



COMMISSION'S ORDER

ON

**ANNUAL REVENUE REPORT FOR TRANSMISSION
BUSINESS & SLDC FOR FY 2006-07 AND TRANSMISSION
TARIFF & SLDC CHARGES**

July 26, 2006

HARYANA ELECTRICITY REGULATORY COMMISSION

SCO 180, SECTOR - 5, PANCHKULA - 134 109, HARYANA

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HERC/PRO - 1 OF 2006

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PANCHKULA

**HARYANA ELECTRICITY REGULATORY COMMISSION SCO 180,
SECTOR - 5, PANCHKULA - 134 109, HARYANA**

CASE NO. HERC / PRO - 1 OF 2006

Date of Order: July 26, 2006

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 2006-07 and determination of Transmission Tariff and SLDC Charges.

PRESENT: Lt. Col. (retd.) Raghbir Singh, Chairman

Er. T.R. Dhaka, Member

Shri. T.S. Tewatia, Member

On behalf of HVPNL

Shri. P.K. Das, M.D, HVPNL
Shri. A.S. Chugh, Director / Tech
Shri. D.P. Tiwari FA/Hq
Shri. T.K. Dhingra SE/Planning
Shri. S.K. Aggarwal, CAO

On behalf of UHBVNL

Shri. Deepak Chopra, SE / RA
Shri. D.C. Aggarwal FA/Hq

On behalf of Staff of
HERC

Shri. Lajvir Singh, Secretary
Smt. Saroj Deswal, Director
Er. Sunil Kumar Madan, Director
Shri. Sanjay Varma, Jt. Director, HERC
Shri. Ashu Mathur, Jt. Director, HERC
Smt. Surbhi Jain, Dy. Director, HERC

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 2006-07.

1.1 Enactment of the Electricity Act 2003

The Electricity Act, 2003 (hereafter 'the Act'), enacted in June 2003, repealed the Indian Electricity Act, 1910, the Electricity (Supply) Act, 1948 and the Electricity Regulatory Commissions Act, 1998.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 also 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 can be 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. 10th 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 10th 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 9th June 2004 for a period of one year. Resultantly HVPNL continued to be the Transmission and Bulk Supply Licensee till 9th June 2005 functioning under the Transmission & Bulk Supply License (License No. 1 of 1998) granted by the Commission.

The Commission in its order on the ARR for Transmission and Bulk Supply Business for FY 2005-06 & Bulk Supply & Transmission Tariffs dated 10th May 2005 as well its order dated 7th March 2005 with respect to FY 2004-05

expressed its concern with respect to 'indecision regarding the manner and shape in which the bulk supply / trading in electricity will be handled' in the light of the approaching deadline viz. 9th June 2005. These were followed by memo no. 778/HERC dated 9th June 2005 with a copy vide Endstt. No. 779 / HERC of even date endorsed to FC & PS Power, Government of Haryana, which stated, "The Commission so far, has not received any intimation regarding the manner and shape in which bulk supply / trading in electricity will be handled from 10th day of June 2005. In the light of the above, and the fact that as per provision of section 14 (c) of the Act trading in electricity is a licensed activity, HVPNL (the STU), needs to inform the Commission about the arrangements made to disassociate itself from the activity of trading in electricity, without any further loss of time. Otherwise, it will be violation of the provisions of section 39 & 14 of the Act".

Further, in order to implement provisions of sections 31(2), 39(1) and 41 of the Act which prohibits the STU and SLDC from engaging in the business of trading, the Haryana Government vide their notification No. 1/6/2005-1 Power made in Haryana Government Gazette (Extra.) dated 9th June, 2005 transferred the rights relating to procurement and bulk supply of electricity or trading in electricity from Haryana Vidyut Prasaran Nigam Ltd. (HVPNL) to Haryana Power Generation Corporation Ltd. (HPGCL) w.e.f 10th June, 2005. The assets and liabilities relating to 'Trading in electricity', which stood in the books of HVPNL as on 31st March 2005, were transferred and vested with HPGCL. The results of trading operations performed by HVPNL for the period from 1st April 2005 to 9th June 2005 were also transferred and vested in HPGCL. The Power Purchase Agreements (PPA) and contracted generation capacities hitherto available with the HVPNL were also transferred to HPGCL. While ownership of the shared generation assets viz. BBMB & IP Station were retained with HVPNL.

Resultantly, HPGCL vide memo no. HPGCL/FIN/Reg-199/1360 dated 9/6/2005 applied for grant of provisional license for trading in electricity. While disposing of

the above provisional application, the Commission vide its Memo No. 784 – 785 / HERC dated 9/6/2005, with a copy vide Endstt. 786/HERC of even date, endorsed to the FC&PS Power Government of Haryana observed, “There is no provision for grant of provisional license under section 14 of the Electricity Act, 2003 as requested. However, the Commission shall examine the application whether the same is tenable under the law and process it accordingly. However, the Government of Haryana may assign the purchase and sale function of electricity to distribution licensees who shall not require a license for trading in electricity under section 14 of the Electricity Act, 2003”. Consequently, HPGCL vide its Memo No. HPGC/FIN/Reg-199/1390 dated 14/06/2005 withdrew their application for the grant of a provisional license for electricity trading and applied for the issue of a regular license for trading in electricity in terms of section 14 of the Electricity Act, 2003. Subsequently, vide Memo No. HPGC/FIN/Reg-199 / 3159 dated 7/12/2005 submitted that ‘HPGCL was created under Section 55 read with Section 23,24 & 25 of the Haryana Electricity Reforms Act, 1997 w.e.f 14/08/1998 vide state Government Notification No. S.O./ 106/H.A. 10/98/S/23,24,25/98 dated 14/08/98 and is a deemed licensee under Section 14 of the Act for trading in electricity. Since HPGCL is a deemed licensee, the application No. HPGC/FIN/Reg – 199/1390 dated 14/06/2005, filed for grant of a regular license under Section 14 of the Act, is withdrawn’.

The Commission after careful consideration and after obtaining opinion of the legal experts of national repute on regulatory laws and issues conveyed its decision vide letter no. 3419/HERC/SV/trading dated 14th March 2006 that “By virtue of the above transfer (9th June 2005), HPGCL is now a ‘deemed licensee’ for intra – state trading in electricity in Haryana under the 5th proviso to section 14 of the Act”. All other terms and conditions incorporated in the License as well as the existing ARR and Tariff Regulations and Guidelines shall be applicable until amended or modified by the Commission.

Clause 21.1 of the transmission license provides that “each year, not later than 31st December, the Licensee shall prepare and submit to the Commission a report of its expected aggregate revenues and cost of service (including financing costs and its proposed return on equity) for its Transmission Business”.

As the Haryana Government, in exercise of powers conferred by Section 31 of the Electricity Act, 2003, through its notification dated 9th December 2003 notified that the SLDC at Sewah (Panipat), with Sub Load Despatch Centres at Dadri & Narwana commissioned on 1/08/2002), to be operated by the Haryana State Transmission Utility viz. HVPNL w.e.f 10th December 2003, filing of a separate ARR for the SLDC became imperative.

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.

Thus, HVPNL was required to file the ARR application for FY 2006 - 07 by 31/12/ 2005 as per the license conditions. HVPNL, Vide its Memo No. Ch- 35 / SE/RAU/F-68 dated 3/01/2006 filed its ARR for FY 2006-07 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. 9th 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 long term / short term open access customers, if any. The tariff / charges proposed by HVPNL are presented in table 1.1.

Table 1.1 HVPNL proposal for Transmission Tariff & Charges

Monthly Transmission Charges (Rs. million)	UHBVNL	DHBVNL	Total
	245.7057	220.6732	466.3789
Transmission Tariff for Short term Customers (Rs / MW per day)	6 hours per day	6 to 12 hrs per day	Above 12 hrs
	296.38	592.77	1185.54
SLDC Charges (Rs. million / month)	5.716	5.492	11.208

The Commission in Chapter - 4 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 14th May 2004 notified that the Haryana Electricity Regulatory Commission (Tariff) Regulations, 1999 notified in Haryana Government Gazette (Extra), dated 30th 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 licensee provided the salient features of their proposed ARR in its public notice referred to above. The aggregate revenue requirement of Transmission business has been projected at Rs.559.65 Crore, which was subsequently revised to Rs.567.66 Crore. HVPNL has claimed Return on Equity @14% which works out to Rs. 85.97 Crore. The projected total expenditure is Rs. 470.37 Crore (revised to Rs. 478.38 Crore). A revenue gap of Rs.241.27 Crore (revised to Rs. 249.28 Crore) has been projected to be bridged by way of increase in transmission tariff. The transmission ARR for FY 2006-07 is proposed to be recovered from UHBVNL, DHBVNL (the two long term customers of HVPNL) by levying a single part transmission tariff based on the contribution of each long term customer to the total transformation capacity (in MVA) at the interconnection points.

