



**COMMISSION'S ORDER**

**ON**

**ANNUAL REVENUE REPORT FOR TRANSMISSION  
BUSINESS & SLDC FOR FY 2007- 08 AND TRANSMISSION  
TARIFF & SLDC CHARGES**

**May 8, 2007**

**HARYANA ELECTRICITY REGULATORY COMMISSION**  
Bay No. 33-36, SECTOR - 4, PANCHKULA - 134 109, HARYANA  
[www.herc.nic.in](http://www.herc.nic.in)

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**CASE NO**

**HERC/PRO - 6 OF 2006**

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**PANCHKULA**

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**BAY No. 33-36, SECTOR - 4, PANCHKULA - 134 109, HARYANA**

**CASE NO. HERC / PRO - 6 OF 2006**

**Date of Order: May 8, 2007**

In the matter of applications filed by Haryana Vidyut Prasaran Nigam Limited (HVPNL) for approval of Annual Revenue Requirement for Transmission business and operating cost of SLDC for FY 2007-08 and determination of Transmission Tariff and SLDC Charges.

<b>PRESENT:</b>	<b>Shri. Bhaskar Chatterjee, Chairman</b> <b>Er. T.R. Dhaka, Member</b> <b>Shri. T.S. Tewatia, Member</b>
On behalf of HVPNL	Shri. P.K. Das, M.D, HVPNL Shri. A.S. Chugh, Director / Proj. Shri. S.K. Singal, Director/Tech. Shri. A.K.Tandon, CE Shri. S.K. Aggarwal, CAO Shri. T.K. Dhingra, SE Raghvir Sharan, SE
On behalf of HERC Staff	Shri. Surjeet Singh, Secretary Smt. Saroj Deswal, Director/Tariff Shri. Balbir Singh, Director/Tech. Shri. Sanjay Varma, Joint Director/Tariff Smt. Surbhi Jain, Deputy Director

**ORDER**

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# **1. PROCEDURAL ASPECTS OF THE ARR FILING**

In exercise of the powers vested under section 62 of the Electricity Act, 2003 and section 26 of the Haryana Electricity Reform Act, 1997 and all other powers enabling it in this behalf, the Haryana Electricity Regulatory Commission passes this order and determines Annual Revenue Requirement (ARR) for Transmission of electricity and State Load Dispatch Centre (SLDC) business of Haryana Vidyut Prasaran Nigam Ltd (HVPNL) for the Financial Year 2007-08.

## **1.1 Enactment of the Electricity Act 2003**

The Electricity Act, 2003 (the Act), enacted in June 2003, repealed the Indian Electricity Act, 1910, the Electricity (Supply) Act, 1948 and the Electricity Regulatory Commissions Act, 1998. It provides for a liberal framework for development of the power sector and increased competition by facilitating open access (permission to use the existing power transfer facilities) for transmission and distribution, power trading, and allows setting up of captive power plants without any restriction.

Section 185 (3) of the Act states that “The provisions of the enactments specified in the ‘Schedule’, not inconsistent with the provisions of this Act, shall apply to the States in which such enactments are applicable”. The Haryana Electricity Reforms Act, 1997 has been listed under this proviso at serial No. 2 of the schedule of the Act.

Therefore, from this provision of the Act, it is interpreted that the provisions of Haryana Electricity Reforms Act, 1997 that are not inconsistent with the provisions of the Act shall continue to be applicable to the State of Haryana. The Commission, while analyzing the instant ARR and Tariff application and while issuing this order has duly considered the provisions of the Act and has dealt with the matters accordingly.

## **1.2 Procedure envisaged in the Act for Tariff Order**

Section 64 of the Act lays down the procedure to be followed for issuance of a tariff order. Sub-sections (1) & (3) of Section 64 of the Act provide as under:

Sub-section (1): “An application for determination of tariff under section 62 shall be made by a generating company or licensee in such manner and accompanied by such fee, as may be determined by regulations”.

Sub section (3): “The Appropriate Commission, shall within one hundred and twenty days from receipt of application under sub-section (1) and after considering all suggestions and objections received from the public:-

- (a) issue a tariff order accepting the application with such modifications or such conditions as may be specified in that order;
- (b) reject the application for reasons to be recorded in writing if such application is not in accordance with the provisions of this Act and the rules and regulations made there under or the provisions of any other law for the time being in force:

Provided that an applicant shall be given a reasonable opportunity of being heard before rejecting his application.”

## **1.3 Procedural History**

Government of Haryana vide their notification No. 1/10/2003-1/Power dated 9/12/2003 notified HVPNL to be “Haryana State Transmission Utility” for the purpose of the Act w.e.f. 10<sup>th</sup> December, 2003.

Section 31 (1) of the Act provides “ the State Government shall establish a Centre to be known as State Load Dispatch Centre (SLDC) for the purpose of exercising the powers and discharging the functions under this Act”. while sub

section 31(2) provides that the “State Load Dispatch Centre (SLDC) shall be operated by a Government company or any other authority or corporation established or constituted by or under any State Act, as may be notified by the State Government:

Provided that until a Government company or any authority or corporation is notified by the State Government, the State Transmission Utility (STU) shall operate the State Load Dispatch Centre.

Provided further that “no State Load Dispatch Centre shall engage in the business of trading in electricity”.

The Government of Haryana vide their notification No. 1/11/2003-1/Power notified that the SLDC at Sewah (Panipat) established for the purpose under Section 31(1) of the Act is to be operated by the Haryana State Transmission Utility w.e.f 10<sup>th</sup> December 2003.

Further, Section 39 (1) of the Act provides that “the State Government may notify the Board or a Government company as the State Transmission Utility; Provided that the State Transmission Utility shall not engage in the business of trading in electricity”.

The above-mentioned provisions of the Act were deferred by the Government of India notification dated 9<sup>th</sup> June 2004 for a period of one year. Resultantly HVPNL continued to be the Transmission and Bulk Supply Licensee till 9<sup>th</sup> June 2005 functioning under the Transmission & Bulk Supply License (License No. 1 of 1998) granted by the Commission.

Clause 21.2 of the transmission license states that if the report referred to in Clause 21.1 indicates a significant difference between its expected aggregate revenues and its expected cost of service, the Licensee shall also submit with its

report an explanation of the measures it proposes to take, including any proposed tariff amendments, to eliminate the difference.

The Commission vide memo no. 1205 / HERC dated 20/09/2006 directed HVPNL to file the ARR for FY 2007-08 before 10<sup>th</sup> November 2006. HVPNL, Vide its memo no. Ch- 63 / SE/RAU/F-71 dated 8/12/2006 filed its ARR for FY 2007-08 and Tariff in respect of its Transmission Business and SLDC.

Since HVPNL is no more engaged in the business of bulk supply / trading w.e.f. 9<sup>th</sup> June 2005, the instant filing is for recovery of transmission charges by way of transmission tariff and SLDC charges from the distribution licensees UHBVNL & DHBVNL and other long term / short term open access customers, if any. The tariff / charges proposed by HVPNL are presented in table 1.1.

**Table1.1 HVPNL proposal for Transmission Tariff & Charges**

Monthly Transmission Charges (Rs. million)	UHBVNL	DHBVNL	Total
	289.89438	261.23562	551.13
Transmission Tariff for Short term Customers (Rs / MW per day)	6 hours per day	6 to 12 hrs per day	Above 12 hrs
	292.90	585.80	1171.60
SLDC Charges (Rs. million / month)	5.036	4.538	9.575

The above monthly transmission charges (based on respective transformation capacity of UHBVNL & DHBVNL) are based on an estimated revenue requirement of Rs. 6613.56 million comprising Rs. 6180.40 million expenditure, Rs. 500.45 million return on equity less Rs. 67.29 million non-tariff income. Transmission tariff for short-term customers has been proposed at 25% of the normal rate.

The Commission in Chapter - 2&3 of this order, has dealt with HVPNL's proposal as presented in table 1.1.

