COMMISSION'S ORDER

ON

AGGREGATE REVENUE REQUIREMENT OF HVPNL FOR TRANSMISSION BUSINESS & SLDC AND TRANSMISSION TARIFF & SLDC CHARGES FOR FY 2012-13

CASE NO: HERC/PRO - 34 OF 2011

29th March, 2012

Panchkula

HARYANA ELECTRICITY REGULATORY COMMISSION

Bay No. 33-36, SECTOR - 4, PANCHKULA - 134 112, HARYANA

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HARYANA ELECTRICITY REGULATORY COMMISSION

BAYS NO. 33-36, SECTOR - 4, PANCHKULA - 134 112

CASE NO: HERC / PRO - 34 OF 2011

IN THE MATTER OF

Petition / Application filed by Haryana Vidyut Prasaran Nigam Limited (herein after referred to as HVPNL or petitioner) for approval of Aggregate Revenue Requirement (ARR) for Transmission business and State Load Dispatch Centre (SLDC) and determination of Transmission Tariff and SLDC Charges for FY 2012-13.

Present:

Shri R. N. Prasher	**Chairman**
Shri Rohtash Dahiya	**Member**
Shri Ram Pal	**Member**

DATE OF ORDER: 29th March, 2012

ORDER

The Haryana Electricity Regulatory Commission (hereinafter referred to as 'the Commission'), in exercise of powers vested in it under section 62 of the Electricity Act, 2003 and Section 26 of the Haryana Electricity Reforms Act, 1997 and all other provisions enabling it in this behalf, passes this order determining the Aggregate Revenue Requirement (ARR) for Transmission and State Load Despatch Centre Business of Haryana Vidyut Prasaran Nigam Limited and the transmission tariff and SLDC charges for the FY 2012-13. The Commission while passing this order has considered the petition filed by HVPNL for ARR for Transmission Business & SLDC, Transmission tariff & SLDC charges for FY 2012-13, subsequent filings made by HVPNL in response to various queries of the Commission, the objections / comments of UHBVNL and DHBVNL on the ARR Petition furnished to the Commission in response to the Public Notice, submissions made by HVPNL in its presentation during Public Hearing held on 13th February, 2012 and clarifications given in respect of objections of UHBVNL and DHBVNL.

In its consultative process the Commission convened a meeting of the State Advisory Committee on 23/02/2012 and their views on different aspects of transmission tariff & SLDC charges have been kept in mind while passing this order. Further all other relevant facts and information on the record of the Commission have been perused before passing this order.

1. PROCEDURAL ASPECTS OF THE ARR FILING

1.1 Background

(i) The Haryana Electricity Regulatory Commission (HERC) was established in August 1998 to regulate power sector in the state of Haryana, under the provisions of Haryana Electricity Reforms Act 1997(Act 10 of 1998) which was enacted by the Government of Haryana in 1997 and came into force on 14th August, 1998 after presidential assent on 20th February,1998 .

The Electricity Act, 2003 (EA, 2003) was enacted by the Govt. of India in June, 2003. However, the Government of Haryana, in exercise of the powers conferred by clause (d) of section 172 of the Electricity Act, 2003 , vide its notification No. 1/4/2003 - 1 Power dated 8/09/2003 notified that all the provisions of the Act except section 121, which has not been enforced by the Central Government vide notification No. S.O 699 (E) dated 10/6/2003, shall not apply in the State of Haryana for a period of six months from the appointed date i.e. 10/6/2003. Resultantly, EA, 2003 came into force in the State of Haryana w.e.f. 10/12/2003. However, as the Haryana Electricity Reforms Act, 1997 (HERA, 1997) is a saved Act under sub – section (3) of section 185 of EA, 2003, the provisions of HERA, 1997 not inconsistent with EA, 2003 continue to be applicable.

(ii) The Haryana Vidyut Prasaran Nigam Ltd. (HVPNL) is a state Government owned company registered under Indian Companies Act, 1956. It is presently engaged in the business of transmission in the State and is also operating State Load Dispatch Centre (SLDC) at Sewah in Distt. Panipat. HVPNL came into being on 14.8.1998 as per the provisions of the first Transfer Scheme Rules, 1998 notified by the Government of Haryana under HERA for implementation of Power Reforms & Restructuring of erstwhile Haryana State Electricity Board (HSEB). Initially both transmission as well as distribution business was vested in HVPNL. Thereafter, through the Second Transfer Scheme Rules, 1999, the Distribution business was separated from HVPNL and vested into two distribution companies, namely Uttar Haryana Bijli Vitran Nigam Ltd. (UHBVNL) & Dakshin Haryana Bijli Vitran Nigam Limited (DHBVNL)

(iii) The Government of Haryana vide its notification No. 1/10/2003-1/ Power dated 9.12.2003 notified HVPNL as the State Transmission Utility (STU) for the purpose of section 39(1) of E.A. 2003. Through another notification No. 1/11/2003-1 Power dated 9.12.2003, the State Govt. notified that SLDC at Sewah in Distt. Panipat, established for the purpose under section 31 (1) of the Act, shall be operated by HVPNL w.e.f. 10.12.2003.

(iv) HVPNL also holds ownership interest in the generation projects of BBMB & IP Thermal Power Station. HVPNL's share of Power Generation of these projects has been assigned to the UHBVNL & DHBVNL for a period of five years w.e.f. 1.4.2008 in the ratio of 1:1 vide Govt. of Haryana Notification dated 11.4.2008. Being interstate generation projects, the power to fix generation tariff for these projects are not vested with the Commission and same is regulated as per the Power Supply Agreement entered into between HVPNL and the two Discoms.

(v) Compliance of directive for alteration / modification in the Transmission license

Haryana Vidyut Prasaran Nigam Limited is the holder of the "The Haryana Transmission and Bulk Supply License [License No. 1 of 1999] granted to it by the Commission under section 15 of the Haryana Electricity Reform Act, 1997. However, the Government of Haryana vide its notification no. 116/2005/1/ Power dated 9th June, 2005, transferred the rights relating to procurement & bulk supply of electricity or trading of electricity from HVPNL to HPGCL and subsequently to distribution licensees. Since the existing license of HVPNL is both for transmission as well as bulk supply business, it needs some alterations or modifications in view of transfer of bulk supply business from HVPNL to HPGCL and subsequently to HPPC. In compliance to the provisions of regulations 22.2 of Form-1 in HERC (Conditions for Transmission License) Regulations, 2008 notified by the Commission on 31st October, 2008, HVPNL has submitted for the approval of the Commission the modifications required in its existing license. The Commission is in the process of examining the same and the modified license for transmission business shall be issued shortly.

(vi) The power to determine tariff for generation, transmission, supply & wheeling of Electricity, wholesale, bulk or retail, as the case may be, are vested with the Commission in accordance with section 86 (a) of Electricity Act, 2003. The instant petition filed by Haryana Vidyut Prasaran Nigam Ltd. (HVPNL) is for determination of ARR for Transmission business & SLDC and for fixation of transmission tariff & SLDC charges by the Commission in exercise of powers vested in it under section 62 read with section 64 (3) (a) and section 64 (6) of the Electricity Act, 2003, for the FY 2012-13

1.2 HVPNL's ARR Petition for FY 2012-13

As per provisions of regulation 7 of the HERC (Terms and Conditions for Determination of Transmission Tariff) Regulations, 2008, HVPNL is required to submit ARR for the ensuing year by 30th November of the current year. However, HVPNL vide its letter No. Ch. 100 / SE / ARU / F – 100 / Vol – 1 dated 30th November, 2011 sought extension for filing the ARR application for FY 2012-13 up to 7th December, 2011. The petitioner, accordingly, filed the petition for approval of Aggregate Revenue Requirement (ARR) and tariff for transmission and SLDC charges for the financial year 2012-13 vide Memo No.Ch- 104 / SE / RAU / F-100 /Vol- dated 7th December, 2011 under sections 32 (3), 62 and 64 of the Electricity Act, 2003 read with section 26 (5) of HERA, HERC (Terms and Conditions for Determination of Transmission Tariff) Regulations 2008, applicable provisions of Haryana

Transmission and Bulk Supply License (License No. 1 of 1999) read with Government of Haryana Gazette notification No. 1/6/ 2005 -1/ Power, dated 9th June, 2005.

The petition of HVPNL was considered and after conducting preliminary scrutiny the Commission admitted the petition. The Commission, vide Memo Nos. 3064/ HERC, dated 23.12.2011 and 4006/HERC, dated 28.2.2011 sought additional information required for carrying out detailed analysis which were duly submitted by the petitioner.

1.3 Public Proceedings

In accordance with the provisions of section 64 (2) of the Act, HVPNL published its petition in the abridged form in order to ensure public participation. The Public Notice was issued by the HVPNL in Dainik Bhaskar (Hindi) dated 16.12.2011 & The Tribune (Hindi) dated 16.12.2011 and The Tribune (English) dated 2.2.2012 inviting objections/ suggestions/ comments from the stakeholders by 27.01.2012. Subsequently the Commission issued a public notice on 18.12.2011 in The Times of India (English) and on 19.12.2011 in Dainik Bhaskar (Hindi) inviting objections and suggestions on the ARR petition of HVPNL for FY 2012-13 from the public and other stakeholders. The last date for submission of objections /suggestions was fixed as 10th February, 2012.

In response to the public notices issued by the petitioner and subsequently by the Commission, UHBVNL and DHBVNL submitted their objections / comments. No objections or suggestions were received from public or any other stakeholder. The Commission proceeded to hold public hearing on the ARR petition of HVPNL for FY 2012-13 on 13.2.2012 and issued a public notice for the same for information of public and all the stake holders on 20.01.2012 in The Times of India (English) and Dainik Bhaskar (Hindi).

The public hearing was held as per schedule on 13.02.2012 at 03.00 P.M. in the conference hall of the Commission. The Managing Director of HVPNL made a presentation on HVPNL's ARR during the hearing. The Managing Director and other officers of HVPNL responded to the queries of the Commission. The representatives of UHBVNL and DHBVNL, who were present in the hearing, requested the Commission to consider their written submissions while taking a final view on the ARR and tariff petition of HVPNL for FY 2012-13.

The objections / comments of UHBVNL & DHBVNL on the ARR of HVPNL submitted for the consideration of the Commission are as under:-

i) HVPNL has claimed ROE @ 15.50% against the provision of 14% in HERC (Terms and Conditions for Determination of Transmission Tariff) Regulations 2008. No ROE is allowed to distribution licensees and allowing of the same to HVPNL will have cascading effect on their financial health.

ii) HVPNL has also claimed tax on RoE amounting to Rs. 510.56 millions in FY 2012-13. Allowing a return on equity capital and thereby increasing HVPNL's tax liability would further burden the Discoms and retail electricity consumers since tax payable on the profit earned through RoE will be passed on to the Discoms and the consumers, who are already paying transmission and SLDC charges. This additional burden would lead to a deterioration of the already poor financial health of the Discoms.

iii) HVPNL may be directed to use profit, if any, from the sale of assets for redemption of bonds.

iv) HVPNL has claimed interest on working capital of Rs. 357.90 million which includes receivables equivalent to 2 months. This is not justified as the Discoms are billed on a monthly basis and any delay in payment is subjected to a penal interest. Hence, claiming interest cost on two months of outstanding amount from the utilities is an overstatement. Receivables equivalent to one month only should be considered while calculating interest on working capital for both the transmission tariff and SLDC charges.

v) HVPNL has proposed to retain 50% of the charges collected from short term open access customers and balance to be passed on to the long term customers including Discoms in proportion to the transformation capacity. The Discoms request the Hon'ble Commission to disallow HVPNL's proposal to retain 50% of the charges collected from short term open access customers.

vi) Commissioner of Central Excise & Customs has served a notice on HVPNL for levy of service tax w.e.f July, 2003 which is being contested by HVPNL. In case any service tax is levied in future, the distribution licensees may also be allowed the same.

vii) HVPNL has proposed to levy reactive energy charges @ 11 Paise/kVArh from 1.4.2012 from Discoms and all long/short term open access customers on the basis of the readings of the existing SEMs and individual ABT compliant meters of short-term and long-term customers. By HVPNL's own admission in the ARR petition for FY 2012-13, SEMs have been installed at Inter-face points of Discoms at many, but not all, locations. In the remaining locations Electro Mechanical Meters have been provided and work is still under way to replace such meters with SEMs. The Discoms request the Hon'ble Commission to disallow HVPNL's proposal of levying the reactive energy charges of 11 Paise/kVArh and keep the charges at current level till such time an adequate infrastructure is put in place in the state of Haryana.