SLDC ARR:

The salient features of the ARR of SLDC and Fee / Charges provided in the above mentioned public notice are: The ARR has been projected at Rs.13.45 Crore. SLDC charges are to be recovered on monthly basis in the ratio of units estimated to be purchased by UHBVNL and DHBVNL and other long term Open Access Customers, if any. The proposed SLDC charges to be recovered from UHBVNL are Rs.0.57 Crore per month and DHBVNL Rs.0.55 Crore per month. It is 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.

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.

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, SCO-180, Sector – 5, Panchkula with a copy to the licensee through special messenger or by registered post so as to reach before 5 pm of 10th 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.

1.4 Salient features of the ARR

HVPNL has projected an Annual Revenue Requirement (ARR) for the ensuing year ending March 31, 2007 of Rs. 5676.62 million revised to Rs. 6017.25 million consisting of total expenditure in respect of transmission business amounting to Rs. 4783.79 million revised to Rs.5124.43 million, Return on Equity @ 14% on an Equity of Rs. 6,140.55 million amounting to Rs. 859.68 million and non-tariff income of Rs.33.15 million, to be deducted to arrive at net aggregate revenue requirement. Similarly net ARR of SLDC is proposed at Rs. 134.493 million

comprising of expenses including Income tax Rs. 122.645 million, Return on Investment @ 14% on equity capital of Rs.860.5 million amounting to Rs.12.05 million and Tax on Income amounting to Rs. 1.014 million.

As per the Annual Revenue Requirement proposal for FY 2006-07 in respect of the transmission business, there is an uncovered revenue gap of Rs. 2492.78 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 single part based on the respective contribution of UHBVNL and DHBVNL to the total transformation capacity.

The Licensee is required to furnish requisite data to the Commission to enable it to properly analyze and to give its orders on the ARR. In spite of the general guidelines for filing of ARR application and specific directions given in the Commission's orders on ARR filing during previous years, HVPNL filed its ARR for FY 2006-07 without fully complying with all the directions given by the Commission.

After preliminary review of the filing, the Commission brought out a number of deficiencies in the data contained therein. The Commission sought the supplementary information regarding these deficiencies so that a meaningful analysis of the filing could be carried out. The deficiencies were pointed out to HVPNL vide Commission's letter no. 3181/HERC/SV-HVPNLdef dated 8th February 2006. HVPNL was directed to provide the requisite data / information within 7 days from the date of issue of the above mentioned letter. HVPNL vide their Memo No. Ch-50/SE/RAU/F-68/Vol.1 dated 17/02/2006 submitted that the reply is under process and its finalization needs more time. Accordingly, the licensee sought extension in time for filing of reply upto 24/02/2006. The Commission granted the extension in time sought by HVPNL.

HVPNL submitted its supplementary information required for meaningful analysis of ARR for FY 2006-07 vide their office Memo No. Ch-55/SE/RAU/F-68/Vol - 1, dated 24/02/2006.

The Commission is not fully satisfied with the data provided with ARR filing and the supplementary information furnished by the Licensee. The Licensee has asked for waivers in respect of various important data required by the Commission. The list of waivers requested by the Transmission Licensee and granted by the Commission is given in **Annexure - 1.**

In spite of insufficient data furnished by the Licensee, the Commission deemed it fit in public interest to carry forward the process and separately issued public notice inviting comments / objections on application filed by the HVPNL for approval of ARR & tariff and charges for FY 2006-07 in 'The Hindustan Times' (English) Delhi & Chandigarh edition and 'Dainik Bhaskar' (Hindi) Haryana Page on 2nd March 2006. The public notice contained background information, procedural information and salient features of the ARR filing. An invitation to submit written comments / objections 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 27th March 2006 at 11.30 A.M. in the conference hall of the Commission. The public hearing was held as per the schedule.

1.5 State Advisory Committee (SAC)

The Commission, in its consultative process, convened meeting of the SAC on 22/03/2006 at 11.30 A.M. in the conference hall of Red Bishop Sector 1, Panchkula, 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 Managing Director of HPGCL opined in favour of the transmission tariff based on the system of coincidental peak, which has been in vogue for the last three years. Shri. Anand Dev, CEDE, Northern Railways too favoured the above principle for determining the transmission tariff. Shri. G.C. Narang, Shri. Anand Dev and Shri. S.P. Gupta, Haryana Chamber of Commerce & Industry advised that CERC norms notified in regard to availability of inter – state transmission system should be applied to the intra – state transmission system owned and operated by HVPNL.

While responding to the transmission tariff design and the intra – state transmission system availability, Shri. A.S. Chugh, Director, HVPNL held the view that for proper system utilisation and to ensure recovery of the ARR approved by the Commission, the tariff should be linked with transformation capacity rather than with the coincidental system peak which may result into over / under recovery. Spare capacity and redundancy is built – in for system reliability and keeping in view the ‘open access’ provision, it has become essential to do so. He reiterated that the target availability for intra - state transmission system ought to be 95% as against CERC norms of 98% for inter – state transmission system. HVPNL should be entitled to the requisite incentive in case of performing beyond the 95% target.

Shri. G.C. Narang stated that the transmission loss of 5% is very high and it should be reduced to around 2 to 3%. Shri. Anand Dev also supported for reduction of transmission loss by apprising the SAC that the T&D losses are in the range of 4% to 8% in developed countries and the globally acceptable range of T&D losses is 12% to 16%. As against this, the T&D losses in Haryana are more than double of the average range and thus calls for taking drastic measures to reduce the losses. However, Shri A.S. Chugh maintained that the actual transmission loss (inter – state & intra – state) continues to be of the order of 5.25% out of which the intra – state component is only around 3.11% which is

well within the reasonable transmission losses. However, he assured that HVPNL would continue its efforts to reduce the transmission loss.

1.6 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.

In light of the above, the Commission permitted HERC Staff to intervene and present their views on various aspects of the filing during the public hearing.

2 VIEWS OF HERC STAFF & HVPNL's RESPONSE

THERETO

As there was neither any objection filed in response to the public notice issued by the Commission nor any stakeholder present during the public hearing expressed their desire to make oral submissions before the Commission, the Commission allowed the staff of the HERC to present their views on behalf of the public / consumers.

The staff of the Commission has analyzed the instant ARR & tariff application of HVPNL including additional information provided by them. Based on their analysis, HERC staff submitted their views on specific issues i.e. employee cost, working capital, debenture interest (PF Bonds), depreciation, fringe benefit tax, return on equity, tax on income & profit and transmission losses. A presentation was made by the Joint Director (Economics) of the Commission incorporating staff view and alternative calculations on the issues mentioned above. A summary of the staff submissions is presented in the paragraphs that follow.

2.1 Employee Cost

Employee cost constitutes wages, salaries & related costs. The licensee in respect of its transmission business for FY 2006-07 projected an expenditure of Rs.1830.23 million on wages, salaries & related costs / Other Expenditures (Repair & Maintenance). The HERC staff, intervening on behalf of the public, submitted that while projecting other allowances as a percentage of basic salary, wages of contractual employees should to be excluded. It was argued that the wages of employees on contract is not a function of the basic salary of the regular employees. Resultantly, the rate of other allowances that has been considered by HVPNL at 30.36% of basic salary would decline to 23.68%. Thus, the amount claimed under this head ought to be considered as Rs.95 million against Rs.122 million proposed by HVPNL. Therefore, the excess amount of Rs.27 million proposed by HVPNL should be disallowed.

The staff, in addition to the above, also submitted that the Commission allows terminal benefit on cash pay out (actual) basis anticipated for the ARR period under consideration. Employees' cost including terminal benefits is largely a known fact. However, due to variations in leave encashment, DA etc. there could be some deviation from the estimates made at the beginning of the ARR period. The Commission allowed Rs. 1795.25 million to HVPNL as terminal benefits in the ARR for FY 2004-05. As against this, the actual amount during FY 2004-05 was Rs. 1610.51 million. Resultantly, the HERC staff proposed that the excess amount of Rs.184.74 million along with interest cost @ 8.5% i.e. 15.7 million be reduced from the allowable employees cost in the ARR for FY 2006-07.

2.2 Working Capital

HVPNL has claimed Rs. 451.41 million on account of interest on working capital related borrowings for its Transmission business. The HERC staff submitted that the amount of working capital borrowings envisaged by HVPNL is far in excess of any justifiable financial norms. It needs to be appreciated such short term expensive borrowings should be kept at the minimum possible level. To establish working capital requirement (current assets – current liabilities i.e. the gap required to be financed by way of short term borrowings) the staff referred to the balance sheet of the licensee as on 31st March, 2005. Stripping liabilities of amounts appearing under purchase of power, provision for Income Tax (not being related to transmission business) the current liability works out to about Rs. 498 Crore. On the assets side removing sundry debtors amounting to Rs. 1209.6 Crore that primarily relates to Inter – State sale of power, reactive energy account and accrued Fuel Surcharge adjustment (again not related to transmission business) and considering two months receivable for wheeling amounting to Rs. 64.6 Crore instead of receivable of Rs. 710.9 Crore (i.e. total amount receivable from UHBVNL & DHBVNL), the current assets would work out to about Rs. 195 Crore. Thus, the net 'working capital' gap required to be financed by way of short term borrowings works out to Rs.303 Crore. At the rate of 7.5% (rate considered by HVPNL for additional working capital loan), the

allowable interest cost on working capital borrowings amounting to Rs. 303 Crore works out to Rs. 22.7 Crore.

