.67**
Power Sold Outside	669.12	1284	1284.02
Net Power Purchase for State	**6508.81**	**6806.34**	**6806.65**
Energy Sale	5676.33	5814	5814.34
T&D loss within State	**12.79%**	**14.58%**	**14.58%**

Larji Arrears

5.22 In its first MYT Order the Commission has fixed tariff for erstwhile HPSEB including the tariff for sale of energy generated from Larji HEP, owned by the Petitioner, for the period from FY09 to FY11.

5.23 Since then the capital cost of Larji HEP has undergone change and the Commission vide Tariff Order dated 7th July 2011 for Larji HEP has worked out cumulative revenue deficit of Rs. 82.78 Cr for the period from FY08 to FY11, as tabulated hereunder:

Table 36: Cumulative Deficit of Larji HEP (Rs. Cr)

Particulars	FY08	FY09	FY10	FY11
AFC approved in MYT Order	132.03	123.08	113.37	103.69
AFC Requirement	145.08	141.83	131.94	123.21
Secondary Energy Charge	-	4.22	1.28	7.40
Surplus(+)/Deficit(-)	**(13.05)**	**(22.96)**	**(19.85)**	**(26.92)**
Cumulative Surplus(+)/Deficit(-)	**(13.05)**	**(36.01)**	**(55.86)**	**(82.78)**

5.24 The Tariff Order for Larji states that "recovery of deficit, if any, as well as its carrying cost has to be considered and decided upon for the combined ARR of distribution and generation of the HPSEBL as a whole". Commission observes that a surplus of Rs 288.42 Cr was available to the HPSEBL as the true up order of FY09 and even as per true up for FY10 being under taken by the Commission some surplus is likely to be available to the licensee in FY10. As such Commission has not allowed any carrying cost for these arrears.

5.25 The Commission has decided to approve the cumulative deficit upto FY10 amounting to Rs. 55.86 Cr in the true-up for FY10. The balance arrears of Rs. 26.92 Cr shall be considered by the Commission in the true up of FY11.

True up of Controllable Parameters

O&M Expenses

5.26 The Commission, in its First MYT Order had mentioned that the O&M trajectory for the Control Period would be trued up once the audited accounts for FY08 is made available and/or the utility is unbundled and/or recommendations of the 5th Pay Commission are implemented during the Control Period.

5.27 In its first APR order, the Commission had revised the O&M trajectory based on audited accounts for FY08 and availability of CPI and WPI figures for FY08. The other two events i.e. unbundling of Board and implementation of 5th Pay Commission recommendations have also happened during FY10 and FY11 respectively.

Employee Expenses

5.28 The Petitioner has submitted that the 5th Pay Commission recommendations have been implemented w.e.f. from 1st January, 2010. The Commission directed the Petitioner to submit the break-up of its employee cost into first nine months and last three months, i.e. before implementation of 5th Pay Commission and after its implementation, in order to determine the impact of 5th Pay Commission on the salary expense. In response to this the Petitioner submitted the following information:

Table 37: Break-up of FY10 Salary pre and post implementation of 5th Pay Commission

Period	Salary	DP	GP	I R	DA	OT	Other Allow	Bonus	Other Staff Cost	Total
April'09-Dec'09	124.35	69.07	0.00	41.12	132.24	1.53	23.36	-	-	391.67
Jan'10-Mar'10	83.27	15.68	3.64	9.64	54.99	0.51	7.79	-	-	175.73
Total	**207.62**	**84.76**	**3.64**	**50.76**	**187.23**	**2.04**	**31.15**	**0.85**	**30.28**	**567.20**
Terminal benefits etc.										181.07
Gross Total										**779.40**
Less: employee cost capitalized										49.75
Net Total										**729.65**

5.29 On the basis of the above submission, the Commission provisionally determined the impact due to implementation of 5th Pay Commission amounting to Rs.44.97 Cr, as calculated hereunder, and has decided to include this amount as a part of employee cost for the purpose of true-up.

Table 38: Computation of Impact of 5th Pay Commission for FY10 (Rs. Cr)

Period	Salary	DP	GP	I R	DA	Total
Total Salary Expense	207.62	84.76	3.64	50.76	187.23	534.01
Assumptive salary for FY10 if 5th Pay Commission has not been implemented	165.80	92.09	0.00	54.83	176.32	489.04
Impact of 5th Pay Commission	**41.82**	**-7.33**	**3.64**	**-4.07**	**10.91**	**44.97**

5.30 The Commission shall, however, revisit this figure once the actual data in respect of employees expenses fixed under new pay structure is submitted by the Petitioner.

5.31 In the Second APR Order, the Commission has approved the net employee expense of Rs 605.67 Cr for FY10. The Petitioner has submitted the net employee expenses of Rs.729.65 Cr for FY10 as per the audited accounts.

5.32 As per Regulation 11 of the Himachal Pradesh Electricity Regulatory Commission (Terms and Conditions for Determination of Wheeling Tariff and Retail Supply Tariff) Regulations, 2007, the employee expense is classified as a controllable expense.

5.33 Accordingly, for the purpose of true-up for FY10 the Commission approves the net employee expenses of Rs.605.67 Cr as considered in the Second APR Order. In addition to this the Commission provisionally approves an amount of Rs.44.97 Cr due to the impact of 5th Pay Commission.

5.34 The Petitioner has submitted to the Commission in its clarification that the employee cost for FY10 as per the audited accounts includes Rs.7.97 Cr against salary cost of new recruitments. The Commission approves the employee cost of Rs 7.97 Cr for new recruitments.

5.35 An Interim Relief (IR) of Rs.19.77 Cr had been included in the base cost of FY08 and as such the escalated base employee cost of FY10 already includes an amount of IR. However, settlement of IR and impact of 5th Pay Commission on employee cost shall be taken up in the final Tariff Order for Second Control Period.

5.36 The summary of the trued up employee expenses for FY10 is given in the table as follows:-

Table 39: Employee expenses for FY10 (Rs Cr)

Particulars	Approved in APR Order	True-up petition	Audited Accounts FY10	True-up by Commission
Employee Expenses	661.33	779.40*	779.40*	706.30**
Less: Capitalisation	55.66	49.75	49.75	55.66
Net employee expenses	**605.67**	**729.65**	**729.65**	**650.64**
Provision for New Recruitment	**7.97**	**-**	**-**	**7.97**

** includes provision for new recruitments*
*** including Rs.44.97 Cr, impact of 5th Pay Commission*

Administrative and General (A&G) Expenses

5.37 In the Second APR Order, the Commission has approved net A&G expenses of Rs. 34.50 Cr for FY10. The Petitioner has submitted actual net A&G expenses of Rs. 47.85 Cr for FY10 including an expenditure of Rs. 14 Cr on providing cost free CFL bulbs to the domestic consumers. The Commission has considered the expense on providing cost-free CFL bulbs separately from the A&G cost claimed by the Petitioner and is dealt with in the later sections.

5.38 As per Regulation 11 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.

5.39 Accordingly, the A&G expenses are approved at the same level as provided in the Second APR Order, as shown as follows:-

Table 40: A&G expenses for FY10 (Rs Cr)

Particulars	Approved in APR Order	True-up petition	Audited Accounts FY10	True-up by Commission
A&G expenses	39.13		36.97	39.13
Less: Capitalisation	4.63	-	2.66	4.63
Net A&G expenses	**34.50**	**33.85***	**34.31**	**34.50**

* Excluding expense on providing cost-free bulbs to consumers

Repair and Maintenance (R&M) Expenses

5.40 The Commission has approved net R&M expenses of Rs 38.54 Cr in the Second APR Order. The Petitioner has submitted Rs 30.44 Cr as net R&M expenses for FY10 as per the audited accounts.

5.41 The Commission approves R&M expense of Rs 38.54 Cr for FY10 as considered in the Second 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 Regulation 11 of the Himachal Pradesh Electricity Regulatory Commission (Terms and Conditions for Determination of Wheeling Tariff and Retail Supply Tariff) Regulations, 2007.

Table 41: R&M expenses for FY10 (Rs Cr)

Particulars	Approved in APR Order	True-up petition	Audited Accounts FY10	True-up by Commission
R&M Expenses	38.54	30.44	30.44	38.54

Review of Capital Investment and Capitalization

5.42 According to Regulation 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 –

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.*

5.43 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

5.44 The Commission in its Second APR Order had approved depreciation charges of Rs.113.85 Cr for FY10. The Petitioner has submitted a claim of Rs.105.42 Cr towards depreciation charges for FY10.

5.45 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, the Commission approves depreciation charges of Rs. 113.85 Cr for FY10, as tabulated hereunder:

Table 42: Depreciation for FY10 (Rs Cr)

Particular	Approved in APR Order	True-up petition	Audited Accounts FY10	True-up by Commission
Depreciation	113.85	105.42	105.53	113.85

Interest and Financing Charges

5.46 The Commission had approved the net interest and financing charges of Rs 147.06 Cr for FY10 in its Second APR Order. The Petitioner has submitted net interest and financing charges of Rs. 176.76 Cr for FY10 as per the audited accounts.

5.47 As per MYT Regulations the Capex provided to the Petitioner at the start of the Control Period shall be reviewed at the end of the Control Period and accordingly the interest and financing charges on the funds required for capital investment shall also be trued up at the end of the Control Period.

5.48 Interest and finance charges also include interest on normative working capital. The normative working capital is dependent on both controllable and uncontrollable parameters. Therefore, it will be trued-up to the extent of changes approved in the uncontrollable parameters. Accordingly, the Commission has trued up the interest on working capital expenses at Rs 17.19 Cr against Rs 16.88 Cr approved in the Second APR Order.

5.49 Accordingly, the Commission approves the interest and financing charges of Rs. Rs.147.37 Cr for FY10, as tabulated hereunder:

Table 43: Interest and Financing expenses for FY10 (Rs Cr)

Particulars	Approved in APR Order	True-up petition	Audited Accounts FY10	True-up by Commission
Interest and Financing charges on capital loans	144.90	253.57	253.02	144.90
Interest on working capital	16.88			17.19
Less: Interest expenses capitalized	14.73	76.81	76.81	14.73
Total	**147.06**	**176.76**	**176.76**	**147.37**

Return on Equity

5.50 The Commission had approved return on equity of Rs 43.82 Cr for FY10 in the Second APR Order. The Petitioner has claimed an amount of Rs 140.08 Cr as RoE for FY10.

5.51 As per Regulation 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.

5.52 Accordingly, for the purpose of true-up for FY10, the Commission retains return on equity at Rs 43.82 Cr as approved in the First APR Order.

Table 44: Return on Equity for FY10 (Rs Cr)

Particulars	Approved in APR Order	True-up petition	True-up by Commission
Return on equity	43.82	140.08	43.82

Other Debits and Extra-ordinary Items

5.53 The audited account of the Petitioner for FY10 includes 'Other Debits' of Rs 0.99 Cr and 'Extra Ordinary Credits' of Rs 4.95 Cr s for FY10. On scrutiny of the audited accounts, the Commission noted that 'Other debits' include an amount of Rs.0.02 Cr towards 'bad and doubtful debts written off/provided', which will not be allowed to be trued-up.

5.54 The Commission approves an amount of Rs.0.97 Cr towards 'Other Debits' and Rs. 4.95 Cr towards 'Extra Ordinary Credits' for FY10.

Non Tariff Income

5.55 As per Regulation 25 and sub regulation (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."

5.56 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.

In the Second APR Order, the Commission had approved non tariff income of Rs 130.61 Cr for FY10. The Petitioner has submitted Non-Tariff Income (NTI) of Rs.177.54 Cr for FY10 as per the audited accounts for FY10. Accordingly, the Commission approves NTI of Rs. 177.54 Cr for FY10 on the basis of the audited account of the Petitioner as tabulated hereunder:

Table 45: Approved NTI for FY10 (Rs. Cr)

Particular	Approved in APR Order	True-up petition	Audited Accounts FY10	True-up by Commission
Non-Tariff Income	130.61	177.74	177.74	177.74

Prior Period Adjustment

5.57 From the audited accounts of FY10 submitted by the Petitioner, the Commission observes that it includes net prior period credits of Rs. 56.21 Cr. The Commission has scrutinised each and every element of prior period income and expense for its admissibility or not for the purpose of true-up petition.

5.58 From the scrutiny of individual items of income/expenses the Commission notes that prior period expenses includes the following items which will not be eligible for true-up as these are either controllable elements as per MYT Regulations, 2007 or relates to capex plan which shall be trued-up at the end of the Control Period:

Table 46: Details of Prior-period expenses not considered for True-up for FY10 (Rs. Cr)

Prior Period Expenses	Amount
Operating expenses of the previous years	0.02
Employee cost relating to previous years	9.82
Depreciation under-provided in previous years	0.11
Interest and other charges relating to previous years	0.73
Total	**10.68**

5.59 During the interaction with the Petitioner, it came to knowledge of the Commission that the head ‘Short provisioning for power purchase in previous years’ includes a credit of Rs. 21.14 Cr, being reversal entry in respect of incentive payable to Baspa HEP for secondary energy during FY09.

5.60 The Commission, while truing up for FY09, had disapproved this amount as it was not actually paid. Therefore, this amount shall not be considered while determining the prior period expenses in respect of short-provision for power purchase in previous years for the purpose of true up for FY10.

5.61 The Commission observes that prior period income includes an amount of Rs.46.40 Cr on account of late receipt of UI charges. The net UI charges are included in the power purchase cost which is an uncontrollable parameter. Therefore, the Commission has considered the interest income on account of late receipt of UI charges as an uncontrollable parameter to be passed through on actual basis

5.62 The Commission thus approves net amount of Rs.40.83 Cr as prior period credit, as tabulated hereunder:

Table 47: Admissible Net Prior Period Credits/Charges for FY10 (Rs. Cr)

S. No.	Prior Period Income/Expenses	Amount
Prior Period Income		
1	Receipts from consumers relating to prior periods	19.62
2	Interest Income for prior periods (relating to late receipt of UI charges)	46.40
3	Other income relating to prior period	0.12

S. No.	Prior Period Income/Expenses	Amount
	Sub-total	**66.14**
Prior period expenses/losses		
1	Short Provision for power purchase for prior period [2.54 - (-)21.14]	23.68
2	Other charges relating to previous years	1.63
	Sub-total	**25.31**
	Net Total	**40.83**

Provision for IT and other initiatives

5.63 The Commission in MYT Order, 2008 had approved the cost of Rs 23.30 Cr towards the provision for IT and other initiatives undertaken by the HPSEBL for FY10. The cost under this provision was however subject to true up based on the actual expenditure incurred by the HPSEBL at the end of each year of the Control Period.

5.64 The Commission directed the Petitioner to submit the actual expenditure incurred under this head during FY10. However, the Petitioner has not submitted any detail and thus the Commission approves NIL cost towards the provision for IT and other initiatives.

Provision for AMR

5.65 The Commission in its MYT Order, 2008 had approved the cost of Rs 6.91 Cr 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.

5.66 The Commission directed the Petitioner to submit the actual expenditure under this head. In response, the Petitioner submitted that it incurred an amount of Rs.0.63 Cr on the provision for AMR during FY10. Thus, the Commission approves Rs.0.63 Cr towards provision for AMR.

Expenditure on CFL

5.67 The Petitioner has submitted in its petition that it has incurred an expenditure of Rs 14.00 Cr as a part of A&G cost for providing cost-free CFL bulbs to domestic consumers. 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 0.17%, which is much lower compared to the growth rate of 3.61% of FY09 sales over sales in FY08.

5.68 The Commission believes that the scheme for providing CFLs envisaged availing the benefits of CDM and accordingly the claim for availing the carbon credits is already under process. As such the Commission directs the Petitioner to pursue the matter for getting the benefit under the CDM mechanism. Accordingly, the Commission has not considered the expense of Rs. 14.00 Cr on providing cost free CFL bulbs

Additional Provision on account of shortfall in subsidy

5.69 The Petitioner vide M.A. No 101 of 2011 dated 29th June 2011 in Case No 224 of 2010 has submitted that in the consequential order issued by the Commission for notification of subsidised tariff applicable to domestic and WIPS category, the subsidy of Rs 140.00 Cr was taken into account whereas the actual subsidy payable by GoHP for FY10 is Rs 150.60 Cr, which is attributable to the increase in consumption over the estimated consumption resulting in a shortfall of Rs 10.60 Cr. A request has been made by the Petitioner to account for this amount in the true up for FY10.

5.70 The Commission noticed that the Petitioner had not submitted the actual category wise/ slab wise sales in respect of the subsidised category for FY10 to substantiate the impact of additional burden of Rs 10.60 Cr. The Commission vide letter no HPERC/478-A-Vol-II/(TFA Section)/ 2011-1233 dated 7th July 2011 directed the Petitioner to submit the required details. The Petitioner vide letter no. HPSEB/ CE(Comm.)/SERC-MYT/2011-6224 submitted partial information.

5.71 The Commission scrutinised the information submitted and observed that from the month-wise sales figures for FY10, it is clear that the subsidy shortfall for FY10 is not Rs 10.60 Cr as claimed by the Petitioner but is Rs 5.74 Cr due to an existing opening balance of Rs 4.86 Cr of previous years.

5.72 Hence, the Commission in the true up for FY10 allows a recovery of Rs 5.74 Cr on account of the subsidy shortfall.

Net surplus for FY09

5.73 The Petitioner has not considered the surplus of Rs. 288.42 Cr approved by the Commission in the Order for truing-up for FY09. The Commission included this surplus in the present true-up exercise to determine the net surplus/gap for FY10.

ATE Order

5.74 The HPSEBL vide M.A. No. 99/2011 has submitted the Hon'ble ATE's Judgment dated 27th May 2011 in respect of Review Petition No. 13 filed by the HPSEBL with the request to include allowed costs by Hon'ble ATE in the MYT Order being issued by the Commission for Second Control Period (FY12- FY14). The following issues were raised by the HPSEBL.

Disallowance of Employee cost of Larji and Khauli HEPs - Rs. 11.45 Cr

5.75 The Commission in its Tariff Order for FY06 had subtracted Rs 11.45 Cr from the employee cost on account of employees involved in Larji and Khauli HEP as these projects were not commissioned yet. The HPSEBL appealed against the Order of the Commission. The Hon'ble ATE directed the Commission to allow this amount.

5.76 The HPSEBL in Appeal No. 56 of 2008 against the Tariff Order dated 16 April 2007 for FY08, again raised the issue of non-considering the allowed amount. The Hon'ble ATE in it's Judgment dated 27th May, 2011 in Review Petition No. 13 of 2010 in Appeal Nos. 56 of 2008 and 192 of 2009 has reiterated its decision given in its judgment dated 6 July 2006 in Appeal No. 113 of 2006 and directed the Commission to implement the directions given.

5.77 The Commission while truing Up for FY05 and FY06 in the Tariff Order for FY08, has already implemented the Hon'ble ATE order.

"2.3 While processing the truing up petition, the Commission has also followed the Honourable Appellate's order dated 6 July 2006".

"

Table 48: Employee Expense for FY06

S. No	Particulars	FY06 Approved	FY06 Actual	FY06 Trued Up
1	Basic Salaries	309.95	254.73	254.73
2	Overtime	-	1.00	-
3	DA	28.74	83.55	83.55
4	Other Allowances	32.43	32.23	32.23
5	Bonus	-	-	-
6	Fee & Honorarium	0.06	0.01	0.01
7	Medical expense Reimbursement	6.33	6.57	6.57
8	LTA	-	0.01	0.01
9	Earned Leave	7.20	12.65	12.65
10	Payment under workmen's compensation	0.73	0.89	0.89
11	Leave Salary Contribution	0.64	0.89	0.89
12	Staff Welfare expenses	1.42	1.27	1.27
13	Terminal Benefits	68.70	88.97	88.97
14	**Total Employee costs**	**456.20**	**482.77**	**481.78**
	Less:			
15	Amount to be Transferred to R&M	(19.35)	-	-
16	Capitalization	(71.01)	(70.01)	(70.01)
17	Disallowance due to deviation from PSEB	(3.75)		(3.75)
18	Tfd to CWIP – Larji & Khauli	(11.45)		
19	**Net Employee Cost**	**350.64**	**412.76**	**408.02**

"

5.78 It can be seen from the above that the Commission while truing up for FY06 in FY08 Tariff Order has not reduced any amount on account of Larji and Khauli (S No 18). The issues w.r.t to Larji has been addressed in the Tariff Order dated 7th July 2011 of Larji issued separately.

Disallowance of cost of HPSEBL generation projects:

5.79 The following are the sub- issues under this item:

(1) The Commission applied a cap in tariff of Rs. 2.50 per unit for the HPSEBL generating stations upto 5 MW and Rs. 2.25 per unit for plants exceeding 5 MW. This led to deduction of Rs 10.6 Cr.

(2) The Commission deducted Rs. 2.64 Cr on account of non-compliance of Commission's directions for submission of separate petition for each generating stations.

(3) The Commission deducted Rs 4.8 Cr from the total generation expenses on account of Government of Himachal Pradesh 12% share in the power stations commissioned after September, 1990.

5.80 On the above issues the Hon'ble ATE in its Judgment in Appeal No. 113 of 2006 dated 6th July 2008 allowed these costs. The HPSEBL in Appeal No. 56 of 2008 against the Tariff Order dated 16th April 2007 for FY08, again raised the issue of non-considering the allowed amount.

5.81 The Hon'ble ATE in it's Judgment dated 27th May, 2011 in Review Petition No. 13 of 2010 in Appeal Nos. 56 of 2008 and 192 of 2009 has reiterated its decision given in judgment dated 6th July 2006 in Appeal No. 113 of 2006 directed the Commission to implement the directions given.

5.82 The Commission while truing Up for FY05 and FY06 in the Tariff Order for FY08 has already implemented the Hon'ble ATE order.

"2.3 While processing the truing up petition, the Commission has also followed the Honourable Appellate's order dated 6 July 2006".

Table 49: Net Revenue Requirement for FY05 & FY06

Annual Revenue Requirement (Rs. Cr)	*FY 05 Approved*	*FY05 Actual*	*FY05 Trued Up*	*FY06 Approved*	*FY06 Actual*	*FY06 Trued Up*
Costs						
Power Purchase	*591.45*	*750.76*	*757.04*	*692.00*	*1082.30*	*1057.74*
Employee	*394.76*	*440.19*	*413.72*	*421.65*	*482.77*	*478.03*
Repairs & Maintenance	*22.77*	*21.66*	*21.66*	*42.46*	*23.04*	*23.04*
Admin & General	*20.08*	*27.01*	*25.45*	*33.17*	*29.87*	*27.24*
Interest	*260.74*	*235.29*	*188.70*	*197.87*	*243.36*	*183.29*
Depreciation	*46.04*	*44.05*	*44.05*	*41.68*	*53.85*	*53.85*
Total Costs	***1335.85***	***1518.96***	***1450.62***	***1428.63***	***1915.19***	***1823.18***
Less: Reduction in generation expenditure due to GoHP share				*5.00*		
Less: Reduction in generation exp. due to				*3.00*		

Annual Revenue Requirement (Rs. Cr)	*FY 05 Approved*	*FY05 Actual*	*FY05 Trued Up*	*FY06 Approved*	*FY06 Actual*	*FY06 Trued Up*
failure to submit separate gen tariff petitions						
Less: Expenses Capitalized	*198.73*	*185.76*	*185.76*	*198.46*	*200.84*	*200.84*
Net Total Expenses	***1137.12***	***1333.20***	***1264.86***	***1222.16***	***1714.35***	***1622.33***
Add: Reasonable Return	*35.82*	*36.18*	*36.18*	*41.66*	*44.00*	*41.66*
Add: Regulatory Expenses	*1.66*					
Add: Other Debits		*6.64*	*6.64*		*0.87*	*0.87*
Add: Power Purchase of account of NJHEP		*80.46*	*80.46*		*49.31*	*47.93*
Adjust Prior Period Items			*(20.14)*		*35.24*	*35.24*
Annual Revenue Requirement	***1174.6***	***1456.48***	***1368.00***	***1263.82***	***1843.77***	***1748.04***

5.83 It can be seen from the above that the Commission while truing up for FY06 in FY08 Tariff Order has not reduced any amount on account of Reduction in generation expenditure due to GoHP share and Reduction in generation exp. due to failure to submit separate generation tariff petitions.

5.84 With reference to reduction of Rs 10.6 Cr on account of a cap in tariff of Rs. 2.50 per unit for the HPSEBL generating stations upto 5 MW and Rs. 2.25 per unit for plants exceeding 5 MW, as the HPSEBL was a bundled entity in FY06, there were no commercial transaction happening between the HPSEBL's distribution arm and generation arm. There was no power purchase cost from the HPSEBL's own stations considered by the Commission while approving power purchase cost for FY06 in the tariff order. In the tariff order for FY06 the power purchase cost considered by the Commission is shown as follows:-

"Table 6.25 Summary of Power Purchase and Power Purchase Cost for FY 2005-06

Source	*Units Purchased (MU)*		*Total Price (Rs. Cr)*		*Price/unit (Rs /KWh)*	
	Petition	*Commission*	*Petition*	*Commission*	*Petition*	*Commission*
BBMB	*245*	*245*	*7.30*	*7.30*	*0.30*	*0.30*
NHPC	*223*	*219*	*46.60*	*39.20*	*2.09*	*1.79*
NTPC	*926*	*1016*	*178.90*	*189.20*	*1.93*	*1.86*
NJPC	*446*	*169*	*108*	*39.70*	*2.42*	*2.35*
Narora	*95*	*51*	*22.80*	*12.90*	*2.40*	*2.53*
PSEB	*50*	*50*	*1.30*	*1.30*	*0.26*	*0.26*
Uttaranchal	*359*	*359*	*11.50*	*13.30*	*0.32*	*0.37*
IPP	*1044*	*1110*	*256.80*	*260.70*	*2.46*	*2.35*
Grid Power	*64*	*64*	*2.30*	*2.30*	*0.36*	*0.36*
Share of GoHP		*341*		*66.00*	*0.00*	*1.93*
Total	***3452***	***3624****	***635.50***	***632.00***	*1.84*	*1.74*
PGCIL Charges	*-*	*-*	***69.20***	***60.00***	*-*	*-*
Total	*-*	*-*	***704.7***	***692***		

5.85 It is clear from the above that the Commission had considered only power purchase cost of Rs 692 Cr on account of power purchased from sources other than the HPSEBL's own generating station. The reduction of Rs 10.6 Cr on account of a cap in tariff of Rs. 2.50 per unit for the HPSEBL generating stations upto 5 MW and Rs. 2.25 per unit for plants exceeding 5 MW has not resulted in disallowance to the HPSEBL.

Disallowance of power purchase cost for FY 2005-06 amounting to Rs. 24.90 Cr.

5.86 The Commission in true up order for FY05 and FY06 under the Tariff Order for FY08 dated April, 16, 2007 has allowed the total power purchase cost of Rs. 1057.74 Cr against the submission of Rs. 1082.30 Cr made by the HPSEBL for FY06.

5.87 The issue of disallowance of Power Purchase Cost of Rs. 24.50 Cr was raised by the HPSEBL in Appeal No. 56 of 2008 but the same was not dealt with in the Judgment by Hon'ble ATE dated 31st May 2010. Therefore, the issue was again raised by the HPSEBL in Review Petition No. 13 of 2010 in Appeal No. 56 of 2008 and Appeal No. 182 of 2009.

5.88 Hon'ble ATE in its Judgment dated 27th May, 2011 in Review Petition No. 13 of 2010 in Appeal Nos. 56 of 2008 and 172 of 2009 (Para 9 of the Order) has observed that the State Commission has not given any reason for disallowance of power purchase cost and accordingly directed the commission to consider the submissions of the Petitioner i.e. HPSEBL and pass a reasoned order.

5.89 In the True Up petition for FY05 and FY06, the HPSEBL filed the power purchase cost at Rs.750.76 Cr and Rs.1082.30 Cr for FY05 and FY06 respectively.

5.90 For verifying the power purchase cost, the Commission prepared the monthly merit order based on the variable cost of the generating stations from the monthly billing data provided by the HPSEBL.

5.91 The Commission used the total cost of monthly power purchased from a generating station as provided in the monthly power purchase bills and calculated the cost of power purchase for State's own consumption and for trading (as per dispatch schedule).

5.92 The Commission has approved the power purchase cost for both FY05 and FY06 based upon the monthly billing information submitted by the HPSEBL. The Commission used a merit order to divide the power purchase cost for trading and own use. The Commission approved the following power purchase cost for FY05 and FY06 in its Order for FY08.

	Trued Up for FY05 (Rs. Cr)	*Trued Up for FY06 (Rs. Cr)*
Own Use	*356.25*	*574.22*
Trading	*400.78*	*483.52*
Total	***757.04***	***1057.74***

5.93 It can be seen that the Commission approved power purchase cost of Rs 757.04 Cr against Rs 750.76 Cr for FY05 and Rs 1057.74 Cr against Rs 1082.30 Cr. The power purchase expenses approved by the Commission were completely based upon the monthly power purchase details submitted by the HPSEBL and there was no disallowance. The HPSEBL could not substantiate its claim of Rs 1082.30 Cr through monthly bills. Similarly as the monthly bills submitted by the HPSEBL were for Rs 757.04 Cr for FY05, the Commission approved the same against a lower claim of Rs 750.76 Cr submitted by the HPSEBL.

Aggregate Revenue Requirement

5.94 The Commission herewith approves the Annual Revenue Requirement (ARR) after incorporating the above changes at Rs 2225.78 Cr for FY10.

Table 50: Aggregate Revenue Requirement for FY10 (Rs Cr)

Particulars	Approved in APR Order	True-up petition	True-up by Commission
Power Purchase Expenses (includes PGCIL charges)	1290.30	1629.18	1629.18
Larji Arrears	-	-	56.04
Operations and Maintenance Expenses (net of capitalisation)	678.71	785.97	723.68
Employee Expenses	*605.67*	*721.68*	*650.64*
R&M Expenses	*34.50*	*30.44*	*34.50*
A&G Expenses	*38.54*	*33.85*	*38.54*
Provision for new recruitments	7.97	7.97	7.97
Provision for IT and Other initiatives	23.30	-	-
Provision for AMR	6.91	0.63	0.63
Expenditure on CFL	-	14.00	-
Depreciation	113.85	105.42	113.85
Interest Expense	147.06	176.76	147.37
Other Debits	-	-	0.97
Extra Ordinary Items	-	(3.95)	(4.94)
Prior Period Income/ (Adjustments)	-	-	(40.83)
Net True Up as per True up Order for FY09	(288.42)	-	(288.42)
Provision for Shortfall in Subsidy			5.74
Return on equity	43.82	140.08	43.82
Less: Non Tariff Income	130.61	177.54	177.54
Less: Interest and Expenses Capitalisation			
Aggregate Revenue Requirement	**1892.89**	**2655.92**	**2217.52**

Revenue Surplus/ (Gap)

5.95 The approved revenue surplus for FY10 after the true up is Rs. 47.12 Cr as shown in the table as follows:-

Table 51: Revenue Surplus/ (Gap) for FY10 (Rs. Cr)

Particulars	Approved in APR Order	True-up petition	True-up by Commission
Aggregate Revenue Requirement	**1892.89**	**2655.92**	**2217.52**
Total Revenue from sale of power	2079.27	2263.06	2264.45
GoHP subsidy	-	0.20	0.20
Surplus/(Gap)	**186.38**	**(392.66)**	**47.12**

A6: AGGREGATE REVENUE REQUIREMENT OF HPSEBL GENERATING STATIONS AND FIXATION OF ANNUAL FIXED CHARGES

6.1 This chapter relates to determination of Generation Aggregate Revenue Requirement and the Tariff for Hydro Electric Plants (HEPs) owned by the HPSEBL for the Control Period (FY12 - FY14).

6.2 The Commission has undertaken the exercise to determine plant-wise tariff with the intention that the cost of generation function be identified and cross subsidization of one function by another be contained. The generation function of the HPSEBL should function in an optimal and efficient manner so as to be a least cost generation source for the distribution function and be a source of income generation by way of selling power in the open market during the surplus periods. The Petitioner should maintain separate record of accounts, such as amounts of revenue, cost, asset, liability, and reserve for the generation business.

6.3 The Commission appreciated that an exercise to determine plant-wise tariff in the absence of credible and reliable data is an exercise in futility. But has decided to go ahead with the exercise with the expectation of pushing the utility to treat each of its generating plant as a profit centre and revenue generation source.

6.4 As the Petitioner has not filed the petition as directed by the Commission in its last tariff order, the Commission had to rely upon past submissions/ petitions of the Petitioner and the submissions and information made available to the Commission during the numerous interactions held with the Petitioner.

6.5 **The Commission directs the Petitioner, to file station wise details in its true up petition for the first MYT Control Period.** The Commission may re-visit the numbers, once the Petitioner, files petitions with reliable, accurate and credible data which is supported with documentary evidence.

6.6 The Commission has considered the norms for capacity index, transformation losses and auxiliary losses as specified by the Himachal Pradesh Electricity Regulatory Commission (Terms and Conditions for Determination of Hydro Generation Tariff) Regulations, 2011 (hereinafter referred to as the ‘HPERC Generation Regulations, 2011’) for determination of generation tariffs.

Generating Stations Owned By HPSEBL

6.7 The HPSEBL owns and operates 20 HEPs, with a total installed capacity of 466.95 MW of which 10 HEPs have installed capacity above 5 MW and the rest below 5 MW. The GoHP has 12% share in power generated from Gaj, Baner, Ghanvi, Larji and Khauli HEPs as free power. The details of the stations are given as follows:-

Table 52: Details of HPSEBL Hydro Electric Stations

Sl No	Hydro Electric Plant	Commissioned On	Units	Installed Capacity (MW)	Design Energy (MU)
1	Chaba	1913-14	2 x 0.5 + 3 x 0.25	1.75	7.67
2	Chamba	1938, 57, 85	3 x 0.15 MW	0.45	NA
3	Nogli	1963, 69, 78	2 x 0.25 + 4 x 0.50 MW	2.50	14.70
4	Bassi	1970, 71, 81	4 x 15.00 MW	60.00	346.83
5	Giri	1978	2 x 30.00 MW	60.00	289.55
6	Rukti	1979, 80	3 x 0.50 MW	1.50	6.54
7	Binwa	1984	2 x 3.00 MW	6.00	29.25
8	Rong Tong	1986-87, 97	4 x 0.50 MW	2.00	7.64
9	Andhra	1987	3 x 5.65 MW	16.95	87.30
10	Bhaba	1989	3 x 40.00 MW	120.00	464.70
11	Killar	1995	3 x 0.10 MW	0.30	NA
12	Thirot	1995	3 x 1.50 MW	4.50	23.44
13	Gaj	1996	3 x 3.50 MW	10.50	38.31
14	Baner	1996	3 x 4.00 MW	12.00	60.67
15	Sal – II	1999	2 x 1.00 MW	2.00	12.52
16	Gumma	2000	2 x 1.50 MW	3.00	18.11
17	Ghanvi	2000	2 x 11.25 MW	22.50	93.34
18	Holi	2004	2 x 1.50 MW	3.00	17.52
19	Khauli	2006	2 x 6.00 MW	12.00	49.95
20	Larji	2006	3 x 42.00 MW	126.00	586.82
	Total			**466.95**	**2154.86**

Generation ARR Submitted By the Petitioner

6.8 The Petitioner had complied with the Commission's directive given in the first Tariff Order dated September 21, 2001 and subsequently in the Second Tariff Order dated July 5, 2004 to file functionally unbundled Aggregate Revenue Requirement (ARR). The Petitioner had segregated the ARR for FY08 and for the first Control Period (FY09 – FY11) into three functions, namely Generation, Transmission and Distribution for filling of the first MYT petition (FY09 - FY11).

6.9 The ARR for the Second Control Period has been segregated based on transfer scheme of Government of Himachal Pradesh according to which, with effect from 6th October, 2010, the transmission function of the HPSEBL has been transferred to the HPPTCL and distribution and generation function to the HPSEBL.

6.10 The Petitioner has filed a combined ARR petition for the Second Control Period which has been segregated into distribution and generation function on the basis of identifying and isolating the different activities, assets, costs and revenues to the two functions which is based on circle wise data available for generation and distribution function for FY10 accompanied by certain estimates and assumptions.

6.11 The Petitioner has not provided the basis for segregation of cost into distribution and generation and details of cost allocated to generation are conspicuously absent from the petition. The Petitioner has not submitted plant wise petition with details as required in the MYT formats and has filed a combined petition in the MYT formats for the generation function as a whole.

6.12 The Petitioner has also not submitted information on the design energy, projected generation, projected capacity index, transformation losses, and auxiliary consumption etc considered for the respective stations for the Control Period.

6.13 Petitioner has submitted the combined ARR petition for the Generation business taking into consideration all the 20 HEPs that it operates and has proposed an ARR of Rs 487.27 Cr, Rs 504.59 Cr and Rs 526.46 Cr for FY12, FY13 and FY14 respectively. The ARR for generation business is summaried as follows:-

Table 53: Details of Generation ARR Submitted by HPSEBL

Particulars	FY11 R.E.	FY12 Proj	FY13 Proj	FY14 Proj
Employee Cost	141.71	155.23	160.84	170.29
Net R & M Expenses	13.87	15.13	16.97	19.01
A & G Expenses	9.13	6.18	6.49	6.83
Depreciation	57.10	60.43	64.16	67.55
Interest and Finance Charges	162.30	180.87	186.93	190.14
Less: Interest and Finance Capitalized	42.17	43.22	49.22	50.18
Less: Other Expenses Capitalized	5.90	6.58	7.38	8.25
Return on Equity	124.92	131.81	138.78	144.44
Less: Non Tariff Income	12.23	12.59	12.97	13.37
Total ARR	**448.74**	**487.27**	**504.59**	**526.46**

6.14 The Petitioner had filed its petition on 30th November 2010, which was accompanied by information on generation business in the MYT formats. Subsequently, the Petitioner filed a revised petition post notification of MYT Regulation 2011. However, this submission was not accompanied by revised generation formats. The Petitioner has also not elucidated the basis of allocation of various costs like employee, R&M, A&G, Depreciation, Interest and finance charges etc to generation and distribution functions and to various stations.