The objections / comments of UHBVNL / DHBVNL have been dealt at the relevant paragraphs in the instant order.

1.4 Salient features of the ARR Petition of HVPNL:

1.4.1 HVPNL proposal for ARR of Transmission business for FY 2012-13

HVPNL, in its petition, has furnished the details of various expenses for transmission business for FY 2012-13 including salary & wages, repair and maintenance (R&M) expenses, administrative and general (A&G) expenses, depreciation, interest cost on capital expenditure related borrowings & working capital, fringe benefit tax, Income tax & special appropriations etc. In addition to the above mentioned expenses Return on Equity (ROE) has been claimed @15.5%. The abstract of ARR as projected by HVPNL in the petition filed for the consideration of the Commission is reproduced in the Table 1.1:

Table 1.1- HVPNL proposal for ARR of Transmission Business for 2012-13 (Rs. In millions)

Sr. No.	Description	Audited Actual FY 2010-11	Projected FY 2011-12	Projected FY 2012-13
1	Employees Cost	3531.16	2416.9	3496.19
2	R&M Expenditure	105.41	**167.51**	**214.38**
3	A&G Expenses	103.39	103.10	108.25
4	Interest on Pension Bonds	673	673	673
5	Interest for Capital Expenditure	1039.93	**1,477.67**	**1,983.46**
6	Debenture interest (PF Bonds)	187.41	149.13	129.86
7	Interest for Working Capital	805.06	628.28	357.9
8	Depreciation	1362.65	**1,772.52**	**2,249.06**
9	Other expenditure	584.33	0.00	0.00
10	PPP project	0	0	681.72
11	**Total Expenditure**	**8392.34**	**7,388.11**	**9,893.82**
12	**Special Appropriations:**			
13	Tax on income & Profit (on ROE)	21.63	426.05	510.56
14	Debt Redemption Obligation (for redemption of PF & Pension Bonds)	0	**481.93**	**481.93**
15	Interest of past due payables (FBT for FY 2005-06)	0	6.20	6.20
16	Arrears as per HERC order on Appellate order	0	1276.67	0
17	**Total Special Appropriation**	**21.63**	**2,190.85**	**998.69**
18	**Total Expenditure (including special appropriations)**	**8,413.97**	**9,578.96**	**10,892.51**
19	Return on equity	0.00	2129.52	2551.89
20	Minus Non-tariff expenditure/ (income)	-123.02	**-31.34**	**-31.31**
21	**Total Aggregate revenue requirement**	**8,290.95**	**11,677.14**	**13,413.08**

1.4.2 Revenue Gap

HVPNL has worked out the total revenue at the existing tariff and the revenue gap for FY 2012-13 as under:

Table 1.2- Revenue gap for FY 2012-13

(Rs. In millions)

Consumers	Existing approved monthly tariff for FY 2011-12	Total revenue from existing tariff for the year
UHBVNL	363.99	4367.88
DHBVNL	359.94	4319.28
Total Revenue at existing tariff		8687.16
Total net ARR		13413.08
Difference (Revenue Gap FY 2012-13)		4725.92

1.4.3 Proposed transmission tariff:

HVPNL has proposed to meet the entire revenue gap as projected by them for FY 2012-13 through suitable increase in the transmission tariff. The proposal for transmission tariff for FY 2012-13 as submitted by HVPNL for approval of the Commission is given in the Table 1.3.

Table 1.3- Proposed Transmission Tariff for FY 2012-13

Transmission Tariff	Fixed Charges (Rs. in millions)	
	Per annum	Per month
UHBVNL	6795.07	566.256
DHBVNL	6618.01	551.501

HVPNL has proposed a single part transmission tariff based on the respective share of UHBVNL and DHBVNL in the total transformation capacity projected for FY 2012-13. The recovery of transmission charges has been proposed to be made on a monthly basis from UHBVNL and DHBVNL. The details of projected transformation capacity, share of UHBVNL/ DHBVNL and the monthly recovery of transmission charges as per ARR petition of HVPNL for FY 2012-13 has been worked out as under:-

Table 1.4 - Transmission charges for FY 2012-13

Particulars	UHBVNL	DHBVNL	Total
Transformation capacity (in MVA))	9774.2	9521.4	19295.6
Ratio of average transformation capacity	50.66%	49.34%	100%
Annual transmission charges recoverable	6795.07	6618.01	13413.08
Monthly transmission charges recoverable	566.256	551.501	1117.76
Energy sales (MU)			41626.42
Transmission Tariff for Short term open access Customers (Rs. / kWh).			0.32

The increase in the monthly transmission charges proposed by HVPNL for FY 2012-13 with reference to the existing charges works out to 35.72 % and 34.73% for UHBVNL and DHBVNL respectively.

1.4.4 SLDC ARR & Charges

The abstract of Aggregate Revenue Requirement for SLDC business as proposed by HVPNL in its petition is reproduced in the Table 1.5.

Table 1.5 - ARR for SLDC Business for FY 2012-13 as projected by HVPNL

(Rs. millions)

Sr. No	Particulars	FY 2010-11 (Actual)	Projected for 2011-12	Projected for 2012-13
1	Employee Cost	35.01	39.89	43.90
2	Administration & General Charges	6.38	6.70	7.03
3	Repairs and Maintenance Expenses	14.64	15.37	16.14
4	Depreciation	24.52	21.40	24.27
5	Interest and finance charges	17.57	15.87	22.92
6	Interest on Working Capital	0	0	0
7	Other Expenses	0.001	0.001	0.001
8	Income tax	0	0	1.74
9	Prior Period Adjustments(+ / -)	-1.47	0	0
10	Return on equity	0	8.68	8.68
11	**Total Revenue Requirement**	**96.65**	**107.91**	**124.68**
12	Less other Income (fee etc.,)	-0.72	-0.51	-0.54
13	**Net ARR**	**95.93**	**107.40**	**124.14**

The petitioner has proposed to recover the entire ARR for SLDC from the two Distribution Licensees i.e. UHBVNL and DHBVNL @ 50% from each of them.

The SLDC charges have accordingly been proposed as under:-

Table 1.6 – SLDC charges

(Rs. million)

Total annual charges for SLDC	124.14
Monthly charges for UHBVNL	5.17
Monthly charges for DHBVNL	5.17
Total Recovery per month	10.35

1.5 State Advisory Committee

The Commission, in order to have the benefit of the views of State Advisory Committee (SAC) members, convened a meeting of the State Advisory Committee, constituted under Section 87 of the Electricity Act, 2003, on 23rd February, 2012. The SAC members were provided executive summary of the ARR petition of HVPNL for Transmission & SLDC business for FY 2012-13. The SAC members mostly expressed concern about the increase in intra state transmission loses despite substantial capital expenditure having been incurred by HVPNL in the successive years. The Commission has taken note of the views expressed by the SAC members and considered the same while taking a final view on the transmission tariff and SLDC charges for FY 2012-13.

2. ANALYSIS OF THE ARR FILING AND COMMISSION'S ORDER

The Commission has considered HVPNL's petition comprising of the ARR & Tariff application dated 7.12.2011, additional information provided from time to time, oral submissions of HVPNL and subsequent discussions in the public hearing held on 24.02.2011.

The ARR for the Transmission business & SLDC dealt with by the Commission in this chapter cover the fixed expenses including capital expenditure and the operating expenses. The various elements of transmission and SLDC expenses proposed by HVPNL including capital base, reasonable return, non-tariff income and incidence of taxation are analyzed and the Commission's order on each item is presented.

2.1 Operating and Maintenance (O&M) Expenditure

HVPNL has estimated O&M expenditure for FY 2012-13 at Rs. 3818.82 million in its ARR application submitted for approval of the Commission. Employees' cost, administration & general expenses and repair & maintenance expenses, which together comprise the O & M expenditure, are analyzed under this sub-head. The details of O&M expenses as proposed by HVPNL for FY 2012-13 vis-à-vis those approved by the Commission for FY 2011-12 and the actual expenditure in FY 2010-11 as per their audited accounts under each of these three accounting heads is presented in Table 2.1.

Table 2.1 - O&M expenses (Rs. million)

Particulars	HVPNL audited (FY 2010-11)	HERC Order FY (2011-12)	HVPNL Proposal (FY 2012-13)
Wages, salaries & related costs	3531.16	1824.19	3496.19
Repair & Maintenance Expenses	105.41	204.10	214.38
Administration & General Expenses	103.39	94.77	108.25
Total	**3739.96**	**2123.06**	**3818.82**

The Commission has considered the latest available audited accounts i.e. FY 2010-11 of HVPNL with appropriate adjustments / changes for calculating the allowable expenses as part of the ARR for FY 2012-13.

The Commission has tried to comparatively evaluate the transmission charges of some states. A summary of the same is presented in the table 2.2.

Table 2.2 - Cost Break - up/ KWh

State	Utility	Average cost	Employee	O&M	Interest	Depreciation
Delhi	Delhi Transco	0.12	0.03	0.01	0.02	0.02
Haryana	HVPNL	0.24	0.11	0.02	0.06	0.03
Uttarakhand	Ut Transco	0.15	0.04	0.01	0.03	0.06
Andhra Pradesh	AP Transco	0.10	0.02	0.01	0.02	0.04
Karnataka	KPTCL	0.26	0.05	0.01	0.10	0.08
Gujarat	GETCO	0.17	0.05	0.02	0.04	0.05
Maharashtra	MSPTCL	0.14	0.04	0.03	0.02	0.03

Source: 8th report on performance of State Power utilities by Power Finance Corporation from 2007-08 to 2009-10.

The various expenses that form part of the O&M expenses are discussed in detail in the paragraphs below.

2.1.1 Employees' cost

Employees' cost includes cost incurred for the working employees as well as the retirees. The cost of working employees comprises of salary, dearness allowance and other allowances such as HRA, CEA, LTC, medical reimbursement, etc. In the case of retired employees and those who would be retiring during the financial year under consideration, HVPNL has to discharge its liability in respect of payment of pension, gratuity, leave encashment & other benefits / payments as admissible to the employees under the service rules. The Commission observes that as per audited accounts of HVPNL for FY 2010-11, the employees cost accounts for over 30% of the total transmission expenditure.

A perusal of the comparative cost break – up of transmission business as presented in the table above reveals that the employee cost in Haryana is higher as compared to that of other Transmission Utilities in the country. Some aberrations in the costs are understandable due to the differences in the voltage level to which the transmission system extends as compared to that of HVPNL whose transmission system comprises of 66 KV and above. However, significant variations are a matter of concern. HVPNL is advised to take a close look at its manpower planning / budgeting with a view to rationalize the cost, outsource wherever possible and make optimum use of its available manpower resources without resorting to new recruitments thereby increasing the number of employees and corresponding costs.

The Commission has examined the calculation submitted by HVPNL for projecting the employee cost and mostly agrees with the same except for the terminal benefits. The Commission is in the process of reconciling the allocation of liability between the three utilities. As the data is voluminous it would take some more time. However, for the purpose of the ARR calculations for FY 2012-13, the Commission has allowed the estimation on account of "current service cost" amounting to Rs. 263.016 million as per audited accounts for FY 2010-11. The Commission also allows Rs. 699.51

million as interest cost on the unfunded portion of Pension liability outstanding as on 31.3.2011 amounting to Rs. 8229.532 million. Having said so, the Commission would like to add a word of caution regarding management of funds by HVPNL pension trust. The Commission believes that a part of the increase in pension liabilities is also due to lower returns earned by the funds managed by the trust. As against the discounting factor used for actuarial valuation of liabilities, the interest earned by pension fund is much less. Resultantly the gap in the funded portion increases. The distribution licensees are borrowing funds @ 13% p.a. for contribution to the fund, while a lower return of 6% as earned by the pension fund in FY 2010-11 would lead to an increase of liability by over Rs.2000 million by way of interest loss only which seems to be against prudent financial management practices.