In light of the above, the staff submitted that since working capital already deployed cannot be instantly rolled back, for the purpose of FY 2006-07 the Commission may allow one month ARR as working capital in line with the previous order(s) of the Commission.

2.3 Debenture Interest (PF Bonds)

HVPNL has proposed Rs. 303.34 million as interest on Provident Fund bonds. The HERC staff submitted that the Commission, so far, has been allowing one month's ARR as working capital borrowings to HVPNL. The interest on PF Bonds is part of the working capital, hence covered by one month ARR allowed as working capital. Thus, in line with the previous order(s) of the Commission, debenture interest on PF Bonds should be considered as working capital loan. Consequently, the amount i.e. Rs. 303.34 million, separately claimed, be disallowed for the purpose of computing ARR of the transmission licensee for FY 2006-07.

2.4 Depreciation

On the issue of depreciation the HERC staff made two submissions mentioned as under:

A) The depreciation rates for transmission assets notified by the CERC and also endorsed by the Tariff Policy notified by the Government of India, Ministry of Power on 6/01/2006 should be used for working out the depreciation amount as against the rates notified by the Government of India under the now repealed Electricity (Supply) Act, 1948 vide notification no. S.O. 266(E) dated 29/03/1995.

B) In the approved ARR since FY 2001, the Commission has allowed excess depreciation amounting to Rs. 408.95 million as compared the actual

depreciation amount reflected in the audited accounts of the licensee. The staff submitted that the excess deprecation (net of shortfall during FY 2003 and FY 2005) provided during the period FY 2001 to FY 2005 amounting to Rs. 408.95 million be written back or adjusted against any other claims while computing ARR for FY 2006-07.

2.5 Fringe Benefit Tax

HVPNL in its ARR has proposed Rs. 137.50 million as fringe benefit tax. The HERC staff submitted that as per the Finance Bill (Bill No. 16 of 2006) the value of fringe benefit tax should be taken as nil since contributions by the employer do not exceed Rs.100,000. Consequently, out of Rs. 137.5 million fringe benefit tax amount proposed, an amount of Rs.135.21 million, relating to contribution to the superannuation fund, be disallowed while approving the ARR under consideration.

2.6 Return on Equity (ROE)

On the proposed ROE amounting to Rs. 859.68 million in respect of transmission business and return on investment amounting to Rs. 12.047 million for SLDC the HERC staff submitted that at this stage no ROE should be allowed to the licensee. The staff reasoned that HVPNL is a State owned monopoly as far as transmission business and SLDC function is concerned. Given the operating inefficiencies, any ROE allowed will be used up for working capital purposes and will not be available as internal accrual for the purpose of funding capital works. As the Commission provides all the justifiable 'Capital Expenditure' as well as Working Capital related borrowings i.e. the interest costs besides capital support from Haryana Government, ROE at this juncture and without linking the same with performance parameters such as reduction in transmission loss level, capacity creation, enhancing availability etc. will only add to the cost including cascading effect on the down stream costs i.e. costs of Distribution licensees viz. UHBVNL, DHBVNL, Open Access Users (if any) and will not serve any purpose

such as attracting investments or availability of internal accruals that could be ploughed back into the business.

2.7 Tax on Income and Profit

An amount of Rs. 72.34 million has been claimed by HVPNL as tax on income and profits. The HERC staff submitted that since the staff do not agree with HVPNL's proposal of ROE which could have resulted in Income or profit (in a cost plus regulation income / profit would arise only if return on Equity, Investments etc. is provided) thus no incidence of tax on income would arise during FY 2006-07, hence, the amount of Rs. 72.34 million claimed as tax on income and profit be disallowed.

2.8 Transmission Losses

The transmission losses as per schedule 35 of the ARR filing under consideration is 5.24% in FY 2004-05, 5.25% in FY 2005-06 and is projected at 5.00% in FY 2006-07.

The HERC staff submitted HVPNL despite massive investments in system up-gradation and augmentation has not been able to achieve any significant reduction in the transmission losses. The study on Transmission Losses conducted by the licensee recognizes the fact that the causes of losses are insufficient reactive power compensation, loose joints, sub-optimal loading of lines and transformers, lack of redundancy in the system etc. Thus, despite identifying the major factors contributing to high transmission losses in the system the licensee has not proposed any significant reduction in the transmission losses in FY 2006-07. The HERC staff proposed that the Commission allowed transmission loss level of 4.5% for FY 2005-06 should be further lowered. Any thing above the HERC benchmark may not be allowed as pass - thru cost to the bulk supply business.

Based on the above premises the HERC staff proposed Transmission ARR of Rs.3480 million for FY 2006-07 and on the basis of similar working (same

principles) SLDC charges for FY 2006-07 should be pegged at Rs. 109.28 million.

2.9 HVPNL's Reply to Staff Objections

The Managing Director of HVPNL orally responded to the issues raised by the HERC staff during the course of the public hearing. At the outset, he referred to the deficiency letter issued by the Commission wherein certain issues were raised to which HVPNL submitted written reply. As the staff has raised none of those issues during the public hearing, it is assumed that the replies were satisfactory.

2.10 Tariff Design

The proposed transmission tariff design is based on sharing of transmission capacity by UHBVNL & DHBVNL as against the previous tariff design based on coincidental system peak. It was submitted by HVPNL that as a 'carrier' capacities are planned and created i.e. demand posed as well as forecasted. The capital expenditure proposed to be undertaken is in line with the need for capacity creation. Resultantly, HVPNL is entitled to recover the entire cost of such infrastructure. Tariff based on sharing of transmission capacities can only ensure full recovery of the ARR approved by the Commission. As against this, a tariff design based on coincidental peak may lead to over or even under recovery of the allowed ARR. In case the actual supply is less than the peak i.e. the bulk supply company fails to meet the projected demand, then HVPNL may not be able to fully recover its ARR. Thus, such failures should not be assigned to HVPNL. As against this scenario, in case the demand forecasted by the Distribution licensees is on the lower side while the actual happens to be more, then HVPNL will end up over – recovering. Consequently, in a constrained system like Haryana the Distribution companies may end up paying over and above the ARR requirement.

However, in case tariff is based on capacity based charges the recovery would remain the same i.e. limited to the approved ARR which is essential for transmission business to stand on its own. The assignment of capacity ought to be as projected by HVPNL.

2.11 Open Access

HVPNL informed that they are in the process of finalizing Open Access regime in Haryana. The deficit HT consumers get least volume of power. Thus, for the HT industrial consumers they are contemplating to pre – pone ‘Open Access’. The CERC as well as the national tariff policy support recovery of transmission charges based on transmission capacity.

2.12 Target Availability

HVPNL contended that the present recording system is far from perfect. CERC guidelines provides for 98% based on a specified methodology. In the absence of data, it is difficult to arrive at a ballpark figure of target availability for the purpose of claiming incentive. HVPNL has reduced the target availability from 98% to 95% because of the reason that HVPNL operates and maintain the transmission lines and substations up to the level of 66 KV and above. CERC norms pertain to transmission network of Power Grid Corporation of India Limited (PGCIL), which is not below 220 KV. The transmission network of lower voltages e.g. 132 KV and 66 KV are more prone to breakdowns. The availability of the transmission system on 66 KV and 132 KV is lesser than that of 220 KV as distribution system of 11/33 KV is directly connected to this voltage level on radial mode. It is therefore reasonable to have level of 95% availability for the purpose of incentive.

2.13 Return on Equity (ROE)

The 14% ROE provided by the CERC has been the keystone in the overall scheme of power sector reforms in India. The Commission has always considered Return on Capital Base for transmission & distribution licensees and

Return on Equity in the case of HPGCL (determination of generation tariff). As far as linking 'return' to performance parameters is concerned, HVPNL submitted that no policy documents, including the national tariff policy, lays down any conditionality for claiming ROE i.e. dovetailing ROE with performance parameters. Thus what is 'rightfully ours' should be the deciding factor. Not allowing any 'return' will cause financial distress to HVPNL. Financial institutions such as Power Finance Corporation (PFC) & Rural Electrification Corporation (REC) which are major source of concessional project finance have made 'credit rating' of the borrowers mandatory. If no 'return' is allowed and for some reasons net – worth of HVPNL is eroded, credit worthiness of HVPNL would be downgraded couple of notches below investment grade. Consequently, it would not only make the borrowings expensive in the form of higher rate of interest but also jeopardize future investment. Thus, without a healthy 'bottom-line' which is ensured by a 'return' the State Transmission Utility (STU) would be in a financial distress thereby hampering development of the power sector in Haryana.