Section 64 (1) of the Act provides that an application for determination of tariff under Section 62 is required to be made by a generating company or licensee in such manner and accompanied by such fee as may be determined by regulations. The Commission vide its notification (No. HERC / 2004 / 16 dated 14<sup>th</sup> May 2004 notified that the Haryana Electricity Regulatory Commission (Tariff) Regulations, 1999 notified in Haryana Government Gazette (Extra), dated 30<sup>th</sup> July, 2002, in so far as not inconsistent with the provisions of the Act will be applicable as such until further amendment. As per the regulation 2(2) (c) of the HERC (Tariff) Regulation 1999, the ARR & tariff application should contain a calculation of the licensee's estimated costs of providing the service required by the level of demand indicated in the ARR for each consumer class and under regulation 2(2) (d) of the said regulation the application should contain the licensee's general explanation of how it proposes to deal with any significant divergence between the revenue and cost figures provided in the ARR filing.

Under Section 64(3)(b) of the Act, the Commission can reject the application for reasons to be recorded in writing if such application is not in accordance with the provisions of the Act and the rules and regulations made there under or the provisions of any other law for the time being in force.

HVPNL inserted public notice in two newspapers in respect of their filing of ARR & tariff application with HERC. The Public Notices were issued in 'The Indian Express' and 'Amar Ujala' newspapers on 10/01/2006. The public objections were invited until 10/02/2006. The set of documents related to ARR and tariff were made available for public consultation during office hours on any working day at the head quarter of HVPNL and offices of SEs (Operation) of UHBVNL and DHBVNL. A complete set of these documents was made available on payment of Rs.1000/-, copy of main ARR without Annexure at Rs.300/- and copy of condensed Summary at Rs.50/- in cash or through demand draft, from

the office addresses mentioned in the public notice. The condensed summary was also available on the website of Haryana Power Utilities i.e. at [www.haryanaelectricity.com](http://www.haryanaelectricity.com).

It was also mentioned in the public notice that any person, who intended to submit objections, should submit seven copies of his written objections along with supporting material, if any, to the Secretary, Haryana Electricity Regulatory Commission, with a copy to the licensee through special messenger or by registered post so as to reach before 5 pm of 10<sup>th</sup> February 2006. Any interested person, who wanted to be heard in person, should mention so. Incomplete filings and filings received after the due date may not be entertained.

The salient features of the SLDC ARR and Transmission ARR as filed by HVPNL, on a projected basis for FY 2007-08, for consideration and approval of the Commission are as under.

#### **1.4 Salient features of SLDC ARR:**

The ARR has been projected at Rs. 114.897 million, this includes an expenditure of Rs. 102.706 million, a return on equity of Rs.12.486 less other income (fee etc.) of Rs.0.295 million. SLDC charges are to be recovered on monthly basis in the ratio of transformation capacity (as on 31/3/2006) allocation in respect of UHBVNL (52.60%) & DHBVNL (47.40%). The proposed SLDC charges to be recovered on a monthly basis from UHBVNL is Rs. 5.036 million and Rs. 4.538 million from DHBVNL. HVPNL has proposed to charge a composite fee and charges from a short-term customer for each transaction as per the rates approved by the CERC from time to time for the SLDC. The present rate notified by the CERC is @ Rs. 1000 per day or part of the day. Application fee of Rs.5000/-, which is at par with the rate specified by the CERC, shall be applicable to both short term and long term open access customers.

## **1.5 Salient features of the Transmission ARR**

HVPNL has projected an Annual Revenue Requirement (ARR) for FY 2007-08 at Rs. 6613.56 million consisting of total expenditure in respect of transmission business amounting to Rs. 6180.40 million, return on equity @ 8% on a paid up equity for Transmission business of Rs. 6255.59 million, amounting to Rs. 500.45 million and non-tariff income of Rs. 67.29 million, to be deducted to arrive at net aggregate revenue requirement of Rs.6613.56 million.

As per the Annual Revenue Requirement proposal for FY 2007-08 in respect of the transmission business, there is an uncovered revenue gap of Rs. 3116.15 million. The Licensee has proposed to bridge this revenue gap through suitable increase in transmission tariffs for which they have filed the tariff proposal under consideration. The proposed transmission tariff is a single tariff part based on the respective share of of UHBVNL and DHBVNL to the total transformation capacity.

After preliminary review of the filing, the Commission brought out a number of issues and additional data requirements. HVPNL provided clarification and additional information sought by the Commission.

The list of waivers requested by the Transmission Licensee and granted by the Commission is given in **Annexure - 1**.

The Commission issued public notice inviting comments / objections on application filed by the HVPNL for approval of ARR & tariff and charges for FY 2007-08 in 'The Times of Times' (English) Delhi & Chandigarh edition and 'Dainik Bhaskar' (Hindi) Haryana on 9/02/2007. The public notice contained background information, procedural information and salient features of the ARR filing. An invitation to submit written comments / objections by 19/02/2007 was also given to the public. All the documents relating to ARR filings were made available to the public on payment of a nominal fee so that interested person / organizations could examine and comment on the ARR filings of the Licensee.

The public hearing on the ARR of HVPNL for FY 2006-07 was scheduled for 23<sup>rd</sup> February 2007 at 11.30 A.M. in the conference hall of the Commission. The public hearing was held as per the schedule.

## **1.6 State Advisory Committee (SAC)**

The Commission, in its consultative process, convened meeting of the SAC on 16/03/2007 at 11.30 A.M. in its conference hall, to have benefit of the views of the members of the SAC on different issues pertaining to determination of transmission tariff and SLDC charges of HVPNL for FY 2006-07. The members were of the view that transmission loss of 5% is very high and it should be reduced to around 2 to 3% as per international benchmark.

## **1.7 Interveners / Objectors**

In response to the public notice issued by HVPNL and subsequently by the Commission, no written objections / comments or suggestions were received from public, industrial organizations or any other stakeholder. The two long term customers of HVPNL viz. UHBVNL and DHBVNL who will be paying the tariff and charges determined in respect of Transmission & SLDC also chose not to file any objections / comments or suggestions.

The Commission believes that active public participation will help in developing awareness and understanding about the regulatory process including price (tariff) determination and the approach underlying the decision-making of the Commission. The Commission provided adequate opportunity to all the concerned persons / organizations to put forward their views and objections on the tariff application submitted by the transmission licensee and owner of the SLDC i.e. HVPNL. It needs to be appreciated by all the stakeholders, including electricity consumers of Haryana, that the ARR & Tariff of Transmission business and SLDC charges as determined by the Commission becomes a 'pass through' cost in the determination of ARR & Retail Tariffs of the distribution licensee viz.

UHBVNL & DHBVNL, and hence should be viewed accordingly. Thus, they are encouraged to intervene from their perspective and assist in partnering the regulatory reform process in Haryana.

The Commission has taken into consideration the views of the SAC members, analysis / suggestions of the staff presented before the Commission during the public hearing and response of HVPNL thereto and dealt with it in its detailed order on ARR in Chapter - 2 & Tariff and SLDC charges in Chapter – 3 of this order.

## **2. ANALYSIS OF THE ARR FILING AND COMMISSION'S**

### **ORDER**

In this chapter, various elements of ARR filing namely operating expenditure, capital expenditure, capital base, reasonable return, non-tariff income and incidence of taxation are analyzed and the Commission's order on each item is presented.

HVPNL's proposal refers to the ARR & Tariff application submitted to the Commission on 8<sup>th</sup> December 2006; additional information provided refers to the oral submissions made by HVPNL during the public hearing held on 23/2/2007 and subsequent discussions.

#### **2.1 Legal Issue (BBMB)**

The Commission vide memo no. 1436/HERC/2006 dated 19<sup>th</sup> October 2006 and subsequent reminder vide memo no. 2580 / HERC / 2007 dated 12<sup>th</sup> March 2007 sought the views of the Haryana Government on BBMB generation assets, keeping in view the different court cases pending on the subject and the stand taken by it in this regard. However, no communication has been received from the Power Department, Government of Haryana, so far. Thus, in view of no response from the Government, the Commission continues to hold its view on the subject as per its order dated 26<sup>th</sup> July 2006 (Para 3.1 Page No. 31).