The Commission vide its order on the ARR for FY 2010-11 had allowed HVPNL to recover Rs. 103.60 million as contribution to New Pension Scheme for employees recruited after 1.1.2006. However, as per the audited accounts for FY 2010-11, the Commission observes that the actual contribution by HVPNL on this account is only Rs. 17 million. Therefore the Commission orders the adjustment of excess amount allowed in the ARR.

In view of the above discussions, the Commission approves the employee cost as proposed by the licensee except for disallowance of Rs. 86.60 million (Rs. 103.60 million – Rs. 17 million) and lower terminal benefit cost. Thus the amount approved by the Commission is Rs. 2842.74 million which includes employees cost of Rs. 43.90 million for SLDC. The computation of employee cost is provided in Table 2.3.

Table 2.3 - Employees' cost for FY 2012-13 (Rs. millions)

Particulars	HVPNL Proposal	HERC approval
Basic+DA	1732.00	1732.00
Other allowances	296.66	296.66
Contract employees	173.17	173.17
Contribution towards pension trust fund	1570.09	962.53
Contribution to new pension scheme (NPS)	58.06	58.06
Less:		
Disallowance for excess contribution to NPS allowed in the ARR for FY 2010-11		-86.60
Total Employee Cost	**3829.98**	**3135.81**
Employee cost capitalised	289.89	293.07
Net Employee Cost Expensed		
• **For SLDC Business**	**43.90**	**43.90**
• **For Transmission Business**	**3496.19**	**2798.74**

The Commission directs that the licensee shall not divert any subscription received from employees towards provident fund and new pension scheme to its business.

2.1.2 Repairs and Maintenance Expenses (R&M)

Repair and maintenance (R&M) expenditure is essential for the upkeep of the transmission system. The petitioner has proposed to incur gross R&M expenses (including SLDC) of Rs. 230.51 million @ 0.48% of average GFA for FY 2012-13. The estimate is reasonable, hence the Commission has considered the same percentage i.e.0.48% of average GFA for calculating R&M expenses which works out to Rs. 224.55 millions. **Accordingly the Commission approves R&M expenses of Rs. 224.55 million i.e. Rs. 16.14 million for R&M of SLDC and Rs. 208.42 million for the Transmission system.** The difference in the R&M amount proposed by the petitioner and that approved by the Commission is due to lower capital expenditure approved by the Commission for FY 2012-13.

In the above context the Commission observes that the actual capital expenditure undertaken by HVPNL is much lower than the amount projected by them. Resultantly R&M expenses in the ARRs of earlier years becomes overstated. **HVPNL may submit a comparison of the actual R&M expenses incurred by them as compared to that allowed in the ARR and use the excess amount allowed in the ARR to fund the proposed cleaning of Transmission lines to prevent outages.**

2.1.3 Administrative and General Expense (A&G)

HVPNL has proposed Rs.108.25 million as A&G expenses for FY 2012-13. The Commission has considered the proposed amount and finds it to be reasonable. **The Commission, accordingly, approves A&G expenses as proposed by HVPNL i.e. Rs. 108.25 million (net of capitalization) and Rs. 7.03 million for transmission and SLDC business respectively.**

2.2 Interest cost

2.2.1 Capex & Interest on borrowings

Keeping in view the capital expenditure approved by the Commission, as discussed in para 2.7, the borrowings for capital expenditure are estimated to Rs. 6440.58 million for FY 2011-12 and Rs 5025.67 million for FY 2012-13 respectively and interest is calculated accordingly.

The interest on borrowings related to generation business of BBMB (Rs. 196.31 million) and SLDC business (Rs. 21.04 million) are excluded from interest cost for transmission business. The repayment of loans for calculating interest in the ARR has been considered by the Commission as proposed by the petitioner. The Commission has already allowed funds for repayment of market committee loans in FY 2008-09 hence interest cost amounting to Rs. 74.2 million on these borrowings is excluded. In case the petitioner is able to get the interest accrued on this loan waived off, as claimed by them, the same will be adjusted in the subsequent ARR. **The**

licensee is directed to keep the Commission informed of the latest status on this issue.

The total interest cost for transmission business is further reduced by the amount of interest capitalized i.e. Rs. 1542.41 million as against Rs.1213.60 million projected by the petitioner. On the new capital works to be started during 2012-13 interest is capitalized for a period of six months only as the loans are assumed to be received evenly during the entire year. In case the licensee is able to provide a detailed month wise capitalization schedule, the Commission will allow the calculation of IDC on prorata basis as proposed by the petitioner. Till then the Commission is not inclined to change the date of commissioning of capital works and make it different for calculation of IDC and for depreciation as stated earlier.

In view of the above, the Commission allows Rs. 1234.36 million towards interest on borrowings, net of capitalization, for capital works for FY 2012-13 as worked out in the Table 2.5.

Interest cost on borrowings for Capital works for SLDC has been calculated on the amount of Rs. 21.04 million at interest rate as proposed by HVPNL. The details of the same are provided in Table 2.6.

2.2.2 Interest on working capital borrowings

The borrowings for working capital are being allowed in line with the HERC Transmission Tariff Regulations, 2008. The amount estimated by the Commission on this basis works out to Rs. 1740 million. Interest @ 12% (rate as proposed by HVPNL) on the allowed borrowings amounts to Rs. 208.80 million.

However, in accordance with the agreed payment terms with the distribution licensees, HVPNL charges penal interest on payments delayed beyond one month of billing. In this situation it would amount to burdening the consumers twice; once by way of interest on two months receivables and secondly for the penal interest paid on delayed payments by the distribution companies. Also, in case the bill remains unpaid beyond one month, the interest cost on borrowings is being borne by the distribution licensees. Normally no expenditure can be allowed to be recovered more than once in the ARR. Therefore the transmission licensee and the distribution licensees must work out a solution at the earliest and which would be applicable from FY 2012-13 onward in order to avoid burdening the consumers twice.

HVPNL, while replying to the objections of the Discoms on the issue of working capital borrowings has submitted that they are charging interest on delayed payment of wheeling charges from the DHBVNL as per the explicit order of the Commission. Similarly, HVPNL is allowing rebate to consumers for timely payment of its dues as per order of the Commission. The order of the Commission for levying delayed payment surcharge & allowing the rebate on timely payment is only to disincentives or provide incentives to the Discoms for timely payment of transmission charges. The Commission would like to state that the payment terms were mutually decided by the Power utilities and the same was communicated to the Commission by the State Government vide memo no. 493 dt. 11.4.2008. Therefore the submission of the petitioner that the delayed payment is being charged as per explicit order of the Commission is not correct.

The interest on working capital for the SLDC business is allowed at Rs. 1.88 million as proposed by HVPNL.

2.2.3 Other interest costs

HVPNL, apart from interest on borrowings for working capital and capital expenditure, has also claimed interest on Pension Bonds and PF bonds in the ARR of transmission business. The liabilities on account of Pension bonds and Provident fund bonds in the books of HVPNL are of a specific nature and these are not related to its transmission business. It arose as a consequence of the unbundling of the power sector in Haryana. It needs to be noted that the Provident fund liability in the books of the licensee arose because the erstwhile Electricity Board (HSEB) utilized the Provident fund contributions of employees as additional working capital in total contravention of Provident fund rules. The consumers have, in fact, already paid for this amount by way of salary of the employees in the past years.

Similarly the liability for pension bonds arose as a consequence of unbundling of power sector in Haryana. At the time of HSEB, the pension liability was expected to be met out of future earnings. However, on corporatization, the liability was assessed at Rs.6730 million and brought into books of HVPNL. The assets of HVPNL were revalued upwards and also its investments in distribution companies and generation companies were brought into books to balance these liabilities. The petitioner has claimed that it has no means/resources to redeem these liabilities. Incase these liabilities are not redeemed at the earliest; the interest cost on these pension bonds would continue to distort the transmission tariff indefinitely. Also the consumers of the state would continue to be unnecessarily burdened by the cost which has no relation to the service being provided to them by the power utilities. The revenue earned from sale of assets including land must therefore be utilized to meet the cost of these liabilities.

Despite the fact that the above mentioned liabilities, strictly speaking, do not arise as a consequence of carrying out of transmission business by the petitioner; the Commission allows Interest on the bonds issued by HVPNL against the pension and provident fund liabilities in compliance of the orders of the Hon'ble Appellate Tribunal for Electricity in case no 27 of 2007. The interest cost on these bonds therefore, burdens the users of transmission services over and above the normal transmission costs. The electricity consumers of Haryana have been bearing this burden for more than ten years now. Hence, the Commission is of the opinion that such liabilities are to be taken care of at the earliest in order to normalize the transmission cost borne by the consumers of Haryana. It is observed from the ARR petition that interest comprises of more than 30% of the transmission cost in Haryana which by any standard is excessive.

In order to achieve the objective of normalizing the transmission cost by minimizing the avoidable burden on consumers of Haryana, the Commission in its order dated 16.4.2010 on the ARR of transmission and SLDC business for FY 2010-11 had adjusted profit of Rs. 605.97 million on sale of land that had accrued to HVPNL during FY 2008-09 and revenue generated as a consequence of the order of the Hon'ble Appellate Tribunal for Electricity in Case No. 27 of 2007, while calculating interest on pension fund bonds to be recovered in the ARR. HVPNL in the hearing objected to the adjustment of profit generated from sale of land and revenue generated as a consequence of the order of the Hon'ble Appellate Tribunal for Electricity in case no. 27 of 2007 for retiring of pension bonds and submitted that such revenues may be allowed to be used for payment of other loans by HVPNL.

The Commission observes from the submissions of the petitioner that they are in agreement with the approach adopted by the Commission i.e. the revenue generated through sources other than transmission tariff and charges can be utilized for retirement of debt. The only point of disagreement is on the nature of loan that is to be retired. On this issue, the Commission would like to point out that the payment of all other liabilities is covered from one source or the other e.g. liabilities on account of borrowings for capital works are met from depreciation, liabilities on account of borrowings for working capital are covered either through ARR or through penalty levied on distribution licensees for late payment of transmission tariff and charges. Consequently the liabilities on account of pension bonds and PF bonds alone remain to be taken care of from revenue from generation assets, distribution assets, return on equity and revenues from any other sources generated by HVPNL. Interest on these bonds is allowed to be recovered in the ARR by way of transmission tariff in addition to interest on borrowings for capital works and for working capital which, in opinion of the Commission, is in total contravention of cost causation principle of ARR and accounting principles as no benefit is accruing to the consumers of Haryana for the cost incurred by the Pension and PF bonds. The Commission is of the view that the additional revenue accruing to the licensee from the above mentioned sources ought to be utilized to reduce the interest cost burden on the consumers, who had not, in any manner whatsoever, caused the expenditure namely pension bonds and are not going to derive any benefit from such expenditure. In case the liabilities still remains unmet, the petitioner, being a Government company, should approach the State government for assistance. In redemption of these liabilities the Commission cannot allow funds for redemption of these bonds out of the ARR of the transmission business in view of the judgment of the Hon'ble Appellate Tribunal for Electricity in Appeal No. 58 and 59 of 2007.

In light of the above discussions, the Commission is of the considered view that it will be appropriate to adjust all possible accruals towards reduction of interest cost of these bonds so as to reduce the burden on the electricity consumers. Thus, revenue from short term open access consumers and profit from sale of transmission assets are adjusted against pension bonds so that the interest burden is reduced to that extent. The revenue from short term open access arises only as a consequence of the transmission business. Also, the expenditure base as per the audited accounts used for estimating the allowable expenses of the transmission business for ensuing year and consequently the transmission tariff include expenses incurred by HVPNL on account of **monitoring and control with respect to short term open access related transactions** also. In case the revenue earned from sale of transmission assets is not used to partly redeem these liabilities then the same would have been used to reduce the transmission cost because the Distribution licensees have borne the cost of erecting and maintenance of these assets and the revenue from sale of these assets rightly belong to them.

Consequently, the interest on pension bonds is allowed at Rs. 342.61 million, as against Rs. 673 million proposed by HVPNL, calculated on average balance of pension bonds during FY 2012-13 @ 10% p.a. The calculation of balance of pension bonds is presented in Table 2.4.

