



COMMISSION'S ORDER
ON
GENERATION TARIFF FOR
HARYANA POWER GENERATION CORPORATION LIMITED
FOR FY 2006-07

May 23, 2006

HARYANA ELECTRICITY REGULATORY COMMISSION

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

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CASE No: HERC / PRO – 14 OF 2005

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

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DATE OF ORDER: May 23, 2006

In the matter of application filed by Haryana Power Generation Corporation Limited (HPGCL) for approval of generation tariff for FY 2006 -07.

Present:

Lt. Col (retd) Raghbir Singh	Chairman, HERC
Er. T.R. Dhaka	Member, HERC
Shri T.S. Tewatia	Member, HERC

**On behalf of
HPGCL:**

Smt. Jyoti Arora	Managing Director
Shri J.C.Kinra	Director/ Generation
Shri R.S. Bhatti	Chief Engineer / FTPS
Shri. M.S. Dhanda	Chief Engineer / PTPS
Shri G.K. Arora	FA & CAO
Shri. Vikas Gupta	Sr. Accounts Officer

**On behalf of
HVPNL:**

Shri. P.K. Das	Managing Director
Shri. V.K. Goyal	SE / HVPNL
Shri. D.P. Tiwari	FA / Hq.
Shri. Sanjeev Aggrawal	CAO

**On behalf of
HERC Staff:**

Shri. Lajvir Singh	Secretary
Shri. Balbir Singh	Director / Technical
Smt. Saroj Deswal	Director / Tariff
Shri. Sanjay Varma	Joint Director / Tariff
Shri. Ashu Mathur	Joint Director/ Finance
Shri Ghanshyam Prasad	Joint Director/ Technical
Shri. S.K. Madan	Joint Director/ Technical
Smt. Surbhi Jain	Dy. Director / Accounts
Shri. Rajesh Monga	Law Officer / Registrar

ORDER

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1 PROCEDURAL ASPECTS OF THE FILING

1.1 Preamble

The Haryana Electricity Regulatory Commission (HERC) has been guided by sub section 1 (a) of section 86 and sub section 1(a) of Section 62 of the Electricity Act, 2003 (EA, 2003) for determination of tariff in the case of intra-state generating company viz. Haryana Power Generation Corporation Limited (HPGCL).

1.2 Applicability of Electricity Act 2003 in Haryana

In exercise of the powers conferred by clause (d) of Section 172 of the EA, 2003, the Government of Haryana vide its Notification No. 1/4/2003 -1 Power dated 8/09/2003 declared that all the provisions of EA, 2003 except Section 121 which has not been enforced by the Central Government vide notification no. S.O 699 (E) dated 10/6/2003 shall not apply in the State of Haryana for a period of six months from the appointed date i.e. 10/6/2003. Thus, EA, 2003 came into force in the State of Haryana w.e.f. 10/12/2003.

1.3 Tariff Filing Directives

The Haryana Electricity Regulatory Commission (HERC) vide their letter No. 1934/S/HERC/SV-HPGCL/2005 dated 26th October 2005, directed HPGCL to file their tariff application by 31st December 2005, for their consideration and approval. In compliance to the Commission's above directive, HPGCL vide its Memo No. HPGC/FIN/Reg-205/3141 dated 5th December 2005, submitted the Filing of Proposed Tariff (FPT) for FY 2006-07.

A preliminary review of FPT by HERC revealed quite a few data gaps and requirement for additional & supporting data/information for a meaningful analysis of the tariff application filed by HPGCL. Accordingly, vide letter No. 2840/HERC/SV-HPGCLdef/2005 dated 28th December 2005, the Commission directed HPGCL to file detailed

supplementary / supporting information within 15 days from the date of issue of the aforesaid letter. HPGCL, vide Memo No. HPGC/FIN/Reg – 205 / 143 dated 25th January 2006 filed the requisite supplementary information to their FPT filed on 5th December 2005.

1.4 Public Proceedings

To conform to the provisions of sub section (2) of section 64 of the Electricity Act, 2003, HPGCL published its tariff application in two widely - circulating newspapers in Haryana one each in Hindi and English inviting objections from the general public and interested organisations. HPGCL, by way of public notice, informed the general public about the salient features of the FPT, sources of availability of the relevant documents in respect of the petition and an invitation to the public / interested organisations to file their objections, if any, by 13th January 2006. The public notice issued by HPGCL appeared in the following newspapers:

Table 1.1 Public Notice by HPGCL

Name of Newspaper	Language	Date of Publication
The Indian Express	English	14/12/2005
Amar Ujala	Hindi	14/12/2005

In response to the above public notices issued by HPGCL no objection(s) was received by the deadline i.e. 13/01/2005 for filing written objections.

The Commission issued a public notice on 9th February 2006 informing the public, interested persons / organisations that a public hearing is scheduled on Monday 6th March 2006 at 11.00 A.M in the conference hall of the HERC in respect of determination of generation tariff application for FY 2006-07 filed by HPGCL for approval of the Commission. The last date for filing objections was determined as 5.00 P.M. on 27th February 2006. The public notice was issued in the newspapers, as mentioned in table 1.2, having wide circulation in the State of Haryana: -

Table 1.2 Public Notice by HERC

Name of Newspaper	Language / Edition	Date of Publication
Hindustan Times	English / Delhi & Chandigarh	9/2/2006
Amar Ujala	Hindi / Chandigarh	9/2/2006

In response to the public notice issued by the petitioner i.e. HPGCL and subsequently by the Commission, no objection / suggestion was received from any interested person / organisation or any other stakeholder.

1.5 Public Hearing

The Commission conducted public hearing on 6th March 2006. The Chairman HERC, in his opening remarks, reiterated that the directions and regulations / guidelines issued by the Commission should be meticulously followed. He also commented on non – compliance by HPGCL with respect to preparation of Fixed Assets Register (FAR) and clearing the backlog of getting company's accounts audited. Further, considering the fact that no objection was received from the public or any other stakeholders and in view of the technical nature of HPGCL's petition, the Commission allowed the HERC staff to intervene on behalf of the public / consumers. They were also directed to submit their objections, raised during the public hearing, in writing, to which HPGCL was to reply within a week's time. Accordingly, the staff suggestions / objections and queries raised by the Members of the Commission during the public hearing on the FPT under consideration were forwarded to HPGCL on 9/03/2006 vide letter no. 3381/HERC/SV for submission of their written reply within a week of the date of issue of the letter.

HPGCL vide their Memo No. HPGC/FIN/Reg-205/415 dated 21/03/2006, submitted the replies on the observations of the HERC staff and Member Er. T.R. Dhaka on the HPGCL's Generation Tariff for FY 2006-07.

The Chairman invited HPGCL to make their general presentation and directed them to reply to the specific issues that were raised during the

course of the public hearing. The Managing Director of HPGCL orally responded to several objections raised by the HERC staff. Director / Generation HPGCL and FA cum CAO HPGCL too dealt with the technical and commercial issues respectively.

1.6 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 generation tariff of HPGCL for FY 2006-07.

Shri. Anand Dev, CEDE, Northern Railway was of the view that the performance of HPGCL plants ought to conform to norms of operation laid down by CERC. He was in favour of fixing annual target for various performance parameters of such of the generating units, which are not covered by the CERC Regulations in order to maintain pressure on HPGCL for achieving the same.

Keeping in view the poor quality of indigenously available coal apart from its shortage in the country, Shri. Anand Dev, CEDE, Northern Railway was of the view that the HPGCL may go in for limited quantity of imported coal in order to improve important performance parameters. He also appraised the SAC about steps taken by the Railways in controlling the loss of coal in transit namely moving the coal rakes in block, avoiding stoppage of coal rakes in route, intensified patrolling in yards where the stoppage of coal rakes are unavoidable, deployment of armed railway force for controlling theft / pilferage at critical locations etc. In case the quantum and location of theft / pilferages is given, Railways may extend help in tackling the situation by way of further alerting the Security and Operating staff on way to coal rakes. Covered wagons, if available, may also be requisitioned for carrying coal where the chances of theft are nil. He further suggested that for regular procurement of stores efficiently, Web based Electronic

procurement system should be adopted as done by organisations like Railways. In this system, tender notices are published on Web site and the vendors can download documents directly. For this, vendor is required to obtain a Digital Signature Certificate as per Indian I.T. Act, 2000 from Licensed Certifying Authority like M/s MTNL, M/s Safescript, M/s TCS, M/s (n) Code Solutions etc. This will not only make the process transparent but also eliminate the 'outside interference'. Shri. G.C. Narang, representative of the Confederation of Indian Industries (CII) was of the view that the Railways have reduced the freight charges, which should be passed on by HPGCL to the consumers by way of reduction in its generation tariff.

Shri.T.S.Tewatia, Member, HERC while replying to the observation of the Managing Director HPGCL that the longer distance from the coal field also contribute to higher loss of coal in transit, was of the view that the generating station situated in Punjab are at a greater distance in comparison to Haryana whereas transit loss of coal in case of Punjab's generating stations is less when compared to Haryana.

Er. T.R. Dhaka, Member HERC, observed that the reference of 14% return on equity by HPGCL as allowed by CERC is not relevant because the lower return on equity claimed by HPGCL is as per the resolution adopted by HPGCL on the recommendations of Haryana Government.

While responding to the above observation of Member HERC, and that of Mr. Anand Dev, CEDE, Northern Railways, Mrs. Jyoti Arora, MD, HPGCL explained the performance position of the generating company and highlighted the various actions taken (by them) to improve the performance of old generating stations in Haryana. She informed the SAC that HPGCL's boilers are not suitable to the imported coal. However, coal so imported is being used after blending with the coal sourced from Coal India Limited Collieries. HPGCL is in the process of appointing coal agents, which will help reduce the coal loss in transit. The plants are of old vintage and technology, hence there is not much

of scope for the improvement and the ground reality should be accepted. Further, MD, HPGCL was in favour of allowing depreciation as per the MoP Notification despite being confronted with the fact that National Tariff Policy is quite clear on this point and recommends depreciation of generating assets in line with the norms circulated by CERC in their Regulations dated 26/03/2004.

2 VIEWS OF HERC STAFF AND HPGCL'S RESPONSE THERETO

The HERC Staff, as distinct from the three Member Commission, made oral submission of their comments / queries on the technical as well as financial parameters of the generation tariff application of HPGCL during the public hearing held on 6/03/2006. They were directed by the Commission to file the same in writing. HPGCL was directed to respond to the comments and queries raised by the staff and submit the same in writing within a week.

HPGCL, vide Memo No. HPGC / FIN / Reg-205 / 415 / dated 21 /03/ 2006, submitted their replies on the observations of the HERC Staff & Member Er.T.R. Dhaka. No written reply was submitted on the observation of Member Shri. T.S. Tewatia with respect to the economics of the proposed use of imported coal.

The point wise reply of HPGCL to the issues raised by HERC staff are presented in table 3.1 below:

Table 2.1 HERC Staff Observation and HPGCL's Response

Sr. No.	Observations of HERC Staff	HPGCL's Response
1	HPGCL has sought an upward revision in generation tariff directly affecting the power purchase cost of the Distribution Licensee UHBVNL and DHBVNL. At the HPGCL projected volume on account of energy charges the cost of power purchase for UHBVNL & DHBVNL would increase by Rs.1472.72 million, added to this would be an additional fixed cost amounting to Rupees 344.03 million. Resultantly, the rate case before the Commission imbibes a proposal for an additional Rs.1816 million. Unfortunately, both the Distribution Licensees have submitted no objection, suggestion or comments on the Generation Tariff application of HPGCL. The staff submits that the Honourable Commission may consider exercising its power under Section 94(a) i.e. Summoning and enforcing attendance of UHBVNL and DHBVNL and examining them under	An upward revision in generation tariff at the HPGCL projected volume on account of energy charges is mainly due to the effect of Fuel Surcharge Adjustment (FSA). It is submitted that the per kWh rate of HPGCL power for FY 2006-07 is the same as in FY 2005-06 after taking the effect of the FSA. So virtually there is no change in the tariff as compared to last year.