More so, ROE is to be utilized for meeting the un-funded liabilities inherited by HVPNL, which would go a long way in making the balance sheet of the company healthy. HVPNL has not proposed or even envisaged to pay dividend to the Haryana Government from ROE. Consequently, ROE will incentivise HVPNL to strengthen the transmission system.

2.14 Depreciation

During the course of public hearing, the Managing Director of HVPNL stated that in case CERC notified depreciation rates for transmission assets are available they would consider the same for working out depreciation amount. However, vide memo no. Ch- 63/F-68 dated 8/05/2006 HVPNL stated as following: Annual Revenue Requirement (ARR) and Tariff application was filed with the HERC for FY 2006-07 on 3/01/2006 whereas the tariff policy in compliance of Section 3 of the Electricity Act, 2003 was notified by the Ministry of Power, Government of India on 6th January 2006 i.e. after the filing of ARR by the Licensee. It has been provided in the Tariff Policy that "CERC may notify the rate of depreciation in

respect of generation and transmission assets". The rate of depreciation has not been notified by CERC so far in compliance of Tariff Policy notified by Ministry of Power, Government of India. Further, as checked orally from the office of CERC, New Delhi, no rate of depreciation has been notified by CERC after the issuance of Tariff policy by the Ministry of Power, Government of India. On verbal enquiry, CERC officers informed that CERC has sought certain clarifications from the Govt. of India, Ministry of Power.

Further, HVPNL is charging depreciation on fixed assets on straight line method as per the rates notified by the Ministry of Power, Government of India vide its notification no. SO/266(E) dated 29/03/1995. This notification contains the fair estimated life of assets as well as the rates of depreciation. The licensee shall follow the above notification for working out the fair estimated life of the assets and charging the deprecation till the revised rate of depreciation and fair life of assets is notified by CERC in compliance of Tariff Policy notified by Ministry of Power, Government of India on 6th January 2006. Thus HVPNL should be allowed depreciation for the financial year 2006-07 on the rates of depreciation taken by it as per notification no. SO/266(E) dated 29/03/1995 of Ministry of Power, Government of India. The Commission has already allowed HVPNL depreciation on the same basis in its order dated 10/05/2005 of ARR and Tariff application of HVPNL for FY 2005-06.

2.15 Interest on Working Capital Borrowings

The rate of interest suggested by the HERC staff i.e. 7.5 % is applicable for past borrowings. In the current interest rate regime the rate of interest on short-term loan would be in the range of 8.5% to 9.0%. During the financial year 2006-07, the rate of interest is expected to harden and would be in excess of 9%. Resultantly, the same may be considered.

2.16 Interest on PF Bonds

The Commission has been considering this as part of the working capital borrowing allowed as one month's ARR hence no separate interest cost has

been provided by the Commission so far. HVPNL has preferred an appeal against this in the Appellate Tribunal of Electricity, New Delhi. Consequently, the view of HVPNL is subject to the outcome of the appeal.

2.17 Fringe Benefit Tax (FBT)

The fringe benefit tax for FY 2006-07 has been projected based on fringe benefit tax deposited by HVPNL during the first six months of FY 2005-06. An addition of 5% in expenditure has been considered while calculating FBT for FY 2006-07. However, if there is any change in the provisions of FBT once the Finance Bill FY 2006-07 is passed and becomes legally binding the amount included in the ARR, as FBT shall be refunded in the form of rebate.

2.18 Transmission Losses

On the issue of high transmission losses despite investments on strengthening / augmentation of the transmission system, HVPNL replied as follows.

It is a fact that the distribution companies are paying for the interest cost of capital expenditure incurred by the transmission company, but it is not appropriate to conclude that transmission losses of the system have not shown any significant decline. The amount of energy handled has increased substantially due to the normal demand growth, monsoon failure and inclement weather in summer and winter seasons. To meet with the spurt in demand, power had to be arranged from various sources in the Northern Region as well as other regions. The losses in the intra – state has been indicated as 3.11% against 3.20% last year, which are quite reasonable considering the volume of power handled. HVPNL has no control on inter – state losses, which are apportioned by NREB to respective state as per their share of power in central power sector units. Further, other regional losses occurring due to the purchase of power from other regions by utilising inter – regional corridor through shorter / longer routes are also added, on which also HVPNL has no control. The overall loss has not shown any increase in spite of the fact that more power has been

handled. It therefore, justifies the capital expenditure. The distribution companies are not put to double disadvantage as they had been selling additional quantum of power in the past and would be selling more power to the consumers during the year under reference, whereas the losses have remained at the same level.

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 - 3 & Tariff and SLDC charges in Chapter – 4.

3 ANALYSIS OF THE ARR FILING AND COMMISSION'S ORDER

In this chapter, various elements of ARR filing namely expenditure, capital base, reasonable return, non-tariff income and revenue requirement etc. are analyzed and the Commission's order on each item is presented. The Commission has considered the views expressed by the members of SAC, HERC staff view and the HVPNL's response thereto.

HVPNL's proposal refers to the ARR & Tariff application submitted to the Commission on 4th January, 2006; additional information provided refers to the written response of HVPNL vide its office memo no. Ch-55/SE/RAU/F-68/ Vol.-1 dated 24/02/2006 to the deficiency letter issued by the Commission or otherwise; oral submissions made by the interveners at the time of public hearing held on 27/03/2006 and subsequent written submissions and HVPNL's response thereto.

3.1 Legal Issue (BBMB & IPGCL Power)

The Commission, vide memo no. 3181/HERC/SV-HVPNL.def dated 8/02/2006 sought supplementary information / clarification on HVPNL's filing under consideration. A legal issue on which clarification was sought related to violation of first proviso to Section 39 of the Electricity Act, 2003 i.e. HVPNL (STU) cannot engage in the business of trading in electricity. Whereas in the filing as well as oral submission during the public hearing it was conveyed that HVPNL is in the process of signing a power purchase agreement with HPGCL (the bulk supply / trading company) for BBMB & IPGCL power (in which HVPNL, as per the transfer scheme notified by the Government of Haryana, has ownership interest).

HVPNL while clarifying its position submitted that the provisions of Section 41 of the Electricity Act, 2003 and other provisions of the Act do not, in any case, bar any State Transmission Utility from generation of power and onward sale to any other licensee. Section 2(71) of the Act defines "Trading" as purchase of

electricity for resale thereof and the expression “trade” shall be construed accordingly. Ownership rights in any generating plant do not construe purchase of electricity. Consequently, proviso of Section 39 of the Act does not apply to HVPNL. The issue stands further clarified under Section 41 of the Act wherein the licensee may with prior intimation to appropriate Commission engage in any business for utilization of its assets.

The Commission does not accept the above clarification. HVPNL has relied on the provisions of Section 2(71) and Section 41 of the Act. It needs to appreciate that an STU owning generation capacity and selling the energy generated to a trader (HPGCL) may exercise unfair advantage vis-à-vis other open access customers. Consequently, non – discriminatory open access to the transmission network, which is one of the kingpins of the reform process, may be undermined. To avoid any possibility of ‘collusion’ the first proviso of Section 39 of the Act needs to be implemented in letter and spirit by the STU viz. HVPNL. Further, while interpreting Section 41 of the Act attention needs to be paid to the fact that the provisions under this section enables a transmission licensee to engage in any business for optimum utilisation of its assets. The assets referred to in the above section relates to ‘transmission assets’ and not assets in general, which with technological advancement can also be used for some other purposes e.g. communication, thereby optimising its revenue earning potentials.

In the light of the above, the Commission is of the view that an anomalous situation has been created vis-à-vis the provisions of Section 39 of the Act. **The Commission directs HVPNL to take – up the matter with the Government of Haryana so that the above-mentioned anomaly may be removed at the earliest.**

3.2 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 2006-07 at Rs. 2010.43 million in its ARR submitted to the Commission. The details of proposed O&M expenses for FY 2006-07 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 3.1.

Table 3.1 O&M expenses (Rs. million)

Particulars	HVPNL Audited (FY 2004-05)	HERC Order (FY 2005-06)	HVPNL Proposal (FY 2006 – 07)
Wages, salaries & related costs	1828.45	1787.81	1830.23
Repair & Maintenance Expenses	51.22	61.11	98.49
Administration & General Expenses	73.45	71.87	81.71
Total	1953.12	1920.79	2010.43

HVPNL's audited accounts for the financial year 2004-05 are available to the Commission. Thus, the Commission has considered the audited accounts with appropriate adjustments / changes for calculating the allowable O&M expenses as part of the ARR for FY 2006-07. The expenses that comprise the ARR have been discussed in detail in the paragraphs that follow.

3.3 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 and DA

The Commission has estimated employees' cost by taking into account the amount as per the latest available audited accounts of HVPNL i.e. FY 2004-05. The Commission has allowed 2% increase each year in basic salary over the audited figures of FY 2004-05; dearness pay is estimated at 50% of the basic pay; DA rate for calculating employee cost and the recurring portion of pension has been considered as 26%. The approved expenditure on account of salary, dearness pay and dearness allowance works out to Rs. 760.24 million for FY 2006-07.