Table 2.4 – Other Interest Costs

Pension bonds	Rs. million
Estimated Balance as on 31.3.2012	3628.25
Adjustment of profit from generation business 2010-11	0.00
Adjustment of 25% of revenue from short term open access consumers FY 2010-11	321.68
Adjustment of gain from sale of fixed assets	82.58
Balance as on 31.3.2013	3224.00
Interest cost	342.61

The interest on PF (Provident fund) bonds has been worked out by the Commission @ 8% p.a. as proposed by HVPNL. **The Commission, accordingly, allows the interest on PF Bonds at Rs. 110.57 million. The Commission has not taken into account any repayment, though scheduled, as the petitioner is not expected to have any surplus funds at its disposal as no return on equity is being allowed to HVPNL on the Transmission and SLDC business in FY 2012-13.** The computations of interest expenses are presented in Table 2.5 & 2.6.

Table 2.5 - Interest Cost for Transmission Business for FY 2012-13

(Rs. millions)

Particulars	HVPNL Proposal	HERC approval
Interest on Loans for Capital Expenditure		
Gross Interest Cost for Transmission Works		2776.77
Less: Interest Cost Capitalized		1542.41
Interest Cost net of Capitalization (1)	**1983.46**	**1234.36**
Interest on Loans for Working Capital (2)	**357.90**	**208.80**
Interest on Pension bonds (3)	**673.00**	**342.61**
Interest on PF Bonds (4)	**129.86**	**110.57**

Table 2.6 - Interest Cost for SLDC for FY 2012-13 (Rs. million)

Particulars	HVPNL (Proposal)	HERC (approval)
Interest on Loans for Capital Expenditure	21.04	21.04
Interest on Loans for Working Capital	1.88	1.88

2.3 Depreciation

HVPNL has estimated depreciation amount as per CERC norms (notification issued in the year 2009) for FY 2012-13 at Rs. 2249 million at an average rate of depreciation of 5.16%.

The Commission, for working of depreciation, has increased the audited value of gross fixed assets as on 31.3.2011 by the value of approved additions to GFA for FY 2011-12 and has applied a depreciation rate of 4.91%, based on the audited accounts for FY 2010-11 to arrive at allowable depreciation of Rs. 2092.56 million for 2012-13. Out of this, the depreciation on SLDC assets is Rs.24.272 million (as proposed by HVPNL) and depreciation against capital reserve is Rs.23.69 million (as proposed by HVPNL). The balance depreciation of Rs.2044.60 millions is allowed as depreciation on transmission assets for FY 2012-13. However, balance half of the excess amount of depreciation and AAD allowed in the earlier years i.e. Rs.417.50 million, as worked out in the order dated 26.4.2011, is adjusted against this and **a net amount of Rs.1627.10 million is allowed in the ARR. The depreciation allowed shall be subject to adjustment in the future ARR's in case the petitioner is unable to achieve the approved additions to the transmission system. The computation of depreciation for transmission assets is provided in the Table 2.7.**

Table 2.7 -Depreciation for FY 2012-13 (Rs. million)

Particulars	HVPNL (Proposal)	HERC (approval)
Gross fixed assets at the beginning of the year	43560.19	42620.70
Depreciation Rate (%)	5.16%	4.91%
Depreciation for FY 2012-13	2249.00	2092.56
Less depreciation against Capital reserve	23.69	23.69
Less Depreciation against SLDC assets	24.27	24.27
Less Depreciation against income earning assets	7.74	
Net Depreciation for FY 2012-13 for Transmission Business	2225.31	2044.60
Adjustment of excess depreciation allowed in previous years		417.50
Net amount allowed in the ARR for FY 2012-13		**1627.10**

The depreciation amount for SLDC is allowed at Rs. 24.27 million as proposed by HVPNL.

HVPNL vide memo No. Ch-136/SE/RAU/F-100 dated 10.02.2012 in its additional information to the ARR filing has stated that adjustment of AAD from the depreciation would result in cash deficit to HVPNL.

Regarding the above the Commission would like to point out that in case interest earned on excess depreciation recovered by HVPNL is earlier year is considered, then the licensee has more than Rs. 3000 million with it at the end of FY 2011-12 out of which only Rs.835 million were adjusted when the higher rates of depreciation as per CERC regulation 2009 were being allowed and the balance amount is still available with it. A higher rate of depreciation negates the requirement of providing for repayment through AAD. In view of the higher rates of depreciation now allowed, the licensee has to manage the cash flow without taking recourse to additional borrowing by restructuring the loans in line with the depreciation rates. HVPNL must also note that depreciation is provided on 90% of GFA whereas loan repayment is only on 70% (loan funded portion) of GFA and that much cushion is also available to the licensee. Therefore, the Commission considers irrelevant the submission of HVPNL that in case depreciation is adjusted against AAD then for repayment of loan HVPNL has to borrow from banks and the interest on which will be disallowed by the Commission.

2.4 Special appropriations

2.4.1 Fringe Benefit Tax (FBT)

In accordance with the Commission Order dated 26.9.2007 on the review petition on the ARR of transmission business for FY 2007-08, HVPNL was allowed to recover interest, on FBT on contribution to superannuation fund deposited with the income tax authorities before the date of stay granted by the Hon’ble High Court in this matter. This interest was allowable from the date of deposit of amounts till the date of resolution of the case in the Hon’ble Supreme Court. HVPNL in its filing has stated that assessing authority of income tax department has refunded an amount of Rs.33.19 million inclusive of interest. As interest has already been allowed in the ARRs of the earlier years, the refund of interest now received needs to be reduced from the total amount leaving an outstanding balance of **Rs. 62.45 million.**

The Commission had allowed Rs. 124.19 million income tax in its ARR for FY 2010-11 for the Transmission business and Rs. 1.04 million for SLDC business against which the licensee has paid Rs.46.70 million. The excess amount allowed i.e. Rs. 78.53 million along with interest @ 9 % p.a for two years amounting to Rs14.14 million is adjusted against the FBT balance. This adjustment now leaves an excess balance recovered by HVPNL amounting to Rs. 30.22 million which is reduced from the total ARR for FY 2012-13. The Commission expects that as and when the credit is given on the FBT paid by HVPNL by the income tax authorities, the same shall be passed on to the Distribution licensees by the petitioner.

2.4.2 Income Tax

The incidence of Income Tax is linked to the amount of ROE allowed for Transmission & SLDC business. Regarding Tax liability on RoE, the Commission observes that if the RoE is treated as an income by the licensee in its books of accounts then such income needs to be set off against the accumulated losses. In such a case there would be no Tax liability on RoE. Therefore, Tax liability including other statutory levies, if any, shall be allowed by the Commission in the ensuing ARRs on actual basis on the basis of documentary evidence of the amounts having been paid.

On the issue of Income Tax, HERC Tariff regulations 2008 state as under:
"21. Income Tax.- (1) Tax on the income streams of the transmission licensee from its core business, shall be computed as an expense at the rates applicable from time to time and shall be recovered from the beneficiary (ies).

(2) Any under- recovery or over-recovery of tax on income shall be adjusted every year on the basis of income- tax assessment under the Income-Tax Act, 1961, as certified by the statutory auditors."

In accordance with the above regulation, the Commission allows HVPNL to raise separate bills on account of income tax on its beneficiaries on actual basis. However, the Licensee should make sure that the income tax is charged only on the ROE for transmission business and SLDC business and excluding any equity relating to assets not put in use before the beginning of FY 2012-13

2.4.3 Contribution to Contingency Reserve

The licensee has not proposed any additional contribution to the contingency reserve for FY 2012-13. As far as the previous balance is concerned, the **Commission directs that any drawl from the Contingency Reserve shall be made only with prior approval of the Commission.**

2.4.4 Debt redemption obligation

The recovery of debt redemption amount in the earlier ARRs has been allowed to the licensee in the absence of any other means for the licensee to be able to redeem these debts being of a peculiar nature where assets formed out of these liabilities were not earning sufficient returns.

The above issue was raised by UHBVNL and DHBVNL in the objections filed by them against the ARR and Tariff application of HVPNL for FY 2008-09. The Discoms had submitted that as per second transfer scheme enacted by the Govt. of Haryana "all obligation in respect of payment of pension and other retirement benefits including provident fund, leave encashment, commutation of pension, medical facilities, superannuation and gratuity to the personnel who have retired from services of HPVNL and/or the board on or prior to the effective date shall be discharged by HPVNL and neither transferee shall have any obligation with respect to such retired personnel. Corresponding assets were also available with HVPNL in the opening balance sheet equal to the amount of this liability. Hence, HVPNL cannot be allowed to recover the repayment of liabilities (debt redemption) as it would amount to double recovery especially when all the liabilities have already been matched by way of corresponding assets, out of which fixed assets are being recovered in the shape of depreciation and the current assets are being paid for by the Discoms".

In its reply to the above issue the HVPNL had submitted that "it has issued PF & Pension Bonds against its liability. These bonds are due for redemption from FY 2016 onward. It is correct that the total liabilities assigned to each company were matched with the total assets allocated to it. HVPNL was given assets in the shape of investment in UHBVNL& DHBVNL on which HVPNL is not earning any income".

The Commission while agreeing with the views of the Discoms that the valuation of liability as on the date of the transfer scheme provided for an adequate amount of assets to fund the same, observed that "In the last 7 years the Commission has seen that there has been a substantial increase in the terminal benefits on actuarial valuation which does not support the valuation as on the date of transfer. It implies that the Consumers are being made to fund the increase in liability even though they have paid for the liability as on the date of transfer scheme by way of depreciation and interest and now return on equity and Advance Against Depreciation. At this stage to ask them to pay for the redemption of the same liability would, therefore, amount to double charge. The Commission would like to study the matter in depth and then pronounce its view on the same. Meanwhile any amount earned by way of sale of assets or utilization of assets for other business would be used for balancing the deficit arising in the Pension fund."

The Commission observes that the licensee has to utilize revenues accruing from all sources and assets towards redemption of outstanding PF and pension bonds at the earliest and the same cannot be allowed to be recovered through ARRs. The Commission is of the view that the redemption of PF and pension liabilities from part of return on equity of transmission business and SLDC business and also by utilizing whatever profit it has earned from other businesses to gradually redeem these liabilities will be of help in augmenting cash flow of the petitioner . The impact of these liabilities will be primarily on the owner of Transmission utility i.e. the State Government who is also the rightful owner of these liabilities in terms of provisions of the unbundling scheme.

While hearing the review petition filed by HVPNL against Commission's order dated 16.4.2010, the Commission had directed HVPNL to provide any judgments or rules or regulations that supported re-payment of liability through ARR. HVPNL was unable to satisfy the Commission in this regard and in the filing for FY 2012-13 also, no such supporting documents have been provided.

In view of the above the Commission feels that some other method will have to be devised to redeem the pension and PF liabilities. It is seen that the licensee is earning sufficient revenue through its generation business, additional revenue from short-term open access customers and through return on equity from the transmission business. It has also earned substantial revenue from sale of certain generation assets and transmission assets. Hence it is only the distribution business which is financially stressed. Thus it is not appropriate for HVPNL to recover the debt redemption amount from transmission tariff without adjusting its earnings from all assets as discussed earlier.

The Commission therefore, disallows recovery of Rs.481.93 million proposed by the licensee. This is also in the nature of capital repayment and does not conform to the Aggregate Revenue Requirement methodology of arriving at tariff that is currently in vogue in Haryana and elsewhere in the country. This view has also been upheld by the Hon'ble Appellate Tribunal in its judgment dated 9.11.2010 in Appeal No. 58 and 59 of 2007. In the above mentioned appeal the Hon'ble Appellate Tribunal in its judgment has said that "for want of funds if loan is raised and such loan is to be discharged from out of earnings and loan amount cannot be allowed as pass through tariff".

The Commission further observes that as per the second transfer scheme. "all obligation in respect of payment of pension and other retirement benefits including provident fund, leave encashment, commutation of pension, medical facilities, superannuation and gratuity to the personnel who have retired from services of HPVNL and/or the board on or prior to the effective date shall be discharged by HPVNL and neither transferee shall have any obligation with respect to such retired personnel." Therefore asking the consumers to pay for these liabilities would tantamount to contravention of the act to a certain extent. **The petitioner may examine the reasons behind increase in the pension liability. For any increase in cost**

attributable to period prior to 14.8.1998 the petitioner may approach the State government for additional financial support under the relevant provision of the second transfer scheme along with the requite funds or any other funding mechanism to redeem the pension and PF bonds in case the petitioner is unable to discharge these liabilities out of its income streams.