6.15 The Petitioner has submitted a separate petition for approval of capital cost and determination of tariff for Larji HEP based on which the Commission has approved the capital cost and determined the tariff for Larji for the period FY12-FY14 through tariff order dated 7th July 2011.

Commission's Analysis

6.16 The Commission has carried out the exercise of determination of tariff for the Generation business of the HPSEBL as it is a prerequisite for implementation of the Multi Year Tariff regime. Post notification of transfer scheme, the Petitioner is responsible for generation and distribution functions. The accounts are being maintained as for the HPSEBL as a whole and separate accounts for generation and distribution are not maintained. The segregation of assets, liabilities, cost and revenues to the two functions will only be possible once the Petitioner puts in place separate accounting system for the two businesses.

6.17 The Commission has decided to carry out the exercise of determination of ARR/ AFC (Annual Fixed Cost) for respective businesses as it would help in focussing on inefficiencies in the different businesses and identify areas which require immediate attention.

6.18 The Commission, for determination of ARR/ AFC for the stations owned and operated by the Petitioner, has followed the methodology adopted in the tariff order dated 30 May 2008 for the first Control Period. The AFC for Larji HEP has been determined by the Commission separately through order dated 7th July 2011 and hence has not been considered in this order.

6.19 The ARR/AFC so determined for the projects by the Commission shall be combined to arrive at the ARR/ AFC for the Generation business of the HPSEBL.

Base Year

6.20 The HPERC Generation Regulations, 2011, has defined the base year as the financial year immediately preceding the first year of the Control Period, which is FY11. As the audited/ provisional accounts of the HPSEBL for FY11 are not available, the Commission has considered FY10 as the base year and provisional information for FY11 submitted by the Petitioner for projecting the O&M expenses for the HEPs.

Operational Norms

6.21 The Commission has considered the norms of operation for generating stations of normative capacity index for recovery of full capacity charge, auxiliary energy consumption and transformation losses as specified by the HPERC Generation Regulations, 2011.

Design Energy

6.22 The Petitioner has submitted the details of design energy and actual generation achieved during FY09, FY10 and FY11. On analysing the data, for the generation function as a whole, the average generation over the last three years has been 92% which is commendable considering the vintage of the plants, their location etc even though some of the plants remained closed for major renovation and repairs.

6.23 However, it is seen that for majority of the stations, especially SHPs, the actual generation is very low as compared to the design energy. The Petitioner needs to look on to the reasons for such large deviation and should under take studies to redetermine the design energy for all stations based on the latest hydrological data.

Table 54: Design Energy and Actual Generation

Plant	Capacity MW	Design Energy MU	Actual Generation (MU) FY09	FY10	FY11	Ave	% of Design Energy
Chaba	1.75	7.67	7.34	5.95	9.62	7.64	100%
Chamba	0.45	0.00	0.33	0.31	0.11	0.25	-
Nogli	2.50	14.70	5.34	7.20	7.73	6.76	46%
Bassi	60.00	346.83	227.63	189.12	191.89	202.88	58%
Giri	60.00	289.55	244.79	110.06	233.50	196.12	68%
Rukti	1.50	6.54	1.01	0.50	0.53	0.68	10%
Binwa	6.00	29.25	27.26	25.54	30.02	27.60	94%
Rong Tong	2.00	7.64	2.04	1.52	1.27	1.61	21%
Andhra	16.95	87.30	72.22	40.39	55.75	56.12	64%
Bhaba	120.00	464.70	605.36	625.12	646.31	625.60	135%
Killar	0.30	0.00	0.82	0.82	0.43	0.69	-
Thirot	4.50	23.44	7.21	8.03	9.15	8.13	35%
Gaj	10.50	38.31	39.17	35.93	35.65	36.91	96%
Baner	12.00	60.67	38.78	32.00	41.78	37.52	62%
Sal – II	2.00	12.52	5.85	4.43	3.78	4.69	37%
Gumma	3.00	18.11	7.13	0.68	0.00	2.60	14%
Ghanvi	22.50	93.34	81.78	70.40	60.34	70.84	76%
Holi	3.00	17.52	8.32	10.62	9.28	9.41	54%
Khauli	12.00	49.95	41.41	33.47	41.74	38.87	78%
Larji	126.00	586.82	651.35	602.05	666.39	639.93	109%
Total	**466.95**	**2154.86**	**2075.14**	**1804.14**	**2045.26**	**1974.84**	**92%**

6.24 The Petitioner is undertaking schemes for renovation, modernisation and life extension for the many of the projects and the performance of these stations is expected improved after these schemes have been completed. **It is recommended that the Petitioner should under take study to restate the design energy for all the station in view of the changes in hydrology of the area over the years and the capabilities of the machines installed.**

Capital Investment Proposal for Control Period

6.25 The Petitioner has submitted an investment proposal for the Control Period FY12 to FY14 with a proposed investment of Rs 163.97 Cr in FY12, Rs 285.69 Cr in FY13 and Rs 285.24 in FY14. The investment proposal submitted is summarised as follows:-

Table 55: Propose Investment Proposal for Control Period

Sl No	Scheme	FY12	FY13	FY14
A	**New Projects**			
1	Ghanvi II	18.63	0.50	0.00
2	Bhabha Augmentation	1.00	0.00	0.00
3	Khauli - II	4.20	6.00	11.00
	Sub Total	**23.83**	**6.50**	**11.00**
B	**New Projects Equity BVPCL - Uhl III**	**10.00**	**20.00**	**0.00**
C	**New Projects HPPCL Equity**	**60.00**	**165.64**	**227.39**
D	**Completed Projects**			

Sl No	Scheme	FY12	FY13	FY14
1	Larji	2.76	5.56	0.90
2	Khauli - I	0.93	1.14	0.73
3	Thirot	4.29	1.45	1.39
4	Gumma	0.26	0.63	0.45
5	Bhaba	10.16	13.40	1.23
6	Ghanvi	8.40	2.02	0.54
7	Giri	3.44	14.75	12.69
8	Nogli	0.98	1.44	0.41
9	Chaba	0.30	0.91	0.00
10	Bassi	1.14	0.22	0.06
11	Binwa	1.98	0.33	0.00
12	Gaj	3.34	1.96	0.31
13	Andhra	1.61	1.28	1.72
14	Baner	3.05	1.55	1.61
15	Killar	1.87	1.14	0.19
16	Holi	0.11	0.08	0.08
17	Sal - II	0.21	0.1	0.09
18	Chamba	0.21	0.09	0.09
	Sub Total	**45.04**	**48.05**	**22.49**
D	**R&M of Commissioned Projects**	**17.25**	**33.50**	**24.00**
E	**13th Finance Commission Grants R&M**	**7.85**	**12.00**	**0.46**
	Total	**163.97**	**285.69**	**285.34**

6.26 The Commission analysed the proposal submitted and observes that the majority of the capital investment proposed to be undertaken during the Control Period is for execution of new projects of Ghanvi II, Bhaba Augmentation and Khauli II and as equity contribution in to the new projects being executed by Beas Valley Power Corporation Limited (BVPCL) and Himachal Pradesh Power Corporation Limited (HPPCL). As the capital investment forms part of new projects and hence does not form part of the instant tariff determination.

6.27 The Petitioner has proposed a capital investment of Rs 45.04 Cr in FY12, Rs 48.05 Cr in FY13 and Rs 22.49 Cr in FY14 on the completed project. The Petitioner has not provided details of schemes which are proposed to be under taken during the Control Period for these for these projects. As per information available with the Commission, the expenditure proposed in these projects is in the nature of normal operations and maintenance which is been taken as capital expenditure by the Petitioner. Hence, for the expenditure proposed has not been considered for the purpose of tariff determination and the Petitioner has to meet the investment requirement from the O&M expenses approved for these projects in this order.

6.28 **The Petitioner is directed to file petitions for additional capitalisation schemes which it intends to undertake on the existing projects in accordance with the provisions of** the **HPERC Generation Tariff regulations, 2011 for the approval of the Commission.** The Petition should be complete with respect to scheme details, financing proposed and the benefit expected. The Commission shall consider the additional capitalisation petition submitted on merit and provide for recovery of the expenditure at the time of true up of the Control Period.

Components of Annual Fixed Charge

6.29 The Commission, for the determination of Annual Fixed Charge and the tariff for sale of electricity from the generating station, has considered the following elements as specified by the HPERC (Terms and Conditions for Determination of Hydro Generation Tariff) Regulations, 2011.

(1) Operation and Maintenance Expenses (O&M)

(2) Depreciation

(3) Interest on Loans

(4) Interest on Working Capital; and

(5) Return on Equity (RoE)

6.30 The Commission has considered equity employed in a generating station in excess of 30% as normative loan and applied weighted average cost of debt as the rate of interest. The Commission has not considered Income Tax and Non Tariff Income for tariff determination and shall be considered at actual during true-up.

6.31 The succeeding paras of this chapter deals with each of the five components of annual fixed charges.

Operation and Maintenance Expenses (O&M)

6.32 As per Regulation 22 (2) of the HPERC Generation Regulations, 2011, O&M expenses, for the existing generating stations which have been in operation for 3 years or more in the base year of 2010-11, shall be derived on the basis of actual operation and maintenance expenses for FY08 to FY10.

6.33 The Petitioner, during interaction with the Commission has submitted the actual O&M expenses incurred on the plants for FY08 to FY11. The Commission observed that the O&M expenses submitted for FY11 included arrears paid on account of 5th pay commission revision and asked the Petitioner to resubmit O&M expenses for FY11 segregating the 5th Pay Commission arrears. The resubmitted O&M expenses and the O&M expenses approved for FY08 to FY11 in the MYT order are tabulated as follows:-

Table 56: Actual and Approved O&M Expenses for FY08 to FY11

	Actuals				As per MYT Order				Variation			
Particulars	FY08	FY09	FY10	FY11	FY08	FY09	FY10	FY11	FY08	FY09	FY10	FY11
Chaba	0.83	1.09	1.20	1.31	0.65	0.68	0.71	0.74	27%	60%	69%	78%
Chamba	0.42	0.21	0.22	0.03	0.21	0.22	0.22	0.23	102%	-3%	-2%	-100%

	Actuals				As per MYT Order				Variation			
Particulars	**FY08**	**FY09**	**FY10**	**FY11**	**FY08**	**FY09**	**FY10**	**FY11**	**FY08**	**FY09**	**FY10**	**FY11**
Nogli	1.08	1.29	1.58	1.80	0.71	0.73	0.76	0.79	53%	76%	107%	127%
Bassi	6.41	8.08	8.62	8.58	5.81	6.04	6.28	6.53	10%	34%	37%	31%
Giri	6.85	8.80	9.90	12.66	5.79	6.02	6.26	6.51	18%	46%	58%	94%
Rukti	0.90	0.42	0.38	0.52	0.45	0.47	0.49	0.51	99%	-11%	-22%	2%
Binwa	2.52	3.21	3.23	3.45	2.32	2.41	2.51	2.61	9%	33%	29%	32%
Rong Tong	0.85	0.86	0.30	0.66	0.54	0.56	0.58	0.60	59%	54%	-48%	10%
Andhra	2.44	2.92	3.14	4.45	2.03	2.11	2.19	2.28	20%	39%	43%	95%
Bhaba	10.67	12.30	12.63	14.92	9.88	10.27	10.68	11.11	8%	20%	18%	34%
Killar	0.62	0.11	0.83	0.00	0.20	0.21	0.22	0.23	206%	-48%	278%	-100%
Thirot	1.15	0.87	0.00	0.00	0.67	0.70	0.73	0.76	71%	24%	-100%	-100%
Gaj	2.55	3.23	3.79	3.71	2.54	2.64	2.75	2.86	0%	22%	38%	30%
Baner	2.72	3.35	3.89	4.14	2.25	2.35	2.44	2.54	21%	43%	59%	63%
Sal – II	0.62	0.30	0.24	0.07	0.34	0.36	0.37	0.39	81%	-16%	-35%	-82%
Gumma	1.18	1.53	1.82	1.63	0.66	0.69	0.72	0.75	77%	121%	153%	118%
Ghanvi	3.30	3.77	4.89	4.58	2.99	3.11	3.24	3.36	10%	21%	51%	36%
Holi	0.83	0.35	0.41	0.10	0.49	0.51	0.53	0.55	71%	-31%	-22%	-82%
Khauli	1.44	3.52	3.15	4.03	1.17	1.22	1.27	1.32	23%	189%	149%	206%
Larji	6.40	10.53	11.08	13.07	14.14	14.71	15.29	15.91	-55%	-28%	-28%	-18%
Total	**53.78**	**66.74**	**71.30**	**79.71**	**53.84**	**56.00**	**58.24**	**60.57**	**0%**	**19%**	**22%**	**32%**

6.34 As seen from above tables, the Petitioner has incurred O&M expenses higher than approved for the first Control Period.

6.35 To understand if the actual O&M expenses incurred by the Petitioner are reasonable, the Commission calculated O&M expenses incurred on per MW basis and compared them with the norms specified by Regulation 21 of Central Electricity Regulatory Commission (Terms and Conditions for Tariff determination from Renewable Energy Sources) Regulations, 2009. The CERC Regulation though not applicable on the small hydro projects operated by the Petitioner, the CERC regulations serves as a benchmark to compare the performance of the Petitioner.

6.36 The Regulation 32 reads

"32. Operation and Maintenance Expenses

(1) Normative O&M expenses for the first year of the Control period (i.e. FY 2009-10) shall be as follows:-

Region	***Project Size***	***O&M Expense (Rs Lakh/ MW)***
Himachal Pradesh, Uttarakhand and North Eastern States	*Below 5 MW*	*21*
	5 MW to 25 MW	*15*
Other States	*Below 5 MW*	*17*
	5 MW to 25 MW	*12*

(2) Normative O&M expenses allowed under these Regulations shall be escalated at the rate of 5.72% per annum for the Tariff Period for the purpose of determination of levellised tariff."

6.37 O&M on per MW as per actual O&M expenses incurred in FY10 and FY11 and as allowed by CERC in its regulations are tabulated as follows:-

Particulars	Commissioned On	Capacity	Actual O&M Expenses (Rs Cr)		O&M Expenses Rs Cr/ MW		As per CERC Norms Rs Cr/ MW		% Deviation	
		MW	FY10	FY11	FY10	FY11	FY10	FY11		
Chaba	1913-14	1.75	1.2	1.31	0.69	0.75	0.21	0.22	327%	337%
Chamba	1938, 57, 85	0.45	0.22	0	0.49	0.00	0.21	0.22	233%	0%
Nogli	1963, 69, 78	2.5	1.58	1.8	0.63	0.72	0.21	0.22	301%	324%
Bassi	1970, 71, 81	60	8.62	8.58	0.14	0.14	-	-	-	-
Giri	1978	60	9.9	12.66	0.17	0.21	-	-	-	-
Rukti	1979, 80	1.5	0.38	0.52	0.25	0.35	0.21	0.22	121%	156%
Binwa	1984	6	3.23	3.45	0.54	0.58	0.15	0.16	359%	363%
Rong Tong	1986-87, 97	2	0.3	0.66	0.15	0.33	0.21	0.22	71%	149%
Andhra	1987	16.95	3.14	4.45	0.19	0.26	0.15	0.16	124%	166%
Bhaba	1989	120	12.63	14.92	0.11	0.12	-	-	-	-
Killar	1995	0.3	0.83	0	2.77	0.00	0.21	0.22	1317%	0%
Thirot	1995	4.5	1.01	1.01	0.22	0.22	0.21	0.22	107%	101%
Gaj	1996	10.5	3.79	3.71	0.36	0.35	0.15	0.16	241%	223%
Baner	1996	12	3.89	4.14	0.32	0.35	0.15	0.16	216%	218%
Sal – II	1999	2	0.24	0.07	0.12	0.04	0.21	0.22	57%	16%
Gumma	2000	3	1.82	1.63	0.61	0.54	0.21	0.22	289%	245%
Ghanvi	2000	22.5	4.89	4.58	0.22	0.20	0.15	0.16	145%	128%
Holi	2004	3	0.41	0.1	0.14	0.03	0.21	0.22	65%	15%
Khauli	2006	12	3.15	4.03	0.26	0.34	0.15	0.16	175%	212%

6.38 As seen from the above analysis, the O&M expenses for most of the stations are significantly higher than the norms prescribed by CERC. The Commission understands that for stations like Chaba, Chamba, Nogli, Rukti, Rong Tong, Thirot and Killar, the O&M expenses are high due to reasons of vintage, small size and remote location. But for stations like Binwa, Gaj, Baner, Gumma, Ghanvi and Khauli, which are above 3 MW and young of age, the O&M expenses incurred are very high. In case of Holi HEP, the figures supplied by the HPSEBL do not account for cost of O&M outsourced.

6.39 The Commission analysed O&M expenses for these station and observers that the reason for high O&M is high employee cost incurred on these stations. The breakup of O&M expenses (net of 5th pay arrears) for FY11 as submitted by the Petitioner is given as follows:-

Table 57: Break up of O&M Expenses for FY11

Station	O&M Expenses (Rs Cr)				% of O&M			
	R&M	Emp	A&G	Total	R&M	Emp	A&G	Total
Chaba	0.18	1.12	0.01	1.31	14%	85%	1%	100%
Chamba	0.00	0.03	0.00	0.03	0%	91%	9%	100%
Nogli	0.67	1.11	0.02	1.80	37%	62%	1%	100%
Bassi	0.25	8.17	0.16	8.58	3%	95%	2%	100%
Giri	3.63	8.89	0.15	12.66	29%	70%	1%	100%
Rukti	0.00	0.52	0.00	0.52	0%	100%	0%	100%
Binwa	0.18	3.24	0.03	3.45	5%	94%	1%	100%
Rong Tong	0.02	0.63	0.01	0.66	3%	96%	1%	100%
Andhra	0.66	3.72	0.07	4.45	15%	84%	2%	100%
Bhaba	3.75	10.85	0.32	14.92	25%	73%	2%	100%
Killar	0.00	0.00	0.00	0.00	-	-	-	-
Thirot	0.00	0.00	0.00	0.00	-	-	-	-
Gaj	0.37	3.29	0.05	3.71	10%	89%	1%	100%
Baner	0.39	3.70	0.05	4.14	9%	89%	1%	100%
Sal – II	0.00	0.06	0.00	0.07	3%	95%	3%	100%
Gumma	0.40	1.22	0.01	1.63	25%	75%	0%	100%
Ghanvi	1.33	3.18	0.07	4.58	29%	69%	1%	100%
Holi	0.00	0.10	0.00	0.10	0%	95%	5%	100%
Khauli	0.50	3.35	0.18	4.03	12%	83%	4%	100%
Larji	2.84	9.95	0.28	13.07	22%	76%	2%	100%
Total	**15.17**	**63.13**	**1.40**	**79.71**	**19%**	**79%**	**2%**	**100%**

6.40 As seen from above, 62% to 96% of O&M expenses incurred on the stations in on meeting employee expenses which is high due to high staffing at the stations. As a consequence of high employee expenses, the Petitioner is unable to under take routine R&M for the stations which impacts performance of the stations.

6.41 As per As per Regulation 22 (2) of the HPERC Generation Regulations, 2011, O&M expenses, for the existing generating stations which have been in operation for 3 years or more in the base year of 2010-11, shall be derived on the basis of actual operation and maintenance expenses for the years 2007-08 to 2009-10.

6.42 As the O&M expenses incurred on the stations during FY08 to FY10 are significantly high and providing O&M expenses for the Control Period by escalating at 8.32% per annum as per the regulation would be incentivising inefficiency which is contrary to the spirit of the regulations and the Act.

6.43 The Tariff Policy in clause 5(h)(2) states

"In cases where operations have been much below the norms for many previous years the initial starting point in determining the revenue requirement and the improvement trajectories should be recognized at "relaxed" levels and not the "desired" levels. Suitable benchmarking studies may be conducted to establish the "desired" performance standards. Separate studies may be required for each utility to assess the capital expenditure necessary to meet the minimum service standards."

6.44 Hence, for the Control Period, the Commission freezes the O&M expenses for all the stations at the actuals expenses incurred for FY11 (net of arrears). The Petitioner is expected to meet the O&M expenses by way of rationalising employee staffing at the stations. **The Commission recommends the Petitioner to rationalise employee staffing at the stations and reduce the O&M expenses. The Petitioner should develop O&M/ staffing norms for the stations and submit the proposal to the Commission for approval.**

6.45 The O&M expenses determined as per the regulation are tabulated as follows:-

Table 58: Operation and Maintenance Expenses Approved (Rs Cr)

Particulars	FY11 Actuals	Control Period FY12	FY13	FY14
Chaba	1.31	1.31	1.31	1.31
Chamba*	0.33	0.33	0.33	0.33
Nogli	1.80	1.80	1.80	1.80
Bassi	8.58	8.58	8.58	8.58
Giri	12.66	12.66	12.66	12.66
Rukti	0.52	0.52	0.52	0.52
Binwa	3.45	3.45	3.45	3.45
Rong Tong	0.79	0.79	0.79	0.79
Andhra	4.45	4.45	4.45	4.45
Bhaba	14.92	14.92	14.92	14.92
Killar*	0.61	0.61	0.61	0.61
Thirot*	0.79	0.79	0.79	0.79
Gaj	3.71	3.71	3.71	3.71
Baner	4.14	4.14	4.14	4.14
Sal – II	0.45	0.45	0.45	0.45
Gumma	1.63	1.63	1.63	1.63
Ghanvi	4.58	4.58	4.58	4.58
Holi	0.62	0.62	0.62	0.62
Khauli	4.03	4.03	4.03	4.03
Total	**69.37**	**69.37**	**69.37**	**69.37**

* Actuals for FY10 considered

6.46 As per regulation 22(7) of the HPERC Generation Tariff Regulation 2011, which states

"Of the O&M expenses so determined based on the above regulations, at least 30% shall be spent towards repair and maintenance activities."

6.47 The Commission, at the end of Control Period will review the actual R&M expenses incurred on each of the stations with the approved O&M expenses.

Depreciation

6.48 The Petitioner in its petition has proposed generation asset addition of Rs 148.18 Cr in FY12, Rs 149.87 Cr in FY13 and Rs 121.74 Cr in FY14. The Petitioner has not submitted the details of capitalisation on generation assets and in the absence of which the Commission is unable to provide for additional depreciation during the Control Period.

6.49 The Commission has determined the depreciation for the station in accordance to Regulation 20 of HPERC Generation Regulations, 2011. As per Regulation 20 (5) and 20(6),

"For generating station which are in operation for less than 12 years, the difference between the cumulative depreciation recovered and the cumulative depreciation arrived at by applying the depreciation rates specified in this regulation corresponding to 12 years, shall be spread over the period up to 12 years, and the remaining depreciable value as on 31st March of the year closing after a period of 12 years from date of commercial operation shall be spread over the balance useful life of the asset.

For the project in operation for more than 12 years, the balance depreciation to be recovered shall be spread over the remaining useful life of the asset."

6.50 The Commission has arrived at the accumulated depreciation for the individual projects considering a depreciation rate of 2.50% for each year post commercial operation date of the projects upto a maximum of 90% of the original cost of the asset. For project in operation for more than 12 years, the balance depreciation has been spread over the remaining useful life of the project. The useful life of the project has been considered as 40 years in accordance to Regulation 3(36), which defines the useful life.

Interest on loans

6.51 The Commission has determined the interest charged in accordance to Regulation 17 of HPERC Generation Regulations, 2011 and based capital cost and means of finance approved for each generating station in the tariff order dated 30th May 2009.

Interest on working capital

6.52 The interest on working capital has been determined in accordance with the Regulation 18 and 19 of HPERC Generation Regulations. As per Regulation 18, the working capital for hydro electric power station shall contain following components:

(1) Operation and Maintenance (O&M) expenses for 1 month

(2) maintenance spares equivalent to 15% of O&M

(3) receivables equivalent to two months of fixed cost

6.53 As per Regulation 19, the rate of interest on working capital shall be on normative basis and shall be equal to the Short-Term Prime Lending Rate of the State Bank of

India as on 1st April of the relevant year. The Commission has considered a rate of interest of 13.50% applicable as on 1st April 2011 for determining interest on working capital for the Control Period.

Return on Equity

6.54 The Petitioner has submitted that as per the Audited Accounts of FY10, the total equity of the HPSEBL stands at Rs. 971.77 Cr. This increase in equity of Rs. 575.24 Cr during FY10 is on account of equity invested by the HPSEBL in the past years for the own hydel plants, which where capitalized during the year. As per the annual account of HPSEBL, the equity in projects in FY09 and FY10 stand as follows:-

Table 59: Equity in Projects as per Petitioner (Rs Cr)

Particulars	Annual Account FY2008-09	Addition	Annual Account FY2009-10
Chaba	0.00	0.36	0.36
Chamba	0.00	0.15	0.15
Nogli	0.00	3.54	3.54
Bassi	0.00	9.38	9.38
Giri	0.00	10.87	10.87
Rukti	0.00	0.48	0.48
Binwa	0.00	5.23	5.23
Rong Tong	0.00	4.92	4.92
Andhra	0.00	17.28	17.28
Bhaba	0.00	66.66	66.66
Killar	0.00	2.60	2.60
Thirot	0.00	0.00	0.00
Gaj	0.00	18.17	18.17
Baner	0.00	16.70	16.70
Sal – II	0.00	5.24	5.24
Gumma	0.00	8.67	8.67
Ghanvi	0.00	42.79	42.79
Holi	0.00	8.98	8.98
Khauli	15.16	0.00	15.16
Larji	48.11	353.22	401.33
Total	**63.27**	**575.24**	**638.51**

6.55 The Petitioner has submitted that during the Second Control Period, the Petitioner intends to invest equity to the tune of Rs. 125.94 Cr in new generation projects of Himachal Pradesh Power Corporation Limited (HPPCL) as well as in the other generation schemes. Equity to the tune of 30% of total proposed capital expenditure has been considered for computation of return on equity of generation business of the Petitioner.

6.56 The Commission for determining return on equity has not considered the equity proposed to be invested in HPPCL and other generating schemes as return in equity will be provided to those project only on capitalization of those project and generation schemes.

6.57 On analyzing the equity shown as invested in the projects, it is seen that the equity invested is equivalent to 30% of the project cost considered by the Commission in its tariff order dated 30th May 2009. The Commission has also not considered the equity shown to have been invested in the project in FY10 as these are only book entries and employed to inflate the books of the Petitioner and also considering the provisions relating to equity as per Tariff Policy and the equity shown as invested in the projects.

6.58 The Commission has provided return on equity at rate of 15.5%, on the equity considered in its tariff order dated 30th May 2009. The Commission has not grossed up the rate of return by the tax rate as the Petitioner is loss making entity and has not income tax liability.

Determination of Annual Fixed Charge

6.59 The Commission, for the determination of Annual Fixed Charge for the individual projects has relied on the information available in Commission's records, information submitted by the Petitioner during the tariff determination process for first Control Period and additional information submitted during the course of various interactions held with the Petitioner during processing of instant tariff petition.

6.60 The Commission has considered the following assumptions for determination of AFC and tariff for sale of electricity for projects.

(1) The funding of the project is through 100% debt except where equity has been allowed in specific cases, and all debt has been retired as of date except for Gaj, Baner, Ghanvi, Khauli and Bassi, outstanding loans of which are as per the tariff order dated 30th May 2009.

(2) The completed costs of project have been taken as considered by the Commission as per the tariff order dated 30th May 2009.

6.61 The succeeding paras of this chapter detail the AFC for individual projects.

Annual Fixed Charge for Chaba HEP

6.62 Chaba HEP is a 1.75 MW (2 x 0.5 MW + 3 x 0.25 MW) project commissioned in the year 1913-14. The project was executed with a capital cost of Rs 1.21 Cr and was funded through 100% debt. It is a 94 year old completely depreciated plant with no outstanding loan. The AFC determined for Chaba HEP is shown as follows:-

Table 60: AFC for Chaba HEP

Particular	Unit	Control Period		
		FY12	**FY13**	**FY14**
Gross Generation (Design Energy)	MU	7.67	7.67	7.67
Total Auxiliary	MU	0.08	0.08	0.08
Net Generation at Bus	MU	7.59	7.59	7.59

Particular	Unit	Control Period		
		FY12	**FY13**	**FY14**
Less: Free Power to GoHP @ 0%	MU	0.00	0.00	0.00
Energy available for Sale	**MU**	**7.56**	**7.56**	**7.56**
O & M Expenses	Rs Cr	1.31	1.31	1.31
Depreciation	Rs Cr	0.00	0.00	0.00
Interest Charges	Rs Cr	0.00	0.00	0.00
Return on Equity	Rs Cr	0.00	0.00	0.00
Interest on Notional Loan	Rs Cr	0.00	0.00	0.00
Interest on Working Capital	Rs Cr	0.07	0.07	0.07
Annual Fixed Charge	**Rs Cr**	**1.39**	**1.39**	**1.39**
Sale Rate of Energy	P/KWh	183	183	183
Energy Charge Rate*	P/KWh	91	91	91

*as per regulation 26(5) of HPERC Generation Regulations, 2011

Annual Fixed Charge for Chamba HEP

6.63 Chamba HEP is a 0.45 MW (3 X 0.15 MW) project commissioned in the years 1938, 1957 and 1985. The project was executed with a capital cost of Rs 0.50 Cr and was funded through 100% debt with no outstanding loan. The AFC determined for Chamba HEP is shown as follows:-

Table 61: AFC for Chamba HEP

Particular	Unit	Control Period		
		FY12	FY13	FY14
Gross Generation (Design Energy)	MU	5.00	5.00	5.00
Total Auxiliary	MU	0.05	0.05	0.05
Net Generation at Bus	MU	4.95	4.95	4.95
Less: Free Power to GoHP @ 0%	MU	0.00	0.00	0.00
Energy available for Sale	**MU**	**4.95**	**4.95**	**4.95**
O & M Expenses	Rs Cr	0.33	0.33	0.33
Depreciation	Rs Cr	0.00	0.00	0.00
Interest Charges	Rs Cr	0.00	0.00	0.00
Return on Equity	Rs Cr	0.00	0.00	0.00
Interest on Notional Loan	Rs Cr	0.00	0.00	0.00
Interest on Working Capital	Rs Cr	0.02	0.02	0.02
Annual Fixed Charge	**Rs Cr**	**0.36**	**0.36**	**0.36**
Sale Rate of Energy	P/KWh	72	72	72
Energy Charge Rate*	P/KWh	36	36	36

*as per regulation 26(5) of HPERC Generation Regulations, 2011

Annual Fixed Charge for Nogli HEP

6.64 Nogli HEP is a 2.50 MW (2 x 0.25 + 4 x 0.50 MW) project commissioned in the years 1963, 1970 and 1974. The project was executed with a capital cost of Rs 11.81 Cr and was funded through 100% debt. It is a completely depreciated plant with no outstanding loan. The AFC determined for Nogli HEP is shown as follows:-

Table 62: AFC for Nogli HEP

Particular	Unit	Control Period		
		FY12	FY13	FY14
Gross Generation (Design Energy)	MU	14.70	14.70	14.70
Total Auxiliary	MU	0.15	0.15	0.15
Net Generation at Bus	MU	14.55	14.55	14.55
Less: Free Power to GoHP @ 0%	MU	0.00	0.00	0.00
Energy available for Sale	**MU**	**14.55**	**14.55**	**14.55**
O & M Expenses	Rs Cr	1.80	1.80	1.80
Depreciation	Rs Cr	0.00	0.00	0.00
Interest Charges	Rs Cr	0.00	0.00	0.00
Return on Equity	Rs Cr	0.00	0.00	0.00
Interest on Notional Loan	Rs Cr	0.00	0.00	0.00
Interest on Working Capital	Rs Cr	0.35	0.35	0.35
Annual Fixed Charge	**Rs Cr**	**2.14**	**2.14**	**2.14**
Sale Rate of Energy	P/KWh	147	147	147
Energy Charge Rate*	P/KWh	74	74	74

*as per regulation 26(5) of HPERC Generation Regulations, 2011

Annual Fixed Charge for Bassi HEP

6.65 Bassi HEP is a 60 MW (4 x 15 MW) project commissioned in the year 1970, 1971 and 1981. The project was executed with a capital cost of Rs 31.26 Cr and was funded through 100% debt with no outstanding loan.

6.66 The Petitioner in it submission during the first Control Period, had proposed to renovate and up-rate the Bassi HEP from 60 MW to 66 MW at an estimated cost of Rs 76.97 Cr during the Control Period. The Commission in its tariff order for first Control Period had considered the capital expenditure to be completely capitalized in FY10.

6.67 The Petitioner during the interaction with the Commission has submitted revised information on the scheme. As per the submission, the original scheme was for Rs 28.61 Cr and the scheme was revised to Rs 109.98 Cr vide office order No. HPSEB (Sectt)402-150 (Bassi-Vol-IV)/07-63180-90 dated 11 September 2007. The above amount was to be raised through PFC loan of Rs 76.98 Cr and Rs 32.99 Cr from the Petitioners own recourses. The RMU&LE scheme covers improvement of existing water conductor system, construction of additional tail race, RMU of Turbines, Generators, control and protection system and uprating of existing capacity from 60 MW to 66 MW.

6.68 The Petitioner has submitted that, PFC had sanctioned a loan of Rs 20.00 Cr based on the original project report amounting to Rs 28.61 Cr. The loan limit has now been revised for additional Rs 80 Cr as of 5 February 2008 against the revised scheme of Rs 109.98 Cr. The balance 29.98 Cr is to be met from State plan.

6.69 As per the status of the scheme and schedule of completion submitted by the Petitioner, Unit-4 was commissioned and synchronized with the grid on 29 March 2010, Unit-3 was likely to be commissioned by end of May 2011, Unit-2 on 8^{th} July 2011 and Unit-1 on 6^{th} August 2011.

6.70 The Commission for determination of AFC for the Second Control Period has considered that the scheme will be completed and all units capitalised and commissioned before 31^{st} March 2011. The Commission as considered the opening GFA for FY12 as Rs 141.24 Cr (Rs 31.26 Cr original cost + Rs 109.98 RMU scheme). PFC loan of RS 80.00 Cr has been considered at a rate of 10.25% for calculation of interest.

6.71 The Commission shall true up the expenses based on the actual loan details and the capitalization schedule to be submitted by the Petitioner in its true-up petition for the first Control Period. The O&M expenses have been projected as per the HPERC Generation Regulations, 2011. The AFC determined for Bassi HEP is shown as follows:-

Table 63: AFC for Bassi HEP

Particular	Unit	Control Period		
		FY12	FY13	FY14
Gross Generation (Design Energy)	MU	346.83	346.83	346.83
Total Auxiliary	MU	2.43	2.43	2.43
Net Generation at Bus	MU	344.40	344.40	344.40
Less: Free Power to GoHP @ 0%	MU	0.00	0.00	0.00
Energy available for Sale	**MU**	**344.40**	**344.40**	**344.40**
O & M Expenses	Rs Cr	8.58	8.58	8.58
Depreciation	Rs Cr	6.74	7.46	7.46
Interest Charges	Rs Cr	6.15	5.33	4.51
Return on Equity	Rs Cr	0.00	0.00	0.00
Interest on Notional Loan	Rs Cr	0.00	0.00	0.00
Interest on Working Capital	Rs Cr	0.77	0.77	0.75
Annual Fixed Charge	**Rs Cr**	**22.23**	**22.13**	**21.29**
Sale Rate of Energy	P/KWh	65	64	62
Energy Charge Rate*	P/KWh	32	32	31

*as per regulation 26(5) of HPERC Generation Regulations, 2011

Annual Fixed Charge for Giri HEP

6.72 Giri HEP is a 60 MW (2 x 30 MW) project commissioned in the year 1978. The Commission in its tariff order date 30th May 2009 had considered the completed cost of the project as per the Accounts at Rs 36.22 Cr for tariff determination. The project was assumed to be funded through 100% debt with no outstanding loan.

6.73 The Petitioner, during interaction with the Commission has submitted the status of the RMU scheme proposed for Giri HEP at estimated cost of Rs 48.48 Cr. The scheme has been prepared and awaiting approval of the board of the HPSEBL. The Petitioner has not submitted the capitalisation schedule and the means of finance for undertaking the scheme. In the absence which the Commission has not considered the scheme for the Control Period and shall consider it once proper filing in is made by the Petitioner in this regard.