	<p>oath.</p> <p>This is essential to ensure that any escalation in generation tariff including any Fuel Price Adjustment approved by the Commission enters the cash-cycle smoothly while HPGCL is able to collect the approved tariff and FPA timely.</p>	
2	<p>The broad framework of the Tariff Policy announced by the Government of India revolves around increased efficiency and a transition path. The operating norms (technical) submitted by the staff dwells on these principles. HPGCL should also be directed to reckon with these principles while submitting its generation tariff application.</p>	<p>The Government of India announced the Tariff Policy on 6th January 2006, whereas HPGCL has filed the tariff application for FY 2006-07 on 7th December 2005. However, the principles of tariff policy like: "The norms should be efficient, relatable to the past performance, capable of achievement and progressively reflecting increased efficiencies and may also take into consideration the latest technological advancement, fuel, vintage of equipments, nature of operations, level of service to be provided to consumers etc. continued and proven inefficiency must be controlled and penalized" have been taken into account as HPGCL has kept the norms for FY 2006-07 as approved by HERC for FY 2005-06.</p>
3	<p>The Interest and finance charges allowed by the Commission for Capital Expenditure related loans were Rs.167.32 Crore (FY 2004-05) and Rs. 2324.91 million (FY 2005-06). Thus, in the last two years the Commission has allowed an interest cost of Rs.399.811 Crore. (@9.5% interest the amount of loan would be in excess of Rs.450 Crores). The staff submits that unless the proposed Capex loans are correlated to physical progress in the operating norms, the same should not be allowed. Each loan should be project specific and accompanied with cost – benefit analysis.</p>	<p>The Interest and finance charges allowed by the Commission for Capital Expenditure related loans during the last two years is in the line with the Govt. of India, Tariff Policy. As far as high rate of interest is concerned, HPGCL has got restructured loans from the Power Finance Corporation Ltd. and LIC of India. The status of swapping of loans has already been submitted to the HERC in the Tariff Application for FY 2006-07 in the replies of directives.</p> <p>There is no parameter to measure the correlation of proposed Capex loans with physical progress in the operating norms. More than 90% of loans are taken for funding the projects except some loans for R&M activities. Each loan is project specific and has been taken after making cost – benefit analysis in the respective project reports.</p>
4	<p>The Haryana Electricity Regulatory Commission approved generation target in respect of FTPS in FY 2005 – 06 was 896 million units. The same has been projected for FY 2006 – 07 by HPGCL at 850 MU i.e. a reduction of 46 million units. The Commission in its previous</p>	<p>The actual Gross generation of FTPS, Faridabad is 738 MUs during FY 2005-06 against 896 MUs approved by HERC. HPGCL is not going to achieve the target of 850 MUs during FY 2005-06 as proposed in the FY 2006-07 due to the reasons that the unit 3, FTPS, Faridabad remained under forced shut down for more than two months i.e. 25/10/2005 to 01/01/2006</p>

	<p>order had reiterated that HPGCL needs to take the aberration of PLFs from nationally acceptable levels in all seriousness. Consequently, it is submitted that the Commission may approve 940 million units at a PLF of 65% as against 62% approved for FY 2005 – 06.</p> <p>The reply of HPGCL incorporates factors like: -</p> <p>poor coal quality / poor water quality / Overhauling constraints due to power shortage / phasing out of the plants.</p> <p>The Commission, for the past three years is aware of these factors. No perceivable efforts are visible to achieve any improvement whatsoever in any of the parameter listed by HPGCL justifying poor performance of its Faridabad based powerhouses. Thus it may not be appropriate to pass-on the in-efficiencies that put a question mark on the reasonableness of the cost of power from a fully depreciated plant. It may not be out of place to mention that FTPS achieved a PLF of 67.32% in FY 2002 – 03. This level should have been sustained. The staff submits that as against the FY 2005-06 PLF of 62% allowed by the Commission, the target should be fixed at 65% in FY 2006-07.</p> <p>The Commission during FY 2004-05 & FY 2005-06 not only allowed all the normative expenditures but also allowed a Return on Equity to the tune of Rs.134.9 million (FY05) and Rs.456.44 million (FY06)</p>	<p>on account of fire in the turbine area.</p> <p>Further, it has been decided to phase out these Units of FTPS, Faridabad by 2011-12, as these are very old and of obsolete design and cost of generation from these units are very high. As such no major R&M can be carried out. Some need based R&M schemes for raw water treatment and provision for debris filters at the inlet of cooling water etc. were proposed for FTPS, Faridabad, but keeping in view the decision to phase out these units only essential R&M required for sustenance of these old units is proposed to be carried out.</p> <p>As such PLF levels as proposed in the tariff application by the HPGCL may be allowed.</p> <p>As per CERC norms, Return on Equity is admissible @ 14%. In order to avoid the rise in consumer tariff ROE was claimed @ 5% during FY 2005 and @ 8% during FY 2006 by HPGCL which was approved by Hon'ble Commission.</p>
<p>5</p>	<p>Besides cost and quality of coal, the single factor that reflects the efficiency of a thermal powerhouse is the Station Heat Rate (SHR). An optimum heat rate within 10% of the design value not only economises the usage of fast depleting coal reserves but also reduces the environmental consequences of carbon emission which put heavy burden on the society, so far not quantified in India, but would become a reality soon.</p> <p>In the case of FTPS the design value is 2767 Kcal / kWh, the Commission considered 3970 Kcal/kWh for working</p>	<p>As per Govt. of India, Tariff Policy suitable performance norms of operations together with incentives and disincentives would need to be evolved along with appropriate arrangement for sharing the gains of efficient operations with the consumers. Except for the cases referred to in Para 5.3 (h)(2) of the Tariff Policy, the operating parameters in tariffs should be at “normative levels” only and not at “lower of normative and actual”. This is essential to encourage better operating performance. The norms should be efficient, relatable to past performance, capable of achievement and progressively reflecting increased efficiencies and may also take into consideration the latest technological advancements, fuel, vintage of equipments, nature of operations, level</p>

	<p>out fuel cost in FY 2005-06. Allowing a 10% over the design value we arrive at a value of 3044 Kcal / kWh. The difference between those allowed by the Commission and those obtained after allowing 10% mark – up is 926 Kcal / kWh. Staggering this over a period of 5 years the annualised figure works out to 185 kcal / kWh. Consequently, the staff recommends that the Commission allow 3785 Kcal / kWh after accounting for efficiency gain of 185 Kcal / kWh in FY 2006-07. This crucial parameter too has not shown the desired improvement in the last 3 years vis – a – vis the SHR considered by the Commission in its previous tariff orders. Based on the above principle the staff submits SHR of 3310 Kcal / kWh in respect of PTPS (1-4) and 2700 Kcal / kWh in respect of PTPS (Unit 5). The reported actual SHR have not shown any sign of improvement</p> <table border="1" data-bbox="292 898 699 1494"> <thead> <tr> <th></th> <th>HERC (FY 2004-05)</th> <th>HPGCL (Actual)</th> </tr> </thead> <tbody> <tr> <td>PTPS (1-4)</td> <td>3500 Kcal / kWh.</td> <td>3519 Kcal/ kWh</td> </tr> <tr> <td>PTPS (5)</td> <td>2786 Kcal / kWh.</td> <td>2835 Kcal / kWh</td> </tr> <tr> <td>F TPS (1-3)</td> <td>3970 Kcal / kWh.</td> <td>4204 Kcal / kWh</td> </tr> </tbody> </table>		HERC (FY 2004-05)	HPGCL (Actual)	PTPS (1-4)	3500 Kcal / kWh.	3519 Kcal/ kWh	PTPS (5)	2786 Kcal / kWh.	2835 Kcal / kWh	F TPS (1-3)	3970 Kcal / kWh.	4204 Kcal / kWh	<p>of service to be provided to consumers etc. Continued and proven inefficiency must be controlled and penalized.</p> <p>Keeping in view the tariff policy, HPGCL may be allowed Station Heat Rate as proposed in the Tariff Application for FY 2006-07, as were allowed by the HERC for FY 2005-06.</p>
	HERC (FY 2004-05)	HPGCL (Actual)												
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6	<p>As far as specific fuel oil consumption is concerned, the units have shown no improvement.</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 30%;"></th> <th style="width: 35%;">HERC(FY 2004-05)</th> <th style="width: 35%;">HPGCL (Actual)</th> </tr> </thead> <tbody> <tr> <td>PTPS (1-4)</td> <td style="text-align: center;">4.50 ml/KWh</td> <td style="text-align: center;">4.77 ml / kWh (upto Oct 05)</td> </tr> <tr> <td>FTPS (1-3)</td> <td style="text-align: center;">4.00 ml / kWh</td> <td style="text-align: center;">5.30 ml / kWh (upto Oct.2005)</td> </tr> </tbody> </table> <p>Specific fuel oil consumption especially in the case of PTPS units (1-4) and FTPS at 4.2 ml/kwh and 4.0 ml/kwh are above any norms. The Commission had also directed HPGCL to take necessary measure to reduce specific fuel oil consumption but to no avail. The staff submits that these should be marginally lowered to 4 ml/kwh and 3.5 ml/kwh respectively for determining cost of secondary fuel oil during FY 2006-07.</p>		HERC(FY 2004-05)	HPGCL (Actual)	PTPS (1-4)	4.50 ml/KWh	4.77 ml / kWh (upto Oct 05)	FTPS (1-3)	4.00 ml / kWh	5.30 ml / kWh (upto Oct.2005)	<p>Actual Specific fuel oil consumption for the Units 1 to 4, PTPS, Panipat and FTPS, Faridabad up to February 2006 is as under as compared to that proposed by HPGCL: -</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 15%;"></th> <th style="width: 45%;">Proposed by HPGCL for FY 2006-07</th> <th style="width: 40%;">Actual Specific Oil Consumption</th> </tr> </thead> <tbody> <tr> <td>PTPS (1-4)</td> <td style="text-align: center;">4.25 ml/kWh</td> <td style="text-align: center;">5.49 ml / kWh</td> </tr> <tr> <td>FTPS (1-3)</td> <td style="text-align: center;">4.00 ml / kWh</td> <td style="text-align: center;">5.54 ml/ kWh</td> </tr> </tbody> </table> <p>During the current year, the Specific Oil Consumption has remained high due to:</p> <p>i) Forced outage of unit-2 from 03.01.2005 to 14.05.2005 due to damage of turbine bearings during severe grid disturbance in the first week of January 2005.</p> <p>ii) In 110 MW Unit 3 excessive oil has been consumed during July 2005 and December 2005 due to repeated outage on account of persistent high Vibration problem and the trim balancing of the machine carried out at site by BHEL engineers resulting into high SOC of 11.87ml/kWh.</p> <p>iii) Frequent backing down during April-September 2005, which resulted into generation loss of 248 MUs, resulting into increase in no. of start-ups and high oil consumption.</p> <p>Receipt of extremely wet coal during the rainy season and with heavy stones and boulders, which cause choking of coal mills, which resulted into their outage and necessitated oil support to save the unit from tripping.</p> <p>Due to the above reasons, the Power Station was forced to use reject coal, which also requires excessive oil support.</p> <p>However, as directed, HPGCL is taking the necessary measures to reduce the Specific Oil Consumption to the level of national norms as already intimated in the supplementary information.</p> <p><u>FTPS, Faridabad</u></p> <p>During 2006-07, the Unit 1 is likely to remain under annual overhaul for 29 days and Unit 2 is scheduled to</p>		Proposed by HPGCL for FY 2006-07	Actual Specific Oil Consumption	PTPS (1-4)	4.25 ml/kWh	5.49 ml / kWh	FTPS (1-3)	4.00 ml / kWh	5.54 ml/ kWh
	HERC(FY 2004-05)	HPGCL (Actual)																		
PTPS (1-4)	4.50 ml/KWh	4.77 ml / kWh (upto Oct 05)																		
FTPS (1-3)	4.00 ml / kWh	5.30 ml / kWh (upto Oct.2005)																		
	Proposed by HPGCL for FY 2006-07	Actual Specific Oil Consumption																		
PTPS (1-4)	4.25 ml/kWh	5.49 ml / kWh																		
FTPS (1-3)	4.00 ml / kWh	5.54 ml/ kWh																		

		<p>remain under Capital overhauling for 45 days. During FY 2005-06 the average GCV of coal received up to February 06 is 4092 K.cal/kg against designed value of GCV 5500\pm200 K.cal/ kg. As such frequent oil support is required for proper combustion of coal, which increases specific oil consumption. The Unit 3 of FTPS was under forced outage from 25.10.2005 to 01.01.2006 and excessive amount of oil was consumed during revival and stabilisation of the unit during January 2006.</p> <p>Keeping in view of the above HERC is requested to allow specific oil consumption as proposed in the Tariff Application for FY 2006-07.</p>									
<p>7</p>	<p>Auxiliary energy consumption in the case of PTPS (Units 1-4) and FTPS (Units 1-3) are far from comfortable. The Commission, in its previous order observed that Auxiliary energy consumption exceeding 9.5% in respect of PTPS Units (1-4) and FTPS depicts inefficiency.</p> <table border="1" data-bbox="293 1476 743 1859"> <thead> <tr> <th></th> <th>HERC (FY 2004 – 05)</th> <th>HPGCL (Actual)</th> </tr> </thead> <tbody> <tr> <td>PTPS (1-4)</td> <td>10.5%</td> <td>11.74%</td> </tr> <tr> <td>FTPS</td> <td>12.5%</td> <td>12.67%</td> </tr> </tbody> </table> <p>The staff submits that keeping in view progressive improvement until optimum levels are reached, the Commission should allow 10% in the case of PTPS</p>		HERC (FY 2004 – 05)	HPGCL (Actual)	PTPS (1-4)	10.5%	11.74%	FTPS	12.5%	12.67%	<p>As pointed by the staff of the Commission that as per the tariff policy the Central Commission, in consultation with the CEA, shall notify operating norms from time to time. However, SERC may fix relaxed norms suitably and draw a transition path for achieving the norms notified by the Central Commission.</p> <p>The Central Electricity Authority has finalized auxiliary power consumption norms of 12% for units (with capacity less than 200 MW) with cooling towers. The HPGCL has claimed auxiliary power consumption of 11% for Unit 1-4 PTPS Panipat and 12.5% for FTPS for FY 2007. Actual auxiliary power consumption up to February 2006 was 11.74% and 13.03% respectively, which are very near to the norms approved by HERC for FY 2005-06 for these units.</p> <p>It is further submitted that all out efforts are being made to bring down the auxiliary power consumption. As the Unit 1,3 & 4 are old units, the same are being run at (reduced) load, to avoid frequent tripping of units due to boiler tube failures, which ultimately results in less generation than the rated generation. Since the auxiliary consumption remains constant even at this reduced generation, which result in increase percentage auxiliary consumption.</p>
	HERC (FY 2004 – 05)	HPGCL (Actual)									
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FTPS	12.5%	12.67%									