#### **2.2 Operating and Maintenance Expenditure (O&M)**

Employees' cost, administration and general expenses and repair and maintenance expenses are analyzed under this sub-head. HVPNL has estimated its O&M related expenditure for FY 2007-08 at Rs. 2010.43 million in its ARR submitted to the Commission. The details of proposed O&M expenses for FY 2007-08 s vis-à-vis the corresponding amounts for FY 2005-06, as approved by the Commission vide its order dated 10/05/2005 is presented in Table 2.1.

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

Particulars	HVPNL Audited (FY 2005-06)	HVPNL Proposal (FY 2007-08)	HERC Order (FY (2006-07))
Wages, salaries & related costs	1797.14	2048.96	1634.83
Repair & Maintenance Expenses	78.31	83.41	98.49
Administration & General Expenses	79.88	82.55	79.35
<b>Total</b>	<b>1955.33</b>	<b>2214.92</b>	<b>1812.67</b>

The Commission has considered the latest available audited accounts i.e. FY 2005-06 of HVPNL with appropriate adjustments / changes for calculating the allowable expenses as part of the ARR for FY 2007-08. The expenses that form part of the ARR are discussed in detail in the paragraphs below.

### **2.3 Employees' cost**

Employees' cost includes cost incurred for the working employees as well as the retirees. The cost of working employees comprises of salary and dearness allowance payable to them and other allowances such as HRA, CCA, LTC, medical reimbursement, etc. In the case of retired employees and those retiring during the financial year under consideration, HVPNL has to discharge their liability towards pension, gratuity, and leave encashment benefit / payments applicable to them.

The employees' cost is an important constituent of the ARR and it is possible to project the same with fair degree of accuracy.

#### **1. Salary, DP and DA**

The Commission has allowed 2% increase each year in basic salary over the audited figures of FY 2005-06; dearness pay is estimated at 50% of the basic pay; DA rate for calculating employee cost has been considered as 40% as against 35% proposed by HVPNL. The expenditure on account of salary,

dearness pay and dearness allowance works out to Rs. 733.96 million for FY 2007-08, which is approved by the Commission. In addition to this, the Commission approves Rs. 94.56 million as other allowances at 19.42% of basic salary for FY 2007-08 as per the rate reflected in the audited expenditure for FY 2005-06 as proposed by the licensee.

## **2. Salary wages of employees through contractor**

The expenditure on account of salary/ wages of employees outsourced through contractors has been approved as proposed by HVPNL.

### **Terminal benefits**

The Commission, as per audited accounts for FY 2005-06, approves terminal benefits of Rs. 1191.70 million on accrual basis. For future ARR's, the licensee may explore the possibility of actuarial valuation on an estimated basis from a certified actuary for the ensuing year in order to accurately project its expenses.

## **3. Employees' Cost Capitalised**

The amount of employees' cost capitalized ought to relate to the cost of the employees who are engaged in capital projects. The Commission is allowing capitalization of employees cost in the same ratio as the actual expenditure incurred in the construction divisions bear to total expenditure as per the audited accounts of the licensee for FY 2005-06. Consequently, the employees cost capitalized works out to Rs. 164.78 million. The rate of capitalization being 19.39%.

## **4. SLDC Cost**

The total employee cost for the transmission business for FY 2007-08 as worked out earlier includes the cost of employees engaged in SLDC activities. The licensee has estimated this cost at Rs. 15.981 million for FY 2007-08, which is being allowed by the Commission. This amount is to be reduced from the total

employee cost as estimated above in order to arrive at the employee cost for the transmission business.

The employees' cost approved by the Commission is Rs. 1860.95 million, net of the amount capitalized of Rs. 164.78 million. The computation of employee cost is presented in table 2.2.

**Table 2.2 Employees' cost for FY 2007- 08 (Rs. million)**

<b>Particulars</b>	<b>HVPNL Proposal</b>	<b>HERC approval</b>
Basic+DA+DP	719	733.96
Other allowances	97	94.56
Contract employees	21	21.49
Terminal benefits	1385	1191.70
<b>Total</b>	<b>2222</b>	<b>2041.71</b>
Employee cost capitalised	157	164.78
<b>Net Employee Cost Expended</b>	<b>2065</b>	<b>1876.93</b>
SLDC Cost	16	15.98
<b>Total (Transmission)</b>	<b>2049</b>	<b>1860.95</b>

The Commission reiterates that HVPNL shall not divert any subscription received from employees towards provident fund to its business.

## **2.4 Repairs and Maintenance Expenses (R&M)**

Repair and maintenance (R&M) expenditure is essential for the upkeep of the transmission system. The Commission had restricted R&M expenses to 1.3% of the gross fixed assets (GFA) of the transmission business in the earlier approved ARR. HVPNL has projected Rs.83.41 million as R&M expenditure for FY 2007-08. The Commission approves the same as the projected amount is less than 1.3% of the average GFA.

## **2.5 Administrative and General Expense (A&G)**

The Commission approves A&G expenses as proposed by HVPNL amounting to Rs. 82.55 million net of capitalization and SLDC expenses.

## **2.6 Interest on Loans**

In line with the orders of the Hon'ble Appellate Tribunal for Electricity, the Commission is allowing working capital borrowings equivalent to 2 months ARR for the Transmission business. Interest @ 8.47 % (being the average rate of interest on working capital as proposed by the licensee) on the allowed borrowings works out to Rs. 76.76 millions as against Rs. 77.26 million proposed by the licensee.

As far as capital expenditure (projects) related borrowings are concerned, the Commission has allowed interest on all borrowings for which HVPNL has provided source wise details. In view of this, the Commission approves Rs. 1095.21 million as interest on borrowings to fund capital works as proposed by HVPNL. This expenditure, however, includes Rs. 36.68 million as interest on borrowings related to generation works and Rs. 58.57 million on borrowings for SLDC related works. The residual amount of interest cost for transmission business is further reduced by amount of interest capitalized i.e. Rs. 413.63 million as against Rs.280.55 million projected by HVPNL based on the fact that 80.89% of the opening balance of CWIP for FY 2007-08 i.e. Rs.3703.88 millions, is funded through loans. Interest on these borrowings @ 8.90% (being the average rate of borrowings for FY 2006-07) is capitalized as the works are deemed to be put into commercial operation on the last day of 2007-08. On the new capital works started during 2007-08, interest is capitalized for a period of six months only as the loans are assumed to be received evenly during the full year.

Interest on PF bonds and pension bonds is allowed as proposed by HVPNL. The licensee has proposed creation of a debt redemption obligation fund in order to

raise sufficient funds through its ARR by the time these funds are due for redemption in 2016. The Commission is of the view that the consumer would be better served in case the licensee is able to reduce its interest burden by early redemption of these loans. Resultantly, Rs. 481.93 million is utilized towards repayment of PF bonds and the interest outgo on the bonds is reduced accordingly to Rs. 284.07 million as against Rs. 303.34 million proposed by the licensee.

In addition to the interest expenses, HVPNL has proposed Rs. 12.74 millions as guarantee fee, which is approved by the Commission. The computations of interest expenses are presented in table 2.3 & 2.4.