6.74 The AFC determined for Giri HEP is shown as follows:-

Table 64: AFC for Giri HEP

Particular	Unit	Control Period		
		FY12	FY13	FY14
Gross Generation (Design Energy)	MU	289.55	289.55	289.55
Total Auxiliary	MU	2.03	2.03	2.03
Net Generation at Bus	MU	287.52	287.52	287.52
Less: Free Power to GoHP @ 0%	MU	0.00	0.00	0.00
Energy available for Sale	**MU**	**287.52**	**287.52**	**287.52**
O & M Expenses	Rs Cr	12.66	12.66	12.66
Depreciation	Rs Cr	0.47	0.47	0.47
Interest Charges	Rs Cr	0.00	0.00	0.00
Return on Equity	Rs Cr	0.00	0.00	0.00
Interest on Notional Loan	Rs Cr	0.00	0.00	0.00
Interest on Working Capital	Rs Cr	0.71	0.71	0.71
Annual Fixed Charge	**Rs Cr**	**13.85**	**13.85**	**13.85**
Sale Rate of Energy	P/KWh	48	48	48
Energy Charge Rate*	P/KWh	24	24	24

*as per regulation 26(5) of HPERC Generation Regulations, 2011

Annual Fixed Charge for Rukti HEP

6.75 Rukti HEP is a 1.50 MW (3 x 0.50 MW) project commissioned in the year 1979 and 1980. The project was executed with a capital cost of Rs 1.59 Cr and was funded through 100% debt with no outstanding loan. The AFC determined for Rukti HEP is shown as follows:-

Table 65: AFC for Rukti HEP

Particular	Unit	Control Period		
		FY12	FY13	FY14
Gross Generation (Design Energy)	MU	6.54	6.54	6.54
Total Auxiliary	MU	0.07	0.07	0.07
Net Generation at Bus	MU	6.47	6.47	6.47
Less: Free Power to GoHP @ 0%	MU	0.00	0.00	0.00
Energy available for Sale	**MU**	**6.47**	**6.47**	**6.47**
O & M Expenses	Rs Cr	0.52	0.52	0.52
Depreciation	Rs Cr	0.02	0.02	0.02
Interest Charges	Rs Cr	0.00	0.00	0.00
Return on Equity	Rs Cr	0.00	0.00	0.00
Interest on Notional Loan	Rs Cr	0.00	0.00	0.00
Interest on Working Capital	Rs Cr	0.03	0.03	0.03
Annual Fixed Charge	**Rs Cr**	**0.57**	**0.57**	**0.57**
Sale Rate of Energy	P/KWh	89	89	89
Energy Charge Rate*	P/KWh	44	44	44

*as per regulation 26(5) of HPERC Generation Regulations, 2011

Annual Fixed Charge for Binwa HEP

6.76 Binwa HEP is a 6 MW (2 x 3 MW) project commissioned in the year 1984. The project was executed with a capital cost of Rs 17.44 Cr and was funded through 100% debt with no outstanding loan. The AFC determined for Binwa HEP is shown as follows:-

Table 66: AFC for Binwa HEP

Particular	Unit	Control Period		
		FY12	FY13	FY14
Gross Generation (Design Energy)	MU	29.25	29.25	29.25
Total Auxiliary	MU	0.20	0.20	0.20
Net Generation at Bus	MU	29.04	29.04	29.04
Less: Free Power to GoHP @ 0%	MU	0.00	0.00	0.00
Energy available for Sale	**MU**	**29.04**	**29.04**	**29.04**
O & M Expenses	Rs Cr	3.45	3.45	3.45
Depreciation	Rs Cr	0.30	0.30	0.30
Interest Charges	Rs Cr	0.00	0.00	0.00
Return on Equity	Rs Cr	0.00	0.00	0.00
Interest on Notional Loan	Rs Cr	0.00	0.00	0.00
Interest on Working Capital	Rs Cr	0.21	0.23	0.25
Annual Fixed Charge	**Rs Cr**	**3.95**	**3.95**	**3.95**
Sale Rate of Energy	P/KWh	136	136	136
Energy Charge Rate*	P/KWh	68	68	68

*as per regulation 26(5) of HPERC Generation Regulations, 2011

Annual Fixed Charge for Rong Tong HEP

6.77 Rong Tong HEP is a 2 MW (4 x 0.50 MW) project commissioned in the year 1986-87. The project was executed with a capital cost of Rs 16.39 Cr and was funded through 100% debt with no outstanding loan. The AFC determined for Rong Tong HEP is shown as follows:-

Table 67: AFC for Rong Tong HEP

Particular	Unit	Control Period		
		FY12	FY13	FY14
Gross Generation (Design Energy)	MU	7.64	7.64	7.64
Total Auxiliary	MU	0.08	0.08	0.08
Net Generation at Bus	MU	7.56	7.56	7.56
Less: Free Power to GoHP @ 0%	MU	0.00	0.00	0.00
Energy available for Sale	**MU**	**7.56**	**7.56**	**7.56**
O & M Expenses	Rs Cr	0.79	0.79	0.79
Depreciation	Rs Cr	0.28	0.28	0.28
Interest Charges	Rs Cr	0.00	0.00	0.00
Return on Equity	Rs Cr	0.00	0.00	0.00
Interest on Notional Loan	Rs Cr	0.00	0.00	0.00
Interest on Working Capital	Rs Cr	0.05	0.05	0.05
Annual Fixed Charge	**Rs Cr**	**1.12**	**1.12**	**1.12**
Sale Rate of Energy	P/KWh	146	146	146
Energy Charge Rate*	P/KWh	73	73	73

*as per regulation 26(5) of HPERC Generation Regulations, 2011

Annual Fixed Charge for Andhra HEP

6.78 Andhra HEP is a 16.95 MW (3 x 5.65 MW) project commissioned by the HPSEBL in the year 1987. The project was executed with a capital cost of Rs 57.61 Cr and was funded through 100% debt with no outstanding loan. The AFC determined for Andhra HEP is shown as follows:-

Table 68: AFC for Andhra HEP

Particular	Unit	Control Period		
		FY12	FY13	FY14
Gross Generation (Design Energy)	MU	87.30	87.30	87.30
Total Auxiliary	MU	0.87	0.87	0.87
Net Generation at Bus	MU	86.43	86.43	86.43
Less: Free Power to GoHP @ 0%	MU	0.00	0.00	0.00
Energy available for Sale	**MU**	**86.43**	**86.43**	**86.43**
O & M Expenses	Rs Cr	4.45	4.45	4.45
Depreciation	Rs Cr	1.10	1.10	1.10

Particular	Unit	Control Period		
		FY12	FY13	FY14
Interest Charges	Rs Cr	0.00	0.00	0.00
Return on Equity	Rs Cr	0.00	0.00	0.00
Interest on Notional Loan	Rs Cr	0.00	0.00	0.00
Interest on Working Capital	Rs Cr	0.27	0.27	0.27
Annual Fixed Charge	**Rs Cr**	**5.82**	**5.82**	**5.82**
Sale Rate of Energy	P/KWh	67	67	67
Energy Charge Rate*	P/KWh	34	34	34

*as per regulation 26(5) of HPERC Generation Regulations, 2011

Annual Fixed Charge for Bhaba HEP

6.79 Bhaba HEP is a 120 MW (3 x 40 MW) project commissioned in the year 1989. The Commission in its tariff order date 30th May 2009 had considered the completed cost of the project as per the Accounts at Rs 222.19 Cr for tariff determination. The project was assumed to be funded through 100% debt with no outstanding loan. The AFC determined for Bhaba HEP is shown as follows:-

Table 69: AFC for Bhaba HEP

Particular	Unit	Control Period		
		FY12	FY13	FY14
Gross Generation (Design Energy)	MU	464.70	464.70	464.70
Total Auxiliary	MU	5.58	5.58	5.58
Net Generation at Bus	MU	459.12	459.12	459.12
Less: Free Power to GoHP @ 0%	MU	0.00	0.00	0.00
Energy available for Sale	**MU**	**459.12**	**459.12**	**459.12**
O & M Expenses	Rs Cr	14.92	14.92	14.92
Depreciation	Rs Cr	4.42	4.42	4.42
Interest Charges	Rs Cr	0.00	0.00	0.00
Return on Equity	Rs Cr	0.00	0.00	0.00
Interest on Notional Loan	Rs Cr	0.00	0.00	0.00
Interest on Working Capital	Rs Cr	0.93	0.93	0.93
Annual Fixed Charge	**Rs Cr**	**20.27**	**20.27**	**20.27**
Sale Rate of Energy	P/KWh	44	44	44
Energy Charge Rate*	P/KWh	22	22	22

*as per regulation 26(5) of HPERC Generation Regulations, 2011

Annual Fixed Charge for Killar HEP

6.80 Killar HEP is a 0.30 MW (3 x 0.10 MW) project commissioned in the year 1995. The project was executed with a capital cost of Rs 8.65 Cr and was funded through 100% debt with no outstanding loan. The AFC so determined for Killar HEP is shown as follows:-

Table 70: AFC for Killar HEP

Particular	Unit	Control Period		
		FY12	FY13	FY14
Gross Generation (Design Energy)	MU	1.16	1.16	1.16
Total Auxiliary	MU	0.01	0.01	0.01
Net Generation at Bus	MU	1.15	1.15	1.15
Less: Free Power to GoHP @ 0%	MU	0.00	0.00	0.00
Energy available for Sale	**MU**	**1.15**	**1.15**	**1.15**
O & M Expenses	Rs Cr	0.61	0.61	0.61
Depreciation	Rs Cr	0.18	0.18	0.18
Interest Charges	Rs Cr	0.00	0.00	0.00
Return on Equity	Rs Cr	0.00	0.00	0.00
Interest on Notional Loan	Rs Cr	0.00	0.00	0.00
Interest on Working Capital	Rs Cr	0.04	0.04	0.04
Annual Fixed Charge	**Rs Cr**	**0.83**	**0.83**	**0.83**
Sale Rate of Energy	P/KWh	714	714	714
Energy Charge Rate*	P/KWh	357	357	357

*as per regulation 26(5) of HPERC Generation Regulations, 2011

Annual Fixed Charge for Thirot HEP

6.81 Thirot HEP is a 4.50 MW (3 x 1.50 MW) project commissioned in the year 1995. The Commission in its tariff order date 30th May 2009 had considered the completed cost of the project as per the Accounts at Rs 49.30 Cr for tariff determination. The project is assumed to be funded through equity of Rs 15 Cr and a debt of Rs 34.30 Cr with no outstanding loan.

6.82 The Commission in its order dated 30th May 2009 has considered that the only equity that was invested in the project was from GoHP of Rs 15 Cr which was later transferred to the HPSEBL. The Commission has provided return on Rs 15 Cr of GoHP equity (transferred to HPSEBL) at 15.50% as per the HPERC Generation Regulation, 2011. The O&M expenses have been projected as per the HPERC Generation Regulations, 2011. The AFC determined for Thirot HEP is shown as follows:-

Table 71: AFC for Thirot HEP

Particular	Unit	Control Period		
		FY12	FY13	FY14
Gross Generation (Design Energy)	MU	23.44	23.44	23.44
Total Auxiliary	MU	0.16	0.16	0.16
Net Generation at Bus	MU	23.28	23.28	23.28
Less: Free Power to GoHP @ 0%	MU	0.00	0.00	0.00
Energy available for Sale	**MU**	**23.28**	**23.28**	**23.28**

Particular	Unit	Control Period		
		FY12	FY13	FY14
O & M Expenses	Rs Cr	0.79	0.79	0.79
Depreciation	Rs Cr	1.03	1.03	1.03
Interest Charges	Rs Cr	0.00	0.00	0.00
Return on Equity	Rs Cr	2.33	2.33	2.33
Interest on Notional Loan	Rs Cr	0.00	0.00	0.00
Interest on Working Capital	Rs Cr	0.12	0.12	0.12
Annual Fixed Charge	**Rs Cr**	**4.27**	**4.27**	**4.27**
Sale Rate of Energy	P/KWh	182	182	182
Energy Charge Rate*	P/KWh	91	91	91

*as per regulation 26(5) of HPERC Generation Regulations, 2011

Annual Fixed Charge for Sal-II HEP

6.83 Sal-II HEP is a 2 MW (2 x 1 MW) project commissioned in the year 2000. The Commission in its tariff order date 30th May 2009 had considered the completed cost of the project as per the Accounts at Rs 17.48 Cr for tariff determination. The project is assumed to be funded through 100% debt with no outstanding loan. The AFC so determined for Sal-II HEP is shown as follows:-

Table 72: AFC for Sal-II HEP

Particular	Unit	Control Period		
		FY12	FY13	FY14
Gross Generation (Design Energy)	MU	12.52	12.52	12.52
Total Auxiliary	MU	0.09	0.09	0.09
Net Generation at Bus	MU	12.43	12.43	12.43
Less: Free Power to GoHP @ 0%	MU	0.00	0.00	0.00
Energy available for Sale	**MU**	**12.43**	**12.43**	**12.43**
O & M Expenses	Rs Cr	0.45	0.45	0.45
Depreciation	Rs Cr	0.39	0.39	0.39
Interest Charges	Rs Cr	0.00	0.00	0.00
Return on Equity	Rs Cr	0.00	0.00	0.00
Interest on Notional Loan	Rs Cr	0.00	0.00	0.00
Interest on Working Capital	Rs Cr	0.03	0.03	0.03
Annual Fixed Charge	**Rs Cr**	**0.88**	**0.88**	**0.88**
Sale Rate of Energy	P/KWh	70	70	70
Energy Charge Rate*	P/KWh	35	35	35

*as per regulation 26(5) of HPERC Generation Regulations, 2011

Annual Fixed Charge for Gumma HEP

6.84 Gumma HEP is a 3 MW (2 x 1.5 MW) project commissioned in the year 2000. The

Commission in its tariff order date 30th May 2009 had considered the completed cost of the project as per the Accounts at Rs 28.89 Cr for tariff determination. The project is assumed to be funded through 100% debt with no outstanding loan. The AFC so determined for Gumma HEP is shown as follows:-

Table 73: AFC for Gumma HEP

Particular	Unit	Control Period		
		FY12	FY13	FY14
Gross Generation (Design Energy)	MU	18.11	18.11	18.11
Total Auxiliary	MU	0.13	0.13	0.13
Net Generation at Bus	MU	17.98	17.98	17.98
Less: Free Power to GoHP @ 0%	MU	0.00	0.00	0.00
Energy available for Sale	**MU**	**17.98**	**17.98**	**17.98**
O & M Expenses	Rs Cr	1.63	1.63	1.63
Depreciation	Rs Cr	1.53	1.53	0.54
Interest Charges	Rs Cr	0.00	0.00	0.00
Return on Equity	Rs Cr	0.00	0.00	0.00
Interest on Notional Loan	Rs Cr	0.00	0.00	0.00
Interest on Working Capital	Rs Cr	0.12	0.12	0.10
Annual Fixed Charge	**Rs Cr**	**3.28**	**3.28**	**2.26**
Sale Rate of Energy	P/KWh	181	181	125
Energy Charge Rate*	P/KWh	90	90	62

*as per regulation 26(5) of HPERC Generation Regulations, 2011

Annual Fixed Charge for Holi HEP

6.85 Holi HEP is a 3 MW (2 x 1.5 MW) project commissioned by the HPSEBL in the year 2004. The project was commissioned with a capitalized cost of Rs 29.93 Cr (with no outstanding capitalization as per Accounts) as of date and was funded through 100% debt with no outstanding loan.. The AFC so determined for Holi HEP is shown as follows:-

Table 74: AFC for Holi HEP

Particular	Unit	Control Period		
		FY12	FY13	FY14
Gross Generation (Design Energy)	MU	17.52	17.52	17.52
Total Auxiliary	MU	0.12	0.12	0.12
Net Generation at Bus	MU	17.40	17.40	17.40
Less: Free Power to GoHP @ 0%	MU	0.00	0.00	0.00
Energy available for Sale	**MU**	**17.40**	**17.40**	**17.40**
O & M Expenses	Rs Cr	0.62	0.62	0.62
Depreciation	Rs Cr	1.58	1.58	1.58
AAD	Rs Cr	0.00	0.00	0.00

Particular	Unit	Control Period		
		FY12	FY13	FY14
Interest Charges	Rs Cr	0.00	0.00	0.00
Return on Equity	Rs Cr	0.00	0.00	0.00
Interest on Notional Loan	Rs Cr	0.04	0.04	0.04
Interest on Working Capital	Rs Cr	0.07	0.07	0.07
Annual Fixed Charge	**Rs Cr**	**2.27**	**2.27**	**2.27**
Sale Rate of Energy	P/KWh	130	130	130
Energy Charge Rate*	P/KWh	65	65	65

*as per regulation 26(5) of HPERC Generation Regulations, 2011

Annual Fixed Charge for Gaj HEP

6.86 Gaj HEP is a 10.50 MW (3 x 3.50 MW) project commissioned by the HPSEBL in the year 1996.

6.87 The Commission in its tariff order date 30th May 2009 had considered Rs 60.58 Cr as the capitalized project cost for the purpose of determination of AFC during the Control Period and approved Rs 37.31 Cr of loan arranged from PFC, LIC and GoHP and the Rs 15 Cr GoHP equity as submitted by the HPSEBL. The Commission considered that the remaining fund requirement of Rs 8.27 Cr has been funded through short term loans taken by the HPSEBL and there is not equity infusion in the project from the HPSEBL. The Commission approves the repayment and the interest charges for PFC and LIC loans for the Control Period as considered in the tariff order dated 30th May 2009.

6.88 The Petitioner has submitted that Rs 18.17 Cr has been invested as equity in the past years which has been capitalised during FY10 and has claimed return on equity at 15.50% as per the HPERC Generation Regulations, 2011.

6.89 The Commission has considered that the equity invested in the project by the GoHP as Rs 15 Cr which was later transferred to the HPSEBL as considered in the Tariff Order dated 30th May 2009. Hence, the Commission has provided return on Rs 15 Cr of GoHP equity (transferred to the HPSEBL) at 15.50% as per the HPERC Generation Regulation, 2011.

6.90 The GoHP has 12% share in the generation as free power which has been reduced to arrive at the net saleable energy from the project The AFC determined for Gaj HEP is shown as follows:-

Table 75: AFC for Gaj HEP

Particular	Unit	Control Period		
		FY12	FY13	FY14
Gross Generation (Design Energy)	MU	38.31	38.31	38.31
Total Auxiliary	MU	0.38	0.38	0.38

Particular	Unit	Control Period		
		FY12	FY13	FY14
Net Generation at Bus	MU	37.93	37.93	37.93
Less: Free Power to GoHP @ 12%	MU	4.55	4.55	4.55
Energy available for Sale	**MU**	**33.38**	**33.38**	**33.38**
O & M Expenses	Rs Cr	3.71	3.71	3.71
Depreciation	Rs Cr	1.28	1.28	1.28
Interest Charges	Rs Cr	0.02	0.00	0.00
Return on Equity	Rs Cr	2.33	2.33	2.33
Interest on Notional Loan	Rs Cr	0.00	0.00	0.00
Interest on Working Capital	Rs Cr	0.29	0.29	0.29
Annual Fixed Charge	**Rs Cr**	**7.62**	**7.61**	**7.61**
Sale Rate of Energy	P/KWh	199	199	199
Energy Charge Rate*	P/KWh	100	99	99

*as per regulation 26(5) of HPERC Generation Regulations, 2011

Annual Fixed Charge for Baner HEP

6.91 Baner HEP is a 12 MW (3 x 4 MW) project commissioned by the HPSEBL in the year 1996.

6.92 The Commission in its tariff order date 30th May 2009 had considered Rs 55.67 Cr as the capitalized project cost for the purpose of determination of AFC during the Control Period and approved Rs 34.66 Cr of loan arranged from PFC, LIC and GoHP and the Rs 15 Cr GoHP equity. The Commission considered that the remaining fund requirement of Rs 6.01 Cr has been funded through short term loans taken by the HPSEBL and there is not equity infusion in the project from the HPSEBL. The Commission approves the repayment and the interest charges for PFC and LIC loans for the Control Period as considered in the tariff order dated 30th May 2009.

6.93 The Petitioner has submitted that Rs 16.67 Cr has been invested as equity in the past years which has been capitalised during FY10 and has claimed return on equity at 15.50% as per the HPERC Generation Regulations, 2011.

6.94 The Commission has considered that the equity invested in the project by the GoHP as Rs 15 Cr which was later transferred to the HPSEBL as considered in the Tariff Order dated 30th May 2009. Hence, the Commission has provided return on Rs 15 Cr of GoHP equity (transferred to the HPSEBL) at 15.50% as per the HPERC Generation Regulation, 2011.

6.95 The GoHP has 12% share in the generation as free power which has been reduced to arrive at the net saleable energy from the project The AFC determined for Baner HEP is shown as follows:-

Table 76: AFC for Baner HEP

Particular	Unit	Control Period		
		FY12	FY13	FY14
Gross Generation (Design Energy)	MU	60.67	60.67	60.67
Total Auxiliary	MU	0.61	0.61	0.61
Net Generation at Bus	MU	60.06	60.06	60.06
Less: Free Power to GoHP @ 12%	MU	7.21	7.21	7.21
Energy available for Sale	**MU**	**52.86**	**52.86**	**52.86**
O & M Expenses	Rs Cr	4.14	4.14	4.14
Depreciation	Rs Cr	1.19	1.19	1.19
Interest Charges	Rs Cr	0.01	0.00	0.00
Return on Equity	Rs Cr	2.33	2.33	2.33
Interest on Notional Loan	Rs Cr	0.00	0.00	0.00
Interest on Working Capital	Rs Cr	0.31	0.31	0.31
Annual Fixed Charge	**Rs Cr**	**7.98**	**7.97**	**7.97**
Sale Rate of Energy	P/KWh	131	131	131
Energy Charge Rate*	P/KWh	66	66	66

*as per regulation 26(5) of HPERC Generation Regulations, 2011

Annual Fixed Charge for Ghanvi HEP

6.96 Ghanvi HEP is a 22.50 MW (2 x 11.25 MW) project commissioned by the HPSEBL in the year 2000.

6.97 The Commission in its tariff order date 30th May 2009 had considered Rs 142.62 Cr as the capitalized project cost for the purpose of determination of AFC during the first Control Period and approved Rs 93.97 Cr of loan arranged from PFC and LIC. The Commission has considered that the remaining fund requirement of Rs 48.65 Cr has been funded through short term loans taken by the HPSEBL and there is not equity infusion in the project from the HPSEBL. The Commission approves the repayment and the interest charges for PFC and LIC loans for the Control Period as considered in the tariff order dated 30th May 2009.

6.98 The GoHP has 12% share in the generation as free power which has been reduced to arrive at the net saleable energy from the project The AFC determined for Ghanvi HEP is shown as follows:

Table 77: AFC for Ghanvi HEP

Particular	Unit	Control Period		
		FY12	FY13	FY14
Gross Generation (Design Energy)	MU	93.34	93.34	93.34
Total Auxiliary	MU	1.12	1.12	1.12
Net Generation at Bus	MU	92.22	92.22	92.22
Less: Free Power to GoHP @ 12%	MU	11.07	11.07	11.07

Particular	Unit	Control Period		
		FY12	FY13	FY14
Energy available for Sale	**MU**	**81.15**	**81.15**	**81.15**
O & M Expenses	Rs Cr	4.58	4.58	4.58
Depreciation	Rs Cr	7.53	7.53	2.72
Interest Charges	Rs Cr	0.36	0.09	0.02
Return on Equity	Rs Cr	0.00	0.00	0.00
Interest on Notional Loan	Rs Cr	0.00	0.00	0.00
Interest on Working Capital	Rs Cr	0.43	0.43	0.32
Annual Fixed Charge	**Rs Cr**	**12.91**	**12.63**	**7.63**
Sale Rate of Energy	P/KWh	138	135	82
Energy Charge Rate*	P/KWh	69	68	41

*as per regulation 26(5) of HPERC Generation Regulations, 2011

Annual Fixed Charge for Khauli HEP

6.99 Khauli HEP is a 12 MW (2 x 6 MW) project commissioned by the HPSEBL in the year 2006.

6.100 The Commission in the Tariff Order for 2007-08 had provisionally approved Rs 110 Cr as the capital cost for the Khauli project and directed the HPSEBL to file a detailed petition with the Commission for finalization of the capital cost for Khauli HEP, which the HPSEBL failed to do so to date.

6.101 The Commission in its tariff order dated 30th May 2009 decided, as an interim measure, a normative capital cost of Rs 6.50 Cr per MW, to arrive at a completed capital cost of Rs 78 Cr for the project. The Commission in this instant order has considered the capital cost and means of finance as considered in the tariff order dated 30th May 2009 for determination of AFC for the Control Period. **The Commission directs the Petitioner, to file a separate Tariff Petition for Khauli HEP as done in the case of Larji HEP.**

6.102 The Commission, having considered an interim capital cost of Rs 78 Cr, for the project, has approved Rs 70 Cr loan from HP Cooperative Bank and considered the remaining amount of Rs 8 Cr to be funded through short term loans having the same conditions as on the loan from HP Cooperative Bank. The HP Cooperative Bank loan carries an interest rate of 9% and tenure of 5 years with 10 equal half yearly repayments. The repayment starts from the second half of FY08 and the last repayment shall be in the first half of FY13.

6.103 The Commission has calculated the total interest charges as per the repayment schedule and the interest charges for the respective years of the Control Period. The Commission has not considered any equity in the project as the project has been considered to be funded through 100% debt.

6.104 The GoHP has 12% share in the generation as free power has been reduced to arrive at the net saleable energy from the project. The AFC determined for Khauli HEP is shown as follows:-

Table 78: AFC for Khauli HEP

Particular	Unit	Control Period		
		FY12	FY13	FY14
Gross Generation (Design Energy)	MU	49.95	49.95	49.95
Total Auxiliary	MU	0.35	0.35	0.35
Net Generation at Bus	MU	49.60	49.60	49.60
Less: Free Power to GoHP @ 12%	MU	5.95	5.95	5.95
Energy available for Sale	**MU**	**43.65**	**43.65**	**43.65**
O & M Expenses	Rs Cr	4.03	4.03	4.03
Depreciation	Rs Cr	4.12	4.12	4.12
Interest Charges	Rs Cr	1.40	0.35	0.00
Return on Equity	Rs Cr	0.00	0.00	0.00
Interest on Notional Loan	Rs Cr	0.00	0.00	0.00
Interest on Working Capital	Rs Cr	0.35	0.33	0.32
Annual Fixed Charge	**Rs Cr**	**9.91**	**8.83**	**8.47**
Sale Rate of Energy	P/KWh	198	177	170
Energy Charge Rate*	P/KWh	99	88	85

*as per regulation 26(5) of HPERC Generation Regulations, 2011

Annual Fixed Charge for Larji HEP

6.105 The Commission in the Tariff Order dated 7th July 2011 has approved the Annual Fixed Charges for Larji HEP for the Control Period. The AFC approved is given as follows:-

Particular	Unit	Control Period		
		FY12	FY13	FY14
Gross Generation (Design Energy)	MU	586.82	586.82	586.82
Total Auxiliary	MU	7.04	7.04	7.04
Net Generation at Bus	MU	579.78	579.78	579.78
Less: Free Power to GoHP @ 12%	MU	69.57	69.57	69.57
Energy available for Sale	**MU**	**510.20**	**510.20**	**510.20**
O & M Expenses	Rs Cr	15.00	16.25	17.60
Depreciation	Rs Cr	56.69	56.69	56.69
Interest Charges	Rs Cr	45.56	34.59	25.16
Return on Equity	Rs Cr	30.14	30.14	30.14
Interest on Notional Loan	Rs Cr	0.00	0.00	0.00
Interest on Working Capital	Rs Cr	3.36	3.20	3.08

Particular	Unit	Control Period		
		FY12	FY13	FY14
Annual Fixed Charge	**Rs Cr**	**150.77**	**140.89**	**132.68**
Sale Rate of Energy	P/KWh	296	276	260
Energy Charge Rate*	P/KWh	148	138	130

*as per regulation 26(5) of HPERC Generation Regulations, 2011

Determination of Total Generation ARR/AFC

6.106 The Commission has added the individual ARR/AFC of the HEPs to arrive at the total generation ARRs/AFC.

Table 79: Total Generation ARR/AFC

Particular	Unit	Control Period		
		FY12	FY13	FY14
Gross Generation	MU	2161.02	2161.02	2161.02
Total Auxiliary	MU	21.53	21.53	21.53
Net Generation at Bus	MU	2139.48	2139.48	2139.48
Less: Free Power to GoHP @ 12%	MU	98.35	98.35	98.35
Energy available for Sale	**MU**	**2041.13**	**2041.13**	**2041.13**
O & M Expenses	Rs Cr	84.37	85.62	86.97
Depreciation	Rs Cr	88.86	89.58	83.78
Interest Charges	Rs Cr	53.50	40.36	29.69
Return on Equity	Rs Cr	37.12	37.12	37.12
Interest on Notional Loan	Rs Cr	0.00	0.00	0.00
Interest on Working Capital	Rs Cr	8.52	8.33	8.05
Annual Fixed Charge	**Rs Cr**	**272.37**	**261.01**	**245.60**
Sale Rate of Energy	P/KWh	133	128	120
Energy Charge Rate*	P/KWh	67	64	60

*as per regulation 26(5) of HPERC Generation Regulations, 2011

6.107 The total ARR/AFC for the generation business of the HPSEBL as determined by the Commission for the Control Period is Rs 272.37 Cr for FY12, Rs 261.01 Cr for FY13 and Rs 245.60 Cr for FY13.

6.108 The recovery of annual fixed charges through capacity charges and energy charges shall be done monthly in accordance with Regulation 26 of the HPERC Generation Tariff Regulations, 2011.

True Up

6.109 The recovery of annual fixed charges shall be subject to truing up in terms of Regulation 9 of the HPERC Generation Tariff Regulations, 2011. Regulations 9 states

"9. True Up

(1) The true up across various controllable parameters shall be conducted as per principles stated below: -

(a) any surplus and deficit on account of O&M expenses shall be to the account of the generating company 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.

(2) Notwithstanding anything contained in these regulations, the gains or losses in the controllable items of ARR on account of force majeure factors shall be passed on as an additional charge or rebate in ARR over such period as may be laid down in the order of the Commission."

A7: ANALYSIS OF THE AGGREGATE REVENUE REQUIREMENT (ARR) OF HPSEBL FOR THE SECOND CONTROL PERIOD

Introduction

7.1 The Commission has analyzed the Multi Year Tariff (MYT) petition submitted by the HPSEBL (Petitioner) for approval of Aggregate Revenue Requirement (ARR) of the Petitioner and determination of Wheeling and Retail Supply Tariffs for the Control Period (FY12-FY14).

7.2 The Commission held several rounds of technical discussions to validate the data submitted by the Petitioner and sought further clarifications on various issues. The Commission has considered all information submitted by the Petitioner as part of the tariff petition, audited accounts for past years, responses to various queries raised during the discussions and also during the public hearing, for determination of tariff.

7.3 This chapter contains detailed analysis of the MYT petition and various parameters approved by the Commission for determination of ARR for the HPSEBL as a whole.

Base Year

7.4 As per Himachal Pradesh Electricity Regulatory Commission (Terms and Conditions for Determination of Wheeling Tariff and Retail Supply Tariff) Regulations, 2011 the base year for the Second Control Period means the financial year immediately preceding first year of the Control Period(i.e. FY11).

7.5 The Commission directed the Petitioner to submit the audited/provisional accounts for FY11. However, the Petitioner expressed its inability to submit the audited/provisional accounts. In the absence of audited/provisional accounts for FY11, the Commission has considered the annual audited accounts of FY10 and the revised estimates of FY11 submitted by the Petitioner for the purpose of ARR and tariff determination for the Control Period.

7.6 The Commission clarifies that all the expenses projection and trajectory for the Control Period may be revised by the Commission as and when the audited accounts for FY11 are made available.

Sales Forecast

7.7 For projecting the energy sales of the HPSEBL for the Second Control Period, the Commission has taken into account the category-wise actual trend of past sales. The Commission has made use of statistical tools such as time trend analysis which helps in forecasting future values of a variable by fitting a trendline over past values of that variable, and Compounded Annual Growth Rate (CAGR) which gives the smoothed 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. CAGRs corresponding to different lengths of time were calculated for each consumer category and depending on the specific characteristics of each category, either the time trend forecast value or a particular CAGR has been chosen as the basis of sales projection for that category depending on whichever forecast technique fits the actual sales trend better.

7.8 The HPSEBL has projected energy sales by applying the category-wise CAGR of certain years on the estimated sales of FY11, in the following manner:

(1) For Domestic, Street Lighting, Water (and Irrigation) Pumping supply and Temporary categories, the HPSEBL has projected increase in sales at the 3-year CAGR for sales to the respective category.

(2) For Non Domestic Non Commercial (NDNC) and Commercial categories, the HPSEBL has projected sales growth the 2-year CAGR for sales for both categories taken together. For Large Industrial Power Supply too, the HPSEBL has projected increase in sales at by applying 3-year CAGR for the category.

(3) For Small and Medium Supply category as well as the Bulk Supply category, the HPSEBL has projected sales growth taking the 5-year CAGR for the respective category.

7.9 The HPSEBL has estimated sales for FY11 at 6267 MU and projected energy sales within the State of 6774 MU, 7328 MU and 7931 MU for FY12, FY13 and FY14 respectively. However, there were several discrepancies in the demand projections filed as part of the HPSEBL's MYT Petition and the sales reported as per MYT format F1. The Commission has considered the figures projected by the HPSEBL in its tariff petition as the Petitioner's submission.

7.10 For checking the rationale behind sales estimation and to get in-depth information on sales, the Commission analyzed the slab-wise category-wise actual sales figures for FY10 and revised estimates of the same for FY11. The Commission also asked the HPSEBL to provide details of applications pending for new connections to enable the Commission to examine and assess the growth in sales to certain consumer categories, with which the HPSEBL complied.

7.11 The Commission has undertaken a detailed analysis of the sales projected by the HPSEBL. The Commission analyzed the year-on-year variations in sales as well as the short term, medium term and long term trends in sales and computed the CAGR for different lengths of time (2 years, 3 years, 4 years, 5 years, 6 years, 8 years and 10 years) for all categories. The Commission also carried out a time series analysis using past data to forecast the sales in the Second Control Period.

7.12 On the basis of such analysis, the Commission approves total sales of 7090.19 MU, 7567.11 MU and 8022.02 MU for FY12, FY13 and FY14 respectively, which shows a growth rate of 6.65%, 6.73% and 6.01% respectively over the previous year.

7.13 The Commission approves sales to each consumer category as detailed as follows:-

Domestic Supply

(1) The sales to the domestic category have shown a declining trend in the last two years which could be due to increase in usage of CFL in the State. Citing this, the HPSEBL has projected an increase in sales to this category at 5.48%, which is line with 3 years' CAGR for sales to this category. The HPSEBL has also projected an increase of 48,435 domestic consumers in FY11 which is an increase of about 3% over the consumer base in FY10.

(2) The trend analysis of sales to this category shows that the year-on-year variation in sales ranges between 0.17% and 17.27% in recent years, while the 10-year CAGR for sales is 6.27%. The actual growth rate of sales for FY10 over FY09 is low at 0.17%, but the estimate for growth in FY11 over FY10 is significantly higher at 17.27%.

(3) Considering such huge fluctuations in sales growth in the past few years, the Commission has relied on time series analysis in order to forecast the sales to this category in future years, instead of opting for the CAGR method. Accordingly, the Commission has fitted a polynomial time trend over past data with an R-squared coefficient of 0.9999 which demonstrates the near-perfect fit of such trendline analysis for the available data.

(4) On this basis, the Commission has projected total sales of 1290.36 MU, 1356.83 MU and 1423.30 MU to the domestic category in FY12, FY13 and FY14 respectively..

Non Domestic Non Commercial Supply (NDNCS) and Commercial Supply

(1) The NDNCS category was created in the Tariff Order for FY02. In the absence of segregated data for sales to this category prior to FY02, the Commission has assessed the trend in sales for the NDNCS as well as Commercial categories together.

(2) 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 4.73% and 17.73%. The long term (10 years) CAGR for sales is 9.85% while the short term (2 years) CAGR is 8.66%. The actual growth rate of sales in FY10 over FY09 was 7.35% and estimated growth rate in FY11 is 17.73%.

(3) Considering all this, for the Control Period, the Commission has projected an increase in sales to this category at 8.66% for FY12, which is in line with the 2-year CAGR for sales to the NDNCS and Commercial Supply categories considered together. Thereafter, considering the overall economic outlook, the Commission has considered a taper in growth at the rate of 1% for each subsequent year of the Control Period. Hence, the Commission has projected

sales growth of 8.66% in FY12, 7.66% in FY13 and 6.66% in FY14.

(4) Further, taking into account the actual ratio of past sales to NDNCS category and Commercial Supply category separately, out of the total sales made to both categories taken together, the Commission has projected sales of 98.89 MU, 106.47 MU and 113.56 MU to the NDNCS category in FY12, FY13 and FY14 respectively. Similarly, the Commission has projected sales of 388.95 MU, 418.75 MU and 446.65 MU to the Commercial Supply category in FY12, FY13 and FY14 respectively.

Small and Medium Industrial Power Supply

(1) An assessment of the growth in sales to this category indicates variations in growth on a year-to-year basis. Based on actual data for the first six months of FY11, the HPSEBL has estimated an increase of 12.77% in FY11 over FY10.

(2) Further the long term 8-year CAGR for this category is 6.68% while the 3-year CAGR is 4.69%. The HPSEBL has projected an increase of 624 consumers in this category for FY11 over the consumer base of FY10.

(3) After detailed analysis of the trend in sales, pending applications for new connections and the overall economic outlook, the Commission has projected an increase in sales to this category at 4.69% for FY12, which is the 3-year CAGR for this category. Further, considering the economic outlook for industrial activity, the Commission has considered a taper in growth at the rate of 1% for each subsequent year of the Control Period. Hence, the Commission has projected sales growth of 4.69% in FY12, 3.69% in FY13 and 2.69% in FY14.

(4) Therefore, the Commission has projected sales of 213.89 MU, 221.79 MU and 227.76 MU to this category in FY12, FY13 and FY14 respectively.

Large Industrial Power (LS) Supply

(1) An assessment of growth in sales to this category indicates fairly high growth in recent years, along with significant variations in growth on a year-to-year basis with variation in sales ranging from 8% to 35.93%. The long term (10 years) CAGR for sales is 14.53% while the short term (2-year) CAGR is 8.74%. The actual growth rate in sales for FY10 was 8.00% while the expected growth rate for FY11 is 15.46%.