	<p>(1-4) and 12% in the case of FTPS.</p> <p>As per the tariff policy the Central Commission, in consultation with the CEA, shall notify operating norms from time to time. However, SERC may fix relaxed norms suitably and draw a transition path for achieving the norms notified by the Central Commission. In its reply to the deficiency letter of the Commission HPGCL at point No. 11 has submitted that CEA has approved auxiliary norms of 12% for units with capacity less than 200 MW with cooling tower. If the same has been adopted and notified by the Central Commission HPGCL may like to submit the same.</p>	<p>Although, the operating norms finalised by CEA has not yet been notified by the CERC but these norms being reasonable should be adopted by the SERCs and notified accordingly.</p> <p>HERC is requested to allow the Auxiliary power consumption as proposed by the HPGCL, in the tariff application for FY 2006-07.</p>
8	<p>The Commission allowed transit loss of coal to the extent of 3% while allowing the quantum of coal during FY 2004-05 & 2005-06. The staff submits that sufficient transition period has been allowed by the Commission for reining in the transit loss. Resultantly, for FY 2006-07 it should be marginally lowered to 2.5% and ultimately brought down to 0.8% as per CERC (non - pithead) norm.</p>	<p>The dispatch and transportation of coal calls for inter - agency coordination between Railways and Coal Companies. HPGCL does not have much control in this area.</p> <p>Railways do not own the responsibilities for loss of coal in transit. The coal is transported in open wagons from coalmines from a distance of more than 1000 KMs. and there are high chances of pilferage of coal en-route.</p> <p>HPGCL had brought down the transit loss from 6.58% in 2001-02 to 4.98% in 2005-06 (up to December 2005). HPGCL has appointed M/s Naresh Kumar & Co. as Coal Agents w.e.f. 10.03.2006 as one of the measures to minimize the loss of coal in transit.</p> <p>Keeping in view the fact that losses of coal in transit are beyond the control of HPGCL and the efficiency measures taken to improve the transit loss by HPGCL, transit loss of coal may be kept at 3% for the FY 2006-07.</p>

9	<p>Increase in cost of secondary fuel oil considered is phenomenal.</p> <table border="1" data-bbox="300 318 743 667"> <thead> <tr> <th></th> <th>PTPS</th> <th>FTPS</th> </tr> </thead> <tbody> <tr> <td>HERC (FY 2005-06)</td> <td>11,762</td> <td>22,427</td> </tr> <tr> <td>HPGCL (FY 2006-07)</td> <td>19,147.7</td> <td>29,226.7</td> </tr> </tbody> </table> <p>The weighted (volume used as weights) average cost based on the invoices submitted by HPGCL works out to Rs.11,411.94 (PTPS) & Rs. 27,464 (FTPS).</p>		PTPS	FTPS	HERC (FY 2005-06)	11,762	22,427	HPGCL (FY 2006-07)	19,147.7	29,226.7	<p>The difference in cost of secondary fuel oil for FTSP and PTPS is due to the reason that the HPGCL had taken the prices of oil for the month of September 2005 only, whereas the staff of HERC has taken the weighted average rate for the period from April 2005 to September 2005.</p> <p>It is pertinent to mention here that the rates of secondary fuel oil for PTPS, Panipat and FTSP, Faridabad since October 2005 are around or more than the rates taken by the HPGCL in the tariff application for FY 2006-07. In the context, It is submitted that for the tariff for FY 2006-07, the last available rate of oil should be taken; otherwise an inbuilt FSA of huge amount will be there and HPGCL has to take the working capital loans to plug the gap. The latest rates available for oil is given as under: -</p> <table border="1" data-bbox="810 779 1414 1223"> <thead> <tr> <th></th> <th>PTPS</th> <th>FTPS</th> </tr> </thead> <tbody> <tr> <td>HERC (calculated by HERC Staff)</td> <td>11,762</td> <td>22,427</td> </tr> <tr> <td>HPGCL (December 05)</td> <td>19,095.22</td> <td>29,441.73</td> </tr> <tr> <td>HPGCL (Proposal)</td> <td>19,147.7</td> <td>29,226.7</td> </tr> </tbody> </table> <p>Keeping in view the above it is requested that the HERC may allow the rates of oil as proposed by the HPGCL in the tariff application and it will help to curtail the amount of FSA during the FY 2006-07.</p>		PTPS	FTPS	HERC (calculated by HERC Staff)	11,762	22,427	HPGCL (December 05)	19,095.22	29,441.73	HPGCL (Proposal)	19,147.7	29,226.7
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HPGCL (Proposal)	19,147.7	29,226.7																					
10	<p>No ROE should be allowed to PTPS (1-4) and FTSP (1-3) as these units are operating at much lower than the desired norm. The purpose of allowing ROE i.e. internal accrual to be ploughed back for efficiency gains, may not serve the purpose as the same will go into funding of losses as these units are not operating at the norm allowed by the Commission.</p>	<p>As per CERC norms, Return on Equity (ROE) is admissible @ 14%. In order to avoid the rise in consumer tariff HPGCL has claimed ROE @ 10% only during FY 2006-07, which may be allowed.</p>																					

11	<p>It is submitted that the Commission should disallow interest on any borrowings not approved by it. The Commission allows interest on borrowings for capital expenditure as well as interest on borrowings for working capital loans. Resultantly interest on transitional loan amounting to Rs.141.12 million for FY 2006-07 may be disallowed.</p>	<p>The HPGCL was operating its affairs on pass through basis up to 2003-04. During this period all the efficiencies were passed on to HVPNL. Even miscellaneous revenue etc. realized by way of sale of scrap etc. was also passed on to HVPNL. The repayment of loans was to be met out of depreciation accruals. Depreciation accruals were inadequate and there was an accumulated gap between depreciation accruals and repayments of loans of Rs. 171.63 Crore up to 31.3.2004 and Rs. 272.44 Crore up to FY 2004-05.</p> <p>To bridge the gap, a transitional loan of Rs. 275.23 Crore was raised from PFC during FY 2003-04 and FY 2004-05. Out of above, an amount of Rs.81.88 Crore has already been repaid during 2005-06. It is pertinent to mention here that if HPGCL had not raised the transitional loan during FY 2003-04 and FY 2004-05, HPGCL would have been in financial crisis.</p>
12	<p>Minimising expensive working capital by way of managing creditors and debtors needs to be explored. As against the above HPGCL has conveniently applied the CERC norms and worked out a working capital requirement of Rs.7383.96 million (working capital without FSA) and Rs.8583.96 million with FSA (Rs.772.56 millions as interest cost at the rate of 9% has been claimed).</p> <p>Since there is a large variation in the normative working capital requirement i.e. 7383.96 million and the actual say Rs.58 million (FY 2003-04) the Commission may restrict the working capital requirement to the actual level worked out on the basis of leads and lags (in receivable and payables)</p>	<p>HERC has rightly said that HPGCL had applied the CERC norms to work out the Working Capital requirements, which is an acceptable norm. HERC has allowed a normative working capital of Rs. 5491.30 million for FY 2004-05 in its tariff order dated 14.05.2004 against actual working capital of Rs. 6988.61 million as per provisional balance sheet as on 31.03.2005 (already supplied to HERC along with Supplementary Information). It is to be pointed that HERC has allowed Rs. 3284.30 million on account of receivables for 2 months whereas the actual amount of receivables as on 31.03.2005 is Rs. 5105.85 millions and the same will be the case in FY 2006-07. So, HPGCL is claiming less working capital being on normative basis against the higher actual working capital.</p> <p>HERC is requested to allow the normative working capital as claimed in tariff application for FY 2006-07.</p>
13	<p>As per schedule 19 of the provisional balance sheet for the year ended 31st March 2005, the net employee cost is Rs.1043.62 million. It is submitted that the Commission may allow 4% year-to-year increase over the reported actual for FY 2006-07. The amount works out to Rs.1128 million.</p>	<p>O&M charges (Repair & Maintenance, Employees Cost and Admn. Expenses) claimed by HPGCL for FY 2006-07 are based on the CERC Norms. In the tariff policy issued by Govt. of India, Central Commission, in consultation with the CEA, shall notify operating norms from time to time for generation & transmission. The SERC would adopt these norms. In cases where operations have been much below the norms for many previous years, the SERCs may fix relaxed norms. So the Hon'ble Commission is requested to allow employees cost as claimed by HPGCL in the tariff application.</p>

	Based on the operating parameters submitted by the staff, the fuel cost (Rs/kWh) works out as under:			While filing the tariff application for FY 2006-07, HPGCL has taken the operating norms as approved by the HERC in the tariff application for FY 2005-06. The increase shown in the comparative statement of FY 2005-06 & 2006-07 is mainly due the increase in the variable costs i.e. increase in the prices of coal & fuel oils and low GCV of Coal etc. If the impact of FSA is taken into account then virtually there will not be any increase in the tariff for FY 2006-07.
	HERC (FY 2005-06)	HPGCL (FY2006-07) proposed)	Staff Submission (FY 2006-07)	
PTPS (1-4)	2.04	2.25	2.06	
PTPS (5)	1.58	1.70	1.64	
PTPS (6)	1.44	1.58	1.52	
PTPS (7)	1.46	1.58	1.52	
PTPS (8)	1.48	1.58	1.52	
FTPS (1-3)	2.50	2.90	2.67	

2.1 Member's queries

Sr. No.	Observations of Member Er. T .R. Dhaka	Replies of HPGCL						
1(a)	<p>Have the annual overhauling/preventive maintenance of the following generating units scheduled as per the period shown against each been carried out since the submission of the ARR under reference?</p> <table border="1"> <thead> <tr> <th>Sr. No</th> <th>Generating Unit</th> <th>Overhaul/Preventive Mtc. Schedule</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>PTPS Unit VI</td> <td>1.10.2005 to 30.10.05</td> </tr> </tbody> </table>	Sr. No	Generating Unit	Overhaul/Preventive Mtc. Schedule	1	PTPS Unit VI	1.10.2005 to 30.10.05	<p>As 250 MW Unit-7, PTPS, Panipat was not available from 29.07.2005 to 19.01.2006 due to fault in Generator, the overhauling of Unit 6 & Unit 1, Panipat was deferred. The preventive maintenance works on Unit-I have been carried out from 14.02.2006 to 28.02.2006 while the overhauling of Unit 6 has been scheduled from 10.04.2006 to 15.05.2006.</p> <p>Similarly, the overhauling of 55 MW, Unit 1, FTPS, Faridabad was also deferred. The unit is presently under overhauling and is scheduled to come on</p>
Sr. No	Generating Unit	Overhaul/Preventive Mtc. Schedule						
1	PTPS Unit VI	1.10.2005 to 30.10.05						

	2.	PTPS Unit I	16.09.2005 to 30.09.2005	bars by 30.04.2006.
	3.	FTPS Unit-I	01.10.2005 to 15.11.2005	
	4.	FTPS Unit-II	01.09.2005 to 15.09.2005	
b)	<p>Have the activities planned during overhauling of PTPS Unit II in February 2006 as per action plan been carried since the submission of ARR under reference?</p> <p>It shall be appreciated that the postponement of overhauling/preventive maintenance activity has a deleterious effect on the generating units with consequent deterioration in the major performance parameters having a direct bearing on the generation tariff. HPGCL in their generation tariff filings have been comparing their performance of a given year with the average of previous three years for various performance parameters, which is likely to be higher in case the scheduled overhauling/preventive maintenance activity is not carried out by the company.</p>			<p>As Unit-1 & Unit 5, Panipat were taken under overhauling in February 2006, the overhauling of Unit-2 has been deferred to 2006-07.</p> <p>HPGCL is fully conscious of the fact that the scheduled overhauling/ preventive maintenance activity helps in improving the performance of the generating units. At the same time, the supply of power to the State also remains the prime concern of HPGCL. In the event of forced shut down of any unit, the scheduled overhauling/preventive maintenance work on a particular unit have to be deferred.</p>