**Table 2.3 Transmission - Interest Cost for FY 2007-08 (Rs. million)**

Source (Institution wise/bank wise)	HVPNL Proposal	HERC approval
<b>Loans for Capital Expenditure</b>		
Total borrowings for Capex	1095.21	1095.21
Less borrowings related to generation	36.38	36.38
Less borrowings related to SLDC	58.57	58.57
<b>Gross Interest for Transmission Works</b>	<b>999.96</b>	<b>999.96</b>
Less: Interest Cost Capitalized	280.55	413.63
<b>Interest cost net of capitalization (1)</b>	<b>719.41</b>	<b>586.33</b>
Interest on Pension bonds	673.00	673.00
PF Bonds	303.34	284.07
<b>Loans for Working Capital</b>	77.26	76.76
Guarantee fee @2%	12.74	12.74

**Table 2.4 SLDC - Interest Cost for FY 2007-08 (Rs. million)**

Source (Institution wise/bank wise)	HVPNL (Proposal)	HERC (approval)
<b>Loans for Capital Expenditure</b>	58.57	58.57
Less: Interest Cost Capitalized	0.00	19.50
<b>Interest cost net of capitalization (1)</b>	<b>57.57</b>	<b>39.07</b>
<b>Loans for Working Capital</b>		
Working Capital Borrowings limited to two Month of ARR		
<b>Interest on working capital borrowings (2)</b>	<b>1.863</b>	<b>1.376</b>
<b>Total Interest cost(1+2)</b>	<b>59.433</b>	<b>40.446</b>

## 2.7 Depreciation

The amount of depreciation as per CERC norms (Terms & Conditions of Tariff) Regulations, 2004 for FY 2007-08 is estimated at Rs. 607.67 million by the licensee. As the CERC stipulated depreciation rates are different from the rates as per the latest available FY 2005-06 audited accounts, the depreciation rates cannot be verified. Consequently, the Commission has relied upon the depreciation rates proposed by the licensee. However, the rate of depreciation of 3.34% calculated by the licensee on GFA excluding land as per schedule 4 of the filing has been applied to the GFA including land for calculating depreciation for FY 2007-08 thereby resulting in higher proposed depreciation. In case land is included as part of GFA, the applicable rate of depreciation works to 3.13%, which has been considered by the Commission for estimating the allowable depreciation for FY 2007-08. The Commission for calculating depreciation in its previous order on the ARR for FY 2006-07 has used this same rate. Resultantly, the Commission approves Rs. 558.46 million as depreciation in respect of transmission. The difference in the depreciation amount is also due to the fact that the opening balance of GFA considered by the Commission is based on Commission's projection of the capitalization schedule for FY 2005-06 as already discussed in this order. The depreciation approved for transmission is presented in Table 2.5.

**Table 2.5 Depreciation for FY 2007- 08 (Rs. million)**

Particulars	HVPNL (Proposal)	HERC (approval)
Gross fixed Assets at the beginning of the year.	18254.72	17762.61
Depreciation Rate	3.33%	3.14%
Depreciation for FY 2007-08	607.67	558.46

## 2.8 Other expenses

The licensee has claimed other expenses amounting to Rs. 1.78 million on actual expenditure basis. As per the licensee, these expenses were incurred during FY 2005-06 and form part of its audited accounts for FY 2005-06. As the Commission has already 'trued up' the expenses of the licensee upto 31.3.2006,

in accordance with the orders of the Hon'ble Appellate Tribunal for Electricity, these expenses cannot be recovered again in any subsequent ARR.

## **2.9 Fringe Benefit Tax (FBT)**

In its ARR for FY 2006-07, HVPNL proposed to recover Rs. 130.95 million fringe benefit tax for FY 2005-06 as past dues payables. They submitted that FBT could not be claimed, as it was not applicable at the time of filing of the ARR for FY 2005-06. Given the statutory nature of this expenditure, the Commission, allowed this to be recovered in the ARR for FY 2006-07. In the absence of audited accounts, the Commission relied upon the figures provided by the licensee. However, a scrutiny of the audited accounts of the licensee for FY 2005-06 reveals that HVPNL has deposited only Rs. 4.09 millions as FBT for FY 2005-06. The Commission feels that it was mis-informed by the licensee in this regard and takes an extremely serious view of the issue. The licensee is a custodian of the funds collected from its consumers on account of statutory levies and therefore the Commission recovers the amount along with interest @ 8.47% (average rate of interest on working capital borrowings for FY 2007-08). This works out to Rs. 142.05 million (Rs. 130.95 million + Rs. 11.11 million). The Commission has already allowed Rs. 4.09 million as part of its truing up order dated 1.12.2006.

HVPNL has also proposed to recover FBT amounting to Rs. 160.34 million for FY 2007-08. This includes Rs. 155.83 million on account of employer's contribution to superannuation fund, which is not being allowed in view of the stay granted by the Hon'ble High court on this issue. The balance amount of Rs. 4.51 million is allowed to be recovered in the ARR. The expenditure on account of fringe benefit tax is allowed subject to the following conditions:

- a) The licensee will provide proof of payment of the amount of fringe benefit tax along with the next filing;
- b) The provision being allowed in the ARR will be adjusted against actual liability on account of fringe benefit tax on final assessment.

## **2.10 Income Tax**

The Commission allows Rs. 43.57 million as income tax as against Rs. 43.16 million projected by the Licensee in the ARR for FY 2007-08. The difference is due to the rate of minimum alternative tax (MAT) used by the licensee and as per the Income Tax rules.

## **2.11 Instalment of written down amount**

The Commission allows Rs.0.80 million as proposed by HVPNL to write off the installment of preliminary expenses yet to be written off.

## **2.12 Advance against Depreciation (AAD)**

HVPNL has claimed that it has a debt redemption obligation for FY 2007-08 amounting to Rs. 828.50 million, which it proposes to recover in addition to the depreciation of Rs. 607.67 million. The licensee intends to create a depreciation fund to enable it to raise sufficient resources to fund future replacement of assets. This is a departure from the norm in the power sector and in the infrastructure sector where in depreciation is considered as cash flow to meet loan repayment obligation. The Central Commission has not followed this approach in any transmission tariff order(s) passed by it. This method would front – load the tariff and hence burden the consumers of the existing transmission network with the cost of establishing a future network in addition to the existing network also.

The Commission allows depreciation and AAD in line with CERC regulations. Regulation 56 (ii) b of Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2004, provides for Advance against depreciation as below:

### ***Advance Against Depreciation***

*In addition to allowable depreciation, the transmission licensee shall be entitled to Advance against Depreciation, computed in the manner given hereunder:*

*AAD = Loan repayment amount as per regulation 56 (i) subject to a ceiling of 1/10th of loan amount as per regulation 54 minus depreciation as per schedule Provided that Advance Against Depreciation shall be permitted only if the cumulative repayment up to a particular year exceeds the cumulative depreciation up to that year;*

*Provided further that Advance Against Depreciation in a year shall be restricted to the extent of difference between cumulative repayment and cumulative depreciation up to that year.*

The licensee may note that this treatment is available only for those capital works that are approved by the Commission.

In accordance with the above regulation, the Advance against depreciation comes to Rs. 473.06 million, the difference between loan repayments for transmission business, limited to 1/10<sup>th</sup> of loans and the amount of depreciation allowed by the Commission. HVPNL shall create an AAD reserve. In future, when depreciation amount exceeds loan repayment amount, the reserves shall be drawn down to meet depreciation requirement, thereby reducing the cost passed on to the consumers.

**HVPNL is directed to ensure that the proposed repayments are made on time. In case the licensee does not make the proposed repayments during FY 2007-08, any excess amounts allowed during the current year shall be recovered in the subsequent ARR with interest. The licensee is required to**

ensure that the depreciation and AAD allowed for repayment of Capex loans are not diverted and to provide documentary support of payment in the next ARR. The licensee is further directed to file a compliance report on timely repayment of loan during 2006-07 by 30<sup>th</sup> April 2007.

Licensee is also directed to submit a report showing year wise cumulative depreciation and instrument wise cumulative repayment of loans for capital works upto 31.3.2007 within 3 months of this order to ensure compliance of the 1<sup>st</sup> proviso to Regulation 56 (ii) b of Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2004.

### **2.13 Contribution to Contingency Reserve**

The Commission approves Rs. 55.55 millions as contribution towards Contingency Reserve as proposed by HVPNL in its ARR filing under consideration. The Commission allowed contribution towards contingency reserves is required to be invested in securities authorized under the Indian Trust Act, 1882 within a period of six months from the close of the year of account in which the appropriation is made. **The Commission expects HVPNL to comply with the above requirement and directs that any drawl from the Contingency Reserve can be made only with the explicit approval of the Commission.**

### **2.14 Total Expenditure**

The total expenditure approved by the Commission with respect to the transmission business for the financial year 2007-08 is Rs. 5114.21 million and SLDC charges of Rs. 94.909 million. Table 2.6 & 2.7 presents the details of HVPNL's proposed expenditures in respect of their Transmission business & SLDC charges and those approved by the Commission.