(2) However, it is acknowledged that the major reasons for such high growth in sales in recent years were the incentives offered to industries and liberal industrial policies. Growth in sales to this category in ensuing years will not continue at the same pace because the excise incentives offered by the Central Government to set up industrial units in Himachal Pradesh have ended partly in 2010 and other incentives may end in 2013.

(3) 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 FY12 at 7.74% which is 1% less than the 2-year CAGR for this category. For FY13 and FY14, the Commission has considered a taper in demand growth at the rate of 1% in each subsequent year of the Control Period. Therefore, the Commission projects growth in large industrial demand at 7.74%, 6.74% and 5.74% for FY12, FY13 and FY14 respectively.

(4) Therefore, the Commission has projected sales of 4304.85 MU, 4594.85 MU and 4858.43 MU to this category in FY12, FY13 and FY14 respectively.

Water (and Irrigation) Pumping Supply (WIPS)

(1) An analysis of the trend in actual sales to this category during the last 10 years shows large variations in year-on-year growth in sales with the variation ranging from -3.87% to 15.61%. The long term (10-year) CAGR for sales is 8.57% while the short term (2-year) CAGR is 12.46%.

(2) Considering such huge fluctuations in sales growth in the past few years, the Commission has relied on time series analysis in order to forecast the sales to this category in future years, instead of opting for the CAGR method. Accordingly, the Commission has fitted a polynomial time trend over past data with an R-squared coefficient of 0.9914 which demonstrates an exceptionally high fit of such trendline analysis for the available data.

(3) On this basis, the Commission has projected sales of 470.16 MU, 495.02 MU and 519.88 MU to this category in FY12, FY13 and FY14 respectively.

Street Lighting Supply

(1) An analysis of the trend in sales to this category shows that the long term (10-year) CAGR is 3.90% and the short term (3-year) CAGR is 1.15%. The actual growth rate of sales for F10 is -9.87% but the HPSEBL has estimated the growth rate for FY11 at 6.29%. The HPSEBL has projected sales growth to this category at 3.42% for the Second Control Period.

(2) After considering past trends, the Commission has projected increase in sales to this category at 3.90% for FY12 which is the 10-year CAGR for this category.

(3) Therefore, the Commission has projected sales of 12.95 MU, 13.46 MU and 13.98 MU to this category in FY12, FY13 and FY14 respectively.

Bulk Supply

(1) An analysis of the trend in sales to this category shows that the year on year variation in sales ranges from -15.44% to 35.92% in the past decade. The long

term (10-year) CAGR for sales is 5.75% while the short term (3 years) CAGR is 18.43%.

(2) The actual growth rate of sales for FY10 is 16.59% while expected growth rate for FY11 is even higher at 17.43%. The Commission has projected increase in sales to this category at 17.43% for FY12, which is in line with the 3-year CAGR for sales to this category.

(3) Therefore, the Commission has projected sales to this category at 285.75 MU, 335.57 MU and 394.07 MU respectively.

Temporary Supply

(1) The actual year-on-year growth in sales to this category witnessed in FY10 was 14.42% while the HPSEBL has estimated growth at -6.15% in FY11.

(2) The Commission approves sales to this category for the Second Control Period at the same level as estimated for FY11, i.e. 24.38 MU.

7.14 The Commission estimates the following sales to retail consumers within the State for the Control Period:

Table 80: Approved Energy Sales (MU) for the Control Period

Category	FY12		FY13		FY14	
	Petition	Approved	Petition	Approved	Petition	Approved
Antodaya/BPL	0.49	0.55	0.51	0.58	0.54	0.61
Domestic Supply	1267	1289.81	1337	1356.25	1410	1422.70
Non Domestic Non Commercial	98	98.89	106	106.47	114	113.56
Commercial Supply	346	388.95	384	418.75	427	446.65
Small and Medium Industrial Power	207	213.89	215	221.79	224	227.76
Large Industrial Power Supply	4052	4,304.85	4387	4,594.85	4751	4858.43
Water Pumping Supply	453	470.16	491	495.02	532	519.88
Street Lighting Supply	19	12.95	19	13.46	20	13.98
Bulk Supply	306	285.75	359	335.57	422	394.07
Temporary Metered Supply	25	24.38	28	24.38	31	24.38
Total	**6774**	**7090.19**	**7328**	**7567.11**	**7931**	**8022.02**

Transmission and Distribution Losses

7.15 It was mutually decided between the HPSEBL and the HPPTCL that the HPSEBL will continue to operate and maintain the transmission lines so vested in the HPPTCL with effect from 10th June 2010. However, a formal agreement in this respect was entered into between the HPPTCL and the HPSEBL on 20th November 2010. In accordance with the terms of the agreement, the HPPTCL was required to pay annual charges to the HPSEBL for O&M of transmission lines. This in effect means that transmission lines remain with the distribution licensee for all practical purposes. Therefore, the Commission has decided not to set the separate target for intra-transmission losses and the trajectory set out as follows includes the transmission losses on account of lines transferred to the transmission licensee:

7.16 The Commission acknowledges that post transfer to the HPPTCL of transmission lines of 66 kV and above, all the system left with the Petitioner, including EHV system, shall be deemed to form part of the distribution system only.

7.17 The Petitioner has submitted that during the first Control Period (FY09 - FY11), it erroneously submitted the KVAh based billing data for some of its operating circles, as a result of which its T&D losses were understated to that extent. The Commission approved the following T&D loss reduction trajectory, on the basis of information submitted by the Petitioner after subjecting it to the test of reasonableness:

Table 81: Approved T&D loss reduction trajectory for First Control Period

Year	FY08	FY09	FY10	FY11
T&D losses (%)	13.49%	13.14%	12.79%	12.49%
T&D loss Reduction (%)		0.35%	0.35%	0.30%

7.18 The Petitioner in its MYT Petition has proposed transmission and distribution loss reduction (including the distribution losses of EHV system) from 14.58% during FY10 to 13.60% at the end of the Control Period (FY14). The year-wise break-up of T&D losses proposed by the Petitioner is tabulated as follows:-

Table 82: T&D loss reduction trajectory as proposed by Petitioner

Year	FY11	FY12	FY13	FY14
T&D losses (%)	14.25%	14.00%	13.80%	13.60%
T&D loss Reduction (%)		0.25%	0.20%	0.20%

7.19 . However, the Commission would like to highlight here the few important aspects which have a direct correlation with the distribution losses of the utility :

(1) Sales-mix: LPS category contributes approx 60% of the energy sales in the State. This 60% energy sales happen at high voltage levels (11 kV and above) and the distribution losses at this voltage levels are lower than the average losses. The losses in the LT system are thus on a much higher side and there is a lot of scope for improving the same, apart from that got HT an EHT system.

(2) Capital investment Plan: The utility is planning to have a massive capital investment during the Control Period, including the schemes of replacement of mechanical meters by electro-magnetic meters, replacement of wooden poles by steel poles and other capital works oriented towards loss reduction under R-APDRP schemes.

(3) Loss Profile: The Commission observes that some circles of the utility are reporting higher than average losses and there is a good possibility of reduction of loses in these circles which will ultimately bring down the overall distribution losses of the utility.

7.20 The licensee has proposed a trajectory based on the expected transmission and distribution losses for FY11. The segregation of intra-state transmission losses (occurring on the HPPTCL system) and the distribution losses occurring on the HPSEBL's distribution system has not been given. In absence of this data, the Commission has fixed the trajectory for the total intra-state losses (i.e. intra-state transmission losses of the HPPTCL system and intra-state distribution losses of the HPSEBL system). **The Licensee is directed to take steps for segregation of their losses by providing suitable metering arrangements and/ or entering into suitable agreement with** the **HPPTCL based the system parameters and normal flows within next six months so that segregated losses are available for FY12 onwards and separate trajectories can also be fixed for the transmission losses and distribution losses from the next Control Period.**

7.21 As per the information submitted by the Petitioner, its estimated distribution losses for FY11 will be to the extent of 14.25% , which is 0.33% less than the actual losses of 14.58% registered by it during FY10.

7.22 For the Control Period, the Commission has considered the T&D loss reduction trajectory of 0.25%, 0.50% and 1.00% in FY12, FY13 and FY14 respectively to reach a level of 12.5% by the end of the Control Period. The Commission, however, clarifies that the T&D loss reduction trajectory may be revised once the actual T&D losses for FY11 are submitted by the Petitioner for truing up.

Table 83: Approved T&D losses for the Control Period

Losses (%)	FY11	FY12		FY13		FY14	
		Petition	Approved	Petition	Approved	Petition	Approved
T&D Loss (%)	14.25%	14.00%	14.00%	13.80%	13.50%	13.60%	12.50%

7.23 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:

(1) 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 0.25%. Any under recovery in the revenue realized, if the T&D loss reduction in the first year of the Control Period is below 0.25%, shall be to the account of the Petitioner.

(2) 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 0.75%. Any under recovery in the revenue realized, if the cumulative T&D loss reduction till the second year of the Control Period is

below 0.75% shall be to the account of the Petitioner.

(3) 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 1.75%. Any under recovery in the revenue realized, if the cumulative T&D loss reduction till the second year of the Control Period is below 1.75% shall be to the account of the Petitioner

7.24 As per the clause 15 (1) of MYT Distribution Regulations, 2011 the incentives/ profits arising from achieving loss level better than specified in the loss reduction trajectory shall be shared in the ratio of 60:40 with the licensee and the contingency reserve for the Second Control Period.

7.25 For all the generating stations that are in the Northern Region and wherein the power comes through PGCIL network to Himachal Pradesh, regional losses of 3.50% has been considered by the Commission. For Kahelgaon-II and Barh I & II, Eastern Region losses of 3.0% have also been considered.

Energy Requirement

7.26 The Commission's estimates of energy requirement at distribution periphery for the Control Period are based on the sales and T&D loss reduction trajectory approved by the Commission. The Commission's estimates for power requirement are tabulated as follows:-

Table 84: Approved Energy Requirement for the Control Period

Energy Requirement	FY12		FY13		FY14	
	Petition	Approved	Petition	Approved	Petition	Approved
Sales (MU)	6774	7090	7328	7567	7931	8022
T&D Losses (%)	14.00%	14.00%	13.80%	13.50%	13.60%	12.50%
Energy Requirement at State Periphery for own consumption (MU)	7877	8244	8501	8748	9179	9168

Determination of Aggregate Revenue Requirement

7.27 The Commission has analyzed all the components of the Aggregate Revenue Requirement (ARR) submitted by the Petitioner to approve suitable values for each component, for each year of the Control Period. As per the MYT Regulations, 2011 the ARR includes the following uncontrollable and controllable components:

(1) Uncontrollable Components

(i) Sales

(ii) Power Purchase Cost (including inter-State and intra-State transmission charges)

(2) Controllable Components

(i) Operations and Maintenance Expenses;

(ii) Interest and Finance Charges

(iii) Return on Equity;

(iv) Depreciation, including Advance Against Depreciation;

(v) Non-Tariff Income; and

(vi) Income from other businesses.

Power Purchase

7.28 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 and through bilateral purchase agreements.

7.29 The Commission has exercised due caution in estimating power purchase cost of the Petitioner. The Commission has made reasonable assumptions for PLF, auxiliary consumption and transmission losses to arrive at the quantum of energy available to the HPSEBL during the Control Period.

Source of Power

7.30 The following power generating stations have been considered for the purpose of estimation of power availability for the Control Period:

(1) The HPSEBL's own generating stations

(2) Purchase from Central Generating Stations of NTPC, NHPC, SJVNL, NPCIL and THDC;

(3) Purchase from Baspa, Patikari HEPs and private SHPs up to 5 MW;

(4) Purchase from BBMB and shared stations;

(5) Purchase of Free and Equity power from the GoHP;

(6) Purchase through bilateral short term arrangements;

(7) New Plants expected to be commissioned during the Control Period; and

Allocation in Generating Stations

Allocation from HPSEBL's own stations

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

Table 85: Allocation from HSPEB own stations

Station	FY12 to FY14 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%

Allocation from Central Sector Generating Stations (CSGS)

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

7.33 In addition to the firm share allocation, most of these stations (except Bairasiul, 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.

7.34 The Petitioner's share in CSGS unallocated quota varies from time to time based on the allocation made to HP depending upon power requirement and power shortage in different States. Therefore, the Commission has considered monthly share of firm and unallocated power for HP in CSGS FY09, FY10 and FY11 sourced from the Final Regional Energy Accounts (REA) of March 2009, March 2010 and March 2011 respectively.

7.35 HP's share in Central Sector Generating Stations is summarized as follows:-

Table 86: Firm Allocation from Central Sector Generating Stations (CSGS)

Station	FY12 to FY14 Allocated	Station	FY12 to FY14 Allocated
NTPC		**NHPC**	
Anta GPP	3.58%	Salal	0.99%
Auriya GPP	3.32%	Tanakpur	3.84%
Dadri GPP	3.01%	Chamera I	2.90%
Unchahar-I	1.67%	Chamera II	3.67%
Unchahar-II	2.86%	Uri	2.71%
Unchahar-III	3.81%	Dhauliganga	3.57%
Rihand-1 STPS	3.50%		
Rihand-2 STPS	3.30%	**THDC**	
Singrauli STPS	0.00%	Tehri	2.80%
Kahelgaon – II	1.53%		
		SJVNL	
NPCIL		Nathpa Jhakri HEP	2.47%
NAPP	3.18%		
RAPP (V & VI)	3.40%	**BBMB**	
		BBMB (Old)	Fixed[1]
		BBMB (New)	2.12%
		Dehar	Fixed[2]

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

Table 87: Unallocated Share from Central Sector Generating Stations (CSGS)

Stations	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar
NTPC												
Anta GPP	1.31%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.95%	1.42%	1.42%	1.42%	1.42%
Auriya GPP	0.91%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.65%	0.98%	0.98%	0.98%	0.98%
Dadri GPP	0.61%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.44%	0.66%	0.66%	0.66%	0.66%
Unchahar–I	0.42%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.30%	0.45%	0.45%	0.45%	0.45%
Unchahar–II	1.31%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.95%	1.42%	1.42%	1.42%	1.42%
Unchahar–III	1.28%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	1.09%	1.64%	1.64%	1.39%	1.40%
Rihand-1 STPS	1.30%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.94%	1.41%	1.41%	1.41%	1.41%
Rihand-2 STPS	1.30%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.95%	1.42%	1.42%	1.42%	1.42%
Singrauli STPS	1.31%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.95%	1.42%	1.42%	1.42%	1.42%
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	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
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%
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	1.57%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	1.13%	1.70%	1.70%	1.70%	1.70%
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	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Dulhasti	1.30%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.95%	1.42%	1.42%	1.42%	1.42%
THDC												
Tehri	0.86%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.62%	0.93%	0.93%	0.93%	0.93%
SJVNL												
Nathpa Jhakri	0.86%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.63%	0.94%	0.94%	0.94%	0.94%

Allocation from Shared Stations

7.36 HP has firm allocated share in Shanan, Shanan (extension), UJVNL and Khara. The allocation from these stations considered by the Commission for the Control Period is shown as follows:-

Table 88: Allocation from Shared Stations

Station	FY12 to FY14
Shanan	Fixed[3]
Shanan Ext	Fixed[4]
Yamuna (UJVNL)	24.68%
Khara	20.00%

Allocation from IPPs and Private projects

7.37 The allocation from IPPs and other Private projects as considered by the Commission for the Control Period is shown as follows:-

Table 89: Allocation from IPPs and Private projects

Stations	FY12 to FY14
Baspa-II	88.00%
Patikari	88.00%
Private SHPs	100.00%

Allocation from Free and Equity Power

7.38 GoHP has free power and equity power entitlements in several stations as shown in the table as follows. The HPSEBL gets free and equity power from GoHP during the winter months:

Table 90: Free and Equity Power Entitlement to GoHP

Station	FY12 to FY14
Free Power	
Bairasiul	12.00%
Chamera-I	12.00%
Chamera –II	12.00%
Shanan Share	Fixed[5]
Ranjeet Sagar Dam Share	4.60%
Malana	15.00%

[3] Shanan Share: Fixed share of 1000 KW at 60% PLF
[4] Shanan Ext: Fixed share of 45 MU per annum
[5] Shanan Free Power Share: Fixed share of 500 KW at 60% PLF

Station	FY12 to FY14
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%
Budhil	12.00%
Allian Duhangan	12.00%
Kol Dam	12.00%
Parbati-II	12.00%
Parbati-III	12.00%
Chamera-III	12.00%
Rampur project	12.00%
Karcham Wangtoo	12.00%
Sawra Kuddu	12.00%
Uhl II	12.00%
Equity Power	
Nathpa Jhakri	22.00%

Allocation from New Projects

7.39 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 HPSEBL from these stations for the Control Period. The summary of the same is shown in the table as follows:-

Table 91: Allocation from New Projects

Station	Capacity	FY12 to FY14			
	(MW)	Allocated	Unallocated	Total	GoHP Free Power
Barh II	1980	1.53%	0.00%	0.00%	0.00%
Kol Dam	800	2.75%	15.00%	17.75%	12.00%
Rihand III U-1,2	1000	3.37%	0.00%	3.37%	0.00%
Chamera III	231	2.75%	15.00%	17.75%	12.00%
Parbati II	800	2.75%	15.00%	17.75%	12.00%
Parbati III	520	2.75%	15.00%	17.75%	12.00%
Koteshwar	400	2.51%	0.00%	2.51%	0.00%
Uhl-III	100	88.00%	0.00%	88.00%	12.00%
Ghanvi II	10	88.00%	0.00%	88.00%	12.00%

Station	Capacity (MW)	FY12 to FY14			
		Allocated	Unallocated	Total	GoHP Free Power
Sawra Kuddu	111	35.20%*	0.00%	0.00%	12.00%
Rampur	412	2.47%$	0.00%	2.47%	12.00%
Karcham Wangtoo	1000	0.00%	0.00%	0.00%	12.00%
Budhil	70	0.00%	0.00%	0.00%	12.00%
Malana II	100	0.00%	0.00%	0.00%	12.00%
Kashang I	65	35.20%*	0.00%	0.00%	12.00%
Kashang II & III	130	35.20%*	0.00%	0.00%	12.00%
Sainj	100	35.20%*	0.00%	0.00%	12.00%
Uri II	240	3.33%	0.00%	3.33%	0.00%

* HPSEBL has 40% of 88% of the share left after 12% free power to GoHP
$ Allocation from Rampur HEP is to be decided. Assumed equal to NJPC firm allocation

Energy Availability

Energy Availability from HPSEBL's own stations

7.40 The Commission has estimated net energy available to the Petitioner during the Control Period by considering generation as average of last three years' generation. The Commission has also considered the auxiliary consumption of these plants as per the HPERC Generation Regulations, 2011 and as mentioned in the Generation ARR section of this order.

7.41 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 HPSEBL own generating stations during the Control Period and Petitioner's share of energy in each station are summarized in the table as follows:-

Table 92: Energy Available from HPSEBL Own Stations in FY12 to FY14

Station	Generation (MU)	Aux Consumption (%)	Allocation (%)	HPSEBL Share (MU)
Bhaba	625.60	1.20%	100.00%	618.09
Bassi	300.00	0.70%	100.00%	297.90
Giri	233.50	0.70%	100.00%	231.87
Andhra	56.12	1.00%	100.00%	55.56
Ghanvi	70.84	1.20%	88.00%	61.59
Baner	37.52	1.00%	88.00%	32.69
Gaj	36.91	1.00%	88.00%	32.16
Binwa	27.60	0.70%	100.00%	27.41
Thirot	8.13	0.70%	100.00%	8.07
Gumma	5.00	0.70%	100.00%	4.97
Holi	9.41	0.70%	100.00%	9.34

Station	Generation (MU)	Aux Consumption (%)	Allocation (%)	HPSEBL Share (MU)
Larji	639.93	1.20%	88.00%	556.38
Khauli	38.87	0.70%	88.00%	33.97
SHPs	22.32	0.92%	100.00%	22.11
Total	**2111.75**	**-**	**-**	**1992.10**

Energy Availability from Central Sector Generating Stations (CSGS)

7.42 For NTPC stations, the Commission has estimated available gross generation for the Control Period based on the actual PLF achieved by the plants in previous three years. Net energy sent out is estimated after deducting auxiliary consumption as approved in relevant CERC orders.

7.43 For NHPC's hydro electric projects, the Commission has taken gross generation for the Control Period based on the actual generation achieved by the plants in previous three years, while the same for Tehri and Nathpa Jhakri has been considered as its CEA generation target for FY12.

7.44 The HPSEBL has projected the energy availability from NAPS by applying the average of previous three years month-wise PLF, and has considered the share from RAPS at 60% PLF. The Commission, however, observes that the PLF of NAPS has improved from a low of 21.21% in FY10 to 48.94% in FY11 and for RAPS has improved from 50.72% in FY10 to 74.54% in FY11. As per the CEA program for FY12, the target PLF for NAPS has been set at 58.37% and for RAPS at 73.49%. Keeping in view the improved PLF in last two years and higher target set for FY12, the Commission has considered PLF of 55% for NAPS and 70% for RAPS for the Control Period.

7.45 The energy available from BBMB (old) and Dehar has been assumed at 1.2 LU per day and 15 MW at 60% PLF respectively. Energy availability from BBMB (new) has been considered based on the CEA program energy.

7.46 The effective share of the HPSEBL is applied on the energy sent out to estimate the energy availability for the HPSEBL from respective stations. Energy sent out from the CSGS and the HPSEBL's share of energy in each station are summarized as follows:-

Table 93: Energy Available from Central Sector Generating Stations (CSGS)

Station	Capacity (MW)	PLF (%)	Aux Consumption	Energy Sent Out (MU)	HPSEBL Share (MU)
NTPC					
Anta GPP	419.33	68.14%	3.00%	2428.04	102.86
Auriya GPP	663.36	71.95%	3.00%	4055.42	153.01
Dadri GPP	829.78	73.85%	3.00%	5206.86	172.60
Unchahar-I	420.00	94.20%	9.00%	3153.98	59.23
Unchahar-II	420.00	94.56%	9.00%	3165.93	111.32

Station	Capacity (MW)	PLF (%)	Aux Consumption	Energy Sent Out (MU)	HPSEBL Share (MU)
Unchahar-III	210.00	94.58%	9.00%	1583.26	71.40
Rihand-1 STPS	1000.00	94.33%	8.50%	7561.27	313.92
Rihand-2 STPS	1000.00	97.22%	6.50%	7962.79	314.98
Singrauli STPS	2000.00	93.13%	6.50%	15255.98	100.13
Kahelgaon – II	1500.00	70.68%	9.00%	8451.49	129.31
NPCIL					
NAPP	440.00	55.00%	9.50%	1918.53	61.01
RAPP (V & VI)	440.00	70.00%	9.50%	2441.76	83.02
NHPC					
Salal	690.00		1.00%	3057.72	30.27
Tanakpur	94.20		1.00%	431.36	16.56
Chamera I	540.00		1.20%	2175.14	63.08
Chamera II	300.00		1.20%	1372.85	61.16
Uri	480.00		1.20%	2884.43	78.17
Dhauliganga	280.00		1.20%	1102.52	46.59
Dulhasti	390.00		1.20%	2174.92	14.27
THDC					
Tehri	1000.00		1.20%	2763.44	89.26
Koteshwar	400.00		1.00%	878.08	22.04
SJVNL					
Nathpa Jhakri	1500.00		1.20%	6500.00	176.46
BBMB					
BBMB (Old)	1480.30			Fixed	43.92
BBMB (New)	1480.30		1.00%	4851.00	102.84
Dehar	990.00			Fixed	78.84
Total					**2496.25**

Energy Available from Shared Stations

7.47 HP has fixed allocation from Shanan and Shanan (Extension) at 1 MW at 60% PLF and 45 MU respectively. The Commission has considered the same while projecting the availability from these stations for the Control Period. For UJVNL and Khara, the Commission has considered the energy availability based on the average of last three years.

Table 94: Energy Available from Shared Stations

Station	Capacity (MW)	Aux Consumption (%)	Energy Sent Out (MU)	HPSEBL Share (MU)
Shanan	60.00	-	Fixed	5.26
Shanan (Extension)	50.00	-	Fixed	45.00
Yamuna	474.75	3.00%	1440.16	365.17
Khara	72.00	3.00%	305.65	62.87

Allocation from IPPs and Private projects

7.48 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 the HPSEBL 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 the HPSEBL from Patikari HEP has been considered at 68.66 MU, after reducing the 12% free power entitlement of GoHP in Patikari HEP.

Table 95: Energy Available from Baspa and Patikari

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

7.49 For projecting the energy availability from private small hydro projects (SHPs) up to 5 MW, the Commission has considered capacity additions of private SHPs for each year of the Control Period as submitted by the HPSEBL. Further, 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.

7.50 The energy available from private SHPs during the Control Period as considered by the Commission is shown in the table as follows:-

Table 96: Energy Available from Private SHPs (MU)

Particulars	Capacity	Generation (MU)			
	MW	FY11	FY12	FY13	FY14
Existing Capacity					
2010-11	171.75	484.87	594.59	594.59	594.59
New Capacity					
2011-12	37.10		64.22	128.44	128.44
2012-13	30.40			52.62	105.24
2013-14	40.00				69.24
Total	**107.50**		**64.22**	**181.06**	**302.92**
Grand Total	**279.25**	**484.87**	**658.81**	**775.65**	**897.51**

Energy Available from Free and Equity Power

7.51 The GoHP has 12% free power share in five the HPSEBL power plants viz. Ghanvi, Baner, Gaj, Larji and Khauli in, three NHPC plants (i.e. Bairasiul, Chamera-I and Chamera-II), Shanan (500 KW), 4.6% in Ranjeet Sagar Dam, 12% in Baspa II and Nathpa Jhakri, 12% in Patikari, Budhil, Allian Duhangan and 15% in Malana. GoHP also has 22% equity share in Nathpa Jhakri. In addition to this, GoHP is scheduled to receive free power from various new stations as and when they get commenced.

7.52 GoHP has agreed to provide free power from these plants to the HPSEBL during October to April, when HPSEBL is deficit in energy.

7.53 For projection of power availability in the Control Period, the Commission has considered the free power to be available to the Petitioner. However, the Petitioner is expected to decide on commercial terms before deciding to avail free power from GoHP.

7.54 The Commission has analysed the cost of Nathpa Jhakri equity power received by the HPSEBL and observes that the ex-bus rate ranges between 239.15 Paise/KWh to 549.80 Paise/KWh with an average ex-bus rate of 418.05 Paise/KWh. However, the rate for Nathpa Jhakri SoR power is 291.89 Paise/KWh, which is substantially lower than Nathpa Jhakri equity power. As the quantum of power purchased from Nathpa Jhakri equity power is around 550 MU in FY11 the power purchase cost is comes to Rs 247.78 Cr which is substantial. The equity power from Nathpa Jhakri has not been considered in the availability for the Control Period. **The Commission directs the Petitioner to use commercial prudence while purchasing equity power from Nathpa Jhakri equity power.**

7.55 The table as follows shows the Commission's estimates of energy availability to the HPSEBL plant-wise:-

Table 97: Energy Available Free Power (MU)

Station	Total Energy Available (MU)	Aux Consumption (%)	Free Power Available to GoHP	Free Power Available to HPSEBL (MU)
Baira Siul	665.73	0.70%	12.00%	31.98
Chamera-I	2175.14	1.20%	12.00%	80.51
Chamera-II	1372.85	1.20%	12.00%	54.34
Shanan Share*	2.63		Fixed	1.52
Ranjeet Sagar Dam Share	1312.94	1.00%	4.60%	28.91
Malana $	346.50	1.00%	15.00%	12.86
Baspa-II	1193.25	1.64%	12.00%	39.03
Patikari+Toss	78.02	0.00%	12.00%	4.26
Nathpa Jhakri	6422.00	1.20%	12.00%	274.27
Ghanvi	69.99	1.20%	12.00%	3.92
Baner	37.14	1.00%	12.00%	1.61
Gaj	36.55	1.00%	12.00%	1.94
Larji	632.25	1.20%	12.00%	26.87
Khauli	38.60	0.70%	12.00%	1.72
Budhil	0.00	1.00%	12.00%	0.00
Allian Duhangan	671.22	1.00%	12.00%	29.94
Kol Dam	0.00	1.00%	12.00%	0.00
Parbati-II	0.00	1.00%	12.00%	0.00
Parbati-III	0.00	1.00%	12.00%	0.00
Chamera-III	292.15	1.00%	12.00%	13.03
Rampur project	0.00	1.20%	12.00%	0.00

Station	Total Energy Available (MU)	Aux Consumption (%)	Free Power Available to GoHP	Free Power Available to HPSEBL (MU)
Karcham Wangtoo	1126.94	1.20%	12.00%	47.07
Sawra Kuddu	0.00	1.20%	12.00%	0.00
Uhl-III	0.00	1.20%	12.00%	0.00
Ghanvi II	0.00	1.00%	12.00%	0.00
Malana II	0.00	1.20%	12.00%	0.00
Kashang I	0.00	1.20%	12.00%	0.00
Kashang II & III	0.00	1.20%	12.00%	0.00
Total	**16473.90**			**653.78**

Table 98: Energy Available Equity Power (MU)

Station	Total Energy Available	Aux Consumption	Energy Sent Out	Equity Power Available to GoHP	Equity Power Available to HPSEBL
Equity Power	6500.00	1.20%	6422.00	1412.84	0.00

Energy Available from New Projects

7.56 The Commission has considered the commissioning schedule of the future stations based on data available from CEA and as per information submitted by the HPSEBL.

7.57 Energy available from these 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 25% to 45% PLF for hydro plants depending the duration of generation during the commission year. Auxiliary consumption has been assumed at 9% for coal fired thermal projects and 1% for hydro projects (including 0.5% transformational loss).

7.58 Energy availability to the HPSEBL in the Control Period from future projects as considered by the Commission is summarized as follows:-

Table 99: Energy Available from New Projects (MU)

Station	FY12	FY13	FY14	HPSEBL Allocation	Energy available to HPSEBL		
				%	FY12	FY13	FY14
Barh II		1156.32	6552.48	1.53%	0.00	16.10	91.23
Kol Dam			3153.60	17.75%	0.00	0.00	554.17
Rihand III U-1,2		4380.00	7008.00	3.37%	0.00	134.32	214.91
Chamera III	295.10	910.60	910.60	17.75%	51.86	160.02	160.02
Parbati II				17.75%	0.00	0.00	0.00
Parbati III			569.40	17.75%	0.00	0.00	100.06
Koteshwar	886.95	1576.80	1576.80	2.51%	22.04	39.18	39.18

Station	FY12	FY13	FY14	HPSEBL Allocation	Energy available to HPSEBL		
				%	FY12	FY13	FY14
Uhl-III	0.00	0.00	394.20	88.00%	0.00	0.00	342.73
Ghanvi II		39.42	39.42	88.00%	0.00	34.34	34.34
Sawra Kuddu			109.39	35.20%	0.00	0.00	38.04
Rampur			812.05	2.47%	0.00	0.00	19.82
Kashang I			256.23	35.20%	0.00	0.00	89.11
Kashang II & III				35.20%	0.00	0.00	0.00
Uri II	219.00	525.60	525.60	3.33%	7.21	17.29	17.29

REC Mechanism

7.59 The Commission has also considered availability of power of 18 MW under REC mechanism for the Control Period.

Table 100: Energy Available from REC Mechanism (MU)

Station	FY12	FY13	FY14
REC Mechanism	10.51	70.96	70.96

Other Sources, Bilateral and Short Term Arrangements

7.60 For the purpose of projecting 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 Commission has not made any provision for banking of power and considered that the surplus and deficits will be met through combination of bilateral sales purchase and banking arrangement undertaken by the Petitioner on commercial principals and with the intention of reducing the power purchase cost. The summary of the same is shown in the tables as follows:-

Table 101: Monthly Demand Supply Position (MU) in FY12

Month	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Total
Total Sales (MU)	538.82	562.94	572.29	578.66	583.90	581.56	589.32	572.15	587.26	616.37	618.58	688.34	7090.19
Intra State T&D Losses	87.72	91.64	93.16	94.20	95.05	94.67	95.94	93.14	95.60	100.34	100.70	112.05	1154.22
Monthly Demand (MU) State Periphery	626.54	654.58	665.46	672.86	678.96	676.23	685.25	665.29	682.86	716.71	719.27	800.39	8244.41
Monthly Availability (MU) State Periphery	536.33	577.75	637.86	765.01	843.30	895.18	784.03	514.69	431.10	398.65	393.22	539.70	7316.81
Deficit Power (MU) State Periphery	90.21	76.84	27.60	0.00	0.00	0.00	0.00	150.60	251.76	318.06	326.06	260.69	1501.81
Surplus Power (MU) State Periphery	0.00	0.00	0.00	92.15	164.35	218.94	98.77	0.00	0.00	0.00	0.00	0.00	574.21

Table 102: Monthly Demand Supply position (MU) in FY13

Month	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Total
Total Sales (MU)	575.07	600.81	610.79	617.58	623.18	620.68	628.96	610.64	626.77	657.83	660.18	734.64	7567.11
Intra State T&D Losses	89.75	93.77	95.33	96.39	97.26	96.87	98.16	95.30	97.82	102.67	103.03	114.65	1180.99
Monthly Demand (MU) State Periphery	668.68	698.61	710.22	718.12	724.63	721.72	731.34	710.04	728.80	764.92	767.66	854.23	8798.97
Monthly Availability (MU) State Periphery	598.31	611.11	671.55	801.60	898.87	945.12	856.87	560.88	464.42	474.34	471.31	634.30	7988.67
Deficit Power (MU) State Periphery	70.37	87.50	38.67	0.00	0.00	0.00	0.00	149.16	264.38	290.58	296.35	219.93	1416.94
Surplus Power (MU) State Periphery	0.00	0.00	0.00	84.37	171.81	219.13	124.94	0.00	0.00	0.00	0.00	0.00	600.25

Table 103: Monthly Demand Supply position (MU) in FY14

	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Total
Total Sales (MU)	609.64	636.92	647.51	654.71	660.64	657.99	666.77	647.34	664.44	697.37	699.87	778.80	8022.02
Intra State T&D Losses	87.09	90.99	92.50	93.53	94.38	94.00	95.25	92.48	94.92	99.62	99.98	111.26	1146.00
Monthly Demand (MU) State Periphery	708.88	740.61	752.92	761.29	768.19	765.11	775.31	752.73	772.61	810.90	813.81	905.58	9327.93
Monthly Availability (MU) State Periphery	709.32	762.60	851.47	1012.68	1120.16	1168.78	1058.60	682.91	563.23	519.35	536.46	760.38	9745.92
Deficit Power (MU) State Periphery	0.00	0.00	0.00	0.00	0.00	0.00	0.00	69.81	209.38	291.55	277.34	145.20	993.30
Surplus Power (MU) State Periphery	0.43	21.99	98.55	251.38	351.97	403.67	283.29	0.00	0.00	0.00	0.00	0.00	1411.29

7.61 As shown in the tables above, the HPSEBL is power deficit in winter months and power surplus in summer months. Thus, it is considered that the HPSEBL would enter into commercial agreements with other states/ buyers including banking arrangement during the summer months to partly offset the deficit in the winter months. The summary of short term power purchase considered by the Commission is shown as follows:-

Table 104: Power Purchase through Banking and Short Term Arrangements (MU)

Particulars	FY12	FY13	FY14
Total Deficit at State Periphery (MU)	1501.81	1416.94	993.30
Inter State Transmission Losses (%)	3.50%	3.50%	3.50%
Total Deficit at Ex- Bus (MU)	1556.28	1468.33	1029.32
Deficit Power Procured through			
Market Purchase and Bilateral Arrangements	1556.28	1468.33	1029.32

Power Purchase Cost

Generation cost of HPSEBL own stations

7.62 The cost of generation from the HPSEBL's own generating stations have been determined by the Commission in accordance with the HPERC Generation Tariff Regulations, 2011 and detailed in Chapter A6: of the order and have been considered a part of the power purchase cost for the HPSEBL's distribution function.

Cost of Power of Central Sector Generating Stations (CSGS)

NTPC

7.63 The Commission has derived annual fixed charges (in proportion to the Petitioner's share) applicable in FY11 for various central sector generating stations from the actual power purchase cost of FY11 as submitted by HPSEBL in Form 4a. Taking into consideration that CERC is yet to come out with tariff orders for the CSGS under CERC Tariff Regulation 2009, the Commission has provided an additional increase of 3% in fixed cost over and above the fixed cost considered for FY11.

7.64 The variable cost including Fuel Price Adjustment (FPA) for the Control Period has been based upon the power purchase data for FY11, as submitted by the HPSEBL in Form 4a. An escalation of 5% has been applied to arrive at the variable cost for subsequent years. Other Charges (per unit) have been considered to be the same as those paid in FY11 by the HPSEBL as submitted in Form 4a.

7.65 For the recently commissioned plants and new plants to be commissioned during the Control Period, the variable and fixed charges have not been approved yet by the CERC. Thus, in the absence of the CERC tariff orders for these plants, the Commission has considered at the same rate of 300 Paise/KWh as estimated by the HPSEBL for the first year of the plant and escalated at 5% for subsequent years.