<p>2.</p>	<p>It has been made out by HPGCL that frequent back-down message depending on the grid frequency tends to hike the specific oil consumption and auxiliary energy consumption. For most part of the year 2005-06 Northern Region has been operating at comparatively low frequency (ies) and many a time at critically low frequency (ies). So there ought not to be practically any occasion to backing down units on this count. Thus, this argument for enhanced said operating parameters is inappropriate/ inapplicable. Moreover, HPGCL has been handling the bulk supply and trading activity since 10.06.2005 and the aspect of backing down the generating units too falls in their domain.</p>	<p>It may be informed that during 2005-06, there has been generally low system frequency from October 2005 onwards. As such, there has been no backing down from October 2005 onwards.</p> <p>Regarding April-September 2005, Units had to be backed down which resulted into generation loss of 248 MUs. Particularly during July & September 2005, the units had to be backed down frequently resulting into generation loss of about 99 MUs. Partial Load running & frequent starts/stops of the units during these two months resulted into a high specific oil consumption of 10.58 ml/kWh and 5.05 ml/kWh respectively and Auxiliary Consumption of 10.84 % and 10.51% respectively. At the end of February 2006, Specific oil consumption and Auxiliary Consumption of our Thermal Plants have come down to 3.89 ml/kWh and 10.08 %.</p> <p>It is a fact that the trading activity has been transferred to the HPGCL and the backing down of the generating units too falls in its domain w.e.f.10.06.2005, but it may be appreciated that the backing down is dependent on the prevailing grid conditions/ frequency.</p>															
<p>3.</p>	<p>HPGCL has made out that the major operating parameters, such as, station heat rate, auxiliary power consumption and specific oil consumption for their 110 MW units at PTPS and 55 MW machines at FTPS compare favourably with machines of the same vintage. It was asked that the above operating parameters for 110 MW machines operating at Bhatinda/ Ropar in PSEB and Kota in Rajasthan may be submitted for appreciation of the Commission. As per the information available with the Commission, the National Average Station Heat Rate of 55 MW machines of the same vintage as FTPS is 3056 K.Cal/kWh, maximum in the sample is 3286 K.cal/kWh, as per the detail given in the deficiency letter (issued by the Commission) on the ARR under consideration.</p>	<p>The performance figures of FTPS as compared with IP stations of similar capacity for FY 2004-05 can be seen in the table below: -</p> <table border="1" data-bbox="943 1554 1422 1951"> <thead> <tr> <th></th> <th>PLF (%)</th> <th>SOC (ml /kWh)</th> <th>SHR (Kcal/ kWh)</th> <th>APC (%)</th> </tr> </thead> <tbody> <tr> <td>F'bad</td> <td>60.04</td> <td>4.45</td> <td>4186</td> <td>12.94</td> </tr> <tr> <td>IPS</td> <td>47.39</td> <td>8.82</td> <td>3648</td> <td>9.00</td> </tr> </tbody> </table> <p>It may be mentioned that the boilers of IP power stations are of better design, corner fired, which</p>		PLF (%)	SOC (ml /kWh)	SHR (Kcal/ kWh)	APC (%)	F'bad	60.04	4.45	4186	12.94	IPS	47.39	8.82	3648	9.00
	PLF (%)	SOC (ml /kWh)	SHR (Kcal/ kWh)	APC (%)													
F'bad	60.04	4.45	4186	12.94													
IPS	47.39	8.82	3648	9.00													

		<p>perform better as compared to boilers of units 1&2 of FTPS. There is no provision of cooling tower at these power stations being “once through cooling water system” thereby leading to lesser Auxiliary Consumption. The other power stations are equipped with bowl mills, which perform much better than the hammer/beater type mills at FTPS, Faridabad, which require a shut down of 3 hours after every 100 hours of operation.</p> <p>The R&M Work of unit-I, PTPS, Panipat has already been awarded to M/s BHEL and it is likely to be completed by March 2007. The R&M of Unit-2 has already been carried out and the same is performing satisfactorily and for R&M of Unit-3&4 the scope of work has been finalized. RLA Studies of Unit –1,3 &4 had already been carried out. The performance parameters of 110 MW units of Kota & Bhatinda were not available and hence could not be compared with the performance parameters of Panipat. However, after completion of R&M the performance of these old 110 MW units of Panipat shall become comparable with those at Bhatinda/ Ropar in PSEB and Kota in Rajasthan.</p>
4.	<p>There is urgent need to get the laboratories at PTPS & FTPS accredited from BIS/ National Accreditation Agency so as to ensure credibility to the in-house testing carried out by HPGCL. The job was required to be accomplished within six months of the issue of the order-dated 02.05.2005. It may be added that a perusal of Annexure F-Comparison of test results corresponding to 09.11.2005 showed wide variation in the values determined at FTPS & NCB Ballabgarh and, hence, the urgency of the issue.</p>	<p><u>PTPS, Panipat</u></p> <p>In case of Panipat, the NCCBM, Ballabgarh has been appointed as consultant and the required equipment for the lab has already been received and the application for accreditation of chemical lab shall be submitted to M/s NABL, New Delhi by 22.03.2006.</p> <p><u>FTPS, Faridabad</u></p> <p>M/s. National Counsel for Cement and Building Material (NCCBM), Ballabgarh has been appointed as consultant. Action is being taken to get the lab accredited at the earliest.</p>
5.	<p>HPGCL has not properly answered our query in regard to justification for allowing/approving higher per MT coal cost at FTPS in the face of the fact that the coal received there ought to be categorized in the grade applicable to the coal supplies received at PTPS based on the gross calorific value results. On the basis of the information given in Annexure E for PTPS, the monthly average GCV for first nine months of FY 2005-06 works out to be 4077 K.Cal /Kg whereas, for first eight months of FY 2005-06 it works out to be about 4125</p>	<p>The supply of coal to FTPS is being received from Central Coal Fields Ltd. from various linked collieries viz. Bhurkunda, Sirka, Gidhi- A and Sayal etc. The coal being received at FTPS is long flame and normally of Grade C. Sometimes it is of Grade B or D. The rates of coal differ from grade to grade and colliery to colliery.</p> <p>The grade of coal is determined with reference to useful heat value (UHV) declared by the coal testing agency which is a third party. Presently, the contract of coal sampling at colliery and as</p>

	<p>K.cal/Kg based on the document made available to me (by the Chief Engineer, FTPS) during my last visit to the plant. It may be confirmed that the cost of coal paid to the coal companies has taken due note of the GCV and corresponding grade in accordance with the procedure established for the purpose. Appropriate action needs to be taken to ensure better quality of coal at FTPS and thus better performance of the Plant.</p>	<p>well as at unloading (Power Station) end is with M/s Superintendence Company of India (Pvt.) Ltd.</p> <p>As regards, the rate difference as compared to Panipat, it is submitted that at PTPS maximum supply of coal of grade D & E from BCCL and the delivered rate of these grade coal exclusive of Railway Freight is Rs. 942 and Rs. 817 per MT respectively. Whereas the delivered rate of D grade coal excluding freight at FTPS varies from Rs. 1186.30 to Rs. 1259.47 per MT depending upon the colliery.</p> <p>Further, the rates of Grade C coal at FTPS are comparable with PTPS. The rates of Grade C coal at PTPS varies between Rs 1409/- to Rs. 1454/- per MT. Whereas, these rates in respect of FTPS varies between Rs. 1395.34 to 1499.86 per MT depending upon the colliery.</p>
6.	<p>As per the information submitted to the Commission, the transit loss of coal for PTPS and FTPS has considerably increased during FY 2005-06 when compared to the corresponding figure for FY 2004-05. While considering the ARR for 2004-05, it was made out by HPGCL that coal Agent engaged for the purpose did contribute to the reduced transit loss during 2004-05. Why has no Coal Agent been engaged for 2005-06 needs to be explained?</p>	<p>Exercise of appointing Coal Agent was carried out during 2004-05 when LOI was issued to M/s Naresh Kumar & Company on 27.12.2004 with the approval of Special High Power Purchase Committee (SHPPC). As the POL (Penalty on overloading) charges had been increased 6 times by Railways during the intervening period of tendering and award of LOI, the firm did not accept the order. After calling fresh tenders, the Coal Agent, M/s Naresh Kumar & Co. has been appointed w.e.f. 10.03.2006 with the approval of SHPPC.</p>
7.	<p>HPGCL have been making out in their ARRs that the generating units at FTPS would be phased out in 4/5 or 5/6 years without firming up the year. Please flag the 'year' of de-commissioning the units at FTPS.</p>	<p>The units at FTPS are likely to be phased out during 2011-12.</p>
8 (a)	<p>What is the status of replacing existing 220 Kv CTs on GT-V, GT-VI, ST-II, ST-III and ST-IV at PTPS by 0.2 accuracy class metering CTs. It is necessary to do so expeditiously in the interest of ensuring required standard of metering energy on inter-face points?.</p>	<p>The 220 KV CTs are proposed to be procured and Commissioned by October 2006.</p>
(b)	<p>Has the remote reading features of special energy meters corresponding to GT-V, GT-VI, ST-II, ST-III and ST-IV commissioned</p>	<p>Yes, remote reading features stand commissioned w.e.f. December 2005.</p>

	facilitating their reading from energy centre at Panchkula?	
9.	Has the Audit of Accounts for FY 2003-04 been completed by February 2006 as assured in the ARR? If so, please submit the required document.	The Audit of Accounts for FY 2003-04 has been completed. The Audit Report for FY 2003-04 will be submitted to the HERC after approval of the Board of Directors.
10.	Has the first instalment of repayment of PFC loan due on 15.10.2005 been paid?	The first instalment of repayment of PFC loan for Unit 7 & 8, PTPS, Panipat, which was due on 15.10.2005, has been paid on the due date.

Sh.T.S.Tewatia, Member HERC, raised the issue of coal linkage for the quarter January to March 2006 as mentioned in Annexure 'H' of HPGCL's reply to the Commission's deficiency letter. The query referred to 50, 000 MT (15 rakes per month) of imported coal wherein no landed cost, date of arrival or economics of using imported coal has been mentioned. Regarding coal linkages from various subsidiaries of Coal India Limited (CIL) the member queried about the efforts being made to ensure delivery of the desired grade of coal as it has been observed over the years, especially in the case of FTPS, the quality of coal supplied has deteriorated adversely effecting the operating parameters leading to high fuel cost per unit of electricity generated.

During the course of the public hearing the Managing Director of HPGCL stated that economics of using imported coal blended with the indigenous coal has been worked out. However, no written submission was made by the HPGCL on the above.

3 ANALYSIS OF THE TARIFF FILING & COMMISSION'S ORDER

The major items of expenditure (cost elements) and the operating parameters proposed by HPGCL for generation tariff determination and HERC approval of the same are discussed in the paragraphs that follow.

3.1 Installed capacity & capacity addition

The installed capacity of HPGCL plants as reported by them in their generation tariff application for FY 2006-07 and the presentation made before the Commission on 6/03/2006, is as per table 3.1.

Table 3.1 Installed Capacity

Particulars	Installed Capacity	Date of Commissioning
Faridabad Thermal power Station (3X55 MW) 60 MW units de-rated to 55 MW by CEA W.E.F 11/01/1990 due to technical constraints	55 MW Unit No.- 1 55 MW Unit No.- 2 55 MW Unit No.- 3	22/11/1974 06/03/1976 01/04/1981
Tau Devi Lal Thermal Power Station, Panipat (4X110 MW + 2X210 MW + 2X250 MW)	Stage-1 110 MW Unit No-1 110 MW Unit No - 2 Stage - II 110 MW Unit No - 3 110 MW Unit No - 4 Stage - III 210 MW Unit No.- 5 Stage - IV 210 MW Unit No- 6 Stage - V 250 MW Unit No - 7 250 MW Unit No - 8	01/11/1979 27/03/1980 01/11/1985 11/01/1987 28/03/1989 31/03/2001 28/09/2004 28/01/2005
WYC Hydro Electric Station, Bhudkalan (Yamunanagar) (6X8 MW and 2X7.2 MW)	Power House A 8 MW Unit No -1 8 MW Unit No - 2 Power House B 8 MW Unit No -1 8 MW Unit No - 2 Power House C 8 MW Unit No -1 8 MW Unit No - 2 Power House D 7.2 MW Unit No -1 7.2 MW Unit No - 2	29/05/1986 13/06/1986 15/05/1987 01/06/1987 27/03/1989 18/04/1989 16/04/2004 12/05/2004
Micro hydel Power station	Kakroi (0.3 MW)	Oct 1988
Grand Total	1587.7 MW	(As on 31/03/2006)

3.2 Performance of HPGCL Stations

The performance of HPGCL, as reported by the company in their presentation dated 6th March 2006, for the period FY 1998-99 to FY 2005-06 (upto Feb 2006), is as per table 3.2.

Table 3.2 Performance of HPGCL (1998-99 to 2005-06)

Particulars	1998-99	1999-00	2000-01	2001-02	2002-03	2003-04	2004-05	2005-06 (upto Feb. 2006)
Installed Capacity (MW)	863.3	863.3	863.3	1073.3	1073.3	1073.3	1587.7	1587.7
PLF (%)	49.24	53.24	49.73	60.80	66.44	74.91	69.46	67.50
PLF (%) including backing down.	51.29	54.35	49.97	63.42	68.33	77.91	74.92	69.54
Auxiliary Consumption (%)	12.04	11.70	11.80	11.11	10.56	10.47	11.04	10.08
Coal Consumption (Gms/kWh)	838	803	816	789	770	764	784	743
Oil Consumption (ml/kWh)	12.70	6.38	5.97	3.29	3.19	3.35	3.97	3.89
Gross Gen (MUs)	3784	4051	3792	5311	6212	6998	6915	8465
Net Gen. (MUs)	3359	3604	3372	4797	5580.	6283	5893	7633

The Commission is concerned about the fact that despite adequate Capital and Operating expenditures allowed by it including FPA (Fuel Price Adjustment) based on enhanced cost of coal & fuel oil and actual GCV (Gross Calorific Value) of coal, crucial parameters such as SHR, PLF, Auxiliary Power Consumption, Coal and Oil consumption, specially in the case of PTPS (Units 1-4) and FTPS (Units 1-3), did not show any improvement over the levels approved by the Commission in its previous two generation tariff orders.