**Table 2.6 Transmission Business Approved expenditure  
For FY 2007-08 (Rs. million)**

Description	HVPNL Proposal (Revised)	HERC Approval
<b>Expenditure</b>		
Employees' cost	2048.96	1860.93
R&M expenses	83.41	83.41
A & G Expenses	82.55	82.55
Interest on Capital Expenditure Borrowings	719.41	586.33
Debenture Interest (PF Bonds)	303.34	284.07
Debenture Interest (Pension Bonds)	673.00	673.00
Interest on Working Capital	77.26	76.76
Financial Charges (Guarantee fee)	12.74	12.74
Depreciation	607.67	558.46
Advance against depreciation		473.06
Other expenses	1.78	0.00
Fringe Benefit Tax	160.34	4.51
<b>Total Expenditure</b>	<b>4770.46</b>	<b>4695.84</b>
<b>Special Appropriations</b>		
Tax on Income & Profit	43.16	43.57
Instalments of written down amounts	0.80	0.80
Debt redemption obligation (CAPEX Loans)	828.50	0.00
Debt redemption obligation (PF and Pension Bonds)	481.93	481.93
Contribution to Contingency Reserve	55.55	55.55
Past dues payable (Fringe benefit Tax for FY 2005-06)		(142.05)
Total Special Appropriations	<b>1409.94</b>	<b>439.80</b>
Total "expenditure" (including special appropriation)	<b>6180.40</b>	<b>5135.64</b>

**Table 2.7 SLDC Approved expenditure  
For FY 2007-08 (Rs. million)**

Description	HVPNL Proposal (Revised)	HERC Approval
<b>Expenditure</b>		
Employees' cost	15.981	15.981
R&M expenses	2.930	2.930
A & G Expenses	4.441	4.441
Interest & Finance Charges on Capital Expenditure	58.570	39.070
Interest on Working Capital	1.863	1.375
Depreciation	17.867	17.867
Other Expenses	0.003	0.003
<b>Total Expenditure</b>		
<b>Special Appropriations</b>		
Tax on Income & Profit	10.51	10.51
Contribution to Contingency Reserve		
Total "expenditure" (including special appropriation)	<b>102.706</b>	<b>82.719</b>

The methodology for working out the various components of SLDC ARR are the same as discussed in respect of the transmission ARR.

### **2.15 Return on Equity (ROE)**

HVPNL has proposed ROE of Rs. 500.45 million and Rs.7.85 million for its Transmission and SLDC business respectively at 8% p.a. Licensee has claimed that out of total proposed equity of Rs. 7357.86 million as on 1.4.2007, Rs. 1126.20 million is for generation works, Rs. 156.07 million is for SLDC business and balance is for Transmission business. However, the licensee also has investments in equity amounting to Rs. 9842.57 million in Distribution business in Haryana. Before divestment of distribution assets on 30.6.1999, the licensee was also transacting distribution business funded partly out of equity of Rs. 2549 million as on 30.6.1999. The Commission feels that it will not be right to burden the transmission business with the return on equity of the distribution business in view of the cost causation principles. Therefore, the Commission has allocated

the equity as on 30.6.1999 in the ratio of transmission assets and distribution assets as on the same date. The equity on which the distribution assets can lay their claim comes to Rs. 1401.15 million, which is reduced from the proposed total equity of Rs. 7537.86 million as on 1.4.2007. The further allocation between generation, transmission and SLDC business is as proposed by the licensee.

The return @ 8% approved by the Commission on equity for transmission business comes to Rs. 388.36 million and for SLDC business comes to Rs. 12.49 million.

## **2.16 Capital Base & CWIP**

### **Capital Works in Progress (CWIP)**

The opening balance of CWIP as on 1.4.2006 is as per the audited accounts of HVPNL for FY 2005-06. The additions during FY 2006-07 are dependent on the planned additions as well as availability of funds during FY 2006-07. The Licensee had proposed investments of Rs. 3776.30 million during FY 2006-07 in its previous year ARR. **A scrutiny of the utilization details provided to the Commission reveals lower utilization in the REC and NCRPB funded works to the tune of Rs. 766.29 million.** The licensee has now projected that it will invest Rs. 4262.32 million during FY 2006-07 and Rs. 4060.78 million during FY 2007-08 respectively. Based on the revised projections, the Commission has also revised the additions to CWIP, transfer to GFA and closing balance of CWIP for FY 2006-07.

The Commission has considered the capitalization schedule of 30:60:10 meaning that 30% of the works initiated during FY 2007-08, 60% of works initiated during FY 2006-07 and 10% of works initiated during FY 2005-06 will be completed and hence transferred to GFA during FY 2007-08. However, the projected borrowings for FY 2006-07 include Rs. 1767.85 million for schemes not yet sanctioned until the date of filing. The Commission feels that schemes not sanctioned until 8.12.2006 are not likely to be completed by the end of the year. Therefore, these schemes appear as part of CWIP as on 31.3.2007. Resultantly, the transfer to

GFA and closing balance of CWIP for FY 2007-08 works out to Rs. 4252.46 million and Rs. 3512.20 million respectively as per the details presented in table 2.8

**Table 2.8 Calculation of CWIP for FY 2007-08 (Rs. million)**

Description	HVPNL Proposal	HERC Approval	
	FY 2008	FY 2007	FY 2008
<b>Opening balance of CWIP</b>	<b>3196.14</b>	<b>1610.88</b>	<b>3703.88</b>
Additions during the year	4060.78	4262.32	4060.78
Transfer to GFA	3965.88	2169.32	4252.46
<b>Closing balance of CWIP</b>	<b>3291.04</b>	<b>3703.88</b>	<b>3512.20</b>
Funding of CAPEX :			
Equity	747.30	814.60	747.30
Loan funds	478.50	1679.87	478.50
Loan funds yet to be Sanctioned	2834.98	1767.85	2834.98
Total Funds (Including IDC and Expenses Capitalised)	4060.78	4262.32	4060.78

## 2.17 Gross Fixed Assets (GFA)

The opening balance of GFA as on 1.4.2006 is based on the closing balance of GFA as on 31.3.2006 as per the audited accounts of HVPNL. The additions to GFA are derived from the CWIP workings. The computation of gross fixed assets for FY 2007-08 is presented in table 2.9

**Table 2.9 Determination of GFA for FY 2007- 08 (Rs. million)**

	HVPNL Proposal	HERC Approval
Opening Balance of gross fixed assets	18254.72	17968.14
Add: Additions to GFA	3965.88	4252.46
Less: Retirement	0.00	0.00
<b>Closing balance</b>	<b>22220.60</b>	<b>22220.60</b>
Consumers Contribution	<b>172.28</b>	<b>205.53#</b>

# as per audited accounts.

## **2.18 Working Capital (Capital Base Purpose)**

### **2.18.1.1 Cash and Bank Balances**

HVPNL has projected average cash and bank balance of Rs. 319.40 million based on closing balance as on 31/03/2006. The Commission is concerned that HVPNL is maintaining varying cash and Bank balance during the period from April 2005 to March 2006 ranging from Rs. 20 million in June 2005 to Rs. 698.76 million in January 2006 and Rs. 729.80 million in February 2006 million. The average cash balance as calculated in the ARR for FY 2004-05 was only Rs.88.53 million. Monthly projected O&M expenses should be a benchmark for the licensee to estimate its cash requirement. The licensee should follow prudent financial practices and take advantage of technological advancements in the banking sector to minimize the need for maintaining large cash balance. Prudently, the licensee should not hold more than a month's expenses i.e. not exceeding Rs.167 million, lower if possible, as cash at any point of time,

### **2.18.1.2 Stores**

HVPNL has proposed Rs. 405.99 million towards average cost of stores for FY 2007-08 based on closing balance of stores as on March 2006 which is an improvement over previous years.

## **2.19 Amount of Compulsory Investment**

The amount allowed as Contingency Reserves is required to be invested by HVPNL in the specified securities.