7.66 The summary of 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 as follows:-

Table 105: Variable Charges (P/ unit) considered for NTPC Stations

Station	FY12	FY13	FY14
Anta (G)	265.75	279.04	292.99
Auraiya (G)	259.79	272.78	286.42
Dadri (G)	254.93	267.68	281.06
Unchahar-I	203.82	214.01	224.71
Unchahar-II	201.91	212.01	222.61
Unchahar-III	201.54	211.62	222.20
Rihand-I STPS	138.97	145.92	153.22
Rihand-2 STPS	89.53	94.00	98.70
Singrauli STPS	142.40	149.52	157.00
Kahalgaon – II	215.99	226.79	238.12
Rihand-3	-	300.00	315.00
Barh I & II	-	300.00	315.00

Table 106: Fixed and Other Charges considered for NTPC Stations for the Control Period

Station	Fixed Charges (Rs Cr)			Other Charges
	FY12	FY13	FY14	(P/ unit)
Anta GPP	107.66	110.89	114.21	0.65
Auriya GPP	140.98	145.21	149.56	0.00
Dadri GPP	190.96	196.69	202.59	0.00
Unchahar-I	149.52	154.01	158.63	3.90
Unchahar-II	183.21	188.70	194.36	3.36
Unchahar-III	152.54	157.12	161.83	2.54
Rihand-1 STPS	357.46	368.18	379.23	2.71
Rihand-2 STPS	568.45	585.50	603.07	0.00
Singrauli STPS	417.98	430.52	443.44	2.89
Kahalgaon - II	1102.58	1135.66	1169.73	1.63

NHPC

7.67 CERC has recently issued the tariff orders and approved the generation tariff in respect of Salal, Uri, Dulhasti, Tanakpur, and Dhauliganga HEPs for the period 1st April 2009 to 31st March 2014. The Commission has considered the annual fixed cost approved in the respective order for these five stations. For the stations for which the tariff orders are awaited from CERC, the Commission has considered the fixed cost as paid for FY11. The net charges payable has been derived after deducting the free share of power, if any, in the respective stations.

7.68 The summary of the fixed charges considered by the Commission for NHPC stations for the

Control Period is shown in the table as follows:-

Table 107: Fixed Charges considered for NHPC Stations for the Control Period (Rs Cr)

Station	FY12	FY13	FY14
Salal	233.14	240.49	248.56
Tanakpur	81.12	84.47	87.76
Chamera I	200.66	200.66	200.66
Chamera II	348.78	348.78	348.78
Uri	328.68	333.65	338.88
Dhauliganga	270.16	270.47	271.40
Dulhasti	977.72	966.96	956.42

7.69 For the recently commissioned plants and new plants to be commissioned during the Control Period, the variable and fixed charges have not been approved yet by CERC. Thus, in the absence of CERC tariff orders for these plants, the Commission has considered at the same rate of 350 Paise/KWh as estimated by the HPSEBL.

Table 108: Energy Charges (P/ unit) considered for New NHPC Stations

Station	FY12	FY13	FY14
Chamera III	350.00	350.00	350.00
Parbati II			350.00
Parbati III		0.00	350.00
Uri II	350.00	350.00	350.00

NPCIL

7.70 For NPCIL plants, based on the actual power purchase bills for FY11, single part tariff as paid for power received in FY11 has been considered. The summary of the composite variable charges considered by the Commission for NPCIL stations for the Control Period is shown in the table as follows:-

Table 109: Variable Charges (P/ unit) considered for NPCIL Stations

Station	FY12	FY13	FY14
NAPS	204.07	204.07	204.07
RAPS	302.29	302.29	302.29

THDC

7.71 For Tehri HEP, the Commission has considered a composite variable rate of 415.41 P/unit for the Control Period as per the actual power purchase cost as submitted by the HPSEBL in format 4a for FY11.

SJVNL (Nathpa Jhakri)

7.72 For Nathpa Jhakri HEP, the Commission has considered composite rate of 418.05 Paise/KWh paid for power purchased for FY11 for the Control Period.

BBMB

7.73 As per the power purchase agreement with BBMB stations, the HPSEBL 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 HPSEBL in FY11 and has escalated the same by 3 P/ unit, as per the submission made by the HPSEBL.

7.74 For BBMB (new) and Dehar, the Commission has considered variable charges (O&M charges) paid by the HPSEBL in FY11 and escalated the same by 3% for the Control Period. The summary of the variable charges considered by the Commission for BBMB stations for the Control Period is shown in the table as follows:-

Table 110: Variable Charges (P/ unit) considered for BBMB Stations

Station	FY12	FY13	FY14
BBMB (old)	67.48	70.48	73.48
BBMB (new)	44.12	45.45	46.81
Dehar	64.00	65.92	67.89

Cost of Power from Shared Stations

7.75 The cost of power from Shanan, Shanan (extension), UJVNL and Khara, the power purchase rate has been considered at 40 P/unit, 40 P/unit, 34.76 P/unit and 37 P/unit as per the rate paid by the HPSEBL in FY11 for power from these stations.

7.76 For UJVNL, the Commission has considered the Tariff Order (FY2011-12) for UJVNL which approved paise 58.95/ KWh as the pooled average cost of power for FY12. The same rate has been considered for the Control Period.

Table 111: Variable Charges (P/ unit) considered for Shared Stations

Station	FY12	FY13	FY14
Shanan	40.00	40.00	40.00
Shanan (Ext)	40.00	40.00	40.00
Yamuna (UJVNL)	58.95	58.95	58.95
Khara	37.00	37.00	37.00

Cost of Power from IPPs and Private projects

7.77 The Commission has considered the Annual Fixed Cost for Baspa at Rs 269.85 Cr for FY12, Rs 268.54 Cr for FY13 and at Rs 251.69 Cr for FY14 on the basis of the tariff order dated 15 July 2011 for Baspa HEP.

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

7.79 As per the PPAs entered into by the HPSEBL with private SHPs (upto 5 MW), power is purchased at the rates of 250 paise/unit and 295 paise/unit depending on the date of the PPA entered. The Commission has also allowed certain pass through in these basic rates. Some of the cases are presently subjudice. The Commission, for the purpose of projecting the cost of power purchase from these SHPs, has considered an average rate of 255 paise/unit.

Cost of GoHP Free Power

7.80 As per the Commission's Order dated 7th June 2010, the rate of free power available to the HPSEBL from GoHP has been fixed at 319 paise/unit (inclusive of 4 paise/unit trading margin) for FY11. For the purpose of projecting the power purchase cost for the Control Period the Commission has considered 296 paise/unit (exclusive of trading margin) as the rate of free power available to the HPSEBL from GoHP for the entire Control Period as per free power Order dated 14th July 2011. The Commission would like to clarify that the rate of free power considered by the Commission for FY13 and FY14 is provisional and would be trued up as per the free power orders for FY13 and FY14..

Cost of power from New Projects

7.81 The Commission has considered the rate of energy purchased from the new projects during the Control Period at the same rate as specified by the HPSEBL in its Petition.

Table 112: Energy Charges (P/ unit) considered for New Hydro Stations

Station	FY12	FY13	FY14
Koldam	-	-	350.00
Koteshwar	350.00	350.00	350.00
Rampur	-	-	350.00

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

7.82 The Commission has analyzed the power purchase and sale data submitted by the HPSEBL for FY10 and FY11 and observed that it has purchased power through UI at an average rate of Rs. 3.48/ KWh in both FY10 and FY11 and sold surplus power at a rate of Rs 4.40/ KWh in FY10 and Rs 2.98/ KWh in FY11. Thus, the Commission has considered the bilateral/market purchase from inter-State sources at Rs 3.50 per unit for the Control Period.

7.83 The Petitioner is directed to undertake purchase and sale of power based on commercial interest of the HPSEBL with Rs 3.50/KWh as the upper ceiling price for purchase of deficit power and lower ceiling price for sale of surplus power.

7.84 The summary of power purchase cost approved by the Commission for the Control Period is shown in the table as follows:-

Table 113: Approved Power Purchase Cost (Rs Cr) for the Control Period

Station	FY12		FY13		FY14	
	Quantum (MU)	Cost (Rs Cr)	Quantum (MU)	Cost (Rs Cr)	Quantum (MU)	Cost (Rs Cr)
NTPC						
Anta GPP	102.86	31.96	102.86	33.47	102.86	35.04
Auriya GPP	153.01	45.07	153.01	47.22	153.01	49.47
Dadri GPP	172.60	50.33	172.60	52.72	172.60	55.23
Unchahar-I	59.23	15.11	59.23	15.80	59.23	16.52
Unchahar-II	111.32	29.29	111.32	30.61	111.32	31.99
Unchahar-III	71.40	21.45	71.40	22.38	71.40	23.34
Rihand-1 STPS	313.92	59.32	313.92	61.94	313.92	64.69
Rihand-2 STPS	314.98	50.68	314.98	52.77	314.98	54.94
Singrauli STPS	100.13	17.29	100.13	18.09	100.13	18.92
Kahelgaon – II	129.31	45.01	129.31	46.91	129.31	46.81
NPCIL						
NAPS	61.01	12.45	61.01	12.45	61.01	12.45
RAPS	83.02	25.10	83.02	25.10	83.02	25.10
NHPC						
Salal	30.27	2.62	30.27	2.71	30.27	2.80
Tanakpur	16.56	3.54	16.56	3.69	16.56	3.83
Chamera I	63.08	6.61	63.08	6.61	63.08	6.61
Chamera II	61.16	17.66	61.16	17.66	61.16	17.66
Uri	78.17	10.12	78.17	10.27	78.17	10.44
Dhauliganga	46.59	12.97	46.59	12.99	46.59	13.03
Dulhasti	14.27	7.29	14.27	7.21	14.27	7.13
HPSEBL						
Bhaba	618.09	20.27	618.09	20.27	618.09	20.27
Bassi	297.90	22.23	297.90	22.13	297.90	21.29
Giri	231.87	13.85	231.87	13.85	231.87	13.85
Andhra	55.56	5.82	55.56	5.82	55.56	5.82
Ghanvi	61.59	12.91	61.59	12.63	61.59	7.63
Baner	32.69	7.98	32.69	7.97	32.69	7.97
Gaj	32.16	7.62	32.16	7.61	32.16	7.61
Binwa	27.41	3.95	27.41	3.95	27.41	3.95
Thirot	8.07	4.27	8.07	4.27	8.07	4.27
Gumma	4.97	3.28	4.97	3.28	4.97	2.26
Holi	9.34	2.27	9.34	2.27	9.34	2.27

Station	FY12		FY13		FY14	
	Quantum (MU)	Cost (Rs Cr)	Quantum (MU)	Cost (Rs Cr)	Quantum (MU)	Cost (Rs Cr)
Larji	556.38	150.77	556.38	140.89	556.38	132.68
Khauli	33.97	9.91	33.97	8.83	33.97	8.47
Nogli	6.69	2.14	6.69	2.14	6.69	2.14
Chaba	7.56	1.39	7.56	1.39	7.56	1.39
Rukti	0.67	0.57	0.67	0.57	0.67	0.57
Rongtong	1.60	1.12	1.60	1.12	1.60	1.12
Chamba	0.25	0.36	0.25	0.36	0.25	0.36
Killar	0.69	0.83	0.69	0.83	0.69	0.83
Sal-II	4.65	0.88	4.65	0.88	4.65	0.88
THDC						
Tehri	89.26	37.08	89.26	37.08	89.26	37.08
BBMB						
BBMB Old	43.92	2.96	43.80	3.09	43.80	3.22
BBMB New	102.84	4.41	102.84	4.41	102.84	4.41
Dehar	78.84	4.90	78.84	4.90	78.84	4.90
Shared Stations						
Shanan	5.26	0.21	5.26	0.21	5.26	0.21
Shanan Ext	45.00	1.80	45.00	1.80	45.00	1.80
Yamuna	365.17	21.53	365.17	21.53	365.17	21.53
Khara	62.87	2.33	62.87	2.33	62.87	2.33
SJVNL						
Nathpa Jhakri (SOR)	176.46	63.24	186.52	66.85	186.52	66.85
IPPs						
Baspa – II	1050.06	269.85	1050.06	260.54	1050.06	251.69
Patikari	68.66	15.45	68.66	15.45	68.66	15.45
Private SHPs						
Old PPA	594.59	151.62	594.59	151.62	594.59	151.62
New PPA	64.22	16.38	181.06	46.17	302.92	77.24
REC Mechanism	10.51	2.34	70.10	15.63	70.10	15.63
Free Power						
Baira Siul	31.98	9.47	31.98	9.47	31.98	9.47

Station	FY12		FY13		FY14	
	Quantum (MU)	Cost (Rs Cr)	Quantum (MU)	Cost (Rs Cr)	Quantum (MU)	Cost (Rs Cr)
Chamera-I	80.51	23.83	80.51	23.83	80.51	23.83
Chamera-II	54.34	16.09	54.34	16.09	54.34	16.09
Shanan Share	1.52	0.45	1.52	0.45	1.52	0.45
Ranjeet Sagar Dam Share	28.91	8.56	28.91	8.56	28.91	8.56
Malana $	12.86	3.81	12.86	3.81	12.86	3.81
Baspa-II	39.03	11.55	39.03	11.55	39.03	11.55
Patikari	4.26	1.26	4.26	1.26	4.26	1.26
Nathpa Jhakri	274.27	81.18	274.27	81.18	274.27	81.18
Ghanvi	3.92	1.16	3.92	1.16	3.92	1.16
Baner	1.61	0.48	1.61	0.48	1.61	0.48
Gaj	1.94	0.57	1.94	0.57	1.94	0.57
Larji	26.87	7.95	26.87	7.95	26.87	7.95
Khauli	1.72	0.51	1.72	0.51	1.72	0.51
Allian Duhangan	29.94	8.86	29.94	8.86	29.94	8.86
Budhil	0.00	0.00	12.18	3.61	12.18	3.61
Kol Dam	0.00	0.00	0.00	0.00	139.24	41.22
Parbati-II	0.00	0.00	0.00	0.00	0.00	0.00
Parbati-III	0.00	0.00	0.00	0.00	67.64	20.02
Chamera-III	13.03	3.86	40.21	11.90	40.21	11.90
Rampur project	0.00	0.00	0.00	0.00	96.28	28.50
Karcham Wangtoo	47.07	13.93	166.33	49.24	166.33	49.24
Sawra Kuddu	0.00	0.00	0.00	0.00	12.97	3.84
Uhl-III	0.00	0.00	0.00	0.00	16.63	4.92
Ghanvi II	0.00	0.00	2.19	0.65	2.19	0.65
Malana II	0.00	0.00	11.56	3.42	11.56	3.42
Kashang I	0.00	0.00	0.00	0.00	11.29	3.34
Kashang II & III	0.00	0.00	0.00	0.00	0.00	0.00
New Projects						
Rihand-3 Units-1,2	0.00	0.00	134.32	40.30	214.91	67.70
Barh I & II	0.00	0.00	16.10	4.83	91.23	28.74
Koldam	0.00	0.00	0.00	0.00	554.17	193.96
Chamera III	51.86	18.15	160.02	56.01	160.02	56.01
Parbatti II	0.00	0.00	0.00	0.00	0.00	0.00
Parbatti III	0.00	0.00	0.00	0.00	100.06	35.02
Uri II	7.21	2.52	17.29	6.05	17.29	6.05
Koteshwar	22.04	7.71	39.18	13.71	39.18	13.71
Uhl-III	0.00	0.00	0.00	0.00	342.73	119.96

Station	FY12		FY13		FY14	
	Quantum (MU)	Cost (Rs Cr)	Quantum (MU)	Cost (Rs Cr)	Quantum (MU)	Cost (Rs Cr)
Ghanvi II	17.17	6.01	34.34	12.02	34.34	12.02
Sawra Kuddu	0.00	0.00	0.00	0.00	38.04	13.32
Kashang I	0.00	0.00	0.00	0.00	89.11	31.19
Kashang II & III	0.00	0.00	0.00	0.00	0.00	0.00
Rampur	0.00	0.00	0.00	0.00	19.82	6.94
Bilateral						
Bilateral	1556.28	544.70	1432.97	501.54	957.27	335.05
Grand Total	**9023.82**	**2097.21**	**9579.40**	**2252.44**	**10869.28**	**2607.56**

Periodic Review and True up of Power Purchase Cost

7.85 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

7.86 The month wise energy balance for the HPSEBL for the Control Period is shown in the tables as follows:-

Table 114: Energy Balance for FY12 (MU)

FY12	Total	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar
Power Purchase from Outside	4199.53	298.44	345.75	391.55	448.15	443.01	432.99	448.69	310.25	283.62	268.19	241.38	287.50
Deficit Power Purchase	1556.28	93.49	79.62	28.60	0.00	0.00	0.00	0.00	156.06	260.89	329.59	337.88	270.15
Total Purchase outside State	**5755.81**	**391.92**	**425.37**	**420.15**	**448.15**	**443.01**	**432.99**	**448.69**	**466.31**	**544.52**	**597.79**	**579.27**	**557.64**
Less: PGCIL Losses	205.20	13.99	15.16	14.93	15.89	15.82	15.46	16.06	16.65	19.44	21.26	20.60	19.95
Net Purchased for State	**5550.61**	**391.92**	**425.37**	**420.15**	**359.42**	**284.76**	**222.17**	**353.59**	**466.31**	**544.52**	**597.79**	**579.27**	**557.64**
Power Sold Outside State	574.21	0.00	0.00	0.00	92.15	164.35	218.94	98.77	0.00	0.00	0.00	0.00	0.00
Balance Available	4976.40	377.94	410.21	405.21	340.11	262.84	198.59	333.86	449.66	525.08	576.52	558.67	537.70
Power Purchase within State	3268.01	248.60	244.37	260.24	332.75	416.11	477.64	351.39	215.63	157.79	140.18	160.60	262.69
Total Power Available at State Periphery	**8244.41**	**626.54**	**654.58**	**665.46**	**672.86**	**678.96**	**676.23**	**685.25**	**665.29**	**682.86**	**716.71**	**719.27**	**800.39**

Table 115: Energy Balance for FY13 (MU)

FY13	Total	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar
Power Purchase from Outside	4387.11	301.95	349.78	395.83	452.20	448.96	440.11	452.52	311.33	284.29	317.89	289.99	342.25
Deficit Power Purchase	1468.33	72.93	90.68	40.07	0.00	0.00	0.00	0.00	154.57	273.97	301.12	307.10	227.91
Total Purchase outside State	**5855.45**	**374.88**	**440.46**	**435.90**	**452.20**	**448.96**	**440.11**	**452.52**	**465.90**	**558.26**	**619.01**	**597.09**	**570.16**
Less: PGCIL Losses	209.15	13.39	15.69	15.48	16.03	16.03	15.71	16.19	16.64	19.92	22.16	21.37	20.55
Net Purchased for State	**5646.30**	**374.88**	**440.46**	**435.90**	**368.73**	**274.72**	**216.72**	**326.99**	**465.90**	**558.26**	**619.01**	**597.09**	**570.16**
Power Sold Outside State	606.64	0.00	0.00	0.00	83.47	174.25	223.40	125.52	0.00	0.00	0.00	0.00	0.00
Balance Available	5039.65	361.48	424.77	420.42	352.70	258.69	201.01	310.80	449.26	538.34	596.85	575.72	549.61
Power Purchase within State	3759.32	307.20	273.84	289.80	365.42	465.94	520.71	420.55	260.78	190.46	168.06	191.94	304.62
Total Power Available at State Periphery	**8798.97**	**668.68**	**698.61**	**710.22**	**718.12**	**724.63**	**721.72**	**731.34**	**710.04**	**728.80**	**764.92**	**767.66**	**854.23**

Table 116 : Energy Balance for FY14 (MU)

FY14	Total	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar
Power Purchase from Outside	4562.65	328.91	377.88	421.80	481.33	478.28	464.18	479.58	335.87	311.86	296.62	267.40	318.94
Deficit Power Purchase	1029.32	0.00	0.00	0.00	0.00	0.00	0.00	0.00	72.35	216.98	302.12	287.40	150.47
Total Purchase outside State	**5591.98**	**328.91**	**377.88**	**421.80**	**481.33**	**478.28**	**464.18**	**479.58**	**408.22**	**528.84**	**598.74**	**554.80**	**469.41**
Less: PGCIL Losses	202.10	12.01	13.73	15.20	17.27	17.27	16.73	17.36	14.83	19.12	21.53	19.94	17.09
Net Purchased for State	**4180.68**	**328.47**	**355.89**	**323.25**	**229.94**	**126.31**	**60.51**	**196.29**	**408.22**	**528.84**	**598.74**	**554.80**	**469.41**
Power Sold Outside State	1411.29	0.43	21.99	98.55	251.38	351.97	403.67	283.29	0.00	0.00	0.00	0.00	0.00
Balance Available	2769.39	316.46	342.16	308.04	212.67	109.04	43.78	178.92	393.39	509.72	577.21	534.86	452.32
Power Purchase within State	5349.35	392.42	398.45	444.87	548.62	659.15	721.33	596.39	359.33	262.89	233.69	278.94	453.27
Total Power Available at State Periphery	**8118.74**	**708.88**	**740.61**	**752.92**	**761.29**	**768.19**	**765.11**	**775.31**	**752.73**	**772.61**	**810.90**	**813.81**	**905.58**

Transmission Charges

PGCIL Charges- Interstate transmission charges

7.87 For approving the PGCIL charges for the Second Control Period the Commission has considered 5% YoY escalation on the actual transmission charges paid by the Petitioner to PGCIL during FY11. The summary of the PGCIL Charges approved by the Commission for the Control Period are shown in the table as follows:-

Table 117: Approved Inter-State Charges for the Control Period (Rs Cr)

	FY12	FY13	FY14
PGCIL Charges	161.66	169.74	178.23

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

HPPTCL Charges- Intrastate transmission charges

7.89 Himachal Pradesh Power Transmission Corporation Limited (HPPTCL) was formed through an order notified by the State Government vide its No. -MPP-A-(1)-4/2006-Loose, dated September 11, 2008.

7.90 The State Government transferred and vested in the HPPTCL the ownership, operation and maintenance of Transmission lines of 66 KV and above owned by the HPSEBL vide its notification no.-MPP-A(3)-1/2001-IV, dated 21st June, 2010 read with earlier notification of even number dated 10th June, 2010 including the co-ordination of the lines owned and operated by Power Grid Corporation of India (PGCIL), Independent Power Producers (IPPs), Haryana Vidyut Parsaran Nigam Limited (HVPNL) and PSPCL/PSTCL.

7.91 In compliance of these orders of the State Government, the HPSEBL transferred the assets worth Rs. 199.09 Cr to the HPPTCL vide its latter No.-HPSEBL/CE (ES)/AU-4/2010-8648-53 dated 19th November, 2010.

7.92 The HPPTCL was declared State Transmission Utility (STU) by the State Government by the order dated 10th June 2010 and as a result thereof the Commission recognized the HPPTCL as deemed “Transmission Licensee” as per the its order dated July 31, 2010 in petition No. 32 of 2010 filed by the HPPTCL under section 14 and 15 of the Electricity Act, 2003 for grant of Transmission Licensee in the State of Himachal Pradesh.

7.93 Accordingly, the HPPTCL submitted its ARR and Tariff Petition for the Control Period in accordance with the HPERC (Terms and Conditions for Determination of Transmission Tariff) Regulations, 2011.

7.94 On the basis of the approved transmission tariff of the HPPTCL, the intra-transmission charges approved for the distribution business is shown in the table as follows:-

Table 118: Approved Intra-State Charges for the Control Period (Rs. Cr)

Particulars	FY12	FY13	FY14
HPPTCL Charges	11.71	12.05	11.92

7.95 The total transmission charges approved for the Control Period is depicted in the table as follows:-

Table 119: Total Transmission Charges for the Control Period (Rs. Cr)

Particulars	FY12	FY13	FY14
Inter State Transmission Charges	161.66	169.74	178.23
Intra State Transmission Charges	11.71	12.05	11.92
Total Transmission Charges	**173.37**	**181.79**	**190.15**

Operation and Maintenance (O&M) Expenses

7.96 As per the MYT Regulations, 2011 Operation and Maintenance (O&M) expenses shall include: -

(1) salaries, wages, pension contribution and other employee costs;

(2) administrative and general expenses;

(3) repairs and maintenance expenses; and

(4) other miscellaneous expenses, statutory levies and taxes (except corporate income tax).

7.97 As per the MYT Regulations, The O&M expenses for the nth year of the Control Period shall be approved based on the formula given as follows:-

O&Mn = R&Mn + EMPn + A&Gn

Where -

R&Mn = K*GFA n-1

EMPn = (EMPn-1)* (1+Gn) * (CPI inflation)

A&Gn = (A&Gn-1)*(WPI inflation)

'K' is a constant (could be expressed in %). Value of K for each year of the Control Period shall be determined by the Commission in the MYT Tariff order based on licensee's filing, benchmarking of R&M Expenses, approved R&M Expenses vis-à-vis GFA approved by the Commission in past and any other factor considered appropriate by the Commission;

CPI inflation – is the average increase in the Consumer Price Index (CPI) for immediately preceding three years before the base year;

WPI inflation – is the average increase in the Wholesale Price Index (WPI) for immediately preceding three years before the base year;

EMPn – employee costs of the distribution licensee for the nth year;

A&Gn – administrative and general costs of the distribution licensee for the nth year;

R&Mn – repair and maintenance costs of the distribution licensee for the nth year;

GFAn-1 – Gross Fixed Asset of the distribution licensee for the $(n\text{-}1)^{th}$ year;

Gn is a growth factor for the nth year. Value of Gn shall be determined by the Commission in the MYT tariff order for meeting the additional manpower requirement based on licensee's filings, benchmarking, and approved cost by the Commission in past and any other factor that the Commission feels appropriate.

Determination of CPI and WPI Inflation Factor

7.98 Since, the CPI component is considered to contribute towards employee expenses; the Commission has considered the CPI (overall) for Industrial Workers published by the Labour Bureau. The WPI component is linked to A&G costs and hence has been taken from the WPI (overall) published by the Central Statistical Organization.

Table 120: Average increase in CPI and WPI

Year	CPI (Overall)	% Growth YoY	WPI (Overall)	% Growth YoY
2006-07	131.00		114.86	
2007-08	142.00	8.40%	124.82	8.67%
2008-09	157.00	10.56%	127.47	2.12%
2009-10	175.92	12.05%	139.53	9.46%
Average		**10.34%**		**6.75%**

Repairs and Maintenance (R&M) Expenses

7.99 As per the MYT Regulations, 2011 the R&M expenses of the Petitioner for the Control Period has to be determined based on the following formula:

$$R\&M_n = K * GFA_{n-1}$$

Where, 'K' is a constant (expressed in %) governing the relationship between R&M costs and Gross Fixed Assets (GFA) for the n^{th} year.

7.100 During the first Control Period the Commission has determined the value of 'K' for the Control Period as 0.99%, which was the average 'K' for last 4 years. The Petitioner in its tariff petition has claimed K-factor of 0.85% , being the average of the actual R&M expenses as a percentage of opening Gross Fixed Assets of the previous four years (FY07 - FY10).

7.101 The Commission emphasizes that R&M expenses are crucial in order to ensure the quality of supply as well as physical well being of the distribution network. Therefore, the Commission approves K-factor of 0.89% being the average of last 3 years R&M expenses as a percentage of opening GFA, on the basis of approved GFA and actual R&M expenses as submitted by the Petitioner.

7.102 The summary of R&M Expenses approved by the Commission for the Control Period is as shown as follows:-

Table 121: Approved R&M Expenses for the Control Period (Rs Cr)

Particulars	FY12	FY13	FY14
GFA (Opening)	3455.27	3681.25	4087.32
K Factor	0.89%	0.89%	0.89%
R&M Expenses	**30.81**	**32.83**	**36.45**

Employee Expenses

7.103 The Petitioner submitted that the majority of the employees opted for revised pay structure only during FY11. As such, the employee cost as depicted in the audited accounts for FY10 cannot be considered as the base to estimate the employee cost of the Petitioner during the Second Control Period when all the employees will start drawing salary as per the new pay structure.

7.104 Therefore, the Commission has considered the salary expense of March 2011 (for entire HPSEBL), as submitted by the Petitioner, as a base for determining the salary expense of the Petitioner during the Second Control Period (FY12-FY14). The Commission has not considered overtime expenses shown by the HPSEBL while arriving at the base employee expenses.

7.105 The Commission observes that the salary expense of the HPSEBL also includes salary expense for generation function as well as for other functions which are not linked to the distribution function of the Petitioner, like salary expense for Projects and I&P wings.

7.106 Therefore, the Commission directed the Petitioner to submit the details in respect of employees of the Projects and I&P wings, as the Commission feels that it is not appropriate to include the salary cost of these wings in the overall O&M expenses for distribution function as they are not involved in any activity which is related to distribution business of the Petitioner and correspondingly the Commission has not considered the revenue earned by this division for the purpose of arriving at the ARR of the Petitioner for Control Period. **The Commission directs the Petitioner to submit the expenses and revenue earned details of these wings for the current Control Period separately to the Commission to consider it accordingly.** The Commission also feels that I&P wing should work on self sustaining basis and be a source of additional income for the HPSEBL.

7.107 The Petitioner has provided the following information in respect of salary expense of Projects and I&P division as detailed hereunder:

Table 122: Net Employee Cost of Projects and I&P Departments

Employee Cost	Projects	I&P
Employee Cost for FY 11	18.20	5.23
Less : Capitalisation	7.16	5.23
Net Employee Cost	**11.04**	**0.00**

7.108 The Commission has dealt with the salary expenses of the Generation function in earlier part of this Order and accordingly it has reduced the salary expense of generation function to arrive at the salary expense for distribution function which shall be considered as the base for projecting the salary expense of the Petitioner for the Control Period.

Table 123: Employee Cost of HPSEBL for FY11

HPSEBL	HPSEBL – March 2011	Estimate - HPSEBL - Full Year	Employee Cost of Projects Dept	Employee Cost of I&P Dept	Employee Cost of Generation Function	Employee Cost for Distribution function considered for the base year by Commission
Employee's Cost						
Salaries	29.150	349.8	9.91		32.53	307.36
Grade Pay	6.400	76.8	1.78		7.14	67.88
Dearness pay	0.020	0.24	0.11		0.02	0.11
Dearness Allowance	15.560	186.72	4.94		17.36	164.42
Other Allowances	2.550	30.6	0.8		2.85	26.95
Interim relief	0.020	1.48	0.05		0.14	1.29
Overtime	0.150	1.42				0
Total	**53.850**	**647.06**	**17.59**	**5.23**	**60.03**	**568.02**
Medical Expenses Reimbursement	0.550	6.6	0.28		0.61	5.71
Leave Travel Assistance	0.014	0.17	0		0.02	0.15
Earned leave encashment	2.150	24.51	0.33		2.28	21.90
Payment under workmen compensation act	0.020	0.24	0		0.02	0.22
Leave Salary Contribution (employees on deputation)	0.008	0.09	0		0.01	0.08
Total	**2.742**	**31.61**	**0.61**	**5.23**	**2.94**	**28.06**
Staff welfare expenses	0.022	0.26	0		0.02	0.24
Gross Employee Cost	**56.613**	**678.93**	**18.2**	**5.23**	**63.13**	**596.31**
Less: capitalisation	3.900	45.92	7.16	5.23	0	38.76

HPSEBL	HPSEBL – March 2011	Estimate - HPSEBL - Full Year	Employee Cost of Projects Dept	Employee Cost of I&P Dept	Employee Cost of Generation Function	Employee Cost for Distribution function considered for the base year by Commission
Net Employee Cost	**52.713**	**633.01**	**11.04**	**0.00**	**63.13**	**557.55**
Terminal benefits	0.000					
Gratuity	3.950	43.38	0.00			43.38
Pension/Commutation of pension (excluding arrears)	13.960	167.52	0.00			167.52
ex-Gratia	0.009	0.11	0.00			0.11
Medical reimbursement to pensioners	0.400	4.1	0.00			4.1
HPSEBLs Contribution towards DLI	0.050	0.49	0.00			0.49
HPSEBLs contribution towards CPS equal to employees	0.170	1.84	0.00			1.84
Total Terminal Benefits	**18.539**	**217.44**	**0.00**			**217.44**
Total Gross Employee Expenses including Terminal Benefits						**813.75**

7.109 The summary of revised values of employee expenses for FY11 considered by the Commission is shown in the table as follows:-

Table 124: Revised Estimates of Employee Expenses for FY11 (Rs Cr)

Particular	Petitioner's Estimate	Commission's Estimate
Salaries	350.04	307.47
Grade Pay	76.80	67.88
Dearness Allowance	186.72	164.42
Other Allowances	30.6	26.95
Interim relief	1.48	1.29
Overtime	1.42	0
Medical Expenses Reimbursement	6.6	5.71
Leave Travel Assistance	0.17	0.15
Earned leave encashment	24.51	21.90
Payment under workmen compensation Act.	0.24	0.22
Leave Salary Contribution (employees on deputation)	0.09	0.08
Staff welfare expenses	0.26	0.24
Terminal benefits	217.44	217.44
Grand Total (Net)	**896.37**	**813.75**

7.110 The Commission has determined the employee expenses of the Petitioner for the Control Period using the methodology detailed in the MYT Regulations, 2011. In terms of the Regulations, the employee expenses for the n^{th} year of the Control Period (EMPn) shall be determined using the employee expenses for the $(n-1)^{th}$ year and the average increase in the Consumer Price Index (CPI) for immediately preceding three years before the base year as determined above (Table 120).

7.111 However, the Commission has not considered any increase in base salary during the

Control Period as the increase in DA will account for the increase in base salary. Other components of the Salary i.e. DA and other allowances are escalated by escalation factor mentioned above.

7.112 In respect of terminal benefits, the Commission has decided to escalate these at the rate of 5%, which shall be subject to true-up at the end of every year during the Control Period.

7.113 The Commission has also decided to consider the impact of net attrition on the employee cost of the Petitioner as the Commission considers that the employee cost of the Petitioner is on a higher side. Accordingly, on the basis of retirement data submitted by the Petitioner for the Control Period as well as the requirement for new recruitments during the Control Period the net reduction in employee cost is tabulated hereunder:

Table 125: Effect of Net Attrition during the Control Period (Rs. Cr)

Effect of Net Attrition	FY12	FY13	FY14
Retirement during the year	931	1164	1137
Less : Recruitment during the Year	250	250	250
Net Attrition	**681**	**914**	**887**
Salary in the Initial Pay Scales-Officer	40000	40000	40000
Salary in the Initial Pay Scales -Clerk	20000	20000	20000
Average Salary	30000	30000	30000
Cumulative Impact	**22.91**	**51.62**	**84.04**

7.114 For capitalizing the employee expenses for the Control Period, the Commission has considered the capitalization of employee expenses submitted by the Petitioner and has adjusted the same in the ratio of approved capital works in progress (CWIP) and that proposed by the Petitioner.

7.115 The summary of employee expenses approved by the Commission for the Control Period is shown as follows:-

Table 126: Approved Employee Expenses for the Control Period (Rs Cr)

Particulars	FY11	FY12	FY13	FY14
Total Salary Cost (excluding terminal benefits)	596.31	639.69	683.7	728.3
Terminal Benefits	217.44	228.31	239.73	251.71
Less: Effect of Net Attrition	-	22.91	51.62	84.04
Less: Capitalisation	49.28	29.41	86.39	62.75
Net Employee Cost approved	**764.5**	**815.68**	**785.39**	**833.25**

7.116 The Commission has compared the impact of employee cost on per unit of sale for the the HPSEBL with that of Punjab, Haryana and Uttarakhand discoms and as seen from table as follows, the employee cost per unit sale is the highest for the HPSEBL, considering the fact that the 5th Pay Commission arrears do not form part of the Rs 815.68 Cr employee cost approved by the Commission for FY12. Inclusion of the 5th

Pay Commission arrears will lead to a tariff shock for the consumers and hence, the GoHP is requested to consider Grant-in-Aid to the HPSEBL and bear the burden of remaining arrears of Rs 295 Cr (provisional estimates) through one time Grant-in-Aid to the HPSEBL:

Table 127: Employee Cost per unit of Sale - Comparison

Discom	Unit	UPCL	PSPCL	UHBVN	DHBVN	HPSEBL
Approved Sales FY12	MU	7,504	35,676	11,819	16,319	7,090
Employee Cost	Rs Cr	194.62	2,916.98	726.81	443.715	815.68
Employee Cost (per unit Sald)	**P/KWh**	**25.94**	**81.76**	**61.49**	**27.19**	**115.04**

Arrears

7.117 The Petitioner has submitted that 5th Pay Commission recommendations have been adopted from 1st January, 2010 (i.e. the Pay of December 2009).

7.118 The Petitioner further submitted that the 5th Pay Commission recommendations shall have retrospective effect from 1st January, 2006 and accordingly the salary arrears are also due to both employees and pensioners. The Petitioner has projected arrears on account of 5th Pay Commission to the extent of Rs. 400.0 Cr.

7.119 In order to conduct due verification, the Commission directed the Petitioner to submit a detailed working of the arrears claimed under the head of 5th Pay Commission. In response, the Petitioner submitted the detailed working of the arrears claimed on account of 5th Pay Commission amounting to Rs. 326.98 Cr (Rs. 123.36 Cr + Rs. 203.62 Cr) for existing employees, as tabulated hereunder:

Table 128: Petitioner's submission of calculation of 5th Pay Commission Arrears (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**	**Diff (Amount payable)**
FY06 (Jan –Mar 06)	42.45	21.23		15.28	78.96	78.96	21.32	100.28	0	100.28	**21.32**
FY07	177.02	93.8	13.44	83.58	367.84	329.26	88.9	418.16	10.45	428.61	**60.77**
FY08	187.6	93.8	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 (Apr – Nov 09)	121.63	60.81	36.49	118.22	337.15	226.23	61.08	287.31	72.19	359.5	**22.35**
FY10 (Dec 09 – Mar 10)	60.81	30.4	18.24	59.1	168.55	113.11	30.54	143.65	38.79	182.44	**13.89**
Total FY10	182.44	91.21	54.73	177.32	505.7	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**

7.120 However, the Petitioner has not submitted any detailed working in respect of the arrears due to the pensioners/family pensioners.