3.3 HPGCL proposed Generation tariff for FY 2006-07

HPGCL has proposed the cost of generation of power for FY 2006-07 as presented in table 3.3:

Table 3.3 HPGCL Projected Cost of Generation (FY 2006-07)

	PTPS					FTPS	WYC & Kakroi (Hydel)
	Unit 1-4	Unit 5	Unit 6	Unit 7	Unit 8	Unit 1-3	
Variable Cost per Unit (Rs/kWh)	2.25	1.70	1.58	1.58	1.58	2.90	-
Fixed Cost (Rs million)	1393.16	717.43	1893.56	1745.03	1745.10	650.35	283.51

- Variable Cost as per Annexure B/1 of FPT.
- Fixed Cost as per Annexure B-12 of FPT.

The FPT did not contain two - part tariff as envisaged by the National Tariff policy and a requirement under ABT too, hence no mechanism for recovery of fixed expenses as 'fixed charge' linked to availability was proposed by HPGCL. Annexure B -12 of the FPT provided a summary of projected fixed cost for power generation for the financial year 2006-07 which is presented in table 3.3.

HPGCL in their replies submitted to the deficiency letter issued by the Commission on the issue mentioned above stated as under:

Capacity Charges:

Guidelines for filing of application for determination of tariff by generation companies have not been issued by the HERC under Section 61 of The Electricity Act, 2003. In the absence of any guidelines HPGCL has proposed the tariff on two-part basis for FY 2006-07, based on the operating norms approved by HERC, vide its order dated 02/05/2005 for FY 2005-06.

The availability at which the entire fixed cost shall be recovered and the corresponding normative PLF, incentive, billing & payment of capacity charges, rebate and late payment surcharge may be adopted in accordance with the CERC Regulations dated 26/03/2004. The target availability for recovery of full capacity charges proposed by HPGCL are PTPS (Unit 1 to 4) 65%, PTPS (Unit 5 to 8) 80%, FTPS (Unit 1 to 3) 58.81%. In the case of hydel powerhouses (WYC & Kakroi – purely

run of river) the normative capacity index for recovery of full capacity charges should be as per CERC norms. Recovery of fixed cost below the level of target availability shall be on a pro – rata basis. At zero availability no capacity charges shall be payable.

Incentive:

Incentive shall be payable at flat rate of 25.0 paisa / kWh for ex-bus scheduled energy corresponding to scheduled generation in excess of ex-bus energy corresponding to target Plant Load Factor.

Billing & Payment:

Billing and payment of capacity charges shall be done on a monthly basis.

Rebate:

For payment of bills of capacity charges and energy charges through letter of credit on presentation, a rebate of 2% shall be allowed. If the payments are made by a mode other than through a letter of credit but within a period of one month of presentation of billing, a rebate of 1% shall be allowed.

Late Payment Surcharge:

In case the payment of bills of capacity charges & energy charges by the beneficiaries is delayed beyond a period of one month from the date of billing a late payment surcharge at the rate of 1.25% per month shall be levied by the generating company.

Tariff Objective

The Commission has issued a number of directives in its previous orders dated 14/05/2004 and 02/05/2005. However, it has been noted that quite a few directives have not been implemented or partly implemented. A list of directives issued by the Commission but not yet

fully complied by HPGCL or requiring continuing compliance is given at **Annexure-1.**

While determining generation tariff, the Commission has taken into consideration the filing of the proposed tariff (FPT) dated 5/12/2005, additional information / data submitted by HPGCL in response to the deficiency letter issued by the Commission or otherwise, oral submission / presentation made by HPGCL at the time of public hearing on 6/03/2006, additional written submissions made on 6/03/2006 vide memo no. HPGC / FIN / Reg – 194 / 343 and HPGC / FIN / Reg – 205 / 344 and objections raised by HERC Staff during the public hearing on 6/03/2006 and HPGCL's responses thereto. The Commission has attempted to balance the interest of the utility as well as the consumers while determining the generation tariff.

The Commission is conscious of the fact that much - needed power generation in the state cannot be sustained if the generation company is not financially viable and operationally sound and the fact that the generation business should be attractive enough for new investments, both domestic as well as foreign, in order to bridge the demand - supply gap requiring huge capital outlay.

With the above-mentioned objective, the Commission in its order dated 14/05/2004, directed HPGCL to get energy audit of its generating units conducted. The overall picture that emerged from the energy audit studies at PTPS (unit 1,2,3,4 & 5) and FTPS (unit 1,2, and 3) made available to the Commission is that, by rectifying and plugging the controllable parameters, the units referred to above can achieve much better performance levels. HPGCL needs to take prompt follow up action on various recommendations contained therein. HPGCL, in compliance of the Commission's directive on the above (directive no.2 in its order dated 2/05/2005 in respect of HPGCL's generation tariff for FY 2005-06) submitted unit - wise status report, except PTPS unit 6, vide Memo No. HPGC/FIN/DSPT-5/1982 dated 24/08/2005. In respect of PTPS unit – 3 it is stated that a detailed action taken report on each

and every recommendation of CEA in the Energy Audit Report shall be prepared and submitted after observing the performance of the unit for some more time i.e. around 2 to 3 months. **The Commission directs that an action plan duly flagged with the targets to implement various recommendations of the energy audit reports in respect of PTPS Unit 6 should be submitted within 30 days from the date of this order.**

A perusal of the action plan / status submitted reveals that in the case of PTPS (unit 1 2 & 4) due to implementation of the recommendations of CEA flue gas temperature has improved, un-burnt carbon in bottom ash and fly ash is expected to reduce, performance of HP heater has improved and is quite close to the design value, low condenser vacuum observed is expected to improve upto to the design value, the air leakage in air pre-heater has been plugged, DM water consumption has improved, flue gas temperature at ID fan suction has improved, main steam pressure & temperature have improved to the design value of 139 kg/cm² and 540⁰ C. In the case of FTPS (unit 1-3), unlike PTPS powerhouses, no activity wise improvements have been listed. In the case of FTPS unit 1, it is stated that the performance of the unit during three months period from 3/05 to 5/05, after attending various leakages of Air Pre Heater & Other points, have improved compared to the performance of 3 months period prior to Nov – 04. While in the case of FTPS unit 2 & 3 no improvements have been envisaged.

HPGCL is directed to monitor, on a regular basis, the impact of the corrective measures already taken / planned during FY 2006-07 on key parameters such as turbine heat rate, boiler efficiency, auxiliary energy consumption, specific coal & oil consumption, coal mill efficiency etc. and report the findings to the Commission along with the next tariff application.

3.4 Intra - state ABT.

HPGCL has not proposed tariff based on ABT (Availability Based Tariff) principles. In response to the Commission's directive with respect to submitting a status report of all the interface points connected with 250 MW Units 7 & 8; HPGCL vide memo no. HPGC / FIN / Reg – 194 / 1303 dated 6/06/2005 informed that Special Energy Meters for PTPS units 7 & 8 were erected during testing and commissioning of the units and were made fully operational. The system of interface special energy meters between HPGCL & HVPNL has been commissioned for remote readings at Energy Centre, Panchkula on 31/05/2005. HVPNL has confirmed the availability of remote readings of these SEMs at Energy Centre, Panchkula on 31/05/2005. However, in respect to the instant filing the Commission is not considering availability based two – part tariff as about 30% of the interface points between HVPNL (the transmission company) and Distribution licensees are still without SEMs. Till the time two – part tariff is introduced in Haryana the Commission may not consider incentive, rebate, late payment surcharge etc. as proposed by HPGCL in its supplementary filing. Piecemeal approaches will not serve the purpose for which two – part availability based tariff has been envisaged and widely adopted.

In light of the above, HPGCL is directed to file its next generation tariff application in line with the ABT principles so that ABT on HPGCL generating stations can be implemented. HPGCL needs to ensure their a) preparedness for declaring availability for each 15 minutes time block on a day ahead basis for their individual generating stations, b) recording of actual generation of each station in 15 minutes interval, c) compilation of the same and dispatch to the SLDC, d) ensure station wise (including PTPS Unit 1 to 4 and FTPS Unit 1 to 3 separately) compilation of cost details.

3.5 Plant Load factor (PLF)

The Commission, in its previous order(s) considered the unit - wise actual PLF achieved by HPGCL for the various generating units during the last 5 to 6 years as the basis for reckoning PLF for arriving at the station wise gross generation. The Commission notes with concern that no improvement in PLF has been envisaged by HPGCL for FY 2006-07. In line with the national norms as adopted in the previous orders the Commission allows PLF of 80% for all HPGCL thermal units except PTPS (unit 1-4) and FTPS (unit 1-3).

In its previous order the Commission considered PLF of PTPS (Unit 1-4) at 65% that was 3.31% higher than the actual PLF achieved in FY 2004-05 i.e. 61.69%. The actual performance reported upto 28/02/2006 with respect to PLF of these machines was a dismal 58.12% despite the fact that R&M of PTPS Unit 1 is underway and that of PTPS Unit 2 has been completed and the unit is performing satisfactorily. In the FPT under consideration the PLF proposed for recovery of fixed charges was pegged at 65%. However, in its submission made vide Memo No. HPGC/FIN/Reg-205/344 dated 06/03/2006 HPGCL has stated that while opening the turbine of PTPS 110 MW unit-3 during annual overhauling in April 2005, it was observed that its LP rotor had been severely damaged and the same needed replacement. Resultantly, due to non - availability of PTPS Unit - 1 for 4/5 months and PTPS Unit - 3 for a period of 5 months, the PLF of PTPS (Units 1 to 4) is likely to be reduced to 55%. Thus, HPGCL revised their original submission and has now proposed that the availability of these units for recovery of capacity charges be considered as 55% while approving the tariff for PTPS units 1 to 4 for FY 2006-07 as against 65% as per the FPT.

As per FPT (Annexure B/1) the proposed Gross Generation in respect of PTPS (Units 1-4) was 2505 MUs. This station has generated 2050 MUs upto February 2006. Further, vide the above-mentioned memo HPGCL has submitted that PTPS (unit -1) will not be available till July

2006 on account of ongoing repair of the Generator Transformer while PTPS (unit-3) will not be available for 5 months during FY 2006-07. The Commission, for the purpose of determining of generation tariff, has considered PLF of 65% in respect of PTPS unit 2 & 4 i.e. at the previous year's level. Considering the fact that the outage of PTPS (unit -1) shall be about 122 machine days (2928 machine hours) and PTPS (unit - 3), on account of repair / replacement of LP rotor, shall not be available to the the extent of 153 machine days (3672 machine hours), the combined PLF of PTPS (units 1 to 4) works out to 53% during FY 2006-07. In normal circumstances the Commission would have estimated PLF from maintenance schedule and may not have considered forced outage i.e. due to LP Rotor fault or Generator Transformer fault etc. while estimating PLF. However, due to the fact that older units i.e. PTPS (Unit 1-4) has been underperforming and hence should be subjected to intensive R&M measures so as to make them efficient in terms of PLF, SHR, Specific Coal & Oil consumption, auxiliary consumption etc, the Commission as a special case, restricted to FY 2006-07, allows PLF including forced outage of PTPS Unit 1 & 3. Resultantly, the combined PLF of PTPS (Units 1-4) has been considered at 55% as proposed by HPGCL. The Commission, in future, may not consider forced outage while estimating PLF for the purpose of working out generation, fuel cost or recovery of fixed cost. **The Commission directs HPGCL to drive home the urgency of bringing back these machines to the bus – bar due to acute generation shortages in the state, and prevail upon BHEL to complete the task well in time.**

In respect of FTPS (unit 1 to 3), the PLF has been considered at 62%, which is marginally higher than about 60% achieved in FY 2004-05. The table 3.4 provides a summary of the highest level of PLF achieved in the past 7 years in the case of PTPS Unit 1 to 5 and FTPS Unit 1 to 3 while in all other cases viz. PTPS Unit 6 to 8 the reference point is their respective year of Commissioning. HPGCL's proposal for FY

2006-07 and HERC approved PLFs for FY 2006-07 for various generating units are presented in table 3.4:

Table 3.4 Plant Load Factor (Target Availability)

Stations	Highest PLF in last 7 years	HPGCL's proposal for FY 2006-07	HERC's Approval for FY 2006-07
PTPS (%) (Unit 1-4)	72.45	55 #	55
PTPS (%) (Unit -5)	93.68	80	80
PTPS (%) (Unit -6)	92.21	80	80
PTPS (%) (Unit -7)	81.94	80	80
PTPS (%) (Unit -8)	87.28	80	80
FTPS (%) (Unit 1-3)	67.32	58.81	62

65% as per the original filing (FPT).