2. Other allowance:

The licensee has proposed other allowances at 30.36% of basic salary for FY 2006-07 taking the rate from estimated expenditure for FY 2005-06. However, HVPNL has included the expenditure incurred on contract employees also as part of the other allowances, which is inappropriate, as cost incurred on contract employees cannot be a function of basic salary. The Commission has not considered the cost incurred on contract employees as part of other allowances as per FY 2004-05 audited accounts. Resultantly, 'other allowances' works out to 23.68% of basic salary as per the FY 2004-05 audited accounts. Consequently, the same rate is applied on the projected basic salary for FY 2006-07 to arrive at the amount of 'other allowances' for FY 2006-07.

The expenditure incurred for contract employees as per the FY 2004-05 audited accounts is escalated @ 6% p.a. (the same rate as assumed by the licensee) to project the cost of contract employees during FY 2006-07.

3. Terminal benefits:

The Commission is committed to adequately provide for retirement benefits of the employees of HVPNL through the ARR. The Commission, since its very first order, has provided the required amounts with respect to terminal benefits. Thus,

the question of being unable to make payments to its retiring and retired employees because of non-provision of such amount in the ARR should not arise. In the instant case, HVPNL has projected Rs.1160.79 million as terminal benefit expense on actual payment basis. This is in line with the methodology enunciated by the Commission in its order-dated 14.12.2000. Consequently, the Commission approves the same for FY 2006-07.

The manner of sharing the payments between HVPNL and its wholly owned subsidiary distribution companies i.e. UHBVNL & DHBVNL is a matter that has to be decided between them.

The calculation of terminal benefits, as approved by the Commission, for FY 2006-07 is presented in table 3.2.

Table 3.2 - Terminal benefit for FY 2006-07 (Rs. million)

	HVPNL Proposal	HERC Approval
One time payouts to HVPNL employees retiring upto 31.3.2007	114.51	114.51
Regular payment of pension to all retired employees	1046.28	1046.28
Total (HVPNL)	1160.79	1160.79

The order of the Commission in respect of ARR for Transmission & Bulk Supply business dated 29th May 2000, clearly lays down as under:

"The Commission decides that for the purpose of this ARR, the actual amount required by the petitioner during the year will be allowed and any under/over recovery will be subsequently adjusted with appropriate interest".

The amount that was allowed on account of estimated payment to the retirees as per the ARR order for FY 2004-05 was Rs. 1795.24 million whereas the actual expenditure incurred on this account during FY 2004-05 was Rs.1610.50 million.

Consequently, in view of the above-mentioned order the Commission is deducting the excess amount of Rs.184.74 million from the projected expenditure along with interest at an average rate of 8.61% during FY 2006-07 amounting to Rs. 15.91 million.

4. Employees' Cost Capitalised

The amount of employees' cost capitalized should relate to the cost of those 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 2004-05. Consequently, the employees cost capitalized works out to Rs. 194.48 million; the rate of capitalization being 22.28%.

5. SLDC Cost

The total employee cost for the transmission business for FY 2006-07 as worked out earlier includes the cost of employees engaged in SLDC activities. The licensee has estimated this cost at Rs. 16.34 million for FY 2006-07, 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. 1622.28 million, net of the amount capitalized of Rs. 194.48 million. The computation of employee cost is presented in table 3.3.

Table 3.3 – Employees’ cost for FY 2006-07 (Rs. million)

Particulars	HVPNL Proposal	HERC approval
Basic+DA+DP	760	760.24
Other allowances	122	95.27
Contract employees	-	17.45
Terminal benefits	1161	1,160.79
Total	2043	2,033.75
Employee cost capitalised	197	194.48
Net Employee Cost Expended	1847	1839.27
Less: excess terminal benefits provided in the ARR for FY 2004-05		184.74
Interest on above		15.91
Net employee cost expended	1847	1638.62
SLDC Cost	16	16.34
Total (Transmission)	1830	1622.28

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

3.4 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 ARRs approved by it with direction to the licensee to prepare R&M norms for the equipment used in the Transmission & Bulk Supply business. HVPNL has projected Rs.100.01 million as R&M expenditure for FY 2006-07. The Commission approves the same as the projected amount is less than 1.3% of the average GFA.

The approved Repair and Maintenance expenditure also includes R&M expenditure amounting to Rs.1.52 million in respect of SLDC. Thus, the Commission approves an R&M expense of Rs. 98.49 million for the transmission business of HVPNL for FY 2006-07.

3.5 Administrative and General Expense (A&G)

HVPNL has projected Rs. 110.23 millions as A&G expenses in the ARR under consideration. The Commission approves A&G expenses as proposed by HVPNL subject to reduction of the A&G expense to the tune of Rs. 0.96 million on account of expenses for maintenance of guesthouse. Guest - houses are rent earning assets and hence A&G expenses are not admissible. Consequently, the total A&G expenses approved by the Commission amounts to Rs. 109.27 million.

HVPNL has projected capitalization of A&G expenses at the rate of 23.64%, which is allowed by the Commission based on FY 2004-05 audited accounts. Thus, the amount of capitalization of A&G expenses works out to be Rs. 25.83 millions. Resultant the net A&G expenses approved by the Commission is Rs. 83.44 million. This includes Rs. 4.10 million in respect of the SLDC, as proposed by HVPNL. The details of A&G expense are presented in table 3.4.

Table 3.4 - A&G expenses for FY 2006-07 (Rs. million)

Particulars	HVPN Proposal	HERC Approval
Gross expenses	110.23	109.27
Capitalisation	26.05	25.83
Net A&G expenses	84.18	83.44
SLDC (A&G expenses)	4.10	4.10
Transmission (A&G expenses)	80.08	79.34

3.6 Interest on Loans

HVPNL, in its ARR and tariff / charges application for FY 2006-07 under consideration, has proposed total borrowings of Rs. 27,371.58 million which includes borrowings for generation works (Rs.616.41 million) and SLDC works (Rs.533.30 million). The net borrowings for transmission business thus works out to Rs. 26,221.87 million. This comprises of capital expenditure related borrowings amounting to Rs. 9649.11 million, Pension bonds of Rs. 6730 million and the balance i.e. Rs. 9842.76 million being working capital related borrowings. The projected working capital related borrowing is more than even the total

projected ARR of HVPNL for FY 2006-07, which is Rs. 5676.62 million only. This clearly shows that HVPNL has not applied any financial canons while assessing / proposing its working capital requirement during FY 2006-07.

The Commission reiterates its concern regarding large working capital requirement. HVPNL should analyze its 'cash flows' i.e. both payables and receivables and manage the same in a manner that the gap between receivables (number of days) and payables (number of days) is minimized thereby reducing expensive working capital loan requirement. The Commission, however, is not reducing working capital below the limits allowed in the previous ARR. Therefore, in line with the earlier order dated 10/05/2005, the Commission is allowing interest on working capital borrowings equivalent to Rs 259.40 million in respect of transmission business and Rs. 6.90 million for SLDC which is one month's ARR of Transmission and SLDC business respectively. Interest on estimated working capital requirement @ 8.61 % (being the average rate of interest on working capital as proposed by the licensee) works out to Rs. 22.34 million for Transmission business and Rs.0.56 million for SLDC, which is allowed by the Commission to be included in the FY 2006-07 ARR.

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. 876.40 million as interest on borrowings to fund capital works as proposed by HVPNL. This expenditure, however, includes Rs. 33.59 million as interest on borrowings related to generation works and Rs. 47.57 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. 257.18 million as against Rs. 254.07 million projected by HVPNL.

The Commission has approved a capitalization ratio of 30:60:10 for new capital works of transmission business. It effectively means 10% of works initiated in FY 2004-05 and 70% of works initiated during FY 2005-06 are incomplete at the

beginning of FY 2006-07. Corresponding interest cost on borrowings for such works will be capitalized during FY 2006-07. In addition to this, interest cost on all works initiated during FY 2006-07 will also be capitalized. HVPNL has submitted to the Commission that there are works amounting to Rs. 318.43 millions which were proposed to be initiated during FY 2005-06 have not been sanctioned till the time of filing of the ARR. The Commission is of the view that it is unlikely that even 30% of such works will be completed during FY 2005-06. Therefore, the Commission has treated these works in the same manner as works to be initiated during FY 2006-07 for the purpose of capitalization of interest cost.

HVPNL, in its ARR and tariff / charges under consideration, has changed the classification of certain borrowings from working capital borrowings to borrowings for capital expenditure e.g. PF bonds, Pension Bonds, Loan from market committee and 14% HVPNL Bonds. The Commission reiterates that the borrowings, which have in the past been classified as working capital borrowings, in all the ARR filings until FY 2004-05, cannot change their nature in the subsequent filing. When the Commission disallowed the interest on PF and pension bonds, HVPNL justified these as being required for working capital and now the same have been classified as borrowings for capital expenditure. Thus, the Commission is not permitting reclassification of these borrowings.