## **2.20 Non Tariff Income**

HVPNL has proposed that it will earn Rs. 67.29 million on account of non - tariff income during FY 2007-08. This comprises of Rs. 89.63 million as non-tariff income and Rs. 22.35 million as loss on account of prior period charges. The Commission allows non-tariff income of Rs. 89.63 million as proposed by HVPNL as the computation of the same is in line with the Commission's earlier orders. However, the loss on account of expenses incurred during FY 2005-06 is not

being allowed to be recovered in this ARR as the Commission, vide its order dated 1.12.2006 has already adjusted all expenses and incomes forming part of its Balance sheet as on 31.3.2006. The computation of other income is presented in table 2.10.

**Table 2.10 Non- tariff income for FY 200-08 (Rs. million)**

Description	HVPNL Proposal	HERC Approval
Investment income	17.82	17.82
Ancillary and incidental income	71.82	71.82
Prior period credits/ (Charges)	-22.35	0
Total of "Non-tariff Income"	47.29	89.63

For SLDC, the Commission allows a non-tariff income of Rs. 0.295 million which licensee has proposed in its filing.

## **2.21 Aggregate Revenue Requirement**

In light of the above analysis, the Commission approves Rs. 5434.37 million as the net aggregate revenue requirement of the Transmission business and Rs. 94.909 million as SLDC charges for FY 2007-08. The details are presented in table 2.11 & 2.12.

**Table 2.11 Transmission ARR for FY 2007-08 (Rs. million)**

Description	HVPNL Proposal	HERC Approval
Return on equity	500.45	388.36
Total expenditure	6180.40	5135.64
<i>Minus</i> Non-tariff income	(67.29)	(89.63)
Total Aggregate Revenue Requirement	6613.56	5434.37

**Table 2.12 SLDC ARR for FY 2007-08 (Rs. million)**

Description	HVPNL Proposal	HERC Approval
Return on Investments	12.486	12.486
Total expenditure	102.706	82.719
<i>Minus</i> Non-tariff income	(0.295)	(0.295)
Total Aggregate Revenue Requirement	114.897	94.909

## 2.22 Transmission Losses

An analysis of the recent transmission loss data filed by HVPNL brings out quite a few ambiguities and inconsistencies. The figures of scheduled energy imported and inter–state losses (%) for the months of June 2006 and November 2006 are compared in the table below.

Month	Scheduled Energy Imported (MUs)	Inter – State Losses (%)
June 2006	1211.35	3.29
November 2006	706.38	4.49
<i>% Change</i>	(41.7)	36.5

It is noted from the table above that the scheduled energy imported in November, 2006 has declined by 41.7% as compared to June, 2006, whereas the inter–state losses have gone up by 36.5%. Technically the percentage transmission loss is a function of the quantum of energy transmitted and should increase (or decrease)

almost in proportion to the energy transmitted whereas the figures established as per the table above totally defy it.

As far as intra – state transmission loss is concerned, the figures of total energy transmitted and intra–state loss percent for the months of April 2006 and November 2006 are compared in the table below.

<b>Month</b>	<b>Total Energy transmitted (MUs)</b>	<b>Intra – State Losses (%)</b>
April 2006	1689.31	1.56
November 2006	1793.05	3.46
<i>% Change</i>	6.14	121.79

It will be seen from the table above that the total energy transmitted in November, 2006 has gone up by meagre 6.14% as compared to April, 2006 while the intra – state transmission losses have gone up by a whopping 121.79%.

The table below compares the figures of total energy transmitted and intra – state losses (%) for the months of May 2006 and October 2006.

<b>Month</b>	<b>Total Energy transmitted (MUs)</b>	<b>Intra – State Losses (%)</b>
May 2006	2163.30	1.83
October 2006	2090.34	3.64
<i>% Change</i>	(3.37)	98.9

It will be seen from the table above that the total energy transmitted in the month of October 2006 has gone down by a meagre 3.37% as compared to May, 2006, whereas the intra – state transmission losses have gone up by 98.9%. **The Commission notes with concern the above mentioned aberrations in the transmission losses data vis-à-vis energy transmitted and directs HVPNL**

**to examine the same and submit its analysis within one month of the issue of this order. HVPNL is further directed to critically analyse the relevant filings in future and reason out the inconsistency (ies) for appreciation of the Commission.**

As per data filed with the Commission, the month – wise inter – state transmissions losses for FY 2006-07 vary from 3.29% to 4.49% with an overall transmission losses figure of 3.91% (upto November 2006). This does not take into account the effects of inter – regional losses. If the inter – regional losses are also clubbed with the inter – state losses, the percentage inter-state losses shall increase marginally. Consequently, taking into account the effect of inter-regional losses also, the Commission is of the view that inter-state losses for the financial year 2007-08 shall be of the order of 4%, which would constitute power purchase cost of HPGCL's bulk supply business.

Similarly the month-to-month figures of intra – state losses for FY 2006-07 vary from 1.56% to 3.64% with an overall figure of 2.7% upto November 2006. Considering a declining trend during the last quarter of the financial year, the Commission pegs intra – state transmission losses at 2.6% for FY 2007-08. In case the transmission licensee fails to maintain the intra – state losses at 2.6% or below the Commission shall be constrained to reduce an appropriate amount equivalent to the intra –state transmission losses exceeding 2.6% in the subsequent ARR of HVPNL and corresponding amount will be allowed to UHBVNL & DHBVNL in the ratio of their contribution to the coincidental system peak.

### **2.23 Damage of Power Transformers**

The State Transmission Utility has reported that as on 30/09/2006 it has 570 power transformers installed. The number of power transformers failed between 1/04/2006 and 30/09/2006 is 7. It represents about 1.25% of the total power transformers as on 1.4.2006 as against 2% damage of power transformers

during the corresponding period of FY 2005-06. **The Commission has voiced its concern in its previous order and reiterates its direction to the utility to strictly enforce & implement the preventive maintenance schedule for all sub – station equipments including the power transformers.**

Though the Commission is pleased to note the improvement in damage rate of power transformers but it is still high with reference to system operating standards applicable to E.H.V/H.V power systems.

#### **2.24 Fatal & non – fatal accidents**

There were three fatal & three non – fatal accidents involving human beings in FY 2006-07 (upto 9/2006) as against four fatal & seven non – fatal accidents during FY 2005-06. The situation has not shown much improvement. The Commission has noted the plans for improvement submitted by HVPNL along with the ARR filing under consideration and expects zero tolerance on this front.

### **3. TRANSMISSION TARIFF & SLDC CHARGES**

#### **3.1 Background Information on Tariff Filing**

The Haryana Electricity Regulatory Commission in its previous orders determined a single part transmission tariff (Rs/kW of Max demand/month). This was because of the fact that the entire cost of transmission business (including SLDC cost) was considered of a 'fixed' nature, hence the Commission considered it reasonable to allow recovery of entire cost through a 'demand charge'. The single part tariff consisted of per kW fixed charge based on the contributions of the two distribution companies i.e. UHBVNL and DHBVNL to the coincidental system peak (per kW of maximum demand per month). In the absence of detailed voltage wise data including assets and voltage wise desegregation of transmission losses, the Commission had no option but to continue with the existing tariff design.

**Table 3.1 – HERC approved transmission tariff & SLDC charges for FY 2006-07)**

Tariff	
Transmission (Rs/kW of Max Demand / Month)	74.733
SLDC Charges (Rs. Million / Month)	6.904

Besides the transmission tariff the Commission also determined a single rate for wheeling i.e. Rs 0.1364 / kWh in its order for FY 2006-07.

The transmission tariff design in previous orders with reference to calculating Fixed Charge was constrained, as sufficient time series of system peak data for accurately projecting average system peak demand was not available. The projected average annual system peak based on the methodology adopted by the Commission during the last five financial years have shown less than 1.5% deviation from the actual reported / HVPNL's projection for the respective years. Thus, for working out the fixed cost component of transmission tariffs for FY

2007-08 the Commission has considered Average Annual Coincidental System Peak of 3747 MW.