The Commission reiterates that HPGCL need to take the aberration of PLFs from nationally acceptable levels for thermal units in all seriousness and accord high priority for consideration of the recommendations of CEA in its Energy Audit Reports to improve upon the PLFs and gradually bring them to the national norms.

3.6 Auxiliary Power Consumption

The performance of HPGCL as per Annexure / B/11 of the FPT and the presentation made during the public hearing with regards to auxiliary consumption reveals a steady improvement from FY 2000-01 to FY 2003-04 i.e. it improved from 11.80 % to 10.47%. The trend got reversed in FY 2004-05 wherein it declined to 11.04% in FY 2004-05 and 10.08% in FY 2005-06 (upto Feb. 2006). The station wise performance in FY 2005-06 (upto 28/02/2006) has also been far from satisfactory i.e. 11.74% PTPS (unit 1-4), 9.18% PTPS (unit 5), 9.69% PTPS (unit 6), 11.42% PTPS (unit 7) and 13.0% FTPS (unit 1-3). Which the Commission has viewed seriously. The Unit wise actual auxiliary power consumption has been considered while determining the corresponding values for FY 2006-07. Table 3.5 presents the lowest level of auxiliary power consumption achieved in the past 7 years in the case of PTPS (unit 1 to 5) and FTPS (unit 1 to 3) while in all other cases viz. PTPS Unit 6 to 8 the reference point is their respective year of Commissioning. HPGCL's proposals for FY 2006-07

and HERC approved level of auxiliary consumption for FY 2006-07 for various units are presented in table 3.5:

Table 3.5 Auxiliary Consumption (%)

Stations	Lowest Achieved in past 7 years	HPGCL's Proposal for FY 2006-07	HERC's Approval for FY 2006-07
PTPS (Units 1 to 4)	11.05	11.0	11.0
PTPS (Unit 5)	9.10	9.0	9.0
PTPS (Unit 6)	8.94	9.0	9.0
PTPS (Units 7)	10.77	9.0	9.0
PTPS (Units 8)	7.6	9.0	9.0
FTPS (Units 1-3)	12.56	12.5	12.5
WYC & Kakroi	0.60	0.5	0.5

Note: PTPS unit 7&8 refers to FY 2005-06 (upto 28/02/2006)

Auxiliary energy consumption exceeding 9.5% for PTPS (unit 1 to 4) and FTPS (unit 1 to 3) depicts inefficiencies. HPGCL should implement the recommendations CEA in the Energy Audit Reports and take all necessary measures to reduce auxiliary power consumption to the national norms.

3.7 Specific Fuel Oil Consumption (SFC)

The performance of HPGCL as per Annexure B/11 of the FPT and the presentation made during the public hearing with regards to SFC reveals a steady improvement during the period FY 2000-01 to FY 2002-03 i.e. it improved from a level of 5.97 ml/kWh to 3.19 ml/kWh. The trend reversed in FY 2003-04 and continued deteriorating in FY 2004-05 i.e. it deteriorated from 3.35 ml/kWh in FY 2003-04 to 3.97 ml/kWh in FY 2004-05 and practically remained the same in FY 2005-06. The deterioration in specific fuel oil consumption is a matter of serious concern to us. During FY 2005-06 (upto 28/02/2006) the station wise performance particularly in the case of PTPS (unit 1-4, 7, 8) & FTPS presents a dismal picture. In the case of PTPS (unit 1-4) SFC was of the order of 5.49 ml/kWh, in the case of PTPS (units 7 & 8) the same was 7.44 ml / kWh and 4.41 ml/kWh respectively, while in the case of FTPS (Unit 1-3) SFC during the same period was 5.54 ml/kWh. The past performance and the national norms have been taken into

consideration while approving the specific fuel oil consumption for FY 2006-07. The table 3.6 shows the lowest level of specific fuel oil consumption in the last seven years in the case of PTPS unit 1 to 5 and FTPS unit 1 to 3, while in all other cases viz. PTPS (unit 6 to 8) the reference point is their respective year of Commissioning, HPGCL's proposals for FY 2006-07 and level of specific fuel oil consumption approved by the Commission for FY 2006-07 are presented in table 3.6:

Table 3.6 Specific Oil Consumption (ml / kWh)

Stations	Lowest Achieved in past 7 years	HPGCL's Proposal for FY 2006-07	HERC's Approval for FY 2006-07
PTPS (Units 1 to 4)	4.58	4.25	4.25
PTPS (Unit 5)	1.43	2.0	2.0
PTPS (Unit 6)	1.87	2.0	2.0
PTPS (Unit 7)	6.29	2.0	2.0
PTPS (Unit 8)	4.02	2.0	2.0
FTPS (Units 1-3)	3.12	4.0	4.0

The actual average specific fuel oil consumption during last 7 years for FTPS is about 4.46 ml / kWh. In view of the fact that the station can achieve better performance, the Commission approves the specific fuel oil consumption as 4.0 ml / kWh for FTPS for FY 2006-07 and 4.25 ml/kWh in the case of PTPS (Unit 1-4) considering the vintage factor. In all other cases the Commission has considered the national norm.

The actual specific fuel oil consumption reported for the year FY 2005-06 except in the case of PTPS unit 5 & 6 (i.e. 1.77 ml/kWh & 1.61 ml/kWh respectively) are on the higher side as compared to the national norms. Thus, HPGCL needs to take all possible corrective measures including those recommended by CEA in its Energy Audit Report to rein in SFC to 2ml/kWh or lower.

3.8 Station Heat Rate (SHR)

The Station Heat Rate (SHR) of the existing generating units of HPGCL including the recently commissioned PTPS (unit 7&8) are much higher than the norms adopted for the central generating thermal stations. The Commission recognises the fact that SHR despite regular

O&M deteriorates with time. However, the deviation of the heat rate established by the Energy Audit Reports from the respective design values, even after allowing reasonable margin to account for normal operation vis-à-vis test conditions, are far in excess.

The Central Electricity Authority (CEA) in its communiqué dated 10/01/2006 to the Commission with reference to the Energy audit carried out by it at PTPS and FTPS has observed as following “Station must take efforts to bring down the unit heat rate to at least in the range of 10% deviation from the design value gradually and their efforts to operate at design heat rate would be highly appreciated as this will result in saving coal & environmental benign”.

The design value in the case of PTPS (unit 1-4) ranges between 2460 – 2526 Kcal / kWh considering a 10% deviation the desirable heat value as per CEA should have ranged between 2706 – 2778 Kcal / kWh. The actual performances of these stations have been way below the desired heat value. In FY 2005-06 (upto 28/02/2006) the average Station Heat Rate (SHR) reported for PTPS unit 1-4 was 3512 Kcal / kWh (the values ranged from 3500 to 3567 Kcal / kWh).

In the case of FTPS (unit 1-3) the average design SHR is 2767 Kcal /kWh (values ranges between 2727 – 2847 Kcal / kWh). Thus these Stations are capable of achieving an average heat value of 3044 Kcal / kWh. As against this the reported actual during FY 2006-07 (upto 28/02/2006) in the case of FTPS (unit 1-3) was 4200 Kcal / kWh (values ranging from 4167 Kcal / kWh to 4250 Kcal / kWh).

In view of the above, and considering the vintage of PTPS (unit 1-4), the Commission in its previous order(s), allowed SHR based on marginally lower than the lowest value achieved in the past six years i.e. 3450 Kcal / kWh. In the case of PTPS (unit 5) the allowed SHR was 2750 Kcal / kWh.

The SHR is largely influenced by efficiency of the boilers; make – up requirements and O&M practices. Thus, no two machines even if of

same make and vintage are directly comparable. Lack of R&M and overall good O&M practices over a prolonged period has hastened the deterioration in SHR of PTPS (Unit 1 to 4) and PTPS (Unit 5).

It is a matter of great concern to us that the above-mentioned powerhouses failed to achieve the SHR targets set by us in FY 2005-06. We would have lowered the SHR target for tariff determination under consideration. However, given the performance of these powerhouses and the fact that PTPS (unit 1 & 3) have been taken out for major R&M overhauls and hence will not be available for 5 to 6 months during the current financial year. We would like to monitor the performance of these machines during the later part of the year and accordingly set improved norms during the next rate case. Consequently, we in order to ensure that HPGCL is not un-necessarily penalised by adopting SHR which is too stiff to be achieved merely for the reasons that desirable norms are lower or a few station in some part of the country have performed better, peg SHR at 3450 Kcal /kWh in the case of PTPS (unit 1 to 4) i.e. at previous years level and 2700 Kcal / kWh in respect of PTPS (unit 5) which is marginally better than 2750 Kcal / kWh allowed by us during the previous year.

HPGCL needs to note that it may not be fair to carry on indefinitely with a SHR which contains 'large cushions' with reference to design value of the respective machines than admissible as per the normal deterioration due to ageing. **HPGCL is directed to ensure continuous improvement in the SHR of PTPS (unit 1 to 4) and PTPS (Unit 5) so that beginning with the next financial year the 'cushion' allowed during the transition phase beginning FY 2004-05 can be rolled back. Further, we may be kept informed on a monthly basis the unit - wise a) gross generation, b) specific fuel oil consumption, c) auxiliary power consumption, d) station heat rate and e) PLF including steps taken during the month to ensure optimum boiler efficiency.**

We shall be revisiting the whole issue at the time of next generation tariff determination.

The Commission has been allowing SHR of 3970 Kcal/kWh in respect of FTPS (unit 1-3) i.e. the lowest value reported in FY 1999-2000. The station has shown some improvement over the years as SHR improved from 4354 Kcal/kWh in FY 2001-02 to 4194 Kcal/kWh in FY 2005-06 (upto 28/02/2006). However, the improvement reported over the years is marginal and erratic. The Commission expects that HPGCL would implement the recommendations of CEA subsequent to the Energy Audit carried out by them. Considering the fact the FTPS powerhouses have completed their normal useful life, and as submitted by HPGCL in its reply filed vide memo no. HPGC/FIN/Reg-205/415 dated 21/03/2006, are likely to be phased out by 2011-12, we have pegged the SHR of FTPS (Unit 1-3) at 3970 Kcal/kWh i.e. at previous year's level. The SHR for various thermal power stations of HPGCL has been approved as per Table 3.7:

As the Commission had allowed, in its order(s) all the justifiably incurred capital & operating costs, the Commission expects sustained improvement in the operating parameters including the SHR. The same, however, is subject to review at the time of finalising the document on Terms and Conditions for determining Generation Tariff. The table 3.7 shows the lowest value of Station Heat Rate in the last 7 years, HPGCL's proposed for FY 2006-07 and HERC approved Station Heat Rate for FY 2006-07:

Table 3.7 Station Heat Rate (K.cal / kWh)

Station	Lowest Achieved in past 7 years	HPGCL Proposal for FY 2006-07	HERC Approval for FY 2006-07
PTPS (Units 1-4)	3498	3450	3450
PTPS (Unit 5)	2786	2700	2700
PTPS (Unit 6)	2873	2500	2500
PTPS (Unit 7)	2662	2500	2500
PTPS (Unit 8)	2633	2500	2500
FTPS (Units 1-3)	3970	3970	3970

Note: In the case of PTPS Unit 6,7 & 8 the Commission has considered the standard norm of 2500 Kcal/kWh. SHR of PTPS (unit 7 & 8) refers to FY 2005-06 (upto 28/02/2006).

3.9 Energy / Variable Charge

The Energy / variable charge has been calculated based on the parameters indicated in table 3.8.

Table 3.8 Energy/ Variable Charges for FY 2006-07

Parameters	Derivation	Unit	PTPS					FTPS	WYC
			1to4	5	6	7	8	1-3	
Generation	A	MU	2119.92	1472	1472	1752	1752	896	310
Auxiliary Cons (%)		%	11	9	9	9	9	12.5	0.5
Generation (Ex-bus)	A1	MU	1887	1339.52	1339.52	1594	1594	784	308
Station Heat Rate	B	Kcal/KWh	3450	2700	2500	2500	2500	3970	
Specific Oil Consumption	C	MI/KWh	4.25	2.0	2.0	2.0	2.0	4.0	
Calorific Value of Fuel Oil	D	Kcal/Litre	9972	9972	9972	9972	9972	10053	
Calorific Value of Coal	E	Kcal/Kg	4075	4075	4075	4075	4075	4225	
Overall Heat	F= (A*B)	Gcal	7313724	3974400	3680000	4380000	4380000	3557120	
Heat From Oil	G= (A*C*D)/1000	Gcal	89844.33	29357.57	29357.57	34941.89	34941.89	36029.95	
Heat From Coal	H= (F-G)	Gcal	7223879.67	3945042.43	3650642.43	4345058.11	4345058.11	3521090.05	
Actual Oil Consumption	I=G*1000/D=A*C	KL	9009.66	2944	2944	3504	3504	3584	
Actual Coal Consumption	J=(H*1000/E)/0.975	MT	1818185.85	992931.87	918834.02	1093612.24	1093612.24	854763.17	
Cost of Oil per KL	K	Rs/KL	19098.73	19098.73	19098.73	19098.73	19098.73	29441.73	
Cost of Coal per MT (inc LADT)	L	Rs/MT	2230.68	2230.68	2230.68	2230.68	2230.68	2522.99	
Total Cost of Oil	M=K*I/10 ⁶	Rs million	172.07	56.23	56.23	66.92	66.92	105.51	
Total Cost of Coal	N=J*L/10 ⁶	Rs million	4055.79	2214.91	2049.62	2439.5	2439.5	2156.56	
Total Fuel Cost	O=M+N	Rs million	4227.86	2271.14	2105.85	2506.42	2506.42	2262.07	
Fuel Cost	P=O/A1	Rs/KWh	2.24	1.69	1.57	1.57	1.57	2.88	

Note: The Gross generation in respect of hydel powerhouses of HPGCL (W.Y. Canal Phase A,B,C & D) has been considered as per the CEA (as proposed to the ministry of power) hydro generation target for FY 2006-07.