HVPNL, in its reply on the objection raised by UHBVNL & DHBVNL, vide memo no. 130/131/SE/RAU/F-100 dated 10.02.2012 has stated that the pension and PF assigned to HVPNL as per 2nd Transfer scheme notified by Govt. of Haryana in the year 1999 was peculiar type of liability which can be repaid only by recovering the same in the ARR as part of Transmission Tariff. It is pertinent to mention here that at the time of transfer of assets & liability as per 2nd Transfer scheme notified by Govt. of Haryana, HVPNL was given an investment of Rs. 9842.60 million in Discoms i.e. UHBVNL & DHBVNL on which the company is not earning any return. Even the C&AG of India in its supplementary audit on the accounts of petitioner for the FY 2009-10 & 2010-11 has made comments to write off the above investments because of erosion of equity capital of these companies due to huge accumulated losses. This has resulted in buildup of loans from commercial banks, the interest of which is disallowed by the Commission by allowing the interest on working capital loans on normative basis, thus leading to additional burden on HVPNL

The Commission would like to be made aware of the relevant portion of the 2nd transfer scheme notified by the Govt. of Haryana in the year 1999 whereby it is stated that this liability can be repaid only by recovering the same in the ARR as part of transmission tariff.

Also, the Commission would like to be informed of the buildup of loans resulting from losses of the Distribution Licensee. The buildup must clearly demonstrate the relationship between the losses paid for by HVPNL and the loans from commercial banks. Unless both these supporting details are provided by the licensee, the Commission cannot take cognizance of the statement made by HVPNL as above.

2.5 Unitary charge (PPP Transmission Project)

The petitioner has claimed Rs. 681.72 million as unitary charge to be paid by them in view of the Transmission Service Agreement (TSA) for execution of transmission project through Public Private Partnership (PPP) between HVPNL and M/s Jhajjar KT Transco Private Limited. The TSA including monthly unitary charge already stands approved by the Commission and hence the licensee may recover the same by raising a separate bill on the beneficiaries in ratio of their usage from the date of commissioning of the line for which a separate transmission license has been granted by the Commission. The said Unitary Charge is not being included in the ARR as this cost has no impact on the ARR and consequently the transmission tariff for use of transmission system of the petitioner.

2.6 Total Expenditure

The total expenditure approved by the Commission for the transmission business for the financial year 2012-13 is Rs. 6613.43 million and Rs. 114.26 million for SLDC expenditures. Tables 2.8 & 2.9 provides the details of HVPNL's proposed expenditures in respect of their Transmission business and SLDC charges respectively viz-a-viz those approved by the Commission for FY 2012-13.

Table 2.8-Transmission Business Approved Expenditure for FY 2012-13 (Rs. millions)

Description	HVPNL Proposal	HERC Approval
Expenditure		
Employees' cost	3496.19	2798.74
R&M expenses	214.38	208.42
A & G Expenses	108.25	108.25
Interest on Capital Expenditure Borrowings	1983.46	1234.36
Debenture Interest (PF Bonds)	129.86	110.57
Debenture Interest (Pension Bonds)	673.00	342.61
Interest on Working Capital	357.90	208.80
Depreciation	2249.06	1627.10
Unitary Charge for PPP project	681.72	0.00
Total Expenditure	**9893.82**	**6638.86**
Special Appropriations		
Tax on Income & Profit	510.56	-30.22
Interest on FBT Rs. 62.45 million	6.20	0.00
Debt redemption obligation (PF Bonds)	481.93	0.00
Total Special Appropriations	**998.69**	**-30.22**
Total Expenditure (including special appropriation)	**10892.51**	**6608.64**

Table 2.9 - SLDC Approved Expenditure for FY 2012-13 (Rs. millions)

Description	HVPNL Proposal	HERC Approval
Expenditure		
Employees' cost	43.90	43.90
A & G Expenses	7.03	7.03
R&M expenses	16.14	16.14
Depreciation	24.27	24.27
Interest & Finance Charges on Capital Expenditure	21.04	21.04
Interest on Working Capital	1.88	1.88
Special Appropriations	**114.26**	**114.26**
Tax on Income & Profit	1.74	0
Total Expenditure (including special appropriation)	**116.00**	**114.26**

The methodology for working out the various components of SLDC ARR is the same as discussed in the case of ARR for the transmission business of the petitioner.

2.7 Return on Equity (ROE)

The petitioner has sought Return on Equity (ROE) amounting to Rs. 2551.89 million @ 15.5% on an opening balance (Equity) of Rs.16463.81million.

The Commission, after deliberating at length on the issue of ROE, is of the considered view that in normal circumstances return on equity goes to the shareholders as dividend for the 'opportunity cost' of funds (equity) contributed by them. Alternatively it may be ploughed back as 'internal accrual' to fund the Capital Expenditure thereby economizing on the cost of borrowed capital (loan). However, equity is 'risk capital' and at times when the company is carrying accumulated losses or is in a financial distress, return on equity in the form of dividend is foregone as this would further add to the costs.

In the above perspective the Commission observes that HVPNL is a wholly owned company of Haryana Government and so are the two Discoms who are its consumers. The Hon'ble APTEL in its judgment in Appeal No. 33 & 74 of 2005 had held the legitimacy of some sort of return on equity to ensure certain return to the owners. However, in the case of HVPNL the entire equity is contributed by the State Government and no dividend / return is paid on the same. The state citizens being the final equity holders, it would be meaningless to provide ROE and thereby increase the burden on the consumers all of whom can be considered equity holders.

Additionally, the Discoms in Haryana are carrying huge accumulated losses and their entire net worth stands eroded. Further their profits before interest, depreciation and taxes are also negative meaning thereby that their revenue is not sufficient even to meet their operating expenditure. More so, as their equity (included in the net worth) is negative so the Commission has never allowed a return on equity to them. In these circumstances, if the Commission allows ROE to HVPNL it would not only inflate cost of power purchase of the Discoms whose ability to pay is severely constrained but also increase the financial outflow from HVPNL in the form of tax liability. Tax liability being a pass through as expenditure in the regulatory regime would again be passed on to the Discoms and ultimately to the electricity consumers of Haryana.

In view of the above discussions and the fact that no return is paid to the owners i.e. State Government and the equity portion of the Capital Expenditure on an ongoing basis is again contributed by the State Government through its annual plan budget; hence it is also not the case of ROE being ploughed back to augment Capital Expenditure thereby reducing the interest costs of long term loans, the Commission is not allowing any ROE to HVPNL in FY 2012-13.

2.8 Capital Base & CWIP

HVPNL vide memo no. Ch-20/SE/RAU/F-66 vol. -V, dated: 24-10-2011 filed the proposed Capital Investment Plan (CIP) relating to the transmission & SLDC business for FY 2012-13, which was examined and certain deficiencies, observations and mistakes in the filing were conveyed to HVPNL vide memo no. 2784/HERC/T-53 (HVPNL)/TCM dated 23.11.2011. Subsequently, HVPNL vide memo no. Ch-104/SE/RAU/F-100, dated: 07-12-2011 filed ARR & Tariff proposal of HVPNL for transmission & SLDC business for FY 2012-13 wherein CIP was the same as already submitted by HVPNL vide memo dated 24.10.2011.

HVPNL's replies to the Commission's observations on CIP vide memo no. Ch-34/SE/RAU/F-66 / Vol.-V, dated 01.02.2012 and that on ARR & Tariff proposal vide memo no. Ch-127/SE/RAU/F-100/ Vol.-V,dated 02.02.2012 were examined at length. The Commission observes that in the CIP originally submitted by HVPNL, there were certain computational mistakes which were corrected by them. Additionally HVPNL provided separate details of IT plan and SLDC. The petitioner confirmed that all the works proposed/included in the Capital Investment Plan for 2012-13 are approved by the competent authority viz. WTD's of HVPNL. Regarding the basis for the Capital Investment Plan, HVPNL explained that the transmission system planning is well defined in IEGC and Haryana Grid Code and the norms for planning defined therein are being followed. Scientific method viz. load flow studies are carried out for transmission system planning. The Investment envisaged on the transmission infrastructure in the current five year plan is required to match with the generation and load growth. During the current five year plan, intra-state transmission system has been finalized matching with the following generation projects:-

Table 2.10 – Capital Base & CWIP

Sr. No	Generation Projects	Total Capacity
1.	Deenbandhu Chhotu Ram Thermal Power Plant, Yamuna Nagar	600 MW TPS
2.	Rajiv Gandhi Thermal Power Station, Khedar (Hisar)	1200 MW TPS.
3.	Indira Gandhi Thermal Power Project, Jhajjar	1500 MW (Haryana Share 750 MW)
4.	Case-II Jhajjar Power Purchase through bidding (Mahatma Gandhi Thermal Power Project)	1320 MW
5.	Adani Power (Case-I)	1424 MW.

It has been submitted that whenever a transmission scheme, formulated by HVPNL, involves interconnection with inter-state transmission system, the same is finalized after detailed deliberations by the Standing Committee of CEA. For the development of inter-state transmission, the proposals formulated are on 400 KV level. Power Grid is constructing 400 kV substations at Sector-72 Gurgaon, Panchkula and Sonepat for evacuation of inter-state power being purchased by Haryana. The underlying transmission system from these substations is also being developed simultaneously, for which load flow studies are being carried out for planning of the transmission network and it is a continuous process. A copy of CEA minutes on approval for 400 KV works and a copy of load flow studies for the year- 2012 have been enclosed for reference. All the works planned for execution are based on scientific studies and are fully justified.

For FY 2010-11, HVPNL projected capital expenditure amounting to Rs. 23605.6 million in their ARR filing for transmission and SLDC business. After due diligence in respect of status of ordering of equipment, progress of works, past record of HVPNL and keeping in view the importance of works to meet with the demand for evacuation of additional power from the new generating projects, HERC allowed capital expenditure to the tune of Rs. 17000 million for FY 2010-11 subject to review of the progress of expenditure by end of year. HVPNL have now submitted that the actual expenditure incurred during FY 2010-11 was Rs. 10927 million which is 46.29% of the capital expenditure projected by HVPNL and 64.28% of the capital expenditure approved by HERC.

For FY 2011-12, HVPNL projected capital expenditure amounting to Rs. 14057.51 million in their ARR filing for transmission and SLDC business. After due diligence in respect of status of ordering of equipment, progress of works, past record of HVPNL and keeping in view the importance of works to meet with the demand for evacuation of additional power from the new generating projects, HERC allowed capital expenditure to the tune of Rs. 10158 million for FY 2010-11 subject to review of the progress of expenditure by end of year. HVPNL have now informed that the actual expenditure incurred up to November, 2011 is mere Rs. 3310.63 million and they have projected the total likely expenditure of Rs. 9172 million during FY 2010-11 which (if expended) would be 65.24% of the capital expenditure projected by HVPNL and 90.29% of the capital expenditure approved by HERC.

An abstract of the expenditure projected by HVPNL, that approved by HERC and the actual expenditure for the last 41/2 years from FY 2007-08 to FY 2011-12 (up to 09/2011) is as under:-

Table 2.11 - Capital expenditure projected by HVPNL, approved by HERC & Actual

FY	Projected Expenditure by HVPNL	Expenditure approved by HERC	Actual Expenditure	% of actual w.r.t. projected expenditure	% of actual w.r.t. approved expenditure
2008-09	9613.90	6601.41	6704.40	69.73	101.56
2009-10	24009.75	19000	10818.80	45.06	56.94
2010-11	23605.60	17000	10927.00	46.29	63.64
2011-12 up to 11/11	14057.51	10158	3310.63	23.55	32.59

For FY 2012-13, HVPNL projected capital expenditure amounting to Rs. 9261.68 million in the Capital Investment Plan (CIP) originally submitted vide letter dated 24.10.2011, which was examined by the Commission and HVPNL was advised to review the latest progress of various works and indicate the realistic expenditure that would be incurred during FY 2012-13.