### 3.2 Tariff Proposed by HVPNL

HVPNL has now proposed a revision in the existing tariff & charges on the following grounds:

- The aggregate revenue requirement representing the costs to be recovered for the transmission business for the financial year 2007-08 is different from the aggregate revenue requirement for FY 2006 -07.
- The individual parameters used for calculation of tariffs such as the maximum demand, transformation capacity as well as the units projected to be wheeled are different for the two financial years.
- In the instant tariff application, HVPNL has contended that so far as transmission business is concerned all the expenses contribute towards fixed cost only and as such the transmission tariff for FY 2007-08 would be a single part tariff consisting of fixed charge based on the transformation capacity (MVA) at the interconnection points. HVPNL would levy a fixed charge based on the contribution of each long-term customer to the total transformation capacity at the interconnection points.
- A customer who contracts firm transmission capacity on short term basis should pay open access charges on the lines of open access charges notified by CERC for using the central transmission facility / State transmission facility from time to time.
- HVPNL has also submitted that the long term open access customers shall submit details of capacity needed, on the prescribed formats and will sign the bulk power transmission agreement as per provision in HERC Regulations on open access. The charges to be levied on long term open

access customers shall be apportioned between all long term customers including Discoms on the basis of requirement of transmission capacity at inter- connection points and shall be recovered on monthly basis accordingly from all long term open access customer including DISCOMs.

- In respect of short term open access customer(s) CERC has already notified transmission tariff to be levied.

In addition to the above HVPNL has proposed that besides recovery of fixed costs, they will also be entitled to incentive for achieving annual availability beyond the target availability of 98%. The proposed transmission tariff is single part comprising fixed cost component only. The tariff proposed by HVPNL is presented in table 3.2

**Table 3.2 HVPNL’s proposed Transmission Tariff for FY 2007-08**

Tariff	Fixed Charge (Rs. million / month)
UHBVNL	289.89438
DHBVNL	261.23562
Total	551.13

In respect of short-term customers having intra state / inter state power transactions, HVPNL has proposed to charge as per provisions of CERC regulations. It is also proposed that 50% of the charges collected from short – term customer(s) for use of intra –state transmission system shall be retained by the State Transmission Utility and the remaining part of these charges shall be adjusted towards reduction in the transmission charges payable by the long-term customers.

The proposed tariff rates for short-term customers are presented in table 3.3.

**Table 3.3 Transmission tariff for Short Term Customers  
for FY 2007-08**

<b>Description</b>	
Net ARR (Rs. million)	5937.27
Approved System Peak for FY 2007 (MW)	3471
Transmission Tariff (Rs per MW/day) 25% of normal rate	1171.5991
For Open Access upto 6 hrs a day (Rs/MW per day)	292.8998
For Open Access upto 6 to 12 hrs a day (Rs/MW per day)	585.7996
For Open Access above 12 hrs a day (Rs/MW per day)	1171.5991

HVPNL has also proposed a rebate of 1% for payment of bills of transmission charges within 7 days of presentation of bills. Where payments are made subsequently but within a period of 14 days of presentation of bills, a rebate of 0.75% would be allowed. The rebate shall be 0.5% and 0.25% when payments are made between 14 to 21 days and 21 to 30 days respectively from the date of presentation of bills.

However, in case payment of bills of transmission charges is delayed beyond a period of 30 days from the date of billing the transmission licensee shall levy a late payment surcharge at the rate of 1.25% per month or part thereof.

### **3.3 Public Comments**

In response to the public notice inviting objections / suggestions with respect to the proposed transmission tariffs and SLDC charges, no comments / objections were received from the public or any other stakeholder including the distribution licensees.

### **3.4 Analysis of the Tariff Proposal**

The Commission, in line with its previous order, accepts the plea of HVPNL for considering all transmission related cost as fixed for the purpose of this order. The Commission is of the view that 'transmission' 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 transported 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.

#### **3.4.1 Transmission Cost**

HVPNL has proposed Rs. 6613.56 million as their net aggregate revenue requirement for transmission business for FY 2007-08. The Commission as per the details presented in Chapter-2 of this order determines Rs. 5434.37 million as net aggregate revenue requirement for transmission business.

#### **3.4.2 Tariff Design**

The Commission does not agree with HVPNL's proposal of recovery of cost of transmission charges based on the transformation capacity at the inter – connection points (MVA). The Commission believes that recovery of transmission charges based on the coincidental peak, which has been in vogue since FY 2002-03, is appropriate. The transmission tariff based on co-incident peak of the users of the transmission system viz. UHBVNL and DHBVNL ensures optimum investments and efficient utilization of the transmission system as well as maximum availability of the system.

The Commission's projection of the average annual system peak for FY 2002-03, FY 2003-04, FY 2004-05, FY 2005-06 and FY 2006-07 were quite close to the

actual subsequently reported for the respective years as is borne out by the details presented in the table 3.4

**Table 3.4 Projection of Average System Peak (MW) based on the Coincidental Peak (MW)**

Year	Average Annual System Peak (MW)			HERC allowed	Difference (MW)	Difference (%)
	UHBVNL	DHBVNL	HVPNL			
FY 2002-03	1424	1236	2660	2599	61	2.29
FY 2003-04	1532	1322	2854	2873	-19	-0.67
FY 2004-05	1578	1436	3014	3052	-38	-1.26
FY 2005-06	1735	1543	3278	3233	45	1.36
FY 2006-07 (Jan to March 2007 projected)	1859	1680	3539	3471	68	1.96

It shall be noted that the deviation in the last three years has been less than 2%. FY 2002-03 was an aberration as only three months field data was available.

The Commission's projection of average annual system peak based on CAGR of the actual average annual system peak for the last four years (FY 2002-03 to FY 2006-07) works out to 3747 MW (UHBVNL & DHBVNL contribution being 1961 MW & 1786 MW respectively). As neither HVPNL nor the Distribution licensees have submitted any projection of average system peak for FY 2007-08, the Commission has considered an average system peak of 3747 MW for the purpose of determining transmission tariff for FY 2007-08.

#### **3.4.2.1 Transmission tariff**

The Commission, for determining transmission tariff, has considered the fact that entire cost allocated to the transmission business is of 'fixed' nature. Hence, it would be reasonable to recover the entire cost through a demand charge based on projected simultaneous maximum demand of the distribution licensees.

Considering the above factors, the Commission has arrived at a fixed charge for the transmission of power as Rs 120.85 per kW per month of the maximum demand.

The rates as mentioned above will be applicable for power transmitted to the distribution business. Table 3.5 provides the details of the calculation.

**Table 3.5 - Determination of transmission tariff**

Particulars	
Transmission Cost (Rs. million)	5434.37
Average System Peak (MW)	3747
Approved rate (Rs. per KW of coincidental peak per month)	120.85

If HVPNL undertakes wheeling for any other parties or sales to other licensee or exemption holder within the state, the respective contributions to the system peak would be the appropriate measure of demand. However, due to lack of time series data, the short term wheeling rate for third parties within the state will be a single rate based on per MW/day as per details. This rate will apply at the transmission system level.

<b>TRANSMISSION TARIFF FOR SHORT TERM CUSTOMERS</b>		
1	Approved Transmission Cost (Rs.Million)	5434.37
2	25% of Approved Transmission Cost (Rs Million)	1359
3	Average System Peak (MW)	3747
4	<b>Approved Rate (Rs/MW/Day)</b>	<b>1007</b>
5	For Open Access Customers upto 6 hrs a day	252
6	For Open Access Customers from 6 hrs to 12 hrs a day	504
7	For Open Access Customers above 12 hrs a day	1007

The transmission charges shall be levied on the Distribution licensee. The wheeling customers will be subject to single rate as determined for the short term customers. In line with the CERC regulations 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 co-incidental peak.

### **3.5 Billing**

The billing of transmission tariff shall be on a monthly basis in accordance with the respective contribution of the distribution licensees to the coincidental system peak recorded during the month.

The single rate for wheeling, as determined by the Commission, shall be recoverable from the short term & long term 'open access' customers availing HVPNL's transmission system. The wheeling charges recovered from such customers, subject to 25% retention by HVPNL, shall be reduced from the transmission charges to be recovered from the distribution licensees.