The Gross Calorific Value (GCV) of coal and fuel oil is based on the average value of the data submitted by HPGCL for the period FY 2005-

06 (February to December 2005). **HPGCL has been vague in its filing under consideration in regard to accreditation of its Chemical test laboratory at PTPS & FTPS. They were required to do so within six months from the date of issue of FY 2005-06 order i.e. 2nd May 2005. The reply submitted vide memo no. HPGC/FIN/Reg-205/415 dated 21/03/2006 states that “Action is being taken to get the lab accredited at the earliest”. Since HPGCL has not committed any time period for the same the Commission directs HPGCL to accomplish the task of getting its Chemical test laboratory at PTPS & FTPS accredited within 3 months from the date of issue of this order and keep the Commission posted on the progress made regarding the same.** The basic price of coal has been worked out after considering the weighted average of the latest invoiced rate i.e. December 2005 made available to the Commission. LADT of 2% has been added to the basic rate to arrive at the cost (Rs / MT) of coal for FY 2006-07.

Adjustment for transit loss of coal to the extent of 2.5% has been made while computing the actual volume of coal consumption as presented in table 3.8. The actual transit loss of coal as reported by HPGCL is of the order of 4.73% in the case of PTPS during FY 2005-06 (upto December 2005), while the same is 7.33% in the case of FTPS. Which is far in excess of the national norms, more so the transit loss of coal has increased during FY 2005-06 as compared to the previous year. In view of the the ground realities, achievability and the facts placed before the Commission, 2.5% of coal transit loss has been allowed i.e. marginal improvement over 3% allowed by the Commission in the previous generation tariff orders. **We direct HPGCL to take all necessary steps including discussion with representative of the Northern Railways (member of State Advisory Committee). During the SAC meeting held on 22/03/2006 the representative of the Northern Railways offered to assist and desired information on sectors where maximum pilferage of coal from the Railway Wagon**

is taking place. HPGCL should bring down coal transit losses to 1% within 3 years time with an annual reduction target of 0.5%.

The allowed energy charge(s) is subject to fuel price adjustment, if any, due to changes(s) in the price of coal /oil during FY 2006-07 with reference to the approved fuel cost indicated in table 3.8.

3.10 Fixed Cost

The various elements of fixed cost namely operation and maintenance (O&M) charges; depreciation, interest and finance charges on loans, interest on working capital and return on equity are discussed in the paragraphs that follows.

The Commission is of the view that the norms so far allowed for determination of generation tariff are reasonable, realistic and achievable thus the submission with respect to generation tariff for FY 2005-06 made by HPGCL vide their memo no. HPGC/FIN/Reg-194/343 dated 6/03/2006 is not acceptable and hence rejected. The Commission, in the instant case, based on the facts and figures relevant for FY 2006-07 has to determine the generation tariff for FY 2006-07 and not to re-visit (or true – up) the tariff determined by it in FY 2005-06 based on technical / financial norms allowed for that year.

3.11 Operation & Maintenance (O&M) Expenses

The O&M charges comprise of Repair and Maintenance charges (R&M), Employees cost and Administrative expenses.

The guiding factor for working out O&M expenses should have been the actual level of such expenses incurred during the preceding three years for the existing stations escalated by an appropriate factor to account for inflation. However, in the absence of audited accounts of HPGCL for the recent years viz. FY 2003-04 and FY 2004-05, the O&M expenses approved by the Commission in its previous order have been considered for PTPS units 1-5, FTSP unit 1-3 and WYC & Kakroi

powerhouses. These have been escalated by 4% to account for Inflation. For newer units of PTPS i.e. unit 6,7 & 8 the O&M expenses have been worked out as per the national norms proposed by HPGCL i.e. Rs.1.125 million per MW.

The O&M expenses claimed by HPGCL and allowed by the Commission are presented in table 3.9.

Table 3.9 O&M Expenses for FY 2006-07

	PTPS					FTPS (Units 1-3)	WYC & Kakori
	Units 1-4	Unit 5	Units 6	Unit 7	Units 8		
HPGCL Proposal for FY 2006-07 (Rs. million)	620.19	296.04	236.23	281.32	281.32	446.16	83.18
HERC Approval for FY 2006-07 (Rs. million)	620.19	296.04	236.23	281.25	281.25	446.16	83.18

Note: HPGCL proposal is as per Annexure B-12 of the FPT.

The Commission notes with concern the inordinate delay in finalisation / audit of annual accounts and directs HPGCL to ensure timely closure and audit of accounts.

3.12 Depreciation

Para 5.3 (C) of the Tariff policy issued by the Ministry of Power, GOI, on 6/01/2006 states that CERC may notify the rates of depreciation in respect of Generation and Transmission assets. The rate of depreciation so notified would be applicable for the purpose of tariff as well as accounting. Further, there should be no need for any advance against depreciation (AAD).

We are of the view that there is an inherent contradiction in the CERC regulations on depreciation as contained in the CERC (Terms and Conditions of Tariff) Regulations 2004 – No L-7 / 25 (5) / 2003 – CERC dated 26/03/2004 and the recently announced National Tariff Policy. The former provides for AAD while the later specifically lays down that

the rates of depreciation to be notified by the CERC should be such that there is no need for AAD.

We acknowledge the fact that debt (financing) is essential part of capital structure of a capital-intensive industry like power. Resultantly, 'term loan' availed for creating capital assets needs to be repaid from the corpus created out of charging depreciation in the case of a regulated entity. Allowing HPGCL the low rates of depreciation as proposed by HERC staff without AAD would leave HPGCL financially distressed which would be against the basic tenets of corporate finance especially in the absence of an opportunity to HPGCL for re-structuring its capital structure (debt and equity). Resultantly adopting lower rates at this stage may lower the creditworthiness of HPGCL and may also push up the cost of borrowings. In the instant case the loan repayment during FY 2006-07 amounts to Rs. 2732.23 million, while depreciation at the CERC rates calculated by the HERC staff works out to Rs. 1234.59 million, thereby leaving a huge gap in loan repayment amounting to Rs. 1497.64 million.

Having carefully considered the HERC staff view, CERC regulations on depreciation and the National Tariff Policy, we are of the view that CERC is yet to notify the revised rates of depreciation as envisaged in the National Tariff Policy. It may not serve any useful purpose by now adopting the CERC depreciation rates along with AAD only to switch over later to the new CERC formulations.

In the light of the above, depreciation for FY 2006-07, has been allowed amounting to Rs.2605.22 million as calculated on the basis of Gol rates i.e. in line with the previous generation tariff orders of the Commission till such time CERC comes up with new formulations in accordance with the National Tariff Policy.

We direct HPGCL to examine the CERC rates as contained in Appendix II of their Regulations dated 26/03/2004 and also work out alternatives as to how the gap between depreciation amount

available and loan repayments can be bridged in the absence of AAD as stipulated in the National Tariff Policy. The Commission may not allow any transitional loan for the purpose. The analysis / strategy may be provided to the Commission within 6 months from the date of this order.

In its supplementary filing HPGCL has stated that depreciation is being claimed on the value of assets as appearing in the books of accounts. HPGCL needs to note that neither its recent accounts i.e. FY 2003-04, FY 2004-05 are audited even when FY 2005-06 has closed nor as directed by the Commission, HPGCL has been able to prepare (get audited & regularly update) its Fixed Assets Register within a years time, as directed in HERC order dated 14th May 2004. Thus any value that is based on accounts yet to be audited is tentative and open to adjustments till the time audit of the accounts is done. Consequently, the Commission do not lend much credence to any data culled from un – audited / provisional accounts of the company.

3.13 Interest and Finance Charges on Loan

HPGCL has claimed Rs. 2874.88 million as interest on loans and working capital for FY 2006-07. This includes interest cost on long term loans amounting to Rs. 2102.33 million and interest on working capital (including working capital of Rs.1200 million on account of Fuel Price Adjustment) loan to the tune of Rs. 772.56 million. FPA needs to be claimed timely and quarterly and hence no provision for allowing any interest cost arising because of the time lag exists. More so, working capital in the instant case is based on certain norms and not on lead/lag basis.

The Commission has separately provided for interest on working capital, and, hence, this has been dealt with under separate sub-head. Rs. 2095 million has been allowed as interest based on the loans adjusted for repayments and drawls during FY 2006-07 and the corresponding (loan wise) interest rates

3.14 Interest on Working Capital

Interest on working capital has been provided on normative basis. The Commission computed the working capital requirement on the basis of following elements.

- i) Cost of coal stock for 2 months
- ii) Cost of oil stock for 2 months
- iii) O&M expenses for 1 month
- iv) Maintenance spares at 1% of the historical cost escalated @ 6% per annum.
- v) Receivable equivalent to 2 months of projected fixed and variable charges for FY 2006-07

On the normative working capital interest is allowed @ 9% per annum as proposed by HPGCL. Thus Rs. 652.79 million as interest on normative working capital is allowed against Rs. 772.56 million projected by HPGCL. The computation of normative working capital and interest thereon is presented in table 3.10:

Table 3.10 Normative Working Capital (Rs. million)

	PTPS					FTPS (Units 1-3)	WYC & Kakroi
	(Units1-4)	Unit 5	Unit 6	Unit 7	Unit 8		
Cost of Coal Stock for 2 months	675.97	369.15	341.60	406.58	406.58	359.43	0
Cost of Oil stock for 2 months	28.68	9.37	9.37	11.15	11.15	17.58	0
O&M expenses for one month	51.68	24.67	19.68	23.44	23.44	37.18	6.93
Spares	33.93	27.72	116.77	94.63	94.63	7.83	13.91
Receivables (2 months of Fixed & Variable charges allowed)	928.42	495.94	663.71	705.56	705.56	484.00	47.05
Total Normative Working Capital	1718.68	926.85	1151.14	1241.36	1241.36	906.03	67.89
Interest on working capital @ 9%	154.68	83.42	103.60	111.72	111.72	81.54	6.11

A perusal of the provisional balance sheet of FY 2006-07 as on 31st March 2005 reveals net current assets, to be financed by way of working capital borrowings, to the extent of Rs.6988.61 million. It is

also evident from the balance sheet that receivable against supply of power (sundry debtors) as on 31st March 2005 stood at Rs.5105.85 million. As per prudent financial practice it should not have exceeded two months of sales i.e. Rs.2730 million, more so, because (reportedly) the single largest cost element i.e. coal (including freight) is paid in advance thus no credit period is available, similarly credit period available to it for Secondary Fuel Oil, O&M expenses etc. does not exceed two months. Consequently, any dues not collected within two months will have negative impact on 'cash flow' of the company leading to short term expensive borrowings. The interest on normative working capital estimated by the Commission is the maximum ceiling limit. HPGCL should manage their receivables and payables in a prudent way so as to minimise working capital requirement and, hence, interest expense on the same. As a prudent practice expensive short-term borrowings allowed, as working capital should never be resorted to finance anything except the cash gap arising out of unavoidable cash-cycle. **The Commission directs HPGCL to monitor its receivables and take steps to manage its receivables in a prudent way and in tune with its 'payables' so as to reduce the same.**

3.15 Return on Equity (ROE)

A return on equity is essential for compensating equity fund as it reflects the productivity of the ownership (or risk) capital employed in the company. In the case of HPGCL it is essential that they are able to generate resources internally to meet their unfunded liabilities inherited from the past, ensure financial viability and maintain operating efficiency.

An assured ROE should be able to compensate the utility for lack of investible resources other than government equity/loan or grants, when it is operated under 'no profit no loss' basis. The Commission expects that in the medium to long run ROE would generate resources to invest in improvements, expansion and new capacity. The long-term benefit to the consumers would lie in increased availability of power at

affordable tariff. Thus the Commission allows ROE with a belief that it would encourage efficiency and result in providing better service and not used up as working capital to compensate for the un – realised 'book – debt'.

HPGCL has claimed Rs. 703.6 million @ 10% as return on equity (Annexure B/8 of the filing) for FY 2006-07. ROE being a purely mechanical exercise, the Commission allows the same i.e. Rs. 703.6 million @ 10% as proposed by HPGCL for FY 2006-07.