In compliance to the above HVPNL re-submitted a revised CIP, an abstract of which is as under:-

Table 2.12 - Abstract of the Revised Capital Investment Plan for the year 2012-13

(Rs. in Millions)

Sr. No.	Description	Expenditure Incurred upto March 2011	Expenditure Incurred during April 11 to November 11	Likely Expenditure Incurred during Dec. 11 to March 12	Likely Expenditure during 2011-12	Likely Expenditure during 2012-13	Likely Expenditure during 2013-14
Transmission Business							
1	Domestic Funded Works	7584.553	2196.329	3480.168	5676.497	3951.481	1905.788
2	JICA (Sanctioned works & new Works to be posed)	5697.849	153.297	965.319	1118.617	875.316	653.264
3	World Bank	3308.131	872.160	626.613	1498.773	3022.704	3222.570
4	IT Plan	3.00	0	90.000	90.00	147.00	0.00
5	Land Cost for substations	630.558	88.853	692.844	781.697	886.386	114.758
	Total	17224.09	3310.63	5854.94	9165.58	8882.886	5896.38
1	SLDC Business	0	0	6.00	6.00	218.00	430.00

As per the revised CIP for FY 2012-13, the capital expenditure for transmission business has been projected as Rs. 8882.89 million and that for SLDC business the same has been projected as Rs. 218 million making a total of Rs. 9100.89 million for transmission and SLDC business.

The Commission observes that In the revised CIP, HVPNL have deleted some works, shifted some works from one FY to the next FY, reworked the year wise funds requirement as per the latest status now indicated in most of cases etc. It is further observed that NITs are yet to be issued in many cases and work orders are yet to be issued in several cases.

In view of above position, the revised CIP for FY 2012-13 has been reviewed thoroughly by the Commission keeping in view the present status given for each scheme & past record of spending by HVPNL and the capital expenditure allowed for FY 2012-13 is based on the following factors:-

i) In case of schemes where the works are in progress and likely to be completed during FY 2011-12, capital expenditure to be limited to 100% of revised estimate

ii) In case of schemes where the works are in progress and likely to spill over to FY 2012-13, capital expenditure to be limited to 90% of revised estimate

iii) In case of schemes where orders have been placed/ likely to be placed and work is likely to commence in FY 2011-12, the capital expenditure to be limited to 50% of revised estimate.

iv) In case of schemes where NITs are yet to be issued, the capital expenditure to be limited to 25% of revised estimate.

v) In case of schemes where the demand for capital expenditure exceeds the revised estimate, the same to be limited to the revised estimated amount.

An abstract of the revised Capital Expenditure proposed by HVPNL and the estimated Capital Expenditure that they may incur is as under:-

Table 2.13 – Revised Capital Expenditure

(Rs. in Million)

Sr. No.	Description	Revised Capital Expenditure proposed by HVPNL for FY 2012-13	Estimated Capital Expenditure during FY 2012-13 as per present status of works
	Transmission Business		
1	Domestic Funded Works	3951.48	3095.55
2	JICA Funded Works	875.32	758.76
3	World Bank Funded Works	3022.70	2063.37
4	IT Plan	147	65.00
5	Land Cost for substations	886.39	886.39
	Total Transmission Business	8882.89	6878
	SLDC Business		
1	Consultancy charges	18	18.00
2	RTUs /Power supply	200	60
	Total SLDC Business	218	78
	Total Transmission & SLDC Business	9100.89	6947.07

As detailed above, the estimated Capital Expenditure for FY 2012-13 as per present status of works would be Rs. 6869 million against the revised demand of Rs. 8883 million made by HVPNL for transmission works and Rs. 78 million against the demand of Rs.218 million for SLDC.

Keeping in view, the factual position about the present status of works as indicated by HVPNL and the past record of actual spending with reference to the Capital Expenditure demanded for the previous years, it would be a challenging task for HVPNL to complete the works worth Rs. 6869 million for transmission and Rs. 78 million for SLDC. However, the various works planned for completion during FY 2012-13 are considered essential for evacuation of additional power available / to be available for transmission and the improvement in the voltage levels and transmission losses as well as expansion of SCADA of SLDC. HVPNL need to gear up their resources of manpower to speed up the ordering for award and execution of various works so that the desired improvements are brought about in the transmission system of Haryana State so as to match with the load growth.

In light of the above discussions the capital expenditure for FY 2012-13 approved by the Commission is Rs. 6800 million for transmission works & Rs. 78 million for SLDC and in case HVPNL is not able to spend the same, necessary adjustment shall be carried out in the next year's ARR.

Table 2.14 - Calculation of CWIP for FY 2012-13 (Rs. million)

Description	HVPNL Proposal	HERC Approval	
	2012-13	2011-12	2012-13
Opening balance of CWIP	**19431.83**	**20915.37**	**19900.19**
Additions during the year	9261.67	9165.58	6878.00
Transfer to GFA	9231.42	10180.76	8620.35
Closing balance of CWIP	**19462.08**	**19900.19**	**18157.84**
Funding of CAPEX :			
Equity	1852.33	2725.00	1852.33
Loan funds	7409.34	6440.58	5025.67
Total Funds (Including IDC & Expenses Capitalised)	9261.67	9165.58	6878.00

2.9 Gross Fixed Assets (GFA)

The opening balance of GFA as on 1.4.2012 is based on the closing balance of GFA as on 31.3.2011 in accordance with the audited accounts of HVPNL. The additions to GFA are derived from the CWIP. The computation of gross fixed assets for FY 2012-13 is presented in the Table 2.15 below:-

Table 2.15 - Determination of GFA for FY 2012-13 (Rs. million)

Description	HVPNL Proposal FY 2012-13	HERC revised estimated FY 2010-11	HERC Approval FY 2012-13
Opening Balance of gross fixed assets	43560.19	32439.94	42620.70
Add: Additions to GFA	9231.42	10180.76	8620.35
Less: Retirement	0.00	0.00	0.00
Closing balance	52791.62	42620.70	51241.05
Consumers Contribution	862.26	862.26	862.26
SLDC	54.55		54.55

2.10 Non Tariff Income and Other Income

2.10.1 Non tariff income for the year 2012-13

HVPNL has proposed that it expects to earn Rs. 31.31 million on account of non - tariff income during FY 2012-13 for transmission business and Rs. 0.54 million for SLDC business. **The Commission finds the projection reasonable and allows the same in the ARR under consideration.**

2.10.2 Truing up of Non Tariff Income for FY 2010-11

As per audited accounts for FY 2010-11, the licensee has earned Rs. 656.69 million as non tariff income and Rs. 4.62 million as reactive energy charges from UHBVNL and DHBVNL. After exempting income of Rs.310.70 million from treasury operations, profit from sale of assets Rs. 82.58 million used for redemption of pension bonds and non tariff income of Rs. 117.16 million allowed in the ARR order for FY 2010-11, the balance amount of Rs. 150.87 million is added to the non tariff income for FY 2012-13. The procedure adopted for truing up is the same as in previous years. All these incomes have been earned on expenses which have been incurred by the consumers of HVPNL at one time or the other and hence are due for truing up.

The computation of non- tariff and other income is presented in the Table 2.16:

Table 2.16 - Non- tariff income for Transmission for FY 2012-13 (Rs. million)

Description	HVPNL Proposal	HERC Approval
Investment income	29.75	29.75
Ancillary and incidental income	1.56	1.56
Total	31.31	31.31
True up benefit based on audited accounts for FY 2010-11		150.87
Total of Non-tariff Income		182.18
Less SLDC		0.54
Total of Non-tariff Income for Transmission		181.64

In the case of SLDC, the Commission allows a non-tariff income of Rs. 0.54 million as proposed by the petitioner.

2.10.3 Proportionate charge for 124 MW

Based on the total approved ARR for FY 2012-13 the Commission estimates a recovery of Rs. 121 million being the proportionate revenue expected to be earned by the petitioner for 124 MW Transmission Charges in respect of the long term open access consumer i.e. Tata Power Trading Company Ltd for 10% of the total project capacity of Jhajjar Power Ltd. Hence in accordance with the Open Access Regulations of the Commission the revenue expected to be earned on account of this in FY 2012-13, subject to truing up on an actual basis, has been reduced from the ARR of the petitioner.

2.11 Aggregate Revenue Requirement

In light of the above discussions, **the Commission approves Rs. 6305.99 million as the net aggregate revenue requirement of the Transmission business and Rs. 113.73 million as ARR/ operating expenses for SLDC for FY 2012-13.** The details are presented in Tables 2.17 & 2.18:

Table 2.17-Transmission ARR for FY 2012-13 (Rs. millions)

Description	HVPNL Proposal	HERC Approval
Return on equity	2551.89	0
Total expenditure	10892.50	6608.64
Minus Non-tariff income	-31.31	-181.64
Minus proportionate charge for 124 MW		-121.00
Total Aggregate Revenue Requirement	**13413.08**	**6305.99**

Table 2.18- SLDC ARR for FY 2012-13 (Rs. millions)

Description	HVPNL Proposal	HERC Approval
Return on equity	8.68	0
Total expenditure	116.00	114.26
Minus Non-tariff income	-0.54	-0.54
Total Aggregate Revenue Requirement	**124.14**	**113.73**

2.12 Transmission Losses

As per Para 26 of HERC (Terms and Conditions for Determination of Transmission Tariff) Regulations, 2008, the energy losses in the transmission system of the transmission licensee, as determined by the State Load Despatch Centre and approved by the Commission, shall be borne by the beneficiary (ies) in proportion to their usage of the intra-state transmission system.

Provided that the Commission may stipulate a trajectory for transmission losses to be achieved by the transmission licensee:

Provided also that the Transmission Licensee shall not be permitted to recover, under these regulations, energy losses arising from theft, pilferage, failure to meter or bill for electricity transmitted.

The following table depicts the position of interstate & intrastate transmission losses as approved by HERC and actual achieved by HVPNL for FY 2007-08 to FY 2011-12 (up to 11/2011):-

Table 2.19- Interstate & Intrastate transmission losses

FY	Inter State Losses		Intra State Losses	
	% Losses approved by HERC	% Losses actual	% Losses approved by HERC	% Losses actual
2007-08	4	4.78	4.26	2.44
2008-09	3.85	4.56	2.10	2.57
2009-10	3.85	4.70	2.10	2.68
2010-11	3.85	3.82	2.10	2.63
2011-12 (up to 11/2011)	3.63	2.32	2.10	2.56

Inter-state Transmission Losses

As observed from the transmission loss table given above, the trend of inter-state transmission loss is on the decline from FY 2007-08 (4.78%) to FY 2010-11 (3.82%) and the inter-state transmission losses during FY 2011-12 (up to 11/2011) have been reported still lower at 2.32%. HVPNL has stated that they have no control over inter-state transmission losses (i.e. loss incurred in wheeling power from out-of-state generating sources to the HVPNL system). From the data of inter-state losses for the previous FY 2011-12, it is observed that the inter-state losses tend to be a bit higher in the second half as compared to the first half.

In view of the above **the target for inter-state losses for FY 2012-13 is fixed at 2.5% subject to truing up on actual basis.**

Intra- state Transmission Losses

Regarding intra-state transmission losses the Commission observes that the trend has been on the increase from FY 2007-08 (2.44%) to FY 2009-10 (2.68%) and thereafter there is marginal decline during FY 2010-11 (2.63%) and FY 2011-12 up to 11/2011 (2.56%).

On the issue of Intra-state transmission losses (i.e. losses taking place within the state), HVPNL has stated that these losses are due to energy dissipated in the conductors and equipment used for transmission, transformation & sub-transmission. These technical losses are inherent in a system and cannot be reduced beyond an optimum level. The losses can be further sub-grouped depending upon the stage of power transformation & transmission system (400kV/220kV/132kV/66kV). Further the inter-state transmission losses over a given transmission system keep varying over time depending upon power flows, voltage profile, reactive flows, pattern of energy use, load demand, load density and capability & configuration of transmission system etc. HVPNL states that they have little control over these, except that outage of a transmission element increases power flow on parallel path which affects losses. The Central Electricity Regulatory Commission is also of the similar view and has categorically indicated in the proposed approach for sharing of charges and losses in interstate transmission system that transmission losses is the phenomenon of physics and are unavoidable.