As regards the pension bonds, the Commission has allowed the liability of terminal benefits on actual pay out basis and hence the need for additional provision of interest on pension bonds does not arise.

In addition to the interest expenses, HVPNL has proposed Rs. 6.42 millions as guarantee fee, which is approved by the Commission. The computations of interest expenses are presented in table 3.5 & 3.6.

Table 3.5 Transmission - Interest Cost for FY 2006-07 (Rs. million)

Source (Institution wise/bank wise)	HVPNL Proposal	HERC approval
Loans for Capital Expenditure		
Total borrowings for Capex	876.40	876.40
Less borrowings related to generation	33.59	33.59
Less borrowings related to SLDC	47.57	47.57
Gross Interest for Transmission Works	795.23	795.24
Less: Interest Cost Capitalized	254.07	257.18
Interest cost net of capitalization (1)	541.16	538.06
Interest on borrowings for generation works	33.59	0.00
Loans for Working Capital		
PF Bonds	303.34	0.00
Borrowings for working capital	432.25	22.34
CC/OD Limits & LCs	40.00	
Gross interest on working capital borrowings (limited to one month ARR)	775.60	22.34
Less interest on borrowings for SLDC	2.00	-
Net interest on working capital for Transmission business (2)	773.60	22.34
Total Interest cost (1+2)	1348.35	560.40
Guarantee fee @2% on PFC loan 03403019 & 20, REC 350013 to 20 & new loans	6.42	6.42

Table 3.6 SLDC - Interest Cost for FY 2006-07 (Rs. million)

Source (Institution wise/bank wise)	HVPNL (Proposal)	HERC (approval)
Loans for Capital Expenditure	47.57	47.57
Less: Interest Cost Capitalized	-	12.35
Interest cost net of capitalization (1)	47.57	35.22
Loans for Working Capital	2.00	
Working Capital Borrowings limited to One Month of ARR		0.56
Total interest on working capital borrowings (2)	2.00	0.56
Total Interest cost(1+2)	49.57	35.78

3.7 Depreciation

HVPNL calculated depreciation on its fixed assets charged on the basis of Straight Line Method (SLM) as per the rates notified by the Government of India

under the Electricity Supply Act, 1948 vide Notification No. S.O. 266 (E) dated 29/03/1995.

The Commission, vide Memo No. 531/HERC dated 27/06/2006 informed the licensee that the National Tariff Policy notified by the Government of India on 6th January 2006 (Para 5.3 (c) lays down that “The Central Commission (CERC) may notify the rates of depreciation in respect of generation and transmission assets. The depreciation rates so notified would also be applicable for distribution with appropriate modification as may be evolved by the Forum of Regulators (FOR)”. The FOR has informed the Commission vide their letter No. 1/20(6)/2006 – Tariff Policy / CERC dated 23/06/2006 that the Central Commission has already specified the rates of depreciation for various items as part of the CERC (Terms & Conditions of Tariff) Regulations, 2004. The Terms and Conditions of Tariff issued by CERC are valid for the period from 2004-09. As such, the depreciation rates specified in these Regulations may be treated as the rates of depreciation for the purpose under Para 5.3 (C) of the Tariff Policy dated 06th January 2006.

In the light of the above, the Commission directed the licensee to file the calculation of depreciation on its fixed assets for FY 2006-07 based on rates of depreciation notified by CERC.

In compliance of the direction of the Commission, HVPNL, vide their Memo No. Ch – 65/SE/RAU/F-68/Vol.1 dated 10/07/2006, submitted the calculation of depreciation on the Straight Line Method for the financial year 2006-07 based on the rates of depreciation notified by the CERC.

The total amount of depreciation, calculated as above, for FY 2006-07 works out to Rs. 515.44 million including depreciation for SLDC assets amounting to Rs.25.31 million. As the chargeable depreciation rates as per CERC is different from the rates as per the latest available FY 2004-05 audited accounts, the

revised depreciation cannot be verified. Consequently, the Commission has relied on the depreciation rates proposed by the licensee. Thus, the Commission approves Rs. 474.36 million as depreciation in respect of transmission business and Rs. 25.31 million for SLDC. The difference in the depreciation amount is 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. It also excludes generation assets and rent earning assets. The depreciation approved for transmission & SLDC is presented in Table 3.7.

Table 3.7 Depreciation for FY 2006-07 (Rs. million)

Particulars	HVPNL (Proposal)	HERC (approval)
Gross fixed Assets at the beginning of the year.	16,727.00	15,393.83
Depreciation Rate	3.08	3.08
Depreciation for FY 2006-07 (Gross)	515.44	474.36
Depreciation for FY 2006-07 (SLDC)	25.31	25.31
Depreciation for FY 2006-07 (Transmission)	490.13	449.05

3.8 Advance against Depreciation (AAD)

HVPNL vide its filing dated 7.7.2006 has objected to the revised rates of depreciation for the transmission business applicable vide FOR letter No. 1/20(6)2006-Tariff Policy/ CERC dated 23.6.2006. The point of contention is that the proposed rates of depreciation are insufficient to ensure debt redemption obligation for loans taken to create these assets.

HVPNL has claimed that it has a debt redemption obligation for FY 2006-07 amounting to Rs. 88.05 Crores. Out of this amount, Rs. 16.70 Crores is towards repayment of working capital loans and Rs. 2.339 Crores towards repayment of loans for generation works. The balance amount of Rs. 69.011 Crores is to be met through depreciation for the year amounting to Rs. 51.544 Crores thereby leaving a shortfall of Rs. 17.467 Crores, which is being allowed to be recovered as Advance against depreciation (AAD) in this ARR.

The licensee may note that this treatment is available only for those capital works that are approved by the Commission. **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 2006-07, 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.**

3.9 Contribution to Contingency Reserve

The Commission approves Rs. 46.99 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.**

3.10 Instalment of written down amount

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

3.11 Fringe Benefit Tax (FBT)

HVPNL has proposed to recover Rs. 130.95 million fringe benefit tax for FY 2005-06 as past dues payables. They have 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, allows this to be recovered in the ARR for FY 2006-07.

HVPNL has also proposed to recover FBT amounting to Rs. 137.50 million for FY 2006-07. However, the Finance Bill for FY 2006-07 passed by the Union Parliament has exempted the contribution to the superannuation fund upto an individual limit of Rs. 1 lac. In view of the above, the fringe benefit tax liability on account of contribution to the superannuation fund amounting to Rs. 135.21 million is excluded from the ARR for FY 2006-07. Consequently, the balance amount of Rs. 2.29 million is allowed to be recovered in the ARR for FY 2006-07. The expenditure on account of fringe benefit tax for FY 2005-06 and for FY 2006-07 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.

3.12 Income Tax

The Licensee has projected income Tax of Rs. 72.34 million in the ARR for FY 2006-07. The Commission disallows this expenditure as no return on Capital Base is being allowed in the ARR for FY 2006-07.

3.13 Total Expenditure

The total expenditure approved by the Commission with respect to the transmission business for the financial year 2006-07 is Rs. 3171.68 million and SLDC charges of Rs. 83.05 million. Table 3.8 & 3.9 presents the details of HVPNL's proposed expenditures in respect of their Transmission business & SLDC charges and those approved by the Commission.

**Table 3.8 Transmission Business Approved expenditure
For FY 2006-07(Rs. million)**

Description	HVPNL Proposal (Revised)	HERC Approval
Expenditure		
Employees' cost	1830.23	1622.28
R&M expenses	98.49	98.49
A & G Expenses	81.71	79.34
Interest on Capital Expenditure Borrowings	574.75	538.06
Debenture Interest (PF Bonds) Excluding Pension Bonds	303.34	0
Interest on Working Capital	470.26	22.34
Financial Charges (Guarantee fee)	6.42	6.42
Depreciation	490.13	449.05
Advance against depreciation	365.06	174.67
Fringe Benefit Tax	137.50	2.29
Total Expenditure	4532.71	2992.94
Special Appropriations		
Tax on Income & Profit	72.34	0
Instalments of written down amounts	0.80	0.80
Contribution to Contingency Reserve	46.99	46.99
Past dues payable (Fringe benefit Tax for FY 2005-06)	130.95	130.95
Total Special Appropriations	251.09	178.74
Total "expenditure" (including special appropriation)	4783.79	3171.68

**Table 3.9 SLDC Approved expenditure
For FY 2006-07(Rs. million)**

Description	HVPNL Proposal (Revised)	HERC Approval
Expenditure		
Employees' cost	16.337	16.34
R&M expenses	1.516	1.52
A & G Expenses	4.102	4.10
Interest & Finance Charges on Capital Expenditure	49.57	35.22

Interest on Working Capital	0	0.56
Depreciation	25.313	25.31
Other Expenses	0.06	0.00
Total Expenditure	98.15	83.05
Special Appropriations		
Tax on Income & Profit	1.306	0
Return on Investments	15.517	0
Contribution to Contingency Reserve		
Total "expenditure" (including special appropriation)	113.667	83.05

3.14 Return on Equity / Capital Base

HVPNL has proposed ROE of Rs. 859.68 million and Rs.12.05 million for its Transmission and SLDC business respectively. The Commission, for determining ARR for FY 2006-07, is not changing its methodology so far adopted in all its previous ARR orders in respect of transmission business (including SLDC) from 'return on capital base' to 'return on equity'. Consequently, the Commission considers appropriate to continue with 'return on capital base'. The return is required to be computed on the regulated capital base that qualifies for 'minimum return'. The rate base defined as the original cost of fixed assets including cost of investments completed and capitalised, work in progress, intangible assets, compulsory investments, one month's requirement of stores & cash and bank balance less approved loans, debt instruments issued, consumers contribution etc. turns out to be negative. Resultantly in FY 2006-07, no return is allowed on the rate base.