7.121 In the absence of the complete information, the Commission has provisionally worked out arrears on account of the 5th Pay Commission to the extent of Rs. 394.15 Cr on the basis of the information submitted by the Petitioner. Of the total arrears of Rs. 394.15 Cr, the Commission has already allowed an amount of Rs. 98.59 Cr upto FY11 by way of approved IR considered in the base employee cost in the First APR Order of the first Control Period, as tabulated hereunder.

Table 129: Arrears of 5th Pay Commission Allowed by the Commission upto FY11 (Rs. Cr)

Particulars	FY 07	FY08	FY09	FY10	FY11
IR already Paid	13.44	19.77	20.73	21.76	22.89
Escalation factor			*1.0484*	*1.05*	*1.0516*
Cumulative IR Allowed at the end of year	**13.44**	**33.21**	**53.94**	**75.70**	**98.59**

7.122 In the Second APR order for first MYT Period, the Commission has provisionally allowed the impact of 5th Pay Commission of Rs. 168.82 Cr including an amount of Rs.111.51 Cr on account of arrears of 5th Pay Commission, as tabulated hereunder:

Table 130: Summary of provisional expenses allowed for FY11 (Rs. Cr)

Particulars	Commission's Allowance
Revision in pay scales in FY11	57.31
Arrears:	
Revision in IR in FY11	47.66
Retiree benefit	36.85
Impact of GoHP Orders	27.00
Sub-Total	111.51
Total	**168.82**

7.123 Thus against the total provisional arrears of Rs 394 Cr on account of revision of salary from 1st January 2006 till 30th November, 2009, the Commission already allowed an amount of Rs 98.59 Cr in its Tariff Order upto FY11, by way of inclusion of IR in the base cost and additional amount of Rs. 111.51 Cr in the Tariff Order for FY11. However, the funds corresponding to the provision of Rs. 111.51 Cr as provided in the Tariff Order for FY11 may not be actually available to the Petitioner, keeping in view the fact that the estimated net surplus of Rs. 30.57 Cr ending FY11 is likely to get wiped off in view of the true up order for FY10. Thus effectively there is a gap of Rs. 295 Cr on this account.

7.124 The Commission also observes that against the gross employee cost of Rs 752.77 Cr (Rs 695.46 Cr + Rs 57.31 Cr towards revision of salary in FY11) approved for FY11 by the Commission, the gross employee cost considered by the Commission for FY12 has increased to Rs 868 Cr, an increase of Rs 115.23 Cr. Actual reasonable current cost is being given in this MYT after giving the impact of pay revision. The arrears on account of pay revision are not considered and the impact of these arrears cannot be passed on to the consumers which will increase the tariff abnormally. If the Commission considers remaining arrears of Rs 295 Cr also along with these, the gross employee expenses for FY12 will increase by approximately Rs 411 Cr over approved employee expenses for FY11, which will be difficult to recover from the consumer. Since these payments of arrears are not in the control of the HPSEBL, therefore, the Commission requests the GoHP to consider Grant-in-Aid to the HPSEBL and bear the burden of remaining arrears of Rs 295 Cr (provisional estimates) through one time Grant-in-Aid to the HPSEBL. Commission further directs the HPSEBL to take up the matter with GoHP to provide Grant-in-Aid.

Table 131: Calculation of Balance Arrears (Rs. Cr)

Particulars	Amount
Total Arrears as provisionally approved	394.15
IR allowed upto FY11	98.59
Provisional Arrears allowed in Second APR	111.51
Balance Arrears	**184.06**

Administrative and General (A&G) Expenses

7.125 The Commission has determined the A&G expenses of the Petitioner for the Control Period using the methodology detailed in the MYT Regulations, 2011. Hence, the A&G expenses for the nth year of the Control Period (A&Gn) shall be determined using the A&G expenses for the (n-1)th year (i.e. A&Gn-1) and the average increase in the Wholesale Price Index (WPI) for immediately preceding three years before the base year (Table 120).

7.126 For the purpose of calculation of A&G expenses for the Control Period the Commission has first derived the revised values for the base year by considering the A&G expenses as per the audited accounts for FY10 and the revised estimates of A&G expenses for FY11 submitted by the Petitioner. The summary of revised values of A&G expenses for FY11 considered by the Commission is shown in the table as follows:-

Table 132: Revised Estimates of A&G Expenses for FY11 (Rs Cr)

Particular	Petitioner's Estimate	Commission's Estimate
Administration Charges		
Rent, Rates & Taxes	0.91	0.91
Telephone, Postage & Telegrams	2.41	2.41
Consultancy Charges	1.74	1.00
Conveyance & Travel	13.25	13.25
Regulatory Expenses	3.05	2.00
Income tax updating charges	0.04	0.04
Consumer Redressal Forum	0.44	0.44
Other Charges	0.53	0.53

Particular	Petitioner's Estimate	Commission's Estimate
Incentive awards to employees/outsiders	10.47	0.00
Other Administrative Charges		
Fees & Subscriptions, Books & Periodicals	0.27	0.27
Printing & Stationery	1.41	1.41
Advertisement Expenses	0.51	0.51
Electricity Charges	1.83	1.83
Water Charges/ Cold weather expenses	0.21	0.21
Miscellaneous Expenses	1.72	1.72
Legal Charges	0.24	0.24
Audit Fee	3.70	3.70
Freight Material related Expenses	2.86	2.86
Entertainment Charges	0.03	0.03
Training to Staff	0.12	0.12
Public Interaction Program	0.36	0.36
Public Expenses/ Other professional charges	0.13	0.13
DSM Programme	0.47	-
Total	**46.70**	**33.97**
Less: A&G Expenses Capitalsed	3.05	3.05
Total Administrative Charges	**43.65**	**30.92**

7.127 For the first two years of the Control Period the Commission has decided not to allow any expense under the head of 'Incentive awards to employees/ outsiders' as the Commission envisages that any incentive to employee under APDRP schemes will accrue to the employees only during the last year of the Second Control Period. Therefore, the Commission has allowed Rs. 1.00 Cr under the head of 'Incentive awards to employees/ outsiders for FY14.

7.128 For capitalizing the A&G expenses for the Control Period, the Commission has considered the capitalization of A&G expenses submitted by the Petitioner and has adjusted the same in the ratio of approved capital works in progress (CWIP) and that proposed by the Petitioner.

7.129 The summary of A&G expenses approved by the Commission for the Control Period is shown as follows:-

Table 133: Approved A&G Expenses for the Control Period (Rs Cr)

Particulars	FY11	FY12	FY13	FY14
Average increase in WPI	-	1.0675	1.0675	1.0675
Total A&G Cost Approved	**33.97**	**36.26**	**38.71**	**41.33**
Less: Capitalisation	3.05	1.98	5.61	3.08
Net A&G Cost approved	**30.92**	**34.28**	**33.11**	**39.24**

7.130 The Petitioner in its petition has also submitted an expenditure of Rs 14 Cr as a part of A&G cost for providing cost-free CFL bulbs to domestic consumers during the first two-yeas of the Control Period. As the initiative of providing cost-free CFL bulbs to domestic consumers was taken by the HPSEBL on the direction of the Government of Himachal Pradesh, the Commission requests the Government of Himachal Pradesh to bear the cost during FY12 and FY13 and has not considered this as a part of APR for FY12 and FY13.

Periodic Review and True up of O&M Expenses

7.131 As per the MYT Regulations, 2011, O&M expense is a controllable factor and hence the O&M expenses projected for the Control Period, as per the methodology specified in the MYT Regulations, 2011 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.

7.132 The Commission, however, may revise the O&M trajectory for the Control Period once the audited accounts of FY11 are made available.

Capital Investment

7.133 The HPSEBL in its petition submitted in 30th November, 2010 have proposed capital expenditure of Rs. 1422 Cr (including IDC) during the Second Control Period, however, the complete details were not furnished. Subsequently the Petitioner vide letter dated 31st January, 2011 stated that CAPEX plan is being prepared and will be filed separately. No such plan has been received. However, during the discussions held with the Petitioner, a capex plan of approximately Rs. 3100 Cr was indicated by the Petitioner, which includes investments on the ongoing generation projects also. The Commission, in the event of absence of detailed information, provisionally approves the capital expenditure for the Control Period at Rs. 1485.50 Cr subject to the following conditions:

(1) The provisional approval of the capital investment including capitalization of interest and establishment expenses during the Control Period for the purpose of determination of ARR does not imply the approval of schemes. The Petitioner is directed to submit the complete details of the proposed schemes along with the cost benefit analysis and obtain the scheme wise approval (excluding the central sponsored schemes like R-APDRP and RGGVY etc.) in accordance with the provisions of the Regulations for the capital expenditure to be incurred during each year of the Control Period as per the annual investment plan drawn for the purpose. The licensee shall also indicate the sources of funding including the equity contribution, if any.

(2) The licensee shall undertake only such works as considered viable based on the cost benefit analysis.

(3) The licensee shall ensure the capital cost recoverable from the prospective consumer as per the relevant regulations.

(4) The licensee shall ensure timely completion and compliance of the loss deduction targets as well as various other conditions associated with R-APDRP and RGGVY schemes. In case the licensee fails to get any loan converted into grant as per the provision of R-APDRP due to non compliance of any condition the Commission shall not allow any such loan as pass through in the ARR.

(5) This does not include the deposit works which shall be undertaken only after receipt of estimated cost from the concerned persons.

(6) This also does not include the CAPEX plan for ongoing projects as the capital cost and the tariff for such generation projects shall be determined, on receipt of petition from the licensee by the Commission as per the provisions of the Act, tariff policy and Regulation.

(7) The Petitioner shall submit the quarterly progress report of actual capital investment in the format prescribed by the Commission within one month of the respective quarter.

(8) The Commission would also true-up the capital investment for each year at the end of the Control Period based on the actual capital investment carried out by the Petitioner

Asset Capitalisation

7.134 The Commission has analyzed the available details to consider provisional capitalization for the Control Period and the same would be subjected to true-up at the end of the Control Period. The Petitioner is directed to submit actual details of capitalization for each year for the Control Period by September 30 of the following year to the Commission for scrutiny and year-wise capitalization of assets.

7.135 For approving the capitalization for the Control Period, the Commission has considered the following:-

(1) Opening CWIP in FY11 to be capitalised during the entire Control Period in equal proportion.

(2) The Commission has analysed the data of actual capitalisation done by the Petitioner in the previous years and notes that the rate of capitalisation is really low. Therefore, new investment in any year of the Second Control Period would be capitalized in the ratio of 20:25:25 in the first, second and third year from the inception of the scheme with the remaining to be capitalised only after the end of the Control Period.

7.136 Based on the above, the Commission has determined the following capitalization schedule for the investments proposed during the Control Period. The Commission would like to clarify that capitalization approved as follows is provisional and is subjected to true-up on the basis of actual capital investment made and the schemes commissioned by the Petitioner:

Table 134: Capitalization Schedule for the Control Period (Rs Cr)

Particulars	Investment	FY12	FY13	FY14
New Investment of FY12	554.91	110.98	138.73	138.73
New Investment of FY13	761.78	0.00	152.36	190.44
New Investment of FY14	515.44	0.00	0.00	103.09
Capitalisation of Investment prior to FY12	344.98	114.99	114.99	114.99
Total Capitalization		**225.98**	**406.08**	**547.25**

Table 135: Approved CWIP for the Control Period (Rs Cr)

Particulars	FY11	FY12	FY13	FY14
CWIP (opening)	442.78	344.98	673.92	1029.62
Capital Investment	309.55	554.91	761.78	515.44
Base Expenditure	223.27	499.00	592.00	394.50
Establishment Expenses	58.60	31.39	92.00	65.84
IDC	27.68	24.52	77.77	55.11
Capitalisation	407.34	225.98	406.08	547.25
CWIP (closing)	**344.98**	**673.92**	**1029.62**	**997.80**

Depreciation

7.137 For approving the depreciation for the Control Period, the Commission has first determined the opening and closing GFA of the distribution function. For this the Commission has considered the closing value of assets approved during the first MYT order for distribution and transmission function after excluding assets worth Rs.199.09 Cr transferred to the HPPTCL and the approved capitalization schedule for the Control Period.

7.138 The Commission has calculated the depreciation on the average of GFA for the respective year and since the Petitioner has not prepared a "Fixed Asset Register (FAR)", the Commission has considered the rate of depreciation as 2.50% inline with the practice followed in the previous tariff orders.

7.139 The summary of the GFA and depreciation approved by the Commission for the Control Period is shown as follows:-

Table 136: Approved GFA and Depreciation for the Control Period (Rs Cr)

Particulars	FY11	FY12	FY13	FY14
Opening GFA	3247.01	3455.27	3681.25	4087.32
Addition	407.34	225.98	406.08	547.25
Reduction	199.08	0.00	0.00	0.00

Particulars	FY11	FY12	FY13	FY14
Closing GFA	3455.27	3681.25	4087.32	4634.58
Depreciation Rate	2.50%	2.50%	2.50%	2.50%
Depreciation	**86.27**	**89.21**	**97.11**	**109.02**

Working Capital Requirement

7.140 Based on the approved O&M Expenses, expected receivables and consumer security deposits, the Commission approves the working capital requirement for the Control Period provided in the table as follows:-

Table 137: Working Capital Requirement approved for Control Period (Rs Cr)

Particulars	FY12	FY13	FY14
R&M expenses	30.81	32.83	36.45
A&G expenses	36.26	38.71	42.33
Employee expenses	845.09	871.78	896.00
Total O&M expenses	**912.17**	**943.32**	**974.77**
1/12th of total O&M Expenses	**76.01**	**78.61**	**81.23**
Receivables equivalent to 2 months average billing	511.45	526.06	617.99
Maintenance Spares 40% of the R&M expense for one month	1.03	1.09	1.21
Less: Consumer Security Deposit	284.09	326.70	375.70
Power Purchase Expenses (including transmission cost)	2270.58	2434.24	2797.71
Less: One Month Power Purchase	189.21	202.85	233.14
Working Capital Requirement	**115.19**	**76.22**	**91.58**

Interest and Financing Charges

7.141 The Commission has approved a capital investment plan as well as its capitulation schedule, source of funding and financing for the first MYT Control Period. This capital plan shall be trued-up at the end of the first Control Period. Therefore, for the purpose of determining the funding and financing for the Second Control Period the Commission has considered the approved funding and financing of the first MYT Control Period and approved funding and financing for the additional capitalisation approved for the Second Control Period.

7.142 Accordingly, the Commission has considered the outstanding loans at the end of FY11 approved in the first MYT order and the repayment schedule of the respective loans during the Control Period in addition to the financing requirement for capital expenditure approved by the Commission for the Second Control Period.

7.143 The Petitioner in its petition has proposed to fund the capital expenditure for the Control Period through consumer contribution, debt and grants. The summary of means of finance proposed by the Petitioner in its petition is shown in the table as follows:-

Table 138: Means of Finance proposed by the Petitioner for Control Period (Rs Cr)

Particulars	FY12	FY13	FY14
Funding Requirement	782.51	387.03	392.87
Consumer Contribution	30.00	35.00	40.00
Debt	543.51	97.03	278.37
Equity	209.00	255.00	74.50

7.144 The Commission has analyzed the means of finance for the distribution schemes approved for the Control Period and has considered the following:

(1) 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 approved assets capitalization in each year as the funding requirement for that year of the Control Period.

(2) The Commission has thereafter reduced the Consumer Contribution and grants from the funding requirement determined above. The balance remaining has been considered to be funded through debt and/or equity. As per the MYT Regulations, 2011 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 Petitioner for the past projects and has observed that the most of the projects taken up by the Petitioner have been funded entirely through debt. Thus, the Commission has considered 100% debt funding for the future projects as well.

7.145 The summary of means of finance approved by the Commission for distribution business is shown in the table as follows:-

Table 139: Means of Finance approved by the Commission for Control Period (Rs Cr)

Particulars	FY12	FY13	FY14
Funding Requirement	225.98	406.08	547.25
Less: Consumer Contribution	6.67	17.35	30.05
Less: Grant	46.48	123.73	19.47
Balance Remaining	172.82	265.00	497.73
Funded through Debt	172.82	265.00	497.73
Funded through Equity	0.00	0.00	0.00

7.146 However, on the basis of the information provided by the Petitioner, the Commission observes that the loans taken during the first Control Period (FY09-11) for Capex Works have not been fully utilized for the purpose of investment in fixed assets. Loans taken from various banks are diverted for the purpose of meeting the working capital requirement of the Petitioner. Therefore, pending true-up of capitalisation and financing pattern at the time of final APR of first Control Period, the Commission feels that a proportion of these loans should not be carried forward to be included in the Second Control Period. Therefore, out of the total banks loans of Rs. 283.06 Cr outstanding as on 31st March, 2010, the Commission decided not to consider the 50% of these loans, i.e. Rs 141.53 Cr to be carried forward in the next Control Period.

7.147 The summary of the loans approved (source wise) by the Commission for the Control Period is shown in the table as follows:-

Table 140: Loan Schedule approved for distribution business for the Control Period (Rs Cr)

Closing Balance	FY11	FY12	FY13	FY14
LIC				
Opening Balance	4.69	2.95	1.20	0.00
Addition	0.00	0.00	0.00	0.00
Repayments	1.74	1.74	1.20	0.00
Closing Balance	2.95	1.20	0.00	0.00
PFC				
Opening Balance	27.67	17.90	8.13	7.45
Addition	0.00	0.00	0.00	
Repayments	9.77	9.77	0.68	0.68
Closing Balance	17.90	8.13	7.45	6.77
REC				
Opening Balance	134.12	114.56	82.96	51.36
Addition	0.00	0.00	0.00	
Repayments	19.57	31.60	31.60	31.60
Closing Balance	114.56	82.96	51.36	19.76
RGGY				
Opening Balance	0.60	0.52	0.45	0.37
Addition	0.00	0.00	0.00	0.00
Repayments	0.07	0.07	0.07	0.07
Closing Balance	0.52	0.45	0.37	0.30
Bank Loan				
Opening Balance	4.00	4.00	0.00	0.00
Addition	0.00	0.00	0.00	0.00
Repayments	0.00	4.00	0.00	0.00
Closing Balance	4.00	0.00	0.00	0.00
Non NSLR Bonds				
Opening Balance	201.97	114.21	79.95	45.69
Addition	0.00	0.00	0.00	0.00
Repayments	87.76	34.26	34.26	45.69
Closing Balance	114.21	79.95	45.69	0.00
State Govt Loans				
Opening Balance	16.30	15.25	14.03	12.81
Addition	0.00	0.00	0.00	0.00

Closing Balance	FY11	FY12	FY13	FY14
Repayments	1.05	1.22	1.22	1.67
Closing Balance	15.25	14.03	12.81	11.14
Market Bonds				
Opening Balance	10.00	5.50	0.00	0.00
Addition	0.00	0.00	0.00	0.00
Repayments	4.50	5.50	0.00	0.00
Closing Balance	5.50	0.00	0.00	0.00
New loans for Capex (FY09-11)				
Opening Balance	139.40	363.81	302.90	252.18
Addition	285.32	0.00	0.00	0.00
Repayments	60.91	60.91	50.72	39.02
Closing Balance	363.81	302.90	252.18	213.15
New loans for Capex (FY12-14)				
Opening Balance	0.00	0.00	155.54	376.76
Addition	0.00	172.82	265.00	493.73
Repayments	0.00	17.28	43.78	93.56
Closing Balance	0.00	155.54	376.76	780.94
Total (Closing)				
Opening Balance	**538.75**	**638.70**	**645.16**	**736.43**
Addition	**285.32**	**172.82**	**265.00**	**497.73**
Repayments	**185.38**	**166.36**	**163.54**	**212.28**
Closing Balance	**638.70**	**645.16**	**746.62**	**1032.06**

7.148 The Petitioner has submitted that the debt servicing in respect of the loans availed for assets transferred to the HPPTCL is currently being undertaken by the Petitioner itself. Therefore, for the purpose of approving interest and finance charges for the Petitioner for the Second Control Period, the Commission has initially considered the interest and finance charges on total debt and then netted it by the proportionate interest charges on loans availed for assets transferred to the HPPTCL.

7.149 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 12.00% and the interest on working capital loans has been considered at 13.25%.

7.150 Based on the loans approved for the Control Period, the interest and financing charges approved by the Commission in this ARR are tabulated as follows:-

Table 141: Interest Charges approved for the Control Period (Rs Cr)

Particulars	FY12	FY13	FY14
LIC	0.19	0.05	0.00
PFC	0.32	0.19	0.18
REC	9.69	6.59	3.49
Banks	0.18	0.00	
Non SLR Bonds	10.09	6.53	2.37
State Govt Loans	1.70	1.56	1.39
Market Bonds	0.33	0.00	
Other Short Term			
Interest on New loans for capex (FY09-11)	34.17	28.45	23.85
Interest on New loans for capex (FY12-14)	9.33	31.94	69.46
Interest on Consumer Deposit	6.59	7.58	8.71
Interest on Working Capital	15.26	10.10	12.13
Total Interest Charges	**87.85**	**92.98**	**121.59**
Less: Interest Charges on Loans transferred for HPPTCL assets	0.66	0.51	0.39
Net Interest and Finance Charges	**87.19**	**92.47**	**121.19**

Return on Equity

7.151 As stated above the Commission has approved a capital investment plan as well as its capitulation schedule, source of funding and financing for the first MYT Control Period, which shall be trued-up at the end of the first Control Period. Therefore, for the purpose determining the equity investment in the Second Control Period the Commission has considered the approved equity investment in the first MYT Control Period. The Commission will revise this while final true up for the first Control Period.

7.152 During the Second Control Period the Commission does not envisage any equity investment for the approved capitalisation by the Petitioner due to lack of surpluses/ internal accruals and other priorities. The Commission has, thus, approved ROE on the same base which was approved during the Second Control Period at the rate of 16%, in accordance with its MYT Regulations, 2011, as detailed in the table as follows:-

Table 142: Approved ROE for Control Period (Rs Cr)

Particulars	FY09	FY10	FY11
Distribution Equity	189.00	189.00	189.00
Rate	16.00%	16.00%	16.00%
Approved ROE	**30.24**	**30.24**	**30.24**

7.153 The Commission shall, however, true-up the funding and financing approved at the end of the Second Control Period.

Capitalisation of Expenses

7.154 For capitalization of Employee and A&G expenses the Commission has considered the Employee and A&G expenses capitalization proposed by the Petitioner and has adjusted the same in the ratio of approved capital expenditure to that proposed by the Petitioner for each year of the Control Period. No interest has been capitalized for the schemes that would be commencing during the Control Period as the debt for such schemes would be identified only when these schemes are capitalized.

7.155 The summary of the expense capitalization approved by the Commission is shown in the table as follows:-

Table 143: Approved Expenses Capitalisation for the Control Period (Rs Cr)

Particulars	FY12	FY13	FY14
Employee Expenses Capitalised	29.41	86.39	62.75
A&G Expenses Capitalised	1.98	5.61	3.08
Total	**31.39**	**92.00**	**65.83**

Public Interaction Program

7.156 The Petitioner vide its letter no HPSEB/CE(Comm) SERC-MYT/2011-5495-96 dated 23 June 2011 submitted the annual plan proposed to be under taken under the Public Interaction Programme during FY12. The Commission after evaluating the proposed program approves proposed expenditure of Rs 51.81 lacs to be incurred by the HPSEBL for FY12 vide letter No. HPERC/ 478-A-Vol-II/(TFA Section)/2011-1234 dated 07th July 2011.

7.157 The Commission shall review the progress under this programme on quarterly basis and shall true up the expenditure based on the actual expenditure incurred by the Petitioner under the under the Public Interaction Programme.

Non Tariff Income (NTI)

7.158 The Petitioner has submitted the NTI of Rs. 162.19 Cr, Rs.168.45 Cr and Rs.175.02 Cr for the Control Period.

7.159 The Commission has considered the NTI FY11 as submitted by the Petitioner and an item-wise YoY escalation of 5% is given under the respective heads. The Commission has considered meter rent at a rate of Rs 15 per month for single phase energy meter.

7.160 The Petitioner has invested in the Survey & Investigation Wing of the HPSEBL which has done significant work in the past in terms of identification of projects, potentials studies, carrying out investigations, preparation of PFR/ DPRs etc. As per information supplied by the Petitioner about the Rs. 467.00 Cr is recoverable from various agencies on account of the work done by this agency as well as other agencies of the Petitioner towards survey and investigation and project preparation activities. Therefore, the Petitioner needs to make all efforts to recover these dues in a time bound manner. The Petitioner should also prepare a strategic plan for future activities of this Wing so that it not only functions on self-sustaining basis but also becomes source of income for distribution activities. The Wing has a team of experienced engineers and for enhancing the performance options to accomplish the residual work in a time bound, whereas can also be considered.

7.161 As per the provision of Implementation Agreement (I.A.), costs incurred by the Petitioner up to signing of I.A. along with the 10% annual compound interest is payable, for which claim has to be raised within 2 month of signing of I.A. and payments are required to be made the developers within 3 months after the financial closure with a provision for delayed payments. Therefore, I.A. cast responsibility upon the developers to pay and costs needs to be recovered.

7.162 These claims pertain to all projects, small as well as large whereas the HPSEBL enters into PPA on selective basis. Therefore, the HPSEBL has to keep track of I.As being signed and discharge the obligations to raise claims with the developers on behalf of the GoHP within the stipulated time frame because amounts belong to the HPSEBL. Also interest rate prescribed in I.A. is 10% whereas cost of fund, particularly the working capital, is generally higher. Therefore, delay in realisation leads to revenue loss to the HPSEBL. Accordingly, the HPSEBL needs to take following actions:

(1) Prepare and analyse the status with respect to projects where I.A. have been signed.

(2) Raise claims within 2 months of signing of I.A. in future cases and raise claims where claims have not been raised so far in the I.A.s already signed.

(3) Claims to Govt. Agencies for similar services be raised.

(4) Prepare a time bound plan to recover all pending claims and monitor efficiently.

(5) Take up the matter with the State Govt. with the request to provide for

(i) provision for NOC/ no pending claims to be obtained from the HPSEBL pending by the developers before commissioning of the projects

(ii) provision of option for pre-payment

(iii) provision for dispute resolution in the relevant I.A. clause, to settle claims before seeking remedy under section 86 (f) of the Electricity Act, 2003.

7.163 Out the said amount the Commission has considered that an amount of Rs. 300.00 shall be recovered by the Petitioner and accordingly decides that Rs. 100.00 Cr, Rs 150.00 Cr and Rs 50.00 Cr will be recovered in the three years for the control periods.

7.164 In terms of agreement entered into between the HPPTCL and the HPSEBL, the latter is responsible for operation and maintenance of the transmission lines transferred to the HPPTCL in terms of the transfer scheme, as detailed above. HPPTCL in its ARR petition has projected the O&M expenses payable to the HPSEBL on the basis of set norms.

7.165 The Commission has directed the Petitioner to submit the details of O&M costs recoverable from the HPPTCL. However, the Petitioner had not provided any details. Therefore, the Commission has accepted the O&M expenses claimed by the Petitioner and included it in the NTI of the Petitioner as tabulated hereunder:

Table 144: Approved NTI for the Control Period (Rs Cr)

Particulars	FY12	FY13	FY14
Interest Income from Investments	10.54	11.06	11.62
Interest on loans and Advances to staff	0.61	0.64	0.67
Interest on Advances to Suppliers / Contractors	0.19	0.20	0.21
Income from Trading (other than Electricity)	1.22	1.28	1.35
Income/Fee/Collection against staff welfare activities	0.07	0.07	0.07
Miscellaneous receipts	38.88	40.82	42.86
Delayed payment charges from consumers	12.16	12.77	13.41
Meter Rent	41.92	44.02	46.22
Recovery from theft of energy	32.13	33.73	35.42
Wheeling charges	42.70	44.83	47.08
Misc. charges from consumers	4.17	4.38	4.59
Investigation fees reimbursement	100.00	150.00	50.00
O&M Charges from HPPTCL	4.70	5.18	5.69
Total NTI	**289.29**	**349.00**	**259.20**

Aggregate Revenue Requirement (ARR)

7.166 The table given as follows provides a summary view of the Aggregate Revenue Requirement of Distribution business as approved by the Commission for the Control Period:-

Table 145: Approved ARR of Distribution business for the Control Period (Rs Cr)

Particulars	FY12	FY13	FY14
Power Purchase Expenses	2097.21	2252.44	2607.56
PGCIL Charges	161.66	169.74	178.23
HPPTCL Charges	11.71	12.05	11.92

Particulars	FY12	FY13	FY14
Operation & Maintenance Costs	912.17	943.32	974.77
Employee Cost	845.09	871.78	896.00
R&M Cost	30.81	32.83	36.45
A&G Cost	36.26	38.71	42.33
Interest & Financing Charges	87.20	92.47	121.19
Depreciation	89.21	97.11	109.02
Return on Equity	30.24	30.24	30.24
Public Interaction Program	0.52	0.00	0.00
Less: Non Tariff Income	289.29	349.00	259.20
Less: Capitalisation of Expenses	31.39	92.00	65.83
Aggregate Revenue Requirement	**3069.23**	**3156.38**	**3707.91**

Allocation of Distribution ARR into Wheeling and Retail Supply

7.167 As per the MYT Regulations, 2011 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.

7.168 The Petitioner in its petition has not proposed any allocation of Distribution ARR into Wheeling and Retail Supply business. In the absence of any allocation statement, the Commission has allocated the Distribution ARR into Wheeling and Retail Supply business by considering the following allocation:

Table 146: Allocation of ARR of Distribution business for the Control Period (Rs Cr)

Particulars	Wheeling	Retail Supply
Power Purchase Expenses	0%	100%
PGCIL Charges	0%	100%
HPPTCL Charges	0%	100%
Employee Expenses	70%	30%
R&M Expenses	90%	10%
A&G Expenses	60%	40%
Interest & Financing Charges (other than interest on working capital)	100%	0%
Depreciation	100%	0%
Return on Equity on Wheeling Business	100%	0%
Public Interaction Program	0%	100%
Non Tariff Income (excluding wheeling charges received from other states)	0%	100%
Wheeling charges received from other states	100%	0%

7.169 The summary of Wheeling and Retail Supply ARR for the Control Period is shown as follows:-

Table 147: Approved ARR of Wheeling business for the Control Period (Rs Cr)

Particulars	FY12	FY13	FY14
Operation & Maintenance Costs	641.05	663.02	685.40
Interest & Financing Charges	87.20	92.47	121.19
Depreciation	89.21	97.11	109.02
Return on Equity	30.24	30.24	30.24
Less: Non Tariff Income	42.70	44.83	47.08
Less: Capitalisation of Expenses	21.77	63.84	45.78
Aggregate Revenue Requirement	**783.23**	**774.17**	**853.01**

Table 148: Approved ARR of Retail Supply business for the Control Period (Rs Cr)

Particulars	FY12	FY13	FY14
Power Purchase Expenses	2097.21	2252.44	2607.56
PGCIL Charges	161.66	169.74	178.23
HPPTCL Charges	11.71	12.05	11.92
Operation & Maintenance Costs	271.11	280.30	289.37
Interest & Financing Charges			
Public Interaction Program	0.52	0.00	0.00
Less: Non Tariff Income	246.59	304.16	212.12
Less: Capitalisation of Interest & Expenses	9.61	28.16	20.06
Aggregate Revenue Requirement	**2286.00**	**2382.21**	**2854.91**

Wheeling Charges

7.170 Based on the ARR approved for Wheeling function, the Commission has determined the Wheeling charges for the Control Period as per the methodology specified in the MYT Regulations, 2011. The summary of the approved Wheeling charges for the Control Period is shown as follows:-

Table 149: Approved Wheeling Charges for the Control Period

Particulars	FY12	FY13	FY14
Wheeling ARR (Rs Cr)	783.23	774.17	853.01
Energy Sales (MU)	7090.19	7567.11	8022.02
Wheeling Charges (Rs/ unit)	1.10	1.02	1.06

7.171 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.

A8: TARIFF PHILOSOPHY AND DESIGN

Cost to Serve

8.1 In this chapter, the Commission has elaborated on the detailed methodology and assumptions used for determination of the cost of supply.

8.2 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.

8.3 The Commission has developed a Cost to Serve Model based on information provided by the Petitioner. In subsequent sections, the method of computation of the cost-of-supply for FY12 has been explained, along with details of the assumptions taken by the Commission.

8.4 The Commission in the previous tariff orders has given directions to the Petitioner to submit relevant data to enable computation of the voltage level cost of supply in a more scientific and robust manner, the Petitioner 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.

8.5 The Petitioner while replying to the objection has stated that it has been following the average cost of supply model for determination of tariff and is making efforts to shift to the category wise cost of supply in due course of time. Most other states are also following average cost of supply model for determination of tariff. The Petitioner is trying to bring the level of cross subsidy to ±20% as per the National Tariff policy. The Commission agrees with the Petitioner that the National tariff Policy in Clause 8.3 on tariff design provides as under:

"1. In accordance with the National Electricity Policy, consumers below poverty line who consume below a specified level, say 30 units per month, may receive a special support through cross subsidy. Tariffs for such designated group of consumers will be at least 50% of the average cost of supply. This provision will be re-examined after five years.

2. *For achieving the objective that the tariff progressively reflects the cost of supply of electricity, the SERC would notify roadmap within six months with a target that latest by the end of year 2010-2011 tariffs are within ± 20 % of the average cost of supply. The road map would also have intermediate milestones, based on the approach of a gradual reduction in cross subsidy.*

For example if the average cost of service is Rs 3 per unit, at the end of year 2010-2011 the tariff for the cross subsidised categories excluding those referred to in para 1 *above should not be lower than Rs 2.40 per unit and that for any of the cross-subsidising categories should not go beyond Rs 3.60 per unit."*

8.6 The Commission has accordingly based the tariff fixation exercise mainly on the average cost of supply and has duly kept in mind the need for progressively moving towards the targeted limits of ± 20% of the average cost of supply, which we have achieved and would like to consolidate during this Control Period. However, the Commission has also carried out an exercise to assess voltage wise cost to serve based on the piecemeal data given by the Petitioner in the past and the general perception on the aspects for which no data is available. This voltage wise cost to serve has however been worked out for indicative purposes only. Commission does not find it prudent to fix the tariff on the basis of this model, which involves many assumptions but could also lead to tariff shocks in the event of its adoption. Based on the availability of data, the Commission may consider to progressively move towards the cost to serve philosophy from next control period onwards. The voltage wise projections of cost to serve have been worked out by considering the following assumptions and methodologies.

Assumptions

8.7 The Commission has considered the following assumptions:

(1) 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.

(2) 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.

(3) As the Petitioner has failed to submit authentic information on losses at different voltage level, the Commission has allocated loss uniformly across all voltage levels based upon the sales at that voltage level.

(4) 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 Petitioner in the past.

Methodology

8.8 Power Purchase Cost The total cost of power purchase and own generation (reduced by the component of the sale outside the state) has been distributed over the energy sale on per unit basis. This has been done in view of the fact that the quantum of the energy purchased and generated at 33 kV and 22 kV levels is increasing with the commissioning of more SHPs and bidirectional flows cannot be ruled out. However the other costs of HT system has not been allocated to EHT system

8.9 Cost of Supply to consumers at 66 kV and above has been determined by allocating the cost according to the sales in this network (66 kV and above) and power wheeled through this network. However, out of the total cost at 66 kV, a cost of Rs 10 Cr has been only considered for the sales at 66 kV on account of expenses related metering and billing related infrastructure / manpower cost only for 66 kV sales.

8.10 Cost of Supply to consumers at High Tension (11 kV and above) has been estimated by allocating costs to the sales to HT consumers and power wheeled to reach the LT network. However, out of the total cost at HT, a cost of Rs 30 Cr has been only considered for the sales at HT on account of expenses related metering and billing related infrastructure/ manpower cost only for HT sales. It also proportionally includes the cost incurred during the wheeling of power at 66 kV and above network.

8.11 Cost of Supply for the consumers at Low Tension (below 11 kV) level has been estimated by estimating the distribution cost (below 11 kV) and sales to LT consumers. It also includes the proportional costs incurred for wheeling the power at higher voltage levels (from 220 kV till 11 kV).

Sales at various voltage levels

8.12 The sales at various voltage levels have been estimated based upon assumptions mentioned above, and are reproduced in the table as follows:-

Table 150: Sales at Different Voltage Levels (MU)

S. No	Category	Total Sales (MU)	EHT (≥66kV)	HT (≤11kV)	LT (<11kV)
1	Domestic	1290.36	0.00	0.00	1290.36
2	NDNCS	98.89	0.00	29.67	69.22
3	Commercial	388.95	0.00	58.34	330.61
4	Small and Medium Industrial Power	213.89	0.00	0.00	213.89
5	Large Industrial Power Supply (LIPS)	4304.85	1678.89	2625.96	0.00
6	Water and Irrigation Pumping	470.16	0.00	131.21	338.95
7	Street Lighting	12.95	0.00	0.00	12.95
8	Bulk supply	285.75	0.00	182.54	103.21
9	Temporary Supply	24.38	0.00	0.00	24.38
	Total (inside State)	**7090.19**	**1678.89**	**3027.73**	**2383.57**

Cost Segregation

8.13 All the costs are divided into Generation, Transmission, and Distribution, in the following manner.

(1) **Generation and Power purchase cost:** The Commission has considered the approved generation and power purchase cost (including transmission cost) at

Rs 2062.31 Cr.

(2) **Cost of wheeling at EHT:** The Commission has estimated cost of wheeling at EHV at Rs. 263.55 Cr based on EHV component of the GFA, (wheeling cost of Rs 253.55 Cr plus Rs 10 Cr towards metering, billing and collection which is reflected in the distribution cost). Out of Rs 263.55 Cr, Rs 253.55 Cr has been apportioned to sales at all voltage level, and Rs 10 Cr has been allocated only to the sales at EHT level.