In view of the above HVPNL has prayed that the Commission may allow the actual Transmission losses for FY 2012-13 which will be of the order of 2.6 % keeping in view the level achieved up to September, 2011 of the current financial year i.e. FY 2011-12.

The Commission is of the view that HVPNL's contention that transmission losses are unavoidable is acceptable, but their contention that they have little control on the intrastate losses is not correct.

As per technical formula, transmission loss = $I^2 \times R$,

Where I = Current flowing through transmission line,

R = Resistance of the transmission line which is further proportional to length and temperature of the line conductor and inversely proportional to the area of cross section of the conductor

As the load (current) in the system increases with increase in system demand, the transmission loss will tend to increase. The aging factor in the old transmission system also adds to the transmission losses. Capital expenditure for new S/Stns / lines and augmentation of existing transmission system is to be so planned that the length of the lines & loading for individual circuits decrease and the area of cross section of the line conductors increase in line with the principal that continuous loading on all components of the system is limited to about two third of their design capabilities.

As observed from the CWIP, most of the works for addition and argumentation of transmission system planned to be commissioned during FY 2011-12 have been delayed. The actual capital expenditure is far short of the projected expenditure. In the ARR for FY 2011-12, HVPNL had projected that their transformation capacity as on 31.03.2011 would be 16500.40 MVA, but the actual achievement is 13290.60 MVA i.e. 71% of the projection. With the commissioning of 71% of the planned works, the transmission losses have formed a declining trend from 2.68% during FY 2010-11to 2.63% during FY 2011-12 to 2.61% during first half of FY 2012-13. Had all the planned capital works been implemented in time matching with the increase in load flow, the transmission losses could have declined further.

In the ARR & tariff order of HVPNL for FY 2011-12, HVPNL was advised to interact with utilities in other States where transmission losses are decreasing every year and consider the measures taken by them in this direction for implementation in Haryana. Instead of interacting with other

State utilities, HVPNL have stated that the intrastate transmission losses of other states have been checked from the tariff orders issued by their regulatory commissions and the comparative positions are as under:-

Table 2.20 – Comparative positions of transmission losses

State	Year	Transmission Losses	Geographical Area Sq. kMs
Punjab	2010-11	2.5%	50,362
Andhra Pardesh	2011-12	4.1%	275,045
Rajasthan	2011-12	4.3%	342,239
Uttarakhand	2011-12	1.76%	53,483
Karnataka	2011-12	4.20%	191,791
Gujarat	2009-10	4.30%	196,024
UP	2009-10	4.0%	240,928
Orissa	2011-12	3.90%	155,707
Chhattisgarh	2010-11	4.60%	135,191
Madhya Pradesh	2008-09	4.08%	308,245
Haryana	2010-11	2.63%	44,212

The geographical area of the various states has been noted from the web sites and added to the above table. As observed the geographical area of Haryana is the lowest among the above states and normally the transmission losses of Haryana should also be the lowest.

In view of the above discussion and suggestions, the Commission pegs **the target for intra state losses for FY 2012-13 at 2.5% with the road map for reduction of these losses @ 0.1% p.a.**

Provision of Polymer Insulators

In order to avoid the problem of trippings of the power transmission lines due to dense foggy conditions in winter season, HVPNL was advised to provide anti-fog polymer insulators on the transmission network. HVPNL have informed that they had identified 42 ckts for the purpose out of which replacement on 22 ckts has been completed and the work on the remaining ckts is under progress which needs to be expedited. The ckts on which polymer insulators have not been installed must be thoroughly cleaned before onset of winter.

Installation of Capacitor Banks

In order to improve the power factor of the system, HVPNL was advised to install shunt capacitor banks of appropriate capacity at all grid sub-stations under their control and ensure that all capacitor banks are in working order & are switched on/ off as per system requirements. HVPNL was also advised to consider installation of automatic switched capacitor banks. HVPNL has submitted that they have already installed 3370.969 MVAR capacitors up to 31.03.2011 i.e. 25% of the transformation capacity of 13,290.60 MVA against the norm of 40%. Regarding switching on /off as per system requirements, HVPNL has submitted that they have issued the necessary instructions. **The Commission is of the view that there is a need to have surprise checks by senior officers of HVPNL in order to ensure that the instructions are being followed in letter and spirit. HVPNL should also seriously consider installing Automatic Switch On /Off of 11kV capacitor sections as per system requirement on the pattern of the Discoms i.e. UHBVNL &DHBVNL so as to avoid dependence on the operators manning the substations.**

Special Energy Meters

For accurate measurement of energy flow and calculation of transmission losses, HVPNL were advised to replace all the conventional energy meters to special energy meters conforming to CEA's Regulation (on installation and operation of meters), 2006. As per the information supplied by HVPNL, 67 interface points out of a total of 780 points are yet to be provided with SEMs as on 12.03.2012. HVPNL should complete the installation and commissioning of SEMs at all interface points by 30.06.2012 and submit a compliance report in this regard.

Transmission Voltage Levels

As per CERC (Rates, Charges and Terms and Conditions for use of intervening Transmission Facilities) Regulations, 2010, the normative transmission losses for line length of every 50km of distance are as under:

Table 2.21 – Transmission Voltage Levels

Type of Transmission System	Line Losses %
400 kV	0.5%
220 kV	1.0%
132 kV	4.3%
66 kV	8.0%

As reported by HVPNL, the total length of transmission lines and number of sub-stations of different voltage levels as on October 2011 is as under:-

Table 2.22 – Length of transmission lines

Transmission Lines	Length in Ckt. Kms.	%
400 kV	381.6	3.58
220 kV	4184	39.21
132 kV	3752	35.16
66 kV	2353	22.05
Total	10670.6	
Sub-Stations		
400 kV	2	0.60
220 kV	49	14.80
132 kV	163	49.25
66 kV	117	35.35
Total	331	

As observed, the ratio of 132/66 kV transmission system with higher losses (4.3% to 8%) is much more as compared to 400/220kV system with lower losses (0.5 to 1%). With the commissioning of pending 400/220kV transmission works and minimizing 66 kV systems, the overall intrastate transmission losses should come down in future.

Damage of Power Transformers

The data regarding damage of power transformers during the last 4 years as provided by HVPNL is as under:-

Table 2.23 – Damage of power transformers

Sr. No.	FY	Total no. of Power Transformers	No. of Transformers damaged	
			No.	% age
1	2008-09	710	20	2.82
2	2009-10	742	20	2.70
3	2010-11	776	23	2.96
4	2011-12 (up to 02/2012)	895	21	2.35

The Commission observes that 21 power transformers have got damaged during FY 2011-12 up to February, 2012 as against 20/23 each during the 2 previous full years. The rate of damage reported by HVPNL is not acceptable. HVPNL is once again advised to strictly enforce the preventive maintenance schedules, ensure healthiness of the protection system, prevent over loading and implement the findings of the enquiry reports as also the enquiry reports of the Maintenance and Protection wing of the HVPNL so as to aim for zero damage rate for Power Transformers.

Fatal & Non – fatal accidents

The data regarding fatal / non-fatal accidents during the last 4 years as provided by HVPNL is as under:-

Table 2.24 – Fatal & Non-Fatal accidents

Sr. No.	FY	Human Beings		Animals		Total	
		Fatal	Non Fatal	Fatal	Non Fatal	Fatal	Non-Fatal
1	2008-09	1	1	1 2	3		4
2	2009-10	1	4	0 1	0		4

3	2010-11	1	3	0 1	0		3
4	2011-12 (up to 02/2012)	2	3	0 2	0		3

HVPNL should investigate thoroughly the causes for such accidents and take all remedial measures so as to aim for zero tolerance in this regard.

3. TRANSMISSION TARIFF & SLDC CHARGES

3.1 Background Information on Tariff Filing

This section deals with the determination of transmission tariff and SLDC charges for FY 2012-13 based on the ARR determined by the Commission in Chapter–2 of this order. As transmission system cost and cost of operating SLDC are 'fixed cost' having no variable component the Commission has been determining a single part transmission tariff based on the consolidated transformation capacity (MVA) of UHBVNL and DHBVNL as projected by the petitioner for respective years. Thus the entire cost of transmission business (including SLDC) was considered as of 'fixed' nature, and hence the Commission considered it reasonable to allow recovery of entire cost through a 'demand charge' on a monthly basis. The Commission has notified the Haryana Electricity Regulatory Commission (Terms and Conditions for Determination of Transmission Tariff) Regulations, 2008. Regulation 27 of the said regulations provides for payment of Transmission Charges as under:-

"(1) Annual transmission charges shall be fully recoverable at 98% target availability. Payment of transmission charges below 98% shall be on pro-rata basis. The transmission licensee may recover its annual revenue requirement by way of a fixed charge based on transformation capacity, contracted capacity, a charge based on energy transmitted, connectivity charge, reactive energy charge or a combination of these charges. The transmission charges shall be calculated on a monthly basis. In case of more than one beneficiaries of the transmission system, including the distribution licensees and long term open access customers, the monthly transmission charges leviable on each beneficiary shall be computed as per the following formula unless amended by the Commission.

$$\text{Transmission Charges} = \frac{ATC}{12} \times \frac{CA}{CS}$$

Where, ATC = Annual Transmission Charges payable by the beneficiaries, after deducting total transmission charges paid by the short term open access customers; other income, as decided by the Commission, to be passed on to the beneficiaries; reactive energy charges and transmission charges received from the CTU.

CA = Transformation Capacity Allocated to each beneficiary individually including long term open access transmission customers.

CS = Sum of Transformation Capacity of long term intra – state transmission consumers.

(2) The transmission losses shall be allocated to the beneficiaries / users of the intra – state transmission system in proportion to the energy drawn".

In line with the HERC (Terms and Conditions for Determination of Transmission Tariff), 2008 the petitioner has proposed recovery of transmission charges in FY 2012 – 13 based on the respective transformation capacity of its two beneficiaries i.e. UHBVNL and DHBVNL.

The transmission tariff & SLDC charges approved by the Commission in the tariff order for 2011-12 are presented in the Table 3.1.

Table 3.1 - HERC approved transmission tariff & SLDC charges for FY 2011-12)

Tariff	UHBVNL	DHBVNL
Transmission Charges (Rs million / month)	363.99	359.94
SLDC Charges (Rs. million / month)	10.65	
Transmission Tariff for Short term Customers (Rs./ kWh) based on energy sales of 37,842 MUs	0.23	

3.2 Tariff Proposed by HVPNL for FY 2012-13

HVPNL has sought revision in the existing Transmission tariff & SLDC charges on the following grounds:

a) The aggregate revenue requirement representing the cost to be recovered for the transmission business & SLDC for the FY 2012-13 is different than the aggregate revenue requirement for the financial year 2011-12.

b) The individual parameters used for calculation of tariffs such as transformation capacity and average demand are different for FY 2012-13 as compared with FY 201112.

In the tariff petition under consideration , the petitioner has reiterated that so far as transmission business is concerned all the expenses contribute towards fixed cost only and as such the transmission tariff for FY 2012-13 has been proposed by HVPNL as single part tariff consisting of fixed charge based on the transformation capacity (MVA) at the interconnection points. Thus the petitioner has proposed to levy a fixed charge based on the ratio of each long-term customer's transformation capacity (including prospective long term open access customer) to the total proposed transformation capacity. Further, they have submitted that a customer who contracts firm transmission capacity on short – term basis shall pay open access charges on the lines of open access charges notified by HERC from time to time for using the State Transmission facilities. The petitioner has further submitted that the State Transmission Utility (STU) may be allowed to retain 50% of the charges collected from the short term open access customers and the balance shall be passed on to the long term customers including Discoms in proportion to their transformation capacity. Retention of 50% charges has been justified by the petitioner on the plea that the STU shall be required to deal with Inter – State transactions as well as Intra – State transactions and as such the work involved will be more than the work involved with RLDCs despite volume of power being less than the volume handled by CTU. Further monitoring and control shall have to be exercised by SLDC on Intra – State as well as Inter – State system.

The petitioner has submitted that the anticipated transformation capacity at all Interface points have been verified from the record and has been found to be 19295.60 MVA for the year 2012-13. The transformation capacity for FY 2011-12 and FY 2012-13 have been estimated keeping in view the target / estimated commissioning schedule of various schemes under execution / proposed during the financial years 2012 & 2013. The details as submitted by the petitioner are presented in the Table below.