The National tariff policy notified by the Govt. of India on 6.1.2006 provides for either return on equity or return on capital base approach. The Commission would revisit the entire issue of 'return' while finalizing the regulations on Terms and Conditions of Transmission Tariff Determination & SLDC charges.

3.15 Capital Base

Capital Works in Progress (CWIP)

The opening balance of CWIP as on 1.4.2005 is derived from the closing balance of CWIP as on 31.3.2005 as per the audited accounts of HVPNL. The additions during FY 2005-06 are dependent on the planned additions as well as availability of funds during FY 2005-06. The Commission had estimated and approved additions to CWIP during FY 2005-06 as part of its ARR order for FY 2005-06. However, the licensee has revised the availability of funds for capital works during FY 2005-06. Based on the revised projections, the Commission has also revised the additions to CWIP, transfer to GFA and closing balance of CWIP for FY 2005-06. The licensee has projected additions to CWIP for FY 2005-06 through loan funds amounting to Rs. 2022.43 million whereas as per the loan schedule, the licensee has shown receipts of Rs 1868.12 million only. As the loan schedule gives source wise details, the Commission has considered the amounts given in the loan schedule. For FY 2006-07, the licensee has included Rs. 357.87 million from PFC for generation projects in its proposed borrowings for CWIP. The Commission has excluded this amount from the projected funds available for capital works during FY 2006-07, as this does not relate to the licensed business.

After the above adjustments, the Commission approves Rs. 3418.44 million as additions to CWIP for FY 2006-07 including Rs. 943.40 million as funded through equity and the balance through borrowings.

The Commission has considered the capitalization schedule of 30:60:10 meaning that 30% of the works initiated during FY 2006-07, 60% of works initiated during FY 2005-06 and 10% of works initiated during FY 2004-05 will be completed and hence transferred to GFA during FY 2006-07. However, the projected borrowings for FY 2005-06 include Rs. 318.43 million for schemes not yet sanctioned until the date of filing. The Commission feels that schemes not sanctioned until

31.12.2005 are not likely to be even 30% complete by the end of the year. Therefore, these schemes appear as part of CWIP as on 31.3.2006. Resultantly, the transfer to GFA and closing balance of CWIP for FY 2006-07 comes to Rs. 2854.88 million and Rs. 2620.94 million respectively as per the details presented in table 3.10

Table 3.10 Calculation of CWIP for FY 2006-07 (Rs. million)

Description	HVPNL Proposal	HERC Approval	
	FY 2007	FY 2006	FY 2007
Opening balance of CWIP	2069.87	2030.93	2057.38
Additions during the year	3776.30	2451.12	3418.44
Transfer to GFA	2959.29	2424.67	2854.88
Closing balance of CWIP	2886.88	2057.38	2620.94
Funding of CAPEX :			
Equity	943.40	583.00	943.40
Loan funds Sanctioned	2832.91	1549.69	968.90
Loan funds yet to be Sanctioned		318.43	1506.14
Govt.Loans			
Additional borrowings			
Total Funds (Including IDC and Expenses Capitalised)	3776.31	2451.12	3418.44

3.16 Gross Fixed Assets (GFA)

The opening balance of GFA as on 1.4.2005 is based on the closing balance of GFA as on 31.3.2005 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 2006-07 is presented in table 3.11

Table 3.11 Determination of GFA for FY 2006-07 (Rs. million)

	HVPNL Proposal	HERC Approval
Opening Balance of gross fixed assets	16727.43	16585.61
Add: Additions to GFA	3259.29	2854.88
Less: Retirement	0.00	0.00
Closing balance	19986.72	19440.49
Consumers Contribution	90.78	90.78
SLDC assets	781.82	781.82
Generation assets	185.28	185.28
Rent earning assets	224.68	224.68

3.17 Working Capital (Capital Base Purpose)

3.17.1.1 Cash and Bank Balances

HVPNL has projected average cash and bank balance of Rs. 301 million based on closing balance as on 30/09/2005. The Commission is concerned that HVPNL is maintaining varying cash and Bank balance during the period from October 2004 to September 2005 ranging from Rs. 20 million in June 2005 to Rs. 435 million in March 2005. The average cash balance as calculated in the ARR for FY 2004-05 was only Rs.88.53 million as compared to Rs. 301 million in the ARR under consideration. The Commission reiterates that 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, lower if possible, as cash at any point of time,

3.17.1.2 Stores

HVPNL has proposed Rs. 491 million towards average cost of stores for FY 2006-07 based on closing balance of stores as on September 2005. The Commission has already pointed out in its order-dated 7.3.2005, that the licensee has a very large proportion of Material at Site stores (MAS) aggregating around 50% of total stores and there is need to minimize the same.

3.18 Amount of Compulsory Investment

The amount allowed as Contingency Reserves is required to be invested by HVPNL in the specified securities. The contribution of contingency reserve appropriation amounting to Rs. 38.63 million for FY 2005-06, is added to the balance of compulsory investment as on 31.3.2006 amounting to Rs. 141.70 million. This amounts to a contingency reserve investment of Rs. 180.33 million during FY 2006-07.

3.19 Other Income

HVPNL has proposed that it will incur a loss of Rs. 33.15 million on account of non - tariff income during FY 2006-07. This comprises of Rs. 58.89 million as non-tariff income and Rs. 92.04 million on account of prior period charges.

The Commission allows non-tariff income of Rs. 58.89 million as proposed by HVPNL as the computation of the same is in line with the Commission's earlier orders. While calculating the non-tariff income, HVPNL has reduced Rs. 92.04 million on account of prior period charges from its non-tariff income. However, the licensee neither has provided any explanation as to the nature of such expenses nor has given any reason (s) as to why the licensee was unable to anticipate these expenses in the relevant year's ARR's. Therefore, the Commission has excluded these amounts from FY 2006-07 ARR. Resultantly; the Commission approves Rs. 58.89 millions as non-tariff income to be included in FY 2006-07 ARR as against loss of Rs. 33.15 million proposed by the licensee. The computation of other income is presented in table 3.12.

Table 3.12 Non- tariff income for FY 2006-07 (Rs. million)

Description	HVPNL Proposal	HERC Approval
Investment income	13.03	13.03
Ancillary and incidental income	45.86	45.86
Prior period credits/ (Charges)	(92.04)	0.00
Total of "Non-tariff Income"	(33.15)	58.89

For SLDC, the Commission allows a non-tariff income of Rs. 0.198 million which licensee has proposed in its filing.

3.20 Aggregate Revenue Requirement

In light of the above analysis, the Commission approves Rs. 3112.79 million as the net aggregate revenue requirement of the Transmission business and Rs. 82.85 million as SLDC charges for FY 2006-07. The details are presented in table 3.13 & 3.14.

Table 3.13 Transmission ARR for FY 2006-07 (Rs. million)

Description	HVPNL Proposal	HERC Approval
Return on equity	859.68	0
Total expenditure	4783.79	3171.68
<i>Minus</i> Non-tariff income	33.15	(58.89)
Total Aggregate Revenue Requirement	5676.62	3112.79

Table 3.14 SLDC ARR for FY 2006-07 (Rs. million)

Description	HVPNL Proposal	HERC Approval
Return on Investments	12.047	0
Total expenditure	134.691	83.05
<i>Minus</i> Non-tariff income	0.198	(0.198)
Total Aggregate Revenue Requirement	134.493	82.85

3.21 Damage of Power Transformers

The State Transmission Utility has reported that it had lost 11 No. power transformers in the first six months of FY 2005-06. It represents 2% of the total power transformers as on 1.4.2005 which, by any extra – high voltage / high voltage power system operating standards, is quite high. **The Commission views this state of affairs with great concern & directs the utility to strictly enforce & implement the preventive maintenance schedule for all sub – station equipments including the power transformers.**

3.22 Fatal & non – fatal accidents

There were four fatal & thirteen non – fatal accidents involving human beings in FY 2004-05 as against two fatal & four non – fatal accidents in the first half of FY 2005-06. **The Commission considers it quite a worrisome situation & directs the utility to review the safety code to plug its loopholes. The workmen and supervisory staff / officers be sent for training at the manufacturers works / training institutes to hone their skills.**

4 TRANSMISSION TARIFF & SLDC CHARGES

4.1 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 4.1 – HERC approved tariff (May 2005) for Transmission (including SLDC charges)

Tariff	Fixed Charge (Rs/kW of Max demand /month)
Transmission	76.443

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 four 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 2006-07 the Commission has considered Average Annual Coincidental System Peak of 3471 MW, as projected by HVPNL.