(3) **Distribution cost:** For arriving at the CoS, the Commission has considered the distribution cost of Rs 525.10 Cr after deducting Rs 10 Cr towards the metering, billing and collection cost incurred for the consumers in the EHT system from the Wheeling and Retail Supply cost of Rs 535.10 Cr. The distribution cost has further been divided into HT and LT network costs, according to the proportion of sales in these networks. Out of HT distribution cost of Rs 293.80 Cr, Rs 231.29 Cr has been apportioned to sales at HT and LT voltage level respectively and Rs 30 Cr has been allocated only to the sales at HT level.

8.14 The approved CoS at different voltage levels for determination of tariff is shown in the table as follows:-

Table 151: Cost to Serve

S. No.	Particulars	Generation bus bar	EHT (≥66 kV)	HT (≥11 kV)	LT (<11 kV)	Total
1	Energy Input (MU)	8244.41	8244.41	6565.51	3537.79	
2	Sales at respective level (MU)		1678.89	3027.73	2383.57	7090.19
3	Cost at respective level (Rs Cr)	2062.31	263.55	263.80	231.29	2860.96
4	Average Power Purchase Cost for per unit of sales (Rs/unit)	2.91				
5	**Cost Allocation (Rs/unit)**					
	Power Purchase Cost		2.91	2.91	2.91	
	Transmission Cost		0.43	0.37	0.37	
	Distribution Cost (≥ 11 kV)			0.59	0.49	
	Distribution Cost (< 11 kV)				0.97	
6	**Cost of Supply (Rs/unit)**		**3.34**	**3.87**	**4.74**	**4.04***

**Rs 4.04 per unit is the average cost of supply*

Tariff Principles

8.15 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 as follows:-

(1) the principles and methodologies specified by the Central Commission for determination of the tariff applicable to generating companies and transmission licensees;

(2) the generation, transmission, distribution and supply of electricity are conducted on commercial principles;

(3) the factors which would encourage competition, efficiency economical use of the resources, good performance and optimum investments;

(4) safeguarding of consumers' interest and at the same time, recovery of the cost of electricity in a reasonable manner;

(5) the principles rewarding efficiency in performance;

(6) multi-year tariff principles;

(7) that the tariff progressively, reflects the cost of supply of electricity, and also reduces and eliminates cross-subsidies within the period to be specified by the Appropriate Commission;

(8) the promotion of co-generation and generation of electricity from renewable sources of energy;

(9) the National Electricity Policy and Tariff Policy.

8.16 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.

8.17 Based on the analysis of the cost to serve it is seen that the average cost of supply as determined for FY12 is Rs. 4.04 per unit, whereas the average realization from revenue at existing tariffs in FY12 is estimated to be only Rs. 3.71 per unit.

8.18 Further, at existing tariffs, the revenue gap of the Petitioner as estimated by the Commission would be Rs. 227.22 Cr in FY12

Table 152 Projection of revenue in FY12 at Existing Tariff (Rs. Cr)

Category	Petitioner's Submission	Commission's Analysis
Domestic	367.23	372.63
BPL		
NDNCS	49.95	49.14
Commercial Supply	181.53	196.99
Small and Medium Supply	78.54	80.81
Large Supply	1605.03	1628.18
Water and Irrigation Pumping Supply	167.21	163.96
Street Lighting	7.51	5.23
Bulk Supply	132.29	120.00
Temporary Supply	19.15	16.40
Total	**2,608.44**	**2633.34**

Table 153 Commission's Analysis of the Revenue-Expenditure position of the Petitioner FY12 at Existing Tariff (Rs. Cr)

Parameters	FY12
Aggregate Revenue Requirement	3069.23
Revenue From Sale of Power outside State	208.26
Revenue from sale of power within State	2633.34
Revenue Surplus/(Gap)	**(227.62)**

8.19 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 FY12, taking into consideration the cross-subsidy levels for the various consumer categories.

8.20 The category-wise tariffs approved for FY12 are as follows:-

Approved Tariff

DS: Domestic Supply

8.21 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.

8.22 The Petitioner has proposed the following for the consumers in the domestic category:

a) No increase in tariff for BPL consumers

b) Increase of 12% in energy charges for consumers consuming up to 150 units per month

c) Increase of 7% in energy charges for consumers consuming above 150 units per month

8.23 The comparison of existing tariff, tariff proposed by the Petitioner and that approved by the Commission for domestic category is given as follows:-

Table 154: Existing and Proposed Tariff for Domestic Category

Description	Existing		Proposed	
Units/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 40 units per month)	1.80	Nil	1.80	Nil
0 - 150	2.20	25.00	2.45	25.00
151 & above	3.45	25.00	3.70	25.00
Pre-paid meter	2.20		-	-

Table 155: Approved Tariff for Domestic Category

Description	Approved by Commission	
Units/month	Energy Charges (Rs./KWh)	Consumer Service Charges (Rs./con/month)
BPL Consumer (Up to 40 units per month)	2.10	10.00
Other Category		
0 – 40	2.35	30.00
0 - 125	2.50	30.00
126 - 250	3.45	30.00
251 & above	3.50	30.00
Pre-paid meter	2.50	

8.24 For a consumer in BPL category, the rate of next higher slab/slabs of consumption of non BPL consumer category shall be applicable for consumption in access of first 40 units.

8.25 The applicable rebates and surcharges for this category have been detailed in Annexure II of this Order.

Non Domestic Non Commercial Supply

8.26 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 Petitioner and the Petitioner provides meters for individual consumers.

8.27 The Petitioner has proposed to retain the current energy charges applicable for the 0-20 KW slab and for the NDNCS slab above 20 KW.

8.28 The comparison of existing tariff, tariff proposed by the Petitioner and that approved by the Commission is given in the tables as follows:-

Table 156: 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/month)	Energy Charges (Rs./KWh)	Consumer Service Charges (Rs./con/month)	Energy Charges (Rs./KWh)	Consumer Service Charges (Rs./con/month)
4.45	60.00	4.45	60.00	4.45	60.00

Table 157: Existing, Proposed and Approved Tariff for NDNCS Category (Above 20KW)

Existing			Proposed			Approved by Commission		
Energy Charges (Rs/KWh)	Consumer Service Charges (Rs/con/ month)	Demand Charge (Rs/KVA/ month)	Energy Charges (Rs/KWh)	Consumer Service Charges (Rs/con/ month)	Demand Charge (Rs/KVA/ month)	Energy Charges (Rs/KWh)	Consumer Service Charges (Rs/con/ month)	Demand Charge (Rs/KVA/ month)
3.70	120.00	100.00	3.70	120.00	100.00	3.70	120.00	100.00

8.29 The applicable rebates and surcharges for this category have been detailed in Annexure II of this Order.

Commercial Supply (CS)

8.30 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.

8.31 The Petitioner in its petition has proposed to retain the energy charges for the 0-20 KW slab, 20-100 KW slab and above 100 KW slab.

8.32 The existing tariff, tariff proposed by the Petitioner and tariff approved by the Commission are given in the tables as follows:-

Table 158: 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/month)	Energy Charges (Rs./KWh)	Consumer Service Charges (Rs./con/month)	Energy Charges (Rs./KWh)	Consumer Service Charges (Rs./con/month)
4.60	60.00	4.60	60.00	4.60	60.00

Table 159: Existing, Proposed and Approved Tariff for CS Category (Above 20KW)

Slab	Existing			Proposed			Approved by Commission		
	Energy Charges (Rs/KWh)	Service Charges (Rs/con/ month)	Demand Charge (Rs/KVA/ month)	Energy Charges (Rs/KWh)	Service Charges (Rs/con/ month)	Demand Charge (Rs/KVA/ month)	Energy Charges (Rs/KWh)	Service Charges (Rs/con/ month)	Demand Charge (Rs/KVA/ month)
20-100 KW	3.95	120.00	75.00	3.95	120.00	75.00	3.95	120.00	75.00
Above 100KW	3.75	240.00	100.00	3.75	240.00	100.00	3.75	240.00	100.00

8.33 In case of mobile welding sets, the consumer will pay Rs 200 per day, in addition to the energy charges.

8.34 The applicable rebates and surcharges for this category have been detailed in Annexure II of this Order.

Small and Medium Industrial Power Supply (SMS)

8.35 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.

8.36 The Petitioner has proposed an increase of 15 Paise/ KWh in the existing energy charges for the 0-20 KW slab. The Petitioner has proposed an increase of 15 Paisa per KVAh for the above 20 KW slab.

8.37 The existing tariff, tariff proposed by the Petitioner and tariff approved by the Commission are given in the tables as follows:-

Table 160: Existing, Proposed and Approved Tariff for SMS Category (Up to 20KW)

Existing		Proposed		Approved by Commission	
Energy Charges (Rs./KWh)	Service Charges (Rs./con/ month)	Energy Charges (Rs./KWh)	Service Charges (Rs./con/ month)	Energy Charges (Rs./KWh)	Service Charges (Rs./con/ month)
3.70	60.00	3.85	60.00	3.70	80.00

Table 161: Existing, Proposed and Approved Tariff for SMS Category (Above 20KW)

Existing			Proposed			Approved by Commission		
Energy Charges (Rs/KVAh)	Service Charges (Rs/con/ month)	Demand Charge (Rs/KVA/ month)	Energy Charges (Rs/KVAh)	Service Charges (Rs/con/ month)	Demand Charge (Rs/KVA/ month)	Energy Charges (Rs/KVAh)	Service Charges (Rs/con/ month)	Demand Charge (Rs/KVA/ month)
3.05	120.00	50.00	3.20	120.00	50.00	3.30	150.00	50.00

8.38 The applicable rebates and surcharges for this category have been detailed Annexure II of this Order.

8.39 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:

(1) During normal times: normal rate

(2) During peak times: the PLEC rate

(3) During night time: the night time rate

8.40 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)

8.41 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".

8.42 The Petitioner has proposed the following in its petition:

(1) Increase of 125 Paisa in energy charges for EHT up to 300 KVAh/ KVA per month

(2) Increase of 118 Paisa in energy charges for EHT balance KVAh during the month

(3) Increase of 125 Paisa in energy charges for HT up to 300 KVAh/ KVA per month

(4) Increase of 118 Paisa in energy charges for HT balance KVAh during the month

8.43 The existing tariff structure and the tariffs proposed by the Petitioner for the LIP categories are given in the table as follows:-

Table 162: 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/ month)	Demand Charge (Rs/KVA/ month)	Energy Charges (Rs/KVAh)	Service Charges (Rs/con/ month)	Demand Charge (Rs/KVA/ month)	Energy Charges (Rs/KVAh)	Service Charges (Rs/con/ month)	Demand Charge (Rs/KVA/ month)
EHT									
Up to 300 KVAh/KVA/ month	2.60	350.00	185.00	3.85	350.00	185.00	2.85	350.00	240.00
Balance KVAh during the month	2.80	350.00	185.00	3.98	350.00	185.00	3.05	350.00	240.00
HT									
Up to 300 KVAh/KVA/ month	2.80	250.00	225.00	4.05	250.00	225.00	3.05	350.00	240.00
Balance KVAh during the month	3.00	250.00	225.00	4.18	250.00	225.00	3.25	350.00	240.00

8.44 The applicable rebates and surcharges for this category have been detailed Annexure II of this Order.

Bulk Supply

8.45 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.

8.46 The Petitioner in its petition has retained the existing tariff structure for LT consumers and proposed an increase in the energy charges of 25 Paise for HT consumers. The Petitioner has not provided information on the tariff increase proposed for EHT bulk consumers.

8.47 The existing tariff, tariff proposed by the Petitioner and tariff approved by the Commission is given in the table as follows:-

Table 163: 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	4.05	120.00	200.00	4.05	120.00	200.00	4.05	150.00	200.00
HT	3.15	120.00	150.00	3.40	120.00	150.00	3.50	150.00	200.00
EHT	3.05	120.00	140.00	-	-	-	3.35	150.00	200.00

8.48 The applicable rebates and surcharges for this category have been detailed Annexure II of this Order.

Street Lighting Supply

8.49 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.

8.50 The Petitioner has proposed to retain the energy charge for this category.

8.51 The existing tariff, tariff proposed by the Petitioner and tariff approved by the Commission is given in the table as follows:-

Table 164: 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)
4.00	60.00	4.00	60.00	4.00	60.00

8.52 The applicable rebates and surcharges for this category have been detailed Annexure II of this Order.

Temporary Metered Supply

8.53 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 and Irrigation Pumping Supply (WIPS) even for temporary connection.

8.54 The Petitioner has proposed an increase of 33 Paisa/KWh for the slab up to 20 KW and by 25 Paisa/KVAh for consumers above 20 KW connections.

8.55 The existing, proposed and the tariff approved by the Commission is given as follows:-

Table 165: 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)
6.50	120.00	6.83	120.00	6.80	140.00

Table 166: 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)
4.95	120.00	300.00	5.20	120.00	300.00	5.25	200.00	350.00

8.56 The applicable rebates and surcharges for this category have been detailed Annexure II of this Order.

Water and Irrigation Pumping Supply (WIPS)

8.57 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).

8.58 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.

8.59 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.

8.60 The Petitioner has proposed an increase of 9 Paise/ KWh for upto 20 KW and for above 20KW the increase proposed is 32 Paise/ KWh for LT, 18 Paise/ KWh for HT and 31 Paise/ KWh for EHT.

8.61 The existing, proposed and the tariff approved by the Commission for the WIPS category is given as follows:-

Table 167: 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	25.00	1.94	25.00	2.50	40.00

8.62 The two-part tariff applicable for WIPS for connected load above 20 KW shall be as shown in the table as follows:-

Table 168: 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	120.00	50.00	3.52	120.00	200.00	3.50	140.00	50.00
HT	3.65	120.00	150.00	3.83	120.00	150.00	3.85	200.00	175.00
EHT	3.10	120.00	120.00	3.41	120.00	120.00	3.45	250.00	175.00

8.63 The applicable rebates and surcharges for this category have been detailed Annexure II of this Order.

Railway Traction

8.64 The Petitioner has requested the Commission for creating of a separate category for Railway Traction from FY 2011-12 in view of the application received by the Petitioner from the Northern Railway for availing 66 kV supply from the Petitioner's substation at Parwanoo for the Railway traction substation proposed at Parwanoo.

8.65 The Petitioner has proposed energy charges of Rs 4.00/ KWh, Rs 200 per month as Consumer service charge and Rs 185/ KVA/ month as demand charges.

Table 169 Tariff for Railway Traction

Slab	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)
Railway Traction	4.00	200.00	185.00	4.00	350.00	240.00

Revenue Projection at Approved Tariff

8.66 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

8.67 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 Petitioner.

8.68 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.

8.69 The Commission has calculated the revenue from sale of power across each consumer category at the revised approved tariff as shown in the table as follows:-

Table 170: Projection of Revenue from Sale of Power within State for FY12 (Rs. Cr)

Category	Petitioner's Submission		Commission's Analysis		Revenue Mobilization as per Commission's Analysis
	Existing Tariff	Proposed Tariff	Existing Tariff	Approved Tariff	
Domestic BPL	367.23	399.21	372.63	418.78	46.15
NDNCS	49.95	49.95	49.14	49.14	0.00
Commercial Supply	181.53	181.53	196.99	196.99	0.00
Small and Medium Supply	78.54	81.78	80.81	85.80	4.99
Large Industrial Power Supply	1605.03	2110.43	1628.18	1775.51	147.33
Water and Irrigation Pumping Supply	167.21	179.30	163.96	183.23	19.27
Street Lighting	7.51	7.51	5.23	5.23	0.00
Bulk Supply	132.29	137.48	120.00	129.32	9.32
Temporary Supply	19.15	19.89	16.40	17.22	0.82
Total	**2,608.44**	**3,167.08**	**2633.34**	**2861.23**	**227.88**

Revenue from sale of power outside State

8.70 The Petitioner in its petition has projected the net energy available for sale outside the State as 210 MU which takes into account banking power return of 300 MU. The proposed revenue from sale of power outside the State is Rs 95.28 Cr.

8.71 The Commission has projected the power available for sale outside the State (ex-bus) during FY12, the summary of the same is shown as follows:-

Table 171: Surplus Power Available for Sale in FY12 (MU)

Particulars	FY12
Total Surplus at State Periphery (MU)	574.21
Inter State Transmission Losses (%)	3.50
Total surplus at Ex- Bus (MU)	**595.04**

8.72 The Commission has considered that the HPSEBL would enter into commercial agreements with other states/ buyers including banking arrangement of sale of surplus power.

8.73 The cost of power purchase for sale of power outside State, revenue and profit from it are tabulated as follows:-

Table 172: Revenue Projection for Sale of Power outside State for FY12

Parameters	FY12
Bilateral Sale (MU)	595.04
Sale Rate (Rs per unit)	3.50
Revenue from sales of power outside State (Rs Cr)	**208.26**

Overall Revenue–Expenditure Position of HPSEBL at Approved Tariff

8.74 The overall revenue and expenditure position of HPSEBL at approved tariff is given in the table as follows:-

Table 173: Overall Revenue-Expenditure position of the Petitioner in FY12 at Approved Tariffs (Rs. Cr)

Parameters	**FY12**
Aggregate Revenue Requirement	3069.23
Revenue From Sale of Power within State	2861.23
Revenue from sale of power outside State	208.26
Revenue Surplus/(Gap)	**0.26**

8.75 The Commission directs the Petitioner to transfer any surplus revenue realised in FY12 at approved tariffs to the MYT Contingency Reserve as per Regulation 12 of the HPERC (Terms and Condition for determination of Wheeling Tariff and Retail Supply Tariff) Regulation, 2011. Any surplus transferred to the MYT Contingency Reserve would be utilized to meet the increase in tariffs of Central Sector generating stations on account of the CERC 2009 Tariff regulations as well as truing up.

A9: DIRECTIONS AND ADVISORIES

9.1 In order to provide quality supply & services by the HPSEBL to the consumers of Himachal Pradesh and to improve the efficiency and productivity of the HPSEBL, the Commission in its previous Tariff Orders had issued various Directions to the HPSEBL. The Commission had regularly been reviewing the progress in implementation of these Directions. The Directions imparted by the Commission under various Tariff Orders were reviewed during the hearing on 6th March, 2010 vis-à-vis the Compliance Reported by the HPSEBL and an interim order was also passed accordingly.

9.2 The HPSEBL in its multiyear tariff filing for the Second Control Period has given the updated status on compliance of these Directions.

9.3 Commission notes with satisfaction, that the HPSEBL has complied with most of the directions and also observes that some of the directions need continuous follow-up by the HPSEBL being of the general nature and expects the HPSEBL to keep pursuing the same in the interest of the HPSEBL. Where the Commission is satisfied that the implementation of these Directions by the HPSEBL has been complied with or such Directions pertained to a specific prior period or such Directions have lost significance in the present context of the HPSEBL or there exists duplicity of Directions or such Directions are of redundant nature, those Directions have now been dropped.

9.4 Where action has been initiated by the HPSEBL towards the implementation of certain Directions, the Commission feels that when a job is initiated that job will reach to its logical conclusion and has therfore decided to issue such Directions as Advisories to the HPSEBL. The Commission expects that these Advisories shall be pursued by the HPSEBL with the same earnest as has been done in their corresponding Directions.

9.5 The Commission also feels that undertaking Studies by the HPSEBL for its improvement and for the improvement of the overall system in general is imperative and Directions imparted in previous Tariff Orders for undertaking Studies on various issues are best left to the Utility to determine and therefore such Directions are now issued as Advisories to the HPSEBL.

9.6 The Directions of previous Tariff Orders, which are still not fully complied with to the satisfaction of the Commission, are reiterated and carried forward. To facilitate their implementation and timely compliance by the concerned, these have been rationalized. Some of these Directions have been clubbed. New Directions are also issued in this Tariff Order.

9.7 The Commission directs that during the Second Control Period, the carried forward and the new Directions shall be implemented and monitored meticulously by HPSEBL. The Commission shall regularly review the progress against each Direction.

9.8 These Directions are as given as follows:-

Directions of previous Tariff Orders now dropped:

Directions	Grouping as per 2nd APR of 1st Control Period	Reasons Explained
Tariff Order FY 2001-02		
Power Sector Reforms	Management	Since MOU is between GOHP and HPSEBL, implementation and monitoring of conditions of MOU is therefore the prerogative of GOHP.
Tariff Order FY 2004-05		
Employees Cost	Manpower	The appointment of 100 clerks has been undertaken by way of promotion of Class IV and by way of appointment of dependants of deceased employees.
Prioritization of Deliverables from ASCI	Management	Board now stands as a restructured entity by the name HPSEBL.
Capital Projects, Time & Cost Overrun	Generation	Projects under construction have now been transferred to HPPCL except Uhl.
Tariff Order FY 2005-06		
Ratio of single and two phase lines to three phase LT Lines	Distribution	Implementation of various Infrastructure Investment Schemes is in process in the HPSEBL. Moreover natural growth of load and the available finances also drives the creation of appropriate infrastructure facilities and therefore the improvement in line ratios is best left to the Utility to manage.
High Voltage Distribution system	Distribution	HPSEBL has complied with the Directions.
Tariff Order FY 2006-07		
Creation of Separate Protection Unit and O&M Wing	Transmission	The Direction at the time of re-grouping in the 2nd APR Order dated 10th June 2010 was inadvertently re-grouped under 'Transmission' but originally pertained to 'Generation'.
Best Practices for restructuring the project implementation units of the Board and its Special Purpose Vehicles Companies (SPVs)	Transmission	The Direction at the time of re-grouping in the 2nd APR Order dated 10th June 2010 was inadvertently re-grouped under 'Transmission' but originally pertained to 'Generation'.
Creation of separate O&M wing for the existing generating stations	Generation	HPSEBL has complied with the Directions.
Determination of Generation Tariff of Board's own projects	Generation	HPSEBL has complied with the Directions and Separate Balance Sheet / Accounts for Generation business of HPSEBL is in its final stages.
Tariff Order FY 2007-08		
Investment Plan	Miscellaneous	Details of loans and interest as required by the Commission are being depicted annually in Schedules 32 & 33 of the Balance Sheet of HPSEBL.
Quality of Business Plan (Business Plan for next five years)	Miscellaneous	Business Plan dated 26th February 2010 corresponding to 1st Control Period of MYT was submitted by HPSEBL. This Direction relates only to the 1st Control Period.

Directions	Grouping as per 2nd APR of 1st Control Period	Reasons Explained
Quality of supply	Distribution	The Supply parameters are being monitored by HPSEBL under the HPERC (Distribution Performance Standards) Regulations, 2010 and HPERC (Distribution Licensees' Standards of Performance) Regulations, 2005.
Tariff Order FY 2008-09		
Market Survey	Consumer Services	Compliance has been reported by HPSEBL.
Capital Investments Transmission and Distribution Schemes	Miscellaneous	Direction relates only to the 1st Control Period.
Survey and Investigations Schemes (FY 2008-09)	Generation	HPSEBL had submitted the Status Report to the Commission vide MA No. 192/09 dated 26.11.2009. The Commission also feels that the activity of survey and investigation carried out by HPSEBL is regulated by HPERC (Treatment of Income of Other Businesses of Transmission Licensees and Distribution Licensees) Regulations, 2005 and as long as such other businesses are carried out in accordance with these Regulations, the licensee may do so.
Tariff Order FY 2009-10		
Inconsistency / non-reconciliation of data	Finance	Direction relates only to the 1st Control Period.
Demand side management	Distribution	Information required to be submitted by Board to HPERC has already been done.
Ring fencing of the SLDC	Miscellaneous	The functions of the State Load Despatch Centre (SLDC) have since been separated from HPSEBL. SLDC has now been established by the GOHP as an independent entity by the name 'Himachal Pradesh State Load Despatch Society

Directions Carried forward from previous Tariff Orders:

Original Directions	Grouping as per 2nd APR of 1st Control Period	**Reasons Explained**
Tariff Order FY 2001-02		
Public Interaction Programme	Consumer Services	HPSEBL still to provide sufficient evidence of compliance.
Tariff Order FY 2004-05		
Material Management	Distribution	HPSEBL to submit evidence of implementation of ERP Package.
Metering, Billing and Collection Efficiency and stream lining the system	Distribution	Implementation of computerized billing and accounting package and its roll over to other parts of the State is in progress. Up-to-date Status Report be submitted to the Commission.
Tariff Order FY 2005-06		
Replacement of defective / dead stop meters	Distribution	HPSEBL still to submit the proposal of replacement of meters to the Commission. However in order to prevent

Original Directions	Grouping as per 2nd APR of 1st Control Period	Reasons Explained
		revenue loss to the Board due to dead-stop meters, all meters to be purchased in the future should be electronic meters with provision to retrieve the final reading even when the meters become dead-stop.
Unmanning of sub-stations and feasibility of extending the scope of SCADA to integrate control of several substations at single control center	Distribution	HPSEBL still to submit the proposal to the Commission.
Tariff Order FY 2006-07		
Transmission network in the State	Transmission	HPSEBL to submit the status / progress report on implementation of transmission / EHV works approved under the business plan for the 1st MYT Control Period.
Reduction of Commercial Losses	Distribution	However the Commission feels that this Direction be limited only to the strengthening of Flying Squad Units and is retained accordingly after suitable modification to the existing Direction 'that the Flying Squad Units of HPSEBL be strengthened by delegating independent penal powers in respect of offences specified under Sections 135, 136, 137, 138, 139, 140 and 141 of The Electricity Act, 2003 to these Flying Squads'. This will do away with the reliance of the Flying Squad Units on the Field Offices for conducting raid operations.
Tariff Order FY 2009-10		
Implementation of Automatic Meter Reading	Distribution	Compliance to be shown by HPSEBL.
Clubbed Directions (Tariff Orders of FYs 2001-02, 2004-05, 2006-07, 2007-08, 2008-09)		
Unbundled Costs (Direction on Unbundled Costs of Tariff Order FY 2001-02 clubbed with similar Direction of Tariff Order FY 2007- 08)	Finance	Board now stands as an unbundled entity by the name of HPSEBL. HPSEBL has informed that it is in the process of finalizing the Balance Sheet and is in the process of implementing the MIS/ERP/Billing Packages. HPSEBL has not submitted the compliance with respect to amendments to the existing Manuals and other activities as required in the Direction including trainings) Compliance to be Reported.
Manpower Planning & Change in R&P Rules (Direction on Manpower Planning of Tariff Order FY 2006-07 clubbed with similar Direction of Tariff Order FY 2007-08 now clubbed with Direction on Change in R&P Rules FY 2006-07)	Manpower	Compliance still to be done on submission of Report on staffing norms by HPSEBL HPSEBL is now a restructured entity with Distribution function. Fresh perspective in view of functional requirement, efficiency and cost effectiveness is needed and serious exercise on the Directions imparted is required to be undertaken. Compliance be reported within six months, (before the First Annual Performance Review of the Second MYT Control Period).
IT Initiative	Management	Due to similarity of nature, the Direction on Data base management & Management Information System

Original Directions	Grouping as per 2nd APR of 1st Control Period	Reasons Explained
(Direction on Data base management & Management Information System of Tariff Order FY 2007-08 now clubbed with Direction on E-governance of Tariff Order FY 2004-05 and Direction on Decision Making Process of Tariff Order FY 2006-07)		(Direction of FY 2007-08) is now clubbed with: a) E-governance (Direction of FY 2004-05) and b) Decision Making Process (Direction of FY 2006-07). All of the above Directions shall now be read as one Direction.
Voltage-wise Valuation of Assets Direction on Valuation of Assets of Tariff Order FY 2004-05 now clubbed with Direction on Break-up of voltage-wise assets in Distribution Network of Tariff Order FY 2008-09)	Distribution	Due to similarity of nature, the Direction on Valuation of Assets (Direction of FY 2004-05) is now clubbed with Break-up of voltage-wise assets in Distribution Network (Direction of FY 2008-09). (Please Note that The words “losses and” in the Directions of FY 2008-09 now stand deleted).
Tariff Order FY 2010-11 (2nd APR)		
Smart Grids		Direction is continued
Setting up ALDC		Direction is continued

New Directions to HPSEBL

Promotion of renewable energy

9.9 There is considerable focus on the Policy framework at the national level for increasing the share of renewable energy in the total energy consumption in the country. In order to cope up with the emerging requirements and changing scenario, the HPSEBL is required to evolve new strategies to deal with new challenge and also optimise on the opportunities available. The following are the focus areas in renewables in Himachal Pradesh:-

Small Hydro Power Projects

9.10 The Commission feels that apart from existing initiatives to exploit Small Hydro Projects in H.P., Renewable Energy Certificate (REC) mechanism should be given impetus as this mechanism can provide a win-win situation for all the stakeholders. The Commission, therefore, directs the HPSEBL to evolve an adequate strategy to promote REC mechanism in respect of IPPs developing Projects upto 25 MW capacity from whom the HPSEBL proposes to procure power on long term basis and also explore the possibility of power procurement through REC mechanism by using competitive bidding approach. The Commission further directs that in order to give greater clarity, the HPSEBL shall frame a model PPA to be entered into by the RE generators with the HPSEBL within 6 weeks from the date of issuance of this Tariff Order and submit the same for approval of the Commission. The HPSEBL shall also take up measures to increase the awareness of REC mechanism among the stakeholders.

Solar Power

9.11 As per national tariff policy the HPSEBL is required to fulfil a renewable purchase obligation of 0.25% of its total consumption by 2013 and 3% by 2022. The Commission, therefore, directs the HPSEBL to lay down road map within 3 months to fulfil this requirement and submit the same to Commission. The Commission further directs the HPSEBL to identify sites in the HPSEBL's generating stations and power sub-stations and also other sites for developing solar generating plants on Case-II competitive bidding basis. The HPSEBL may also take up the matter with the GoHP for comprehensive Solar policy including the roof top Solar energy to incentivise the generation of solar energy both in private and public sector.

Quality of Power

9.12 There is considerable thrust on quality of power now as this is as important to consumer as the tariff. The Commission's Standards of Performance regulations as well tariff regulations have laid down the regulatory framework for quality of supply. The Commission strongly feels that quality of supply should not be considered as a threat, but rather it is an opportunity by the licensee to demonstrate its commitment towards better quality of supply. The Commission directs the HPSEBL to prepare a comprehensive proposal in respect of investments, human resources requirement and submit the same to the Commission for approval. The HPSEBL shall also identify the governance issues for example supervision and monitoring mechanism, procurement of material and supplies etc. for meeting the SOP, especially one related to consumer services. Special efforts should be made for improving the quality of supply in rural areas, where the quality of power is far lower than the Standards prescribed. The HPSEBL shall initiate the suitable measures for calculating the reliable indices i.e. SAIDI, SAIFI after April, 2012 as per SOP regulations. This would enable the Commission in future to develop a suitable mechanism for incentive/penalty in the ARR on the performance of standards.

9.13 The Commission also directs the HPSEBL to replace all the wooden poles with steel poles and electro-mechanical meters with electronic meters for which the requisite provision has been made in the approved Capex Plan.

Demand Side Management

9.14 The demand side options are inherently more cost effective than supply side options and electricity saved is better than electricity generated or purchased. Any saving in electricity consumption or demand achieved as a result of DSM initiatives, directly contributes to balancing the electricity demand-supply equation. The commission, therefore, directs distribution licensee to prepare a comprehensive draft of DSM Master Plan for a period of five years and submit the same for the approval of the Commission within 6 months. The Commission shall set annual DSM targets for the licensee and based on the DSM Master Plan and targets set, the distribution licensee shall prepare DSM programme on annual basis and the first annual DSM programme shall be prepared, within six months from the date of approval of the DSM Master Plan by the Commission. The Commission may allow all the cost incurred by the distribution licensees on design, development and implementation of DSM initiatives as a pass through in the ARR. The Commission also suggests distribution licensee to create a dedicated DSM Cell by internationalization to carry out various activities associated with DSM.

Statistical Studies for Domestic and Commercial Categories of Consumers:

9.15 Domestic category and Commercial category consumers constitute majority population amongst all consumer categories existing in HPSEBL. In order to arrive at more realistic month-wise (for 12 months) consumption parameters for the respective populations of the two consumer categories, the HPSEBL is directed to undertake statistical studies using random stratified sampling for the two consumer groups. The sample size should be adequate for the two consumer groups. The stratification should be representative of the group population (Rural, Urban, low altitude, medium altitude, high altitude etc). Commercial category of consumers may be further suitably classified into Hotels and other classes. The soft copy of data so collected be provided to the Commission before the first Annual Performance Review of the Second MYT Control Period.

Power Procurement

9.16 The Commission observes that the HPSEBL meets a major part of its winter shortages though the banking of energy and purchase of free/equity power available to HP Govt. The Commission feels that even though these modes assure the availability of power to the licencee during the winter months when it faces energy shortages, this may not always be the most optimum solution in the dynamic scenario of power market. In order to have optimum results, the HPSEBL should study the market conditions regularly so as to arrive at the most optimum decisions about procurement of energy from time to time. The licensee should also consider the following:-

(1) The HPSEBL should endeavour for the long term arrangements for additional requirements at reasonable cost. To meet the objective, it should make consistent efforts to have more shares in UMPPs etc offering power at reasonable rates. It may also resort to Case I bidding.

(2) In order to meet its long term objectives and utilize the sources which are locally available, it should follow a rational policy for procurement of power from the Renewable Sources under long term agreements as well as through REC mechanism.

(3) For meeting the short /medium term requirements, a combination of various alternatives be considered so as to minimize the risks.

(4) It should either enter into a long term agreement with H.P. Government for the free power and equity power available to HP Govt. from various Projects or else reduce its perpetual dependence on the same, so as to enable H.P. Government to trade the same in optimum manner.

(5) In case it is felt necessary to resort to banking of power, the same should be undertaken by floating bids rather than on bilateral basis.

(6) The HPSEBL should address the constraints/problems, if any, in the smooth operation of its hydel Projects having pondage capacity to have more operational flexibility, leading to commercial benefits through UI charges etc.

(7) The HPSEBL should regularly refine and update its estimates of power requirement vis-à-vis availability during different seasons and time blocks.

(8) The officers looking after the licensee's functions of area load dispatch on real time basis should have clear mandate and sufficient decision making powers to enable them to take better decisions in real time situation.

(9) The power procurement should be made strictly as per merit order and the constraints, if any, in this regard should be addressed.

Energy audit and Distribution losses

9.17 The Commission has repeatedly advised the HPSEBL to carryout Energy audit in a more effective manner. Even though the HPSEBL has submitted the feeder-wise HT and LT losses for FY09 and FY10, it has not spelt out the remedial steps taken by it for each respective feeders from which losses are considered to be on higher side. The activity is thus restricted to Energy accounting rather than energy audit. The Commission observes that the losses on some feeders continue to be on higher side and there is a considerable scope for reduction of losses. The Commission accordingly again directs the licensee to take steps to carry out Energy audit in a more effective manner and take remedial steps wherever required in a time bound manner.

9.18 The licensee has proposed a trajectory based on the expected Transmission and Distribution losses for FY11. The segregation of Intra-State Transmission losses (occurring on the HPPTCL system) and the Distribution Losses occurring on the HPSEBL's Distribution system has not been given. In absence of this data, the Commission has fixed the trajectory for the total Intra-State Distribution losses (i.e. Intra State transmission losses of the HPTCL system and Intra-State Distribution losses of the HPSEBL System). The Licensee is directed to take steps for segregation of their losses by providing suitable metering arrangements and/or entering into suitable agreement with the HPPTCL based the system parameters and normal flows within next six months so that segregated losses are available for FY 2012 onwards and separate trajectories can also be fixed for the Transmission losses and Distribution losses from the next control period.

9.19 The Commission has fixed the T&D losses trajectory for the second control period in a manner that leaves sufficient scope for the licensee to make further reduction in losses and avail incentives. The commission thus expects the licensee to not only achieve the minimum targets for R-APDRP areas in a time bound manner but also to achieve considerable reduction in losses in Non-APDRP areas, so that overall reduction is considerably more that what has been trajected. The Commission shall like the licensee to take effective steps to ensure that by the end of third control period, the Transmission and Distribution Losses (i.e. including the Intra-state Transmission losses on the HPPTCL system) are less than 10%. The Commission shall however revisit this target at the beginning of next control period. In this regard, the Commission also expect the HPSEBL to take the following steps in particular:-

(1) The HPSEBL to take steps to ensure completion of R-APDRP and RGGVY schemes and to meet other targets of these schemes. In case any part of the loan convertible to grant remains unconverted due to non-compliance of condition by the HPSEBL, the Commission shall not allow such unconverted loans as pass through in ARR.

(2) Prepare schemes, duly supported by 'cost-benefit analysis', aimed at reduction of losses in the areas not covered by R-APDRP and implement the same after obtaining requisite regulatory and other approvals. The loss reduction target for each component of the scheme should be worked out separately. The components having higher and quick benefits should be implemented on top priority.

(3) All the dead stop/defective meters must be replaced immediately.

(4) Fix the Division-wise or at least circle-wise targets for reduction of losses in an objective manner and monitor the same regularly. The inadequacies, if any, in the metering arrangements should be addressed. The Commission may also consider fixing the circle wise targets, apart from the utility level targets, from the next control period.

(5) In order to identify the cost effective remedial measures, the HPSEBL should compile and monitor voltage-wise losses also, rather than relying upon the average losses alone which may not capture the realistic position.

(6) Review of the progress on periodical basis on management level.

Implementation of I.T. Initiatives and Computerised Billing

9.20 Although the HPSEBL has taken IT initiatives, but the results have not started flowing fully. The Commission directs the HPSEBL to expedite the implementation of the initiatives already taken so that result starts flowing without any further delay. Mechanism of E-billing and E-payment should be operationalised in all the areas for which such mechanisms are envisaged.