Table 3.2 – Transformation capacity for FY 2012-13

	UHBVNL	DHBVNL	Total
Transformation Capacity as on 31/03/2011 (MVA)	7519.70	6400.90	13920.60
Anticipated Transformation Capacity as on 31/03/2012(MVA)	8976.70	9191.90	18168.60
Projected Transformation Capacity as on 31/03/2013(MVA)	9774.20	9521.40	19295.60
Projected Transformation Capacity as on 31/03/2013 (%)	50.66%	49.34%	100%

In addition to the above the petitioner has proposed that besides recovery of transmission and SLDC costs, they may also be allowed incentive on achieving annual availability beyond the target availability of 98% (Target availability) in accordance with the formula specified in the CERC regulations. The petitioner has submitted that billing of the incentive shall be done to the Discoms and long term consumers on annual basis.

The proposed transmission tariff is single part comprising fixed cost component only. The tariff proposed by the petitioner is presented in Table 3.3.

On the issue of rebate/late Payment Surcharge, it has been stated by the petitioner, that the same shall be applicable as per provisions in the Secretary, HERC memo No. 793-796/HERC dated 30/07/2008. HVPNL has also proposed to charge UHBVNL & DHBVNL and all short / long term open access customers, reactive energy charge on the basis of recording made by the existing Special Energy Meters (SEMs) and individual ABT compliant meters of short term and long term open access customers @ 11 paise / KVArh from 1/04/2012.

Table 3.3 - HVPNL's proposed Transmission Tariff for FY 2012-13

Tariff	Ratio of Average Transformation Capacity	Fixed Charge (Rs. million / month)
UHBVNL	50.66%	566.256
DHBVNL	49.34%	551.501
Total	100%	1117.757

The recovery proposed above is based on the net aggregate revenue requirement of Rs. 13,413.08 million projected by the petitioner for FY 2012-13. The projected transformation capacity as on 31/03/2013 has been taken as 19,295.60 MVA i.e. 9774.20 MVA for UHBVNL and 9521.40 MVA for DHBVNL. Further based on the respective percentage shares in transformation capacity i.e. 50.66% UHBVNL & 49.34% DHBVNL, the monthly recovery has been apportioned by the petitioner.

In respect of short-term customers having intra state / interstate power transactions, the petitioner has proposed to charge Rs. 0.32/kWh based on projected energy sales of 41,626.42 MU in FY 2012-13 i.e. net projected ARR of Rs. 13413.08 million divided by 41,626.42 MUs.

3.3 Analysis of the Tariff Proposal

The Commission has considered the proposed transmission tariff and SLDC charges for FY 2012-13 as well as the submissions of the interveners on the same. The Commission accepts the plea of the petitioner for considering all transmission related cost as fixed for the purpose of this order. The Commission is of the view that transmission business needs to be seen as a 'pure wire / carrier' business. Consequently, almost the entire cost structure will be of 'fixed' nature and will not vary with the volume of energy transmitted in any given year. The Commission reiterates the need to refine the transmission tariff design based on voltage differentiation i.e. segregating 'costs' and 'losses' at 220 KV, 132 KV and 66 KV. However, in the absence of reliable and adequate data on voltage wise fixed assets, sales and loss levels and sharing of system peak by consumers at different voltages etc., the Commission has no option but to continue with the existing tariff design.

3.3.1 Transmission Cost

HVPNL has proposed Rs. 13,413.08 millions as their net aggregate revenue requirement for transmission business for FY 2012-13. The Commission as per the details presented in Chapter-2 (Table 2.17) of this order has determined Rs. 6305.99 millions as the net aggregate revenue requirement for transmission business in FY 2012-13. Hence the net ARR approved by the Commission for FY 2012-13 shall form the basis of estimating monthly recovery from the users of the transmission system.

3.3.2 Tariff Design

The Commission, in its earlier order(s), allowed recovery of cost of transmission charges based on the ratio of respective projected transformation capacity of the two Discoms i.e. UHBVNL & DHBVNL. The Commission has notified terms and conditions for determination of transmission tariff regulations on 19th December 2008 and regulation 27, the payment of Transmission Charges, provides that “Annual transmission charges shall be fully recoverable at 98% target availability. Payment of transmission charges below 98% shall be on pro-rata basis. The transmission licensee may recover its annual revenue requirement by way of a fixed charge based on transformation capacity, contracted capacity, a charge based on energy transmitted, connectivity charge, reactive energy charge or a combination of these charges. The transmission charges shall be calculated on a monthly basis. In case of more than one beneficiaries of the transmission system, including the distribution licensees and long term open access customers, the monthly transmission charges leviable on each beneficiary shall be computed as per the formula incorporated in the terms and conditions notified by the Commission for determining transmission tariff”.

In line with the above regulations, the Commission accepts the proposal of the transmission licensee for recovery of transmission cost based on the projected transformation capacities of the user(s) i.e. UHBVNL & DHBVNL.

3.4 Transmission tariff

The Commission, for determining transmission tariff, has considered the fact that entire cost allocated to the transmission business is of ‘fixed’ nature as already stated. Hence, it would be reasonable to recover the entire cost through a demand charge based on the ratio of the projected transformation capacity of the distribution licensees as proposed by HVPNL, as presently there is no long- term open access customer in the State.

Considering the above factors, **the Commission approves monthly fixed charges (Rs. million) for the transmission of power by HVPNL and transmission tariff for short term open access consumers for FY 2012-13 as per detail given in the Table 3.4:-**

Table 3.4 - Determination of Transmission Tariff (FY 2012-13)

Particulars	
Transmission Cost (Rs. millions)	**6305.99**
Projected Transformation Capacity (MVA)	19295.60
UHBVNL's Share (MVA)	9774.20
DHBVNL's Share (MVA)	9521.40
Ratio of Average Transformation Capacity	
UHBVNL (%)	50.66
DHBVNL (%)	49.34
Transmission Charges Recoverable from UHBVNL (Rs. millions)	3194.61
Transmission Charges Recoverable from DHBVNL (Rs. millions)	3111.38
Monthly Transmission Charge UHBVNL (Rs. millions)	**266.22**
Monthly Transmission Charge DHBVNL (Rs. millions)	**259.28**
Transmission Tariff for short term open access customers based on energy sales of 29,602 MUs considered (Rs / kWh)	**0.21**

The short term open access customers will be subject to a single rate of Rs. 0.21/kWh as determined above. As the entire cost of transmission system including renovation, modernization and augmentation under the present tariff design is borne by the distribution companies, the Commission does not agree with the submission of the petitioner for being allowed to retain 50% of the revenue collected from short – term open access consumers. Consequently, in line with its earlier order(s), the Commission allows 25% of the charges collected from the short – term customers for use of intra – state transmission system to be retained by HVPNL and the remaining shall be adjusted towards reducing the transmission charges payable by the existing long term customers viz. UHBVNL & DHBVNL in proportion to their transformation capacity. **The Commission believes that 25% allowed to be retained by HVPNL is sufficient to meet any extra cost including monitoring and control that HVPNL may have to incur with for short term open access transactions.**

3.5 Reactive Energy Charges

The petitioner has submitted that the Discoms, Generators and Open Access consumers are expected to provide adequate reactive compensation in order to ensure that they do not draw / inject VArs during low / high voltage conditions, in line with the criteria laid in clause 6.6 of the Indian Electricity Grid Code (IEGC). According to Clause 6.6(2) of the IEGC the VArh shall be @ 10 Paisa / KVArh w.e.f. 1.4.2010 and the same shall be escalated at the rate of 0.5 paisa / KVArh per year thereafter. Accordingly HVPNL has proposed to charge UHBVNL & DHBVNL and all short term / long term open access consumers @ 11 paisa / KVArh from 1/04/2012.

The Commission has considered the above as well as the objections of the Discoms on the same and notes that as per IEGC and Haryana Grid Code, the beneficiary pays or gets paid for VArs drawn or injected depending on the Grid frequency / Voltage. Thus the VAr account is settled on a net basis from the reactive compensation pool. Reactive energy management is an important issue and all constituents should pay adequate attention to the same including the generator who may be called upon to generate reactive energy at certain times**. HVPNL should ensure that all their interface points are equipped with SEMs by 30th June 2012**. In order to avoid backlog, installation of SEMs should be ensured at all new sub – stations which are commissioned in future. **As reactive energy charge is a legitimate charge, the same is allowed to be recovered as per the provisions of the Indian Electricity Grid Code (IEGC) / Haryana Grid Code as amended from time to time.**

3.6 Billing

The billing of transmission charges shall be on monthly basis in the ratio of the respective transformation capacity of the distribution licensee(s) and long-term customer, if any. The billing for SLDC charges shall also be on monthly basis.

The transmission tariff for wheeling, determined by the Commission in terms of Rs./ kWh, shall be recoverable from the short term 'open access' customers availing HVPNL's transmission system. The wheeling charges recovered from short term customers, subject to 25% retention by HVPNL, shall be reduced from the transmission charges to be recovered from the distribution licensees. However, in view of the revised calculation of working capital borrowings, the due date of payment shall stand enhanced to two months from the date of billing.

3.7 Recovery of SLDC Expenses

The Commission has determined the ARR/ operating cost of SLDC for FY 2012-13 as per details provided in Chapter – 2 (Table 2.18) of the instant order at Rs. 113.73 million. A total monthly recovery of Rs. 9.4775 million shall be made from the two distribution licensees i.e. UHBVNL & DHBVNL in 50:50 proportion and long term open access customers (if any) in the ratio of their transformation capacity / load requirement in case no additional transformer is required to be installed.

3.7.1 Short Term Open Access Consumers

The short-term open access consumers (if any) shall pay a composite fee and charges as per **HERC (Terms and Conditions for grant of connectivity and open access for intra – state transmission and distribution system) Regulations, 2012 dated 11th January, 2012.**

3.7.2 SLDC Application Fee

The application fee shall be as per **HERC (Terms and Conditions for grant of connectivity and open access for intra – state transmission and distribution system) Regulations, 2012 dated 11th January, 2012.**

3.8 Incentive

HVPNL, for its transmission business, has claimed incentive on achieving annual availability beyond 98% (target availability) as per formula approved by the CERC. As the HERC Transmission Tariff Regulations, 2008 has no such provision the petitioner's claim for availability linked incentive is not maintainable and hence the same is rejected.

The Commission for FY 2012-13 approves the schedule of rebate(s) as per provisions in the Secretary, HERC memo no. 793-796/HERC dated 30/07/2008 which stand conveyed to the power utilities.

3.9 Late Payment Surcharge

The late payment surcharge shall be applicable as per provisions in the Secretary, HERC memo no. 793-796/HERC dated 30/07/2008 which was agreed upon by the power utilities.

The Commission has notified HERC (Terms and Conditions for grant of connectivity and open access for intra – state transmission and distribution system) Regulations, 2012 dated 11th January, 2012. The provisions as specified therein shall prevail unless specified differently in the instant order.

CONCLUSION

The Commission, under section 62 read with section 64(3) (a) and section 64(6) of the Act, issues this tariff order for FY 2012-13 determining the ARR for transmission business and SLDC business of HVPNL, the transmission/ SLDC charges and the transmission tariff for short term open access customers as per details given in the order and summarised as under:-

a) The net ARR of HVPNL, for its transmission business, is determined as Rs 6305.99 million for FY 2012-13.

b) The recovery of transmission cost shall be @ Rs. 266.22 million (UHBVNL) and Rs. 259.28 million (DHBVNL) per month.

c) The Net ARR of HVPNL for its SLDC business is determined at Rs. 113.73 million (monthly recovery of Rs. 9.477 million).

d) Transmission tariff / Wheeling Charges for short-term open access consumers shall be Rs. 0.21/ kWh.

e) Intra-state Transmission losses are pegged at 2.5% & Inter-state transmission losses shall also be considered at 2.5 % for FY 2012-13.

The licensee shall implement the tariff and charges contained in this order with effect from 1st April 2012.

This order is signed, dated and issued by the Haryana Electricity Regulatory Commission on 29th March, 2012.

Date: 29th March, 2012.
Place: Panchkula.

(Ram Pal) Member	(Rohtash Dahiya) Member	(R.N. Prasher) Chairman