Besides the transmission tariff the Commission also determined a single rate for wheeling i.e. Rs.0.14 / kWh in its order for FY 2005-06. If HVPNL undertakes wheeling for any other parties or sales to other licensee or exemption holder within the state, the respective contribution to the system peak would be the appropriate measure of demand. However, due to lack of time series data, the wheeling rate for third parties within the state was determined at Rs. 0.14 per unit. The rate was applicable at the transmission system level. In addition, for wheeling customers, 4% of the energy is to be deducted towards transmission loss and the balance is liable for delivery at the delivery point within the state.

4.2 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 2006-07 is different from the aggregate revenue requirement for FY 2005 -06.
- 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 2006-07 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 contract 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 95%. The proposed transmission tariff is single part comprising fixed cost component only. The tariff proposed by HVPNL is presented in table 4.2

Table 4.2 Summary of HVPNL's proposed Transmission Tariff

Tariff	Fixed Charge (Rs. million / month)
UHBVNL	245.7057
DHBVNL	220.6732
Total	466.3789

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 25% of the charges collected from short – term customer(s) for use of its 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 4.3.

**Table 4.3 Transmission tariff for Short Term Customers
for FY 2006-07**

Description	
Net ARR (Rs. million)	5596.55
Approved System Peak for FY 2006 (MW)	3233.35
Transmission Tariff (Rs per MW/day)	1185.53
For Open Access upto 6 hrs a day (Rs/MW per day)	296.38
For Open Access upto 6 to 12 hrs a day (Rs/MW per day)	592.77
For Open Access above 12 hrs a day (Rs/MW per day)	1185.53

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.

4.3 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.

4.4 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.

4.4.1 Transmission Cost

HVPNL has proposed Rs. 5676.62 million as their net aggregate revenue requirement for transmission business for FY 2006-07. This includes total expenditure of Rs. 4783.79 million, return on equity of Rs.859.68 million and non-tariff income of (-) Rs.33.15 million. The Commission as per the details presented in Chapter-3 of this order determines Rs. 3112.80 million as net aggregate revenue requirement for transmission business. This includes Rs. 3171.69 million of total expenditure less non – tariff income amounting to Rs. 58.89 million.

4.4.2 Tariff Design

The Commission does not agree with HVPNL's proposal of recovery of cost of transmission 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. This flows from the fact that the methodology so far adopted by the Commission incentivises the Discoms with respect to management of their peak load. Thus, this becomes an effective tool of demand side management.

The Commission's projection of the average annual system peak for FY 2002-03, FY 2003-04, FY 2004-05 and FY 2005-06 were quite close to the actuals subsequently reported for the respective years as is borne out by the details presented in the table 4.4

**Table 4.4 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

It shall be noted that the deviation in the last three years have been less than 1.5%. 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 2005-06) works out to 3457.33 MW (UHBVNL & DHBVNL contribution being 1821.75 MW & 1635.58 MW respectively). As the Commission's projection is fairly close to HVPNL's projection of 3471 MW (with UHBVNL & DHBVNL contribution being 1804 MW & 1667 MW respectively), the Commission approves HVPNL's proposal of 3471 MW for FY 2006-07 for determining transmission tariff.

4.4.2.1 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 74.733 per kW per month of the maximum demand.

The rates as mentioned above will be applicable for power transmitted to the distribution business. Table 4.5 provides the details of the calculation.

Table 4.5 - Determination of transmission tariff

Particulars		
Transmission Cost (Rs. million)	3112.79	
Average System Peak (MW)	3471	
Sales to Discoms (MU)		22813.22
Approved rate	74.733 (Rs. per KW per month)	
Single rate for wheeling (Rs/kWh)		0.1364

Note: 1. Transmission loss considered by the Commission during FY 2006-07 is 4.4% of the gross purchase.

Note: 2. The gross power purchase volume during FY 2006-07 has been considered at 23,863.20 million units based on CEA's generation targets for FY 2006-07, HERC determined generation in respect of HPGCL and short term tie – ups with various inter – state electricity traders as proposed by HPGCL (the intra – state bulk supply / trading company).

The Commission directs HVPNL to file transmission loss reduction trajectory, enabling it in fixation of incentives / penalties.

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 wheeling rate for third parties within the state will be a single rate based on energy (kWh). For the purpose of this Order, the Commission approves

the rate of Rs. 0.1364 per unit of energy wheeled. This rate will apply at the transmission system level.

The transmission charges shall be levied on the Distribution licensee. The wheeling customers will be subject to single rate determined by the Commission for wheeling. In addition, for wheeling customers, 4% of the energy shall be deducted towards transmission loss and the balance is liable for delivery at the delivery point within the state.

4.5 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 shall be reduced from the transmission charges to be recovered from the distribution licensees.

4.6 Recovery of SLDC Expenses

The SLDC charge determined by the Commission for FY 2006-07 is Rs. 82.85 million. A monthly recovery of Rs. 6.904 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.

4.6.1 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.

4.6.2 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 19th 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.

4.7 Incentive

HVPNL, for its proposed transmission business has claimed incentive on achieving annual availability beyond 95% (Target availability). The Commission is of the view that the licensee has neither spelt out the procedure for calculating the availability of transmission system nor the approach to monitor it. In the absence of the above-mentioned key parameters, the Commission rejects the incentive mechanism proposed by HVPNL. **The Commission directs HVPNL to submit the requisite data / documents enabling the Commission to benchmark target availability and incentive thereto.**

4.8 Rebate

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 2006-07 approves the schedule of rebate(s) as proposed by HVPNL. The details are presented in table 4.6.

Table 4.6 - 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

4.8.1 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.

4.9 Intra – State ABT

The Commission, in order to ensure grid discipline, economic load dispatch and higher availability, would like to introduce Intra – state ABT regime in Haryana at the earliest. It is a matter of great concern that despite repeated insistence of the Commission to install Special Energy Meters (SEMs) at all the interface points between HVPNL and the Discoms, there are still about 30% of such interface points without SEMs. Resultantly, energy accounting (under ABT) especially of reactive energy drawl / injection, UI bills raised by the RLDC would be difficult and inaccurate. This is because the deviations from the schedule as well as a major part of reactive energy drawl / injection occurs at the distribution licensees and open access users (if any) end.

In light of the above, the Commission directs HVPNL to submit its preparedness with respect to the parameters mentioned below, within 3 months from the date of this order.

- 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.

5 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 2006-07 of HVPNL, for its transmission business, has been determined as Rs 3112.79 million.
- b) SLDC charges of Rs. 82.85 million for FY 2006-07 (Rs. 6.904 million per month).
- c) The tariff for transmission of Rs. 74.733 per kW per month of coincidental system peak.
- d) A wheeling charge of Rs. 0.1364 per unit (kWh) has been determined, to be recovered from other parties desiring to wheel power through the HVPNL's transmission system. 4% of the energy supplied for wheeling shall be deducted towards transmission loss.
- e) Transmission loss has been pegged at 4.4% of the gross purchase in FY 2006-07.
- f) The licensee shall implement the tariff and charges contained in this order with effect from 1st August 2006.

This order is signed, dated and issued by the Haryana Electricity Regulatory Commission on 26th July 2006.

Date: 26th July 2006.

Place: Panchkula.

T.S. Tewatia
(Member)

T.R. Dhaka
(Member)

Lt. Col. (Retd) Raghbir Singh
(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 this 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 30th September 2005.

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 2006-07, any excess interest allowed in this year shall be recovered in the subsequent ARR. The licensee is also required to ensure that the depreciation and AAD allowed to the licensee for repayment of Capex loans are not diverted and to provide documentary support of payment in the next ARR (Chapter 3, para 3.1.8)
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 (Chapter 3, Para 3.1.9).
3. The Commission views this state of affairs (damage of power transformers) with great concern & directs the utility to strictly enforce & implement the preventive maintenance schedule for all sub – station equipments including the power transformers (Chapter 3, Para 3.21).
4. The Commission considers it quite a worrisome situation (fatal and non – fatal accidents) & directs the utility to review the safety code to plug its loopholes. The workmen and supervisory staff / officers be sent for training at the manufacturers works / training institutes to hone their skills (Chapter 3, Para 3.22)

5. The Commission directs HVPNL to file transmission loss reduction trajectory, enabling it in fixation of incentives / penalties (Chapter 4, Para 4.4.2.1).
6. 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).
7. In light of the 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.