### **3.6 Recovery of SLDC Expenses**

The SLDC charge determined by the Commission for FY 2006-07 is Rs. 94.909 million. A monthly recovery of Rs. 7.91 million shall be made from the two distribution licensees i.e. UHBVNL & DHBVNL and long term open access customers (if any) in the ratio of their contribution to the system coincidental peak during the month.

#### **3.6.1 Short Term Open access Customers**

The short-term open access customers (if any) shall be charged a composite fee & charge for each transaction @ Rs. 1000 / day or part thereof, as proposed by HVPNL.

#### **3.6.2 SLDC application fee**

The application fee shall be as per the Haryana Electricity Regulatory Commission (Terms and conditions for Open Access for Intra – state Transmission and Distribution System) Regulation, 2005 notified on 19<sup>th</sup> May 2005. 25% of the charges collected from the short – term customer for use of

SLDC shall be retained by HVPNL and the balance 75% shall be adjusted towards reduction in SLDC charges to be recovered from UHBVNL, DHBVNL and other long term open access customer.

### **3.7 Incentive**

HVPNL, for its proposed transmission business has claimed incentive on achieving annual availability beyond 98% (Target availability). The Commission, for the time being, has not considered any availability-linked incentive. The Commission would like to examine transmission line – wise availability data and based on the same would determine the benchmark availability for the purpose of incentive while finalising the regulations on terms and conditions for determining transmission tariff.

The Commission acknowledges the need for a system of rebate and penalty in order to reduce the ‘cash cycle’ and ‘defaults’ for better realisation of ‘book debt’, thereby minimising the need for expensive working capital borrowings. Resultantly, the Commission for FY 2007-08 approves the schedule of rebate(s) as proposed by HVPNL. The details are presented in table 3.6.

**Table 3.6 - Rebates**

(Days) from the date of bills of transmission charges.	%
7 days	1
8 –14 days	0.75
15 – 21 days	0.50
22 – 30 days	0.25

#### **3.7.1 Late Payment Surcharge**

In case payment of bill of transmission charges is delayed beyond 30 days from the date of billing a late payment surcharge of 1% per month shall be levied by HVPNL.

## CONCLUSION

The Commission, under Section 62 read with Section 64(3) (a) and Section 64(6) of the Act, issues this tariff order with modification of the calculation of expected revenue requirement and transmission tariff & SLDC charges proposal of the licensee i.e. HVPNL and hereby determines the same as under:

- a) The net ARR for FY 2007-08 of HVPNL, for its transmission business, has been determined as Rs 5434.37 million.
- b) SLDC charges of Rs. 94.909 million for FY 2007-08 (Rs. 7.91 million per month).
- c) The tariff for transmission of Rs. 120.85 per kW per month of coincidental system peak.
- d) Transmission tariff for short-term customers upto 6 hours shall be Rs. 252 per MW/day, for 6 to 12 hours it shall be Rs.504 per MW/Day and beyond 12 hours the same shall be Rs.1007/MW/day.
- e) The inter – state transmission loss has been pegged at 4% while intra – state transmission losses has been pegged at 2.6% for FY 2007-08.
- f) **The licensee shall implement the tariff and charges contained in this order with effect from 1<sup>s</sup> April 2007.**

This order is signed, dated and issued by the Haryana Electricity Regulatory Commission on 8<sup>th</sup> May 2007.

Date: May 8, 2007.

Place: Panchkula.

T.S. Tewatia  
(Member)

T.R. Dhaka  
(Member)

Bhaskar Chatterjee  
(Chairman)

## **ANNEXURE – 1 : LIST OF WAIVERS GRANTED**

1. Section 2(3) of the Guidelines for Filing of Tariff proposals requires that a study of marginal costs of the licensee's business, including time - differentiated, short-term marginal costs by voltage levels and a written explanation of the methods used to calculate marginal costs. In addition, the statement shall include a comparison of the percentage of marginal costs recovered by the current and proposed tariff for each tariff class. HVPNL has appreciated the need for computing marginal costs but are currently unable to adhere to these Guidelines.

HERC waives the requirement for the quantification of marginal cost as it would require as starting point, the assumptions about the future technology and costs of electricity supply, the pattern of demand resulting from current and projected pricing practices and the historical accounting and operational data of the system. The licensee would also like to bring to the notice of the Commission the following in this regard:

- The customer comprehensiveness, administrative feasibility, regulatory acceptance and validation of such computations would be suspect in view of its data intensiveness and the number of assumptions which would be required about long term capacity expansion plans and price projections. Such plans would have to be mutually consistent, are likely to be judgemental as the power sector in the entire state as well as the country is being transformed and restructured.
- The uncertainties inherent in the energy and demand forecasts, system planning assumptions, unit cost used to establish the investment plan, size of the system or the discount rate, lack of load research and energy flow data would result in estimates that are

difficult to validate. Further, the marginal cost based tariff may be difficult to reconcile with the actual cost encountered in the system.

2. The Commission in its order dated 12/08/2003 directed HVPNL to provide the details of periods when voltage and / or frequency were beyond the prescribed limits on transmission network.

HVPNL, while requesting waiver from complying with the above mentioned directive has stated that data of voltage profile for few representative sub-stations scattered all over the State has been collected for measuring voltage variation at different voltage levels. Since the data is logged at all sub-stations in the field manually, it will be difficult to submit such voluminous data in respect of all sub-stations (more than 180 sub-stations in number).

## **ANNEXURE - 2 : LIST OF DIRECTIVES NOT FULLY**

### **COMPLIED WITH**

1. The Commission directs HVPNL to wipe out the backlog of installation / commissioning of SEMs by 31/07/2005 and report compliance immediately thereafter.
2. A plan to enhance the access of SLDC to all 220 KV sub - stations and other important 132/66 KV sub – stations be formulated and submitted to the Commission by 30<sup>th</sup> September 2005.
3. The Commission directs HVPNL to file transmission loss reduction trajectory, enabling it in fixation of incentives / penalties (Chapter 4, Para 4.4.2.1).
4. The Commission directs HVPNL to submit the requisite data / documents enabling the Commission to benchmark target availability and incentive thereto (Chapter 4, Para 4.7).
5. In light of the proposal to introduce intra – state ABT, the Commission directs HVPNL to submit its preparedness with respect to the parameters mentioned below, within 3 months from the date of this order (Chapter 4, Para 4.9).
  - (i) SEMs at all the interface points.
  - (ii) Preparation of schedules (as required under ABT) for Intra – state generators & CPSUs and communication of the same to the discoms.
  - (iii) Despatch intra – state generators based on schedules and grid conditions.
  - (iv) Real time intimation to the Discoms / Open Access users (if any) of any significant deviation from the schedule.
  - (v) UI based billing ability.

## **ANNEXURE – 3: LIST OF NEW DIRECTIVES**

1. HVPNL is directed to ensure that the proposed repayments are made on time. In case the licensee does not make the proposed repayments during FY 2007-08, any excess amounts allowed during the current year shall be recovered in the subsequent ARR with interest. The licensee is required to ensure that the depreciation and AAD allowed for repayment of Capex loans are not diverted and to provide documentary support of payment in the next ARR. The licensee is further directed to file a compliance report on timely repayment of loan during 2006-07 by 30<sup>th</sup> April 2007.

Licensee is also directed to submit a report showing year wise cumulative depreciation and instrument wise cumulative repayment of loans for capital works upto 31.3.2007 within 3 months of this order to ensure compliance of the 1<sup>st</sup> proviso to Regulation 56 (ii) b of Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2004 (Para 6, Page No. 25-26).

2. The Commission expects HVPNL to comply with the above requirement and directs that any drawl from the Contingency Reserve can be made only with the explicit approval of the Commission (Para 3, Page No. 26).
3. The Commission notes with concern the aberrations in the transmission losses data vis-à-vis energy transmitted and directs HVPNL to examine the same and submit its analysis within one month of the issue of this order. HVPNL is further directed to critically analyse the relevant filings in future and reason out the inconsistency (ies) for appreciation of the Commission (Para 5, Page No.34&35).