Adherence to Billing Cycles

9.21 The Commission has observed that the bills are not being delivered to the Consumers particularly in the rural areas as per the approved billing cycles. The delay in billing not only results in blockage of the HPSEBL's funds but also leads to consumer dissatisfaction. The HPSEBL is advised to take suitable steps to avoid such situations. The HPSEBL shall also explore the possibility of giving average bills or bills for fixed charges i.e. meter rent and consumer service charges pending the adjustment as per actual bills, for the areas where franchisees are not in place and there are acute problems in this regard.

Other Business of Distribution Licensee

9.22 After re-organisation of the HPSEBL, the GoHP has entrusted the functions of distribution, trading and O&M of generating stations to the HPSEBL. The HPSEBL also continuing with the execution of new generation projects at hand. In addition, the HPSEBL has the set up of Survey and Investigation Wing of erstwhile HPSEB. While O&M of existing generating stations and new projects will be governed under the provisions of Electricity Act, Tariff Policy and Regulations, the other activities of the HPSEBL will be undertaken in accordance with the principles laid down under section 51 of the Electricity Act and the HPERC (Treatment of Income of Other Business of Transmission Licensees and Distribution Licensees) Regulations, 2005.

Generation Business

9.23 Entrusting the existing generating stations to the HPSEBL is a great strength/ asset for the HPSEBL. However, these have to be managed on commercial principles and at the same time safeguard the consumer interest. The efficiency gains in management of these assets will in addition help in investments in renovation and modernisation and also supporting wheeling activities. The Commission has segregated tariff determination for generating stations and the total ARR of generating stations have been reflected as power purchase cost. Therefore, in order to ensure that there is objectivity and accountability with respect to generation business in the total business of the Petitioner, Commission directs the HPSEBL as follows:-

(1) The Generation business shall have independent administrative, financial and technical structural framework so that this wing progressively moves towards being an independent unit of the HPSEBL on the lines of special purpose vehicle, without creating a SPV company, reporting directly to the the HPSEBL management.

(2) There will be separate sub balance sheet for each generating station, which will be integrated into common balance sheet for generation business. This will require separate accounts for the generation business including station-wise investment details and so that the admissible cost in accordance with the regulatory provisions are claimed under tariff.

(3) In the present Tariff Order, the actual O&M costs of previous year have been allowed as per details given in the relevant chapter. However, the Petitioner will undertake station-wise rationalisation of O&M requirements in accordance with the regulatory provisions/ norms and where ever relaxation is required full justification be provided.

Projects

9.24 The HPSEBL is undertaking execution of projects assigned to it by the GoHP for which there are two organisations i.e. Beas Valley Power Corporation and the Projects Wing. When the HPSEBL was functioning as an integrated entity, it was undertaking certain projects which were important from the socio-economic development point of view but under the current regulatory regime these projects will be subject to tariff determination and the capital cost will be allowed only within the regulatory framework/ provisions. Therefore, it is necessary that there is cost control by checking time and cost over-runs and maintaining the over head charges, mainly employee costs within the reasonable limits. The HPSEBL needs to be vigilant in management of projects under execution so that any cost, which is beyond permissible limit, does not encumber the finances of the HPSEBL. The HPSEBL may also consider executing future projects, if any, on principles of Case-II Bidding.

Advisories now issued to HPSEBL in lieu of Old Directions:

	Advisory to HPSEBL	Original Direction
a)	Conduct Energy Audit and determine technical and commercial losses at each voltage level, Identify loss making feeders and Circles and the reasons for losses and consequently formulate Schemes and Undertake Investment for improvement and augmentation of the existing Distribution Network so as to reduce T&D / AT&C Losses. Since the basis for above is contained in the Energy Audit, it is advised that the present schema and process of conducting Energy Audit may be re-visited and suitably corrected for enabling an accurate audit.	T&D Loss (FY 2001-02) T&D Losses (FY 2004-05) Energy Audit (FY 2008-09) Loss Making Circles and Feeders (FY 2008-09) Break-up of voltage-wise losses in Distribution Network (FY 2008-09)
b)	In accordance with the National Tariff Policy and Guidelines dated 19.01.2006 issued by the Central Government, HPSEBL is advised to procure power for medium or long-term period through the process competitive based bidding. The Commission advises the HPSEBL to assess the cost benefit of banking, considering the trend in market price of power in summer and winter, on priority and plan optimal quantum of banking accordingly. The Board also needs to expedite the work of setting up/ augmentation of the transmission system for evacuating power from SHPs being set up by the IPPs, as their power is going to help HPSEBL in mitigating its shortfalls.	Procurement of Long Term Power (FY 2005-06)
c)	In the interim order dated 06.03.10, the Commission appreciated the initiative taken by the HPSEBL with regard to special status services to be provided to senior citizens. HPSEBL is advised to continue with its efforts to provide this special status service to the senior citizens in the future also.	Consumer services for senior citizens (FY 2005-06)

	Advisory to HPSEBL	Original Direction
d)	Advisory given under the heading 'Trading Strategies and systems' in Tariff Order FY 2006-07 is retained.	Originally an Advisory in Tariff Order for FY 2006-07.
e)	In the interim order dated 06.03.10, the Commission had observed that the matter related to the implementation of the associated power evacuation plan which needs to be coordinated by HPSEBL with the HPPTCL. Moreover evacuation at 22kV or 33kV level or through the augmentation of existing system has to be implemented by the HPSEBL only. The Commission now advises the Board to address power evacuation bottlenecks, if any, on priority, of the projects for which the PPAs have been signed by the HPSEBL and monitor their implementation as per the construction schedules to protect its interest. HPSEBL has already submitted the status of the HEP's upto 31.10.2009 for which PPAs have been signed by it. HPSEBL is now advised to submit the Agreements and status of all PPAs signed by it after date 31.10.2009.	New Projects (FY 2008-09) Power Purchase Agreements (FY 2008-09)
f)	In the interim order dated 06.03.10, the Commission had appreciated the initiatives taken by HPSEBL to get share from Ultra-Mega Power Projects. The Commission advises HPSEBL to keep up its efforts.	Share from Ultra-Mega Power Projects (FY 2008-09)
g)	HPSEBL has informed that "the detailed report on the observations made by the Hon'ble Commission conveyed vide letter dated 18th February, 2010 had been submitted on dated 10-6-2010 and on this the Hon'ble Commission has issued the fresh directions, which are being complied with. In pursuance to the directions of Hon'ble Commission a meeting of the committee was held on 6-7-2010 in the matter of declining generation of operational power houses of HPSEB Ltd. In the interest of HPSEBL, it is now advised to pursue the causes for declining generation and submit the proposal for remedial action to the Commission.	Declining Generation of Board's own stations (FY 2005-06)
h)	HPSEBL has informed that it is pursuing the matter with the State Government through meetings with Principal Secretary (Power) and Principal Secretary (Tribal Development). Since the matter is to be jointly addressed by the Government of HP and HPSEBL, the Commission advises HPSEBL to continue pursuing this matter with GoHP and to submit to the Commission any positive outcome of such meetings.	O&M of generation projects in tribal area (2005-06)
i)	The Commission advises HPSEBL to follow the timelines framed by it for completing the ongoing RMU & LE of Giri, Bassi and Bhaba HEPs and submit the progress on half yearly basis.	Accelerated programme for renovation, modernization and up-gradation (FY 2006-07)

Advisories issued to HPSEBL for undertaking studies:

No	Advisories to HPSEBL for undertaking studies
a	Benchmark study (FY 2007-08)
b)	Rationalization of staff, redeployment, training & specialization in key activities (FY 2006-07)
c)	Best Practices for restructuring the project implementation units of HPSEBL and its Special Purpose Vehicles Companies (SPVs) (FY 2006-07).
d)	Financial Restructuring (FY 2001-02).
e)	Debt sustainability Study (FY 2006-07).

A10: STRATEGIC ISSUES

10.1 In this section, the Commission would like to discuss certain important issues, which are very pertinent to the power sector scenario in the State.

Power Procurement Planning

10.2 The HPSEBL has about 50% of power availability from its own generation, long term PPAs and bilateral arrangements, all from hydro projects. Remaining requirement is largely met from its shares in CPSU projects in the region, cost of which is increasing by about 10% per annum due to increase in inputs and O&M costs. New hydel projects commissioned or likely to be commissioned have high costs of power during initial years due to debt servicing obligations. Since main deficit is during winters, power sourced from GoHP free power/ equity power and from allocations by Govt. of India from unallocated quota are very costly due to capacity charges as fixed cost as per current tariff design. Hence, overall cost of power is likely to maintain the increasing trend in near future also and therefore reforms initiative in power procurement is imperative. An in-house institutional mechanism having a comprehensive system for power procurement planning has to be in place, which should, inter alia, go into the following issues:

(1) Load assessment, peak and off peak;

(2) Assessing a prudent hydel-thermal mix keeping in view the thermal PPAs already signed and cost implications;

(3) PPA with HPPCL for projects which, from the HPSEBL’s perspective, are sensitive to transmission costs, load centres, winter hydrology, peaking power capacities etc;

(4) Case I bidding options with IPP projects;

(5) Arrangement to off set costly winter power, including banking on competitive bidding basis where sole criteria would be higher quantum in return of summer power, short term market purchase, encouraging open access etc.

Renewables

10.3 Where there are investment constraints and resultant costs in evacuation arrangements, SHPs still have substantial potential for the HPSEBL for reliable long term supplies, distributed generation, high CUF, stable pricing under levelised tariff design etc. Now since the GoHP has made it optional for the HPSEBL to purchase from SHP developers, the HPSEBL should carry out the projects identification process urgently for signing PPAs so that development of SHPs do not get setback due to delayed decision. The HPSEBL should endeavour to purchase power from SHPs upto 5 MW because small developers have least option available except open access unless the project per se is not viable. Option of Case I bidding should also be explored expeditiously. PPA with SHPs are important to meet the RPO obligation of the HPSEBL.

10.4 Tariff Policy makes it mandatory upon the HPSEBL to purchase atleast 0.25% of its power requirement by 2013 and 3% by 2022 from solar source alone and therefore the HPSEBL should workout its long term requirement of installed capacities from time to time up to 2022, identify potential sites, including the sites available at its generating stations and power sub-station premises so as to avoid the REC/ penalty options. This requires a comprehensive strategy and plan involving all the stakeholders and initiative shall be with the HPSEBL because its stakes in this business is very critical.

REC framework

10.5 The HPSEBL has a huge scope of operations under REC framework so that, after meeting RPO, power is procured at APPC price which is lower than preferential tariff. REC is a new revenue model and therefore we need to be developed and enhance investors and lender's confidence. This would require visibility of RPO, APPC and floor and forbearance prices on long term basis. While the Commission will endeavour to fix the RPO percentage for long term, say up to 2022, the HPSEBL may also carryout an exercise of long term projections of likely APPC. With the progressive and proactive policies of GoHP, large number of SHPs are at various stages of execution offering a great opportunity to move faster and effectively towards REC mechanism. The HPSEBL should endeavour to invite developers, sign agreement for medium term on APPC and also provide for moving from APPC to preferential tariff for remaining life of project.

Financial Issues

10.6 The HPSEBL as an integrated entity was carrying out multifarious activities as an agent of the GoHP in the sphere of development of the sector as a whole in the State, ranging from providing access to electricity by laying infrastructure for generation and supply, facilitating private investment in generation, identification of generation potentials and related activities etc. Therefore, it has a vast administrative network which was largely supported by GoHP through plan investments, loans, equity etc. Under the present environment, these costs are being met by the HPSEBL through tariff and borrowings, including those costs which are not admissible under tariff regulations. Infrastructure created overtime is a huge asset to the current operations of the HPSEBL, yet the costs which are not admissible under the regulatory frameworks are a huge liability to the HPSEBL. Therefore, the following course of action needs to be considered:

Pensions

10.7 While the current costs of employees is increasing as a usual phenomenon in spite of net attritions, pension and terminal obligations are likely to increase with phenomenal volumes. In pursuit of the sector development, the HPSEBL had inducted huge manpower, most of whom are retiring progressively. A stage will arrive shortly when pension obligations will be larger than the current cost of employees and with positive life expectancy rate; long term pensionary arrangements have to be made. It cannot be visualized whether such costs could be sustained through tariff mechanism.

10.8 Therefore, there is a need for making an appropriate institutional arrangement to manage this challenging obligation with the participation of all the stakeholders including employees, GoHP, the HPSEBL Board and the Commission. Various legislations and regulatory framework are already in place in the country.

Clearing the balance sheet of Board

10.9 The HPSEBL is undergoing a huge liquidity problem and its operations are in losses. Now since restructuring exercise has been completed, it has focused functions and responsibilities with attendant accountability. Therefore, there is an urgent need to clear the balance sheet to offset the losses of period prior upto to 10th October 2010, which require collective strategy of GoHP and the HPSEBL. The GoHP equity in the HPSBEL, including in specific projects, have almost eroded and therefore there is need to infuse equity by the GoHP in to the HPSEBL.

Governance Issues

10.10 While the HPSEBL has achieved universal electrification goal and is managing availability of power for assured 24x7 supplies. It needs to vigorously pursue its endeavour to consolidate on the issues of quality of supply and service in a cost effective manner. Therefore, some of the arrear of concern those needs to be addressed are:

AT&C Losses

10.11 While T&D losses figure look comfortable in comparison to other utilities, yet when voltage-wise and area-wise analysis indicate that there are distortions in performance. There is under performance in industrial areas in general and in the rural electrical divisions in particular where T&D losses are more than 25%. While some of these losses can be improved by technological and infrastructure, some are on account of thefts and commissions and omissions on the part of staff of the HPSEBL, which can be addressed by way of strong governance.

Access to Services

10.12 Electricity is no longer a commodity of lifeline consumption for lighting alone, but also for sourcing other basic services. The goal of extending urban services to rural areas can be achieved only if there is 24x7 assured quality power supply. This would require investment in sub-transmission system and locally connected distributed decentralised generation. While generation can be covered through SHPs though IPPs, investment in sub-transmission, EHV system has to come from the HPSEBL though various sources to make such investments viable. Various programmes of the State and Central Government are aimed at providing access to basic services and therefore, funds under TASP, BASP, SCCP etc are potential sources. The State Tribal Development Dept has already provided for Rs. 25.00 Cr under TASP for the HPSEBL blocks in Spiti and Kinnaur. These can be dovetailed with costs for evacuation systems, construction power supply to project developer's etc. Adequacy and quality of infrastructure is key to reliable uninterrupted quality in rural and remote areas

Capacity Building

10.13 I.T. interventions for efficiency, transparency and accountability in the operations of the HPSEBL should be successfully executed in a time bound manner. Capacity building of human resources to optimise the technological and knowledge environment for which induction of fresh personnel by realigning the R&P Rules of entry level posts and training/re-training efforts on continuing basis.

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. 1100/ 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.1100/-per Relay
(II)	Power and Distribution Transformers	
(a)	Insulation resistance tests of winding	Rs. 770/-per Transformer
(b)	General checking of breather and 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.1100/-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. 2000/-per meter
(h)(ii)	With CT/PT combined unit	Rs. 2500/-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
(b)	At 11 kV and above	Rs. 110/-per job
(VI)	General	

S. No.	Description		Approved by the Commission
(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 (Note: In accordance with Rule 46 of the Indian Electricity Rules, 1956, where an installation is already connected to the supply system of the supplier, every such installation shall be inspected and tested at intervals not exceeding five (5) years (known as routine periodical inspections and testing).			
(i)	11/22 kV	**Sub Stations**	Rs. 10000/-
(ii)	33 kV		Rs. 15000/-
(iii)	66 kV		Rs. 50000/-
(iv)	132 kV		Rs. 100000/-
(v)	220 kV		Rs. 300000/-
(vi)	SHP Capacity (upto 2.5 MW)	**Small Hydro Plants**	Rs.25000/-
(vii)	SHP Capacity (greater than 2.5 MW)		Rs 50,000/-
D.	Visiting charges		
	Visiting charges for Officers and staff to Consumers premises for testing of equipments(other than C above)		Rs. 3500/- per day for complete team PLUS actual journey charges as per out turn of vehicle
Remarks: -			
(i) The charges mentioned under ‘C’ above shall be charged for the actual Periodical Inspection done and shall be on per inspection basis only.)			
(ii) Visiting charges mentioned under D above include the visiting charges of M&T staff as well.			
(iii) Charges for HPSEBL'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.			
(iv) Complete testing of 11KV,22KV and 33 KV connections as per item C above shall be conducted before the release of HT connection.			
(v) 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.			
(vi) 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.			
vii) 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			
viii) 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			

S. No.	Description	Approved by the Commission
(i)	Single phase	Rs.45/-
(ii)	Poly phase (LT) without CT	Rs. 220/-
	Poly phase (LT) with CT	Rs.440/-
(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 and 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 and 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. 15/- 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 HPSEBL	Rs. 550/-per month
(v)	Polyphase 11kV meter with CT/PT with one 11kV breaker of HPSEBL	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 HPSEBL	Rs. 800/- per month
(vii)	Polyphase 33,22 KV meter with CT/PT with one 33, 22 KV breaker of HPSEBL	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 HPSEBL	Rs. 1300/- per month
(b)	Polyphase 66 KV with CT/PT with 66 KV circuit breaker of HPSEBL	Rs. 13500/- per month
(c)	Polyphase 132 KV with CT/PT without any 132 KV circuit breaker of HPSEBL	Rs. 2500/- per month
(d)	Polyphase132 KV with CT/PT with 132 KV circuit breaker of HPSEBL	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/-

S. No.	Description	Approved by the Commission
(iii)	Large power industrial consumers (connected load >100 KW)	Rs. 1000/-
(iv)	All other categories of consumers	Rs. 40/-
6. Fuse replacement:		
	Replacement of fuse(s) pertaining to HPSEBL/ 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 HPSEBL 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 HPSEBL'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/-

S. No.	Description	Approved by the Commission
(b)	Medium and large power supply	Rs. 5/-
(c)	All other categories	Rs. 5/-
(iii)	Supply of duplicate copies of Demand notice:	
(a)	Domestic consumers	Rs.10/-
(b)	Non residential consumers	Rs.10/-
(c)	Small Industrial and 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 LIMITED

***NOTIFICATION ***

NO.	DATED: -

In pursuance of the tariff order dated 19th July 2011 issued by the Himachal Pradesh Electricity Regulatory Commission; the Himachal Pradesh State Electricity Board Limited 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 **1st April 2011**

PART - I GENERAL

A. This Schedule may be called the **'Himachal Pradesh State Electricity Board Limited Schedule of Electricity Tariff, 2011'.**

B. This Schedule of Tariff shall come into force with effect from **1st April 2011** and will be applicable through out the State of Himachal Pradesh.

   i) Provided that the arrears if any, arising on account of revised tariffs for the billing months of April 2011 to June 2011, shall be adjusted in equal instalments corresponding to the the number of respective billing cycles contained in four months.

   ii) Provided further that this Tariff Order shall not be applicable to consumers who have been permanently disconnected prior to the date of issue of this Order unless such consumers get their connections re-instated in the future

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 1st April, 2010 except in such cases where 'Special Agreements' have otherwise been entered into for a fixed period, by HPSEBL 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 Commission, from time to time**,** and the **'Schedule of General and Service Charges'**.

F. Force Majeure Clause - In the event of lockout, fire or any other circumstances considered by the HPSEBL 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 - As specified under each consumer category of this 'Schedule of Tariff', the 'Standard of Supply Voltage' (in kV) is the voltage of supply of electricity to consumers based on the respective consumer's connected load (measured in KW) to be adopted or followed by the HPSEBL

i) either at the time of supply of electricity to prospective consumers or

ii) on request of existing consumers for change of their supply voltage to a higher voltage level as may be available on the relevant electrical network system of the HPSEBL or

iii) at the time of application of 'Lower Voltage Supply Surcharge' (LVSS) or 'Higher Voltage Rebate' (HVR), to its existing consumers categories in their respective 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 in addition to other charges be also charged a 'Lower Voltage Supply Surcharge' (LVSS) at the rates given in the following Table on only the amount of energy charges billed, for each level of specified step down (as given in following table) 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 at 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 HT consumers (11kV or 15kV or 22 kV or 33 kV) or to such EHT consumers (66 kV and above) who were already existing on date 01.12.2007 and had been given electricity connections at a voltage less than the specified Standard Supply Voltage. However, in case any extension of load is sanctioned in such cases after 1.12.2007 the 'Standard Supply Voltage' and consequently the LVSS shall be applicable as specified.*

3) *Here the expression ….”for each level of specified step down”….. as an example shall mean that in a particular case if the Standard Supply Voltage is 33kV or 66 kV and the Actually Availed Supply Voltage is less than 11 kV, then the number of step downs shall be two (2) and the rate of LVSS applicable shall be 8% (5%+3%).*

J. Higher Voltage Supply Rebate (HVSR) – Consumers 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 rates given in the following Table on only the amount of energy charges billed, for each level of specified step up (as given in the following Table) 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:-

1) *In such cases, the tariff applicable at the higher voltage (i.e. voltage at which connection is actually availed) shall be applicable and the HVSR shall be allowed in addition the said tariff.*
2) *Here the expression ...."for each level of specified step up"..... as an example shall mean that in a particular case if the Standard Supply Voltage is less than 11 KV and the Actually Availed Supply Voltage is 33KV or 66 KV, then the number of step downs shall be two (2) and the rate of HVSR applicable shall be 8% (5%+3%).*

K. Lower Voltage Metering Surcharge (LVMS) - In respect of consumers, for whom the metering (for maximum demand (KVA) or energy consumption (KWh or KVAh) or both) instead of being done on the higher voltage side of the transformer at which the supply had been sanctioned by the HPSEBL, is actually done on the lower voltage side of the transformer due to non-availability of higher voltage metering equipment or its unhealthy operation, such consumers shall in addition to other charges, be also charged "Lower Voltage Metering Surcharge" (LVMS) 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 for the Domestic Supply (DS) consumer categories and at the rate of 2% per month or part thereof for the other 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 HPSEBL 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 in addition to other charges be also charged at the rate specified in the relevant category of this schedule of tariff 'Peak Load Exemption Charge', in two parts which are Demand Charges (in Rs/KVA/month) and Energy Charges (Rs/KVAh).

N. Peak Load Violation Charge (PLVC) – Consumers, in the categories 'Small and Medium Industrial Power Supply' (SMS), 'Large Industrial Power Supply (LIP) and 'Water and Irrigation Pumping Supply' (WIPS) -who are covered under two part tariff and who have sanction of Peak Load Exemption (PLE) from the HPSEBL for running part load only during the peak load hours of the day are found using load in excess of the exemption, shall in addition to the Peak Load Exemption Charges (PLEC) be also charged Peak Load Violation Charges (PLVC) at the rates specified in the relevant Schedule of Tariff for the Energy (Rs/KVAh) and Demand (Rs/KVA/month) for the days of violation only.

(ii) Consumers, who are covered under single part tariff and have meters installed capable of recording consumption (KVAh) and demand (KVA) but do not have sanction for Peak Load Exemption (PLE) from the HPSEBL for running their loads during the peak load hours of the day and are found doing so, shall in addition to the Peak Load Exemption Charges (PLEC) as applicable to the two part tariff consumers, be also charged Peak Load Violation Charges (PLVC) applicable for the two part tariff consumers at the rates specified in the relevant Schedule of Tariff for the Energy (Rs/KVAh) and Demand (Rs/KVA/month) for the days of violation only.

(iii) Consumers, who are covered under single part tariff but do not have meters installed capable of recording consumption (KVAh) and Demand (KVA) and do not have sanction for Peak Load Exemption (PLE) from the HPSEBL for running their loads during the peak load hours of the day and are found doing so, shall for 50% of the consumption for the month be charged at normal rates (Rs/KWh) and the remaining 50% of the consumption shall be charged a PLVC rate that will be three (3) times the normal rate. 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 consumption done as violation during peak load hours of the day.

O. Demand Charge (DC) – Consumers under two (2) part tariff, whose energy consumption during normal load hours of the month is billed/ charged in Rs/KVAh, shall in addition to the KVAh charges, be also charged at the rate specified, the 'Demand Charges' (in Rs/KVA/month), calculated on the actual Maximum Demand (in KVA) recorded on the energy meter during any consecutive 30 minute block period of the month or at 90 % of the Contract Demand (in KVA) or in the absence of Contract Demand, calculated at 80% of the Connected Load (computed in KVA assuming 0.9 power factor) whichever is higher.

Note:

During the actual number of days of billing in any period, the above mentioned parameters i.e. actual recorded Maximum Demand, Contract Demand or connected load in absence of contract demand as the case may be and the prescribed respective rates of charges in the relevant schedule of tariff alone shall form the basis for calculation of Demand Charges and the licensee, based on the number of days of billing in excess or short of a month (of 28 or 29 or 30 or 31 days), shall not apply any other factor other than mentioned in para 'P' above, that may alter or vary either of these parameters in any way.

P. Contract Demand Violation Charge (CDVC) – In the event, the actual Maximum Demand (in KVA) recorded on the energy meter during any consecutive 30 minute block period of normal load hours of the month, exceeds the Contract Demand (in KVA) or in the absence of the Contract Demand, exceeds 80% of the Connected Load (computed in KVA assuming 0.9 power factor), the consumer shall be charged 'Contract Demand Violation Charges' (CDVC) (in Rs/ KVA) at a rate which shall be three (3) times the rate specified for Demand Charge (DC) (referred to in para 'P') to the extent the violation has occurred in excess of the Contract Demand or in the absence of the Contract Demand to the extent the violation has occurred in excess of 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 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 (in Rs/KVAh) on consumption of energy (in KVAh) from 00:00 hours to 06:00 hours, shall be available 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 HPSEBL 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 HPSEBL, 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 and without an installed and having connected load upto 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) 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 as follows 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.

iii) The said power factor surcharge shall be independent of the supply voltage.

iv) 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.

v) No new supply to L.T. installations with induction motor(s) of capacity above 3 H.P and/ or welding transformers above 2 KVA shall be given unless shunt capacitors of appropriate ratings are installed to the entire satisfaction of the HPSEBL.

U. Replacement of Defective/Missing/damaged Shunt Capacitors -

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. **HPSEBL:** means the Himachal Pradesh State Electricity Board Limited.

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 relevant sections of this 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 at the rates prescribed in this Tariff Order and shall be in addition to the energy charges and other fixed charges wherever applicable;

9. **Energy Charges:** expressed in Rs/KW or Rs/KVAh for a billing period shall mean the amount chargeable in rupees based on the quantity of electricity supplied measured in (KWh or KVAh) and calculated at the rates prescribed in this Tariff Order. The Demand or other fixed charges, wherever applicable, shall be in addition to the energy charges.

   Note: During the actual number of days of billing in any period, the above mentioned parameters i.e. energy (in KWh or KVAh) and the prescribed respective rates of charges in the relevant schedule of tariff, alone, shall form the basis for calculation of energy charges and the licensee, based on the number of days of billing in excess or short of a month (of 28 or 29 or 30 or 31 days), shall not apply any other factor other than mentioned in para '9' above, that may alter or vary either of these parameters in any way

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 Limited.

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;;

e) Leprosy Homes run by charity and un-aided by the Government; and,

f) Panchayat Ghars with connected load up to 2 KW.

g) Patwar Khanas and Kanungoo Bhawans (Government Buildings only) with connected load upto 5 KW

h) Monasteries

i) “Home Stay Units” in rural areas duly registered with the District Tourism Development Officer

j) Offices of the Himachal Pradesh Senior Citizen Forum.

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 1250 (125x10) units would be charged at Rs 2.50 per KWh, the next 1250 (125*10) at Rs 3.45 per unit and the balance 500 units at Rs. 3.50 per unit. Consumer service charge shall be Rs. (30x10).*

(iv) In the Section Area (smallest administrative unit) of the *HPSEBL, where a consumer avails more*

than three electricity connections of residential nature (Domestic Supply) in his own name, all such electricity connections in excess of three (3) numbers, shall be billed under Commercial Supply (CS) category and shall be deemed to be for rental purposes.

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 upto 2000 KW	11 KV or 15 KV or 22 KV
2001 KW upto 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)	10.00
Other consumers	30.00

b) Energy Charge (Charges-2a) [Other Than Pre-Paid Metered]

Description	Slabs (KWh per month)	Energy Charge (Rs./KWh)
Below Poverty Line (BPL)	(upto 40 KWh)	2.10
Others	0-40	2.35
	0-125	2.50
	126-250	3.45
	Above 250	3.50

Note:

1. In the case of **Below Poverty Line** beneficiaries the concessional tariff will be available for use of electricity by these families upto a maximum of 40 units per month. In case this limit is exceeded, the normal domestic tariff slabs of 0-125; 126-250; and above 250 KWh per month respectively will apply..
2. In the case of Domestic Category consumers with consumption in the slabs 126-250; and above 250 KWh per month respectively, the slab rates for 0-40 KWh per month shall **not** apply.

c) Energy Charge (Charges-2b) [Prepaid Meter]

Description	Slabs (KWh per month)	Energy Charge (Rs./KWh)
Prepaid meter consumers	Entire consumption	2.50

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 in the slab 0-125 in respect of entire consumption.*

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 with connected load greater than 2KW.

g. Patwar Khanas and Kanungoo Bhawans (Government Buildings only) with connected load greater than 5KW

h. 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), (f) and (g) above, the same shall be charged at the Domestic Supply (DS) tariff, in cases where the consumer seeks a separately metered connection for the residential portion..*

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 upto 2000 KW	11 KV or 15 KV or 22 KV
2001 KW upto 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)	60.00

b) Energy Charge (Charges-2)

Energy Charge (Rs./KWh)	4.45

4. Two Part Tariff for connected Load > 20 KW

a) Consumer Service Charge (Charges-1)

Consumer Service Charge (Rs/month)	120.00

b) Energy Charge (Charges-2)

Energy Charge (Rs./KVAh)	3.70

c) Demand Charge (Charges-3)

Demand Charge (Rs/KVA/month)	100.00

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.

Note: *In the Section Area (smallest administrative unit) of* the *HPSEBL, where a residential consumer avails more than three electricity connections of residential nature (Domestic Supply) in his own name, all such electricity connections in excess of three (3) numbers, shall be billed under this category and shall be deemed to be for rental purposes*

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 upto 2000 KW	11 KV or 15 KV or 22 KV
2001 KW upto 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)	60.00

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	120.00
Above 100 KW	240.00

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	75.00
Above 100 KW	100.00

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 upto 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)	80.00

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)	150.00

b) Energy Charge (Charges-2)

Energy Charge (Rs./KVAh)	3.30

c) Demand Charge (Charges-3)

Demand Charge (Rs/KVA/month)	50,00

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	6.60

b) Peak Load Violation Charge (Charge-2)

Description	Demand Charge	Energy Charge
	PLVC (Rs./KVA/month)	PLVC (Rs./KVAh)
	300	9.90

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 and 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 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	350.00
HT	350.00

b) Energy charge (Charges-2)

Description	Energy Charge (Rs./KVAh)
EHT	
1. Upto 300 KVAh/KVA of contract demand/month	2.85
2. Remaining energy during the month	3.05
HT	
1. Upto 300 KVAh/KVA of the contract demand/month	3.05
2. Remaining energy during the month	3.25

c) Demand Charge (Charges-3)

Description	Demand Charge (Rs/KVA/month)
EHT	240.00
HT	240.00

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	Addl. Demand Charge on exempted load (Rs/KVA/month)	Energy Charge (Rs./KVAh)
EHT	50	5.70

HT	50	6.10

b) Peak Load Violation Charge (Charge-2)

Description	Demand Charge	Energy Charge
	PLVC (Rs./KVA/month)	PLVC (Rs./KVAh)
EHT	300	8.55
HT	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.

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 and 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 upto 2000 KW	11 KV or 15 KV or 22 KV
2001 KW upto 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	40.00

b) Energy Charge (Charges-2)

Energy Charge (Rs./KWh)	2.50

4. Two Part Tariff for connected load above 20 KW

a) Consumer Service Charge (Charges-1)

Consumer Service Charge (Rs/month)	
LT	140.00
HT	200.00
EHT	250.00

b) Energy Charge (Charges-2)

Description	Energy Charge (Rs./KVAh)
LT	3.50
HT	3.85
EHT	3.45

c) Demand Charge (Charges-3)

Maximum Demand Charge (Rs/KVA/month)	
LT	50.00
HT	175.00
EHT	175.00

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)

PLEC	Addl. Demand Charges on	Energy Charges (Rs./KVAh)
LT	50	6.90
HT	50	6.90
EHT	50	6.90

b) Peak Load Violation Charge (Charge-2)

Description	Demand Charge	Energy Charge
	PLVC (Rs./KVA/month)	PLVC (Rs./KVAh)
LT	300	10.35
HT	300	10.35
EHT	300	10.35

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 upto 2000 KW	11 KV or 15 KV or 22 KV
2001 KW upto 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	150.00
HT	150.00
EHT	150.00

b) Energy Charge (Charges-2)

Description	**Energy Charge (Rs./KVAh)**
LT	4.05
HT	3.50
EHT	3.35

c) Demand Charge (Charges-3)

Demand Charge (Rs/KVA/month)	
LT	200.00
HT	200.00
EHT	200.00

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 paise/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)	60.00

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 HPSEBL, 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 *HPSEBL, Line Maintenance and lamp renewal charges shall be as follows:-*

Description	**Charge (**Rs./point/month)
Bulbs	7
Tubes and MVL etc	12
Sodium/Neon Vapour lamps or any	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 upto 2000 KW	11 KV or 15 KV or 22 KV
2001 KW upto 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)	140.00

b) Energy Charge (Charges-2))

Energy Charge (Rs./KWh)	6.80

4 Two Part Tariff for connected Load > 20 KW

a) Consumer Service Charge (Charges-1)

Consumer Service Charge (Rs/month)	200.00

b) Energy Charge (Charges-2)

Energy Charge (Rs./KVAh)	5.25

c) Demand Charge (Charges-3)

Demand Charge (Rs/KVA/month)	350.00

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.*

SCHEDULE – RAILWAY TRACTION

1 Applicability

This schedule is applicable to Railways for Traction loads.

2 Character of service

Standard Supply Voltage (AC 50 Hz)	>= 66KV

3 Two Part Tariff for connected Load > 20 KW

a) Consumer Service Charge (Charges-1)

Consumer Service Charge (Rs/month)	350.00

b) Energy Charge (Charges-2)

Energy Charge (Rs./KVAh)	4.00

c) Demand Charge (Charges-3)

Demand Charge (Rs/KVA/month)	240.00

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): *Not applicable*.

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.*

Abbreviations Used

The abbreviations and acronyms used in this tariff order shall have the following respective meanings unless the context requires otherwise

No	Abbreviation	Description
1	A&G	Administrative and General
2	ACD	Advance Consumption Deposit
3	Act	The Electricity Act, 2003
4	AFC	Annual Fixed Charge
5	APDRP	Accelerated Power Development and Reform Program
6	APR	Annual Performance Review
7	ARR	Aggregate Revenue Requirement
8	ATE	Appellate Tribunal for Electricity
9	BBMB	Bhakra Beas Management Board
10	Board	HP State Electricity Board
11	CAGR	Compounded Annual Growth Rate
12	CEA	Central Electricity Authority
13	CERC	Central Electricity Regulatory Commission
14	CoS	Cost of Supply
15	CPI	Consumer Price Index
16	CPSUs	Central Public Sector Undertakings
17	CSGS	Central Sector Generating Stations
18	DA	Dearness Allowance
19	DP	Dearness Pay
20	EHT	Extra High Tension
21	FPA	Fuel Price Adjustment
22	FY XX	Financial Year beginning 1 April of the year (XX-1) and ending on 31 March of the following year (XX)
23	GFA	Gross Fixed Assets
24	GoHP	Government of Himachal Pradesh
25	GOI	Government of India
26	GP	Grade Pay
27	GPF	General Provident Fund
28	GPP	Gas Power Plant
29	HEP	Hydro Electric Project
30	HPSEB	Himachal Pradesh State Electricity Board
31	HT	High Tension
32	HVPNL	Haryana Vidyut Prasaran Nigam Limited
33	IPP	Independent Power Producers
34	IR	Interim Relief
35	kV	Kilo Volt
36	KVA	Kilo Volt-Ampere
37	KVAh	Kilo Volt-Ampere Hour
38	KW	Kilo Watt

No	Abbreviation	Description
39	KWh	Kilo Watt Hour
40	LT	Low Tension
41	MU	Million Units
42	MW	Mega Watt
43	MYT	Multiyear tariff
44	NAPS	Narora Atomic Power Station
45	NFA	Net fixed assets
46	NHPC	National Hydro-electric Power Corporation
47	NPCIL	Nuclear Power Corporation of India Limited
48	NTPC	National Thermal Power Corporation
49	OT	Overtime
50	PGCIL	Power Grid Corp. of India Ltd.
51	PLF	Plant Load Factor
52	PPA	Power Purchase Agreement
53	PSEB	Punjab State Electricity Board
54	PSPCL	Punjab State Power Corporation Ltd
55	PSTCL	Punjab State Transmission Corporation Ltd
56	R&M	Repair and Maintenance
57	RAPS	Rajasthan Atomic Power Station
58	REA	Regional Energy Accounts
59	REC	Renewable Energy Certificate
60	ROE	Return on equity
61	SHP	Small Hydro Projects
62	SJVNL	Satluj Jal Vidyut Nigam Limited
63	State Govt	Government of Himachal Pradesh
64	STPS	Super Thermal Power Station
65	STU	State Transmission Utility
66	T&D	Transmission and Distribution
67	THDC	Tehri Hydro Development Corporation Limited
68	ToD	Time of Day
69	UJVNL	Uttaranchal Jal Vidyut Nigam Limited
70	UPSEB	Uttar Pradesh State Electricity Board
71	WPI	Wholesale Price Index