3.16 Internal Audit

Internal Audit is recognised as an essential aid to the top management for monitoring and diagnosis of the financial health of the organisation and effectiveness of various programs, schemes and activities undertaken from time to time. The Internal Audit department should assess operating units and 'control functions' to identify areas of potential institutional risk. Internal audit should be conducted through proper internal audit team comprising qualified professionals. **The Commission directs HPGCL to strengthen its internal audit work.**

3.17 Human Resource Management

Human resource is an essential partner in developing and executing organisational strategy. Without a proper and well-executed human resource management plan organisational goals cannot be achieved in an efficient and cost effective manner. Considering the performance of HPGCL during the last three years there is an urgent need to increase professionalism in the functioning of the company. **In view of this the Commission directs HPGCL to undertake a detailed analysis of its human resources, assess its medium to long – term needs and submit a human resource management / development plan for consideration of the Commission within six months from the date of issue of this order.**

3.18 Fixed Expenses for FY 2006-07

A summary of approved fixed expenses is presented in table 3.11.

Table 3.11 Fixed Expenses for FY 2006-07 (Rs. million)

	PTPS					FTPS (Units 1-3)	WYC & Kakroi
	Units 1-4	Unit 5	Units 6	Units7	Unit 8		
O&M Expenses	620.19	296.04	236.23	281.25	281.25	446.2	83.18
Depreciation	299.20	162.26	750.86	636.90	636.97	53.73	65.30
Interest on Term Loan	227.8	137.7	564.3	507.4	507.4	42.5	108.4
Interest on Working Capital	154.68	83.42	103.6	111.72	111.72	81.54	6.11
Return on Equity @ 10%	40.7	25.2	221.4	189.50	189.50	18.0	19.3
Total Fixed Cost	1342.57	704.62	1876.39	1726.77	1726.84	641.97	282.29
Fixed Cost (Rs./ kWh)	0.71	0.53	1.40	1.08	1.08	0.82	0.92

4 CONCLUSION

The approved tariffs for FY 2006-07 are as under:

Table 4.1 HERC's Approved Tariffs

	PTPS (Units 1-4)	PTPS (Unit 5)	PTPS (Unit 6)	PTPS (Unit 7)	PTPS (Unit 8)	FTPS (Unit 1-3)	WYC & Kakroi
Energy Charges (Rs./kWh)	2.24	1.69	1.57	1.57	1.57	2.88	0
Fixed Charges (Rs./kWh)	0.71	0.53	1.40	1.08	1.08	0.82	0.92
Total Charges (Rs./kWh)	2.95	2.22	2.97	2.65	2.65	3.70	0.92

T. S. Tewatia
(Member)

Lt. Col. (Retd.) Raghbir Singh
(Chairman)

In regard to para 3.8 (Station Heat Rate), 3.9 (transit loss of coal) & 3.12 (Depreciation), I express difference of opinion as under:

1. **Station Heat Rate (SHR)**

Directive No. 2 of Annexure-2 (List of New Directives) of Commission's order on Generation Tariff for HPGCL for FY 2005-06 was complied by the generating company by submitting the requisite Action Taken Report vide their memo HPGC/FIN/ DSPT-5/1982 dated 23/24.8.2005. The above document was sent to the CEA – the Commission's Consultant – for their expert comments who submitted the report vide their letter of even reference dated 9.1.2006. The comments/suggestions referred to above were sent to HPGCL vide memo HERC/T-80A/HPGCL/3238 dated 20.2.2006 for their perusal and further improvement. HPGCL was asked to continue its efforts to achieve better operating norms.

I had differed with Hon'ble Lt. Col. Raghbir Singh, Chairman and Hon'ble T.S. Tewatia, Member in regard to Station Heat Rate for PTPS Units 1 to 4, FTPS Unit 1-3 and transit loss of coal while passing order dated 2.5.2005 on Generation Tariff for HPGCL for FY 2005-06 and appended a note of dissent to the said order. I laid a road map for improving upon the Station Heat Rate for the above units over a period of five years (FY 2005-06 to FY 2009-10) apart from gradually reducing the transit loss of coal to national norms during the above period. However, the position is as under:

(A) PTPS Units 1 to 4 (110 MW each)

HPGCL has reported an average Station Heat Rate of 3512 Kcal/Kwh for these units for the period 1.4.2005 to 28.2.2006 as against the target of 3400 Kcal/Kwh for FY 2005-06. Thus, they failed to achieve the target by a significant amount making their task harder for the remaining period of the control period. Keeping in view the fact that PTPS Unit 1 & 2 are more than 25 years old, the target station heat rate for these units for the period FY 2006-07 to FY 2009-10 is as under:

<u>Year</u>	<u>Target Station Heat Rate (Kcal/Kwh)</u>
2006-07	3350
2007-08	3170
2008-09	2970
2009-10	2751

It is essential that R&M activity on PTPS Unit –3 & 4 is planned without delay and implemented in next couple of years in the interest of better operational performance of 110 MW units erected under PTPS stage –I & II.

(B) PTPS Unit –5 (210 MW)

HPGCL has reported the Station Heat Rate of 2856 Kcal/Kwh for this unit for the period 1.4.05 to 28.2.06 as against the target of 2500 Kcal/Kwh for FY 2005-06. The energy audit report for PTPS Unit-5 has concluded that 'overall it (PTPS Unit-5) is running satisfactorily'. Thus, there is no reason to approve a different station heat rate for PTPS Unit-5 when compared to PTPS Unit-6 particularly when both have reported actual Station Heat Rate for the period 1.4.05 to 28.2.06 quite close to each other; 2856 Kcal/Kwh for Unit-5 and 2851 Kcal/Kwh for Unit-6 and both have performed below par when compared to their respective approved Station Heat Rates for FY 2005-06. HPGCL's operating inefficiency (ies) can't be passed on to the electricity consumers of Haryana and thus I approve a station heat rate of 2500 Kcal/Kwh for PTPS Unit-5 for FY 2006-07, i.e. the same as approved by me for FY 2005-06.

In my opinion, there is a strong case for HPGCL to critically analyse the reason(s) for under-performance of PTPS Unit –5 and Unit –6 and take all corrective measures including the ones recommended in CEA's relevant energy audit reports so as to improve upon their performance.

(C) FTSP Unit 1 to 3 (55 MW each)

HPGCL vide its office memo No. HPGC/FIN/Reg-205/415 dated 21.3.2006 has informed the Commission that FTSP Unit 1 to 3 are likely to be phased out by 2011-12. However, the above decision, which was reportedly taken last year, was linked with the erection and commissioning of a gas-based power plant at Faridabad. In view of the developments in the gas sector since the above decision, the future of gas-based generation in Haryana has become uncertain. The scenario may oblige HPGCL to have a second thought on the proposal as it can ill-afford to shut down the power plant enjoying locational advantage; being located at the load centre without ensuring availability of replacement power. HPGCL may look in to the matter expeditiously.

In view of the HPGCL's filing dated 31.3.2006, the target station heat rate for FTPS is approved to be pegged at last year's level i.e. 3900 Kcal/kwh. I propose to consider the matter keeping in view HPGCL's response to the issue raised in the preceding paragraph next year.

(D) **Transit Loss of Coal**

In line with the approach enunciated in my note of dissent to the order dated 2.5.2005 on Generation Tariff for HPGCL for FY 2005-06, I approve coal transit loss for FY 2006-07 equal to 2.3% and gradually reduce it to the national norm over next three years.

2. Depreciation

In my opinion, it is inappropriate to allow depreciation for FY 2006-07 as per the rates contained in GoI notification No. S0 266(E) dated 29.3.95 keeping in view para 5.3 (c) of the National Tariff Policy issued by the Ministry of Power, GoI New Delhi on 6.1.2006. It implies that the rates of depreciation in respect of generation and transmission assets notified by the Central Commission will be applicable (Appendix II of the CERC (Terms & Conditions of Tariff) Regulation No. L-7/25(5)/2003-CERC dated 26.3.2004 contain the depreciation schedule for generation and transmission assets). HERC has been keeping in view the above CERC document while allowing fixed cost such as O&M expenses and interest on working capital in its previous orders. I, therefore, approve that the depreciation may be allowed in line with the CERC notification while determining the generation tariff for HPGCL for FY 2006-07.

3. Conclusion

The improved station heat rate(s) for PTPS Unit 1 to 5 and FTPS, lesser coal transit loss and lesser amount of depreciation in line with CERC document approved by me will result in to a reduced per unit cost of generation apart from conservation of coal. It will lead to

reduction in retail tariff and thus help lessen the burden of electricity consumers of Haryana.

T.R. Dhaka
(Member)

ORDER

1. In terms of Section 92 (3 & 4) of the Electricity Act 2003 (Act 36 of 2003), the majority view of Lt. Col. (Retd.) Raghbir Singh, Chairman and Shri. T.S. Tewatia, Member, will be the order of the Commission.
2. The Commission directs that the generation tariffs approved by it for FY 2006-07 be implemented with effect from 1st June 2006.

HPGCL shall complete all procedural requirements to ensure implementation from the stipulated date. The order shall, unless amended or revoked by the Commission, continues to be in force.

This order is signed, dated and issued by the Haryana Electricity Regulatory Commission on 23rd day of May 2006.

Date: 23rd May 2006

Place: Panchkula

T. S. Tewatia
(Member)

T. R. Dhaka
(Member)

Lt. Col. (Retd.) Raghbir Singh
(Chairman)

ANNEXURE – 1: LIST OF DIRECTIVES NOT FULLY IMPLEMENTED

The Commission has issued a number of directives to HPGCL in its previous order i.e. FY 2004-05 & FY 2005-06. HPGCL has not yet fully complied with many directives. All such directives are given below.

1. The Commission directs HPGCL to take all possible steps to progressively reduce the transit loss of coal to nationally acceptable level as it amounts to an avoidable burden on the electricity consumers of Haryana (Para 4.11 Pg. 27, FY 2004-05 order).
2. The Commission directs that the generating company must prepare itself without any further delay and take steps to provide all infrastructural facilities – both hardware and software – so that ABT regime in line with the regional system may be introduced in Haryana at the earliest (Para 4.6, Page 23 FY 2004-05 order).
3. The Commission directs HPGCL to clear the backlog of getting their accounts audited including that of FY 2003-04 at the earliest and the quarterly report (s) be submitted by 10th of the beginning of the next quarter (Para 4.13, Page 28 FY 2004-05 order).
4. The Commission directs HPGCL to get a FAR prepared and audited within one-year from the date of this order and submit a copy to the Commission (Para 4.14, Page 29 FY 2004-05 order).
5. The Commission directs HPGCL to provide unit wise details of employees' expenses including break-up of basic pay, DA, terminal benefits etc. method of calculation and basis of projection adopted. Similarly, wherever 'cost & rate' allowed by the Commission, so far are not based on 'norms', detailed break-up must be provided. The filing of proposed tariff must include Unit wise variable charges (rate), Unit wise fixed charges (rate) or amount proposed to be recovered. (Para 4.3 Pg. 22, FY 2005-06 order).

6. HPGCL is directed to implement the recommendations of the Energy Audit Reports and take all necessary measures to reduce auxiliary power consumption to the national norms. (Para 4.7 Pg.26, FY 2005-06 order)

7. HPGCL is directed to take all necessary measures to reduce specific oil consumption to the national norms. (Para 4.8 Pg.27, FY 2005-06 order).

ANNEXURE – 2 LIST OF NEW DIRECTIVES

The Commission has given the following new directives in this order.

1. Action plan duly flagged with the targets to implement various recommendations of the energy audit reports in respect of PTPS unit 6 should be submitted within 30 days from the date of this order (Para 3.3 Pg.31).
2. HPGCL is directed to monitor, on a regular basis, the impact of the corrective measures already taken / planned during FY 2006-07 on key parameters such as turbine heat rate, boiler efficiency, auxiliary energy consumption, specific coal & oil consumption, coal mill efficiency etc. and report the findings to the Commission along with the next tariff application (Para 3.4 Pg.31).
3. HPGCL is directed to file its next tariff application in line with the ABT principles so that ABT on HPGCL generating stations can be implemented. HPGCL needs to ensure their a) preparedness for declaring availability for each 15 minutes time block on a day ahead basis for their individual generating stations, b) recording of actual generation of each station in 15 minutes interval, c) compilation of the same and dispatch to the SLDC, d) ensure station wise (including PTPS Unit 1 to 4 and FTPS Unit 1 to 3 separately) compilation of cost details (Para 3.4 Pg. 32).
4. The Commission directs HPGCL to drive home the urgency of bringing back these machines to bus – bar due to acute generation shortages in the state and prevail upon BHEL to complete the task well within time (Para 3.5 Pg. 34).
5. HPGCL is directed to ensure continuous improvement in the SHR of PTPS (Unit 1 to 4) and PTPS (Unit 5) so that beginning with the next financial year the ‘cushion’ allowed during the transition phase beginning FY 2004-05 can be rolled back. Further, we may be kept informed on a monthly basis the stage wise a) gross generation, b)

specific fuel oil consumption, c) auxiliary power consumption, d) station heat rate and e) PLF including steps taken during the month to ensure optimum boiler efficiency (Para 3.8 Pg. 39).

6. HPGCL has been vague in its filing under consideration in regard to accreditation of its Chemical test laboratory at PTPS & FTPS. They were required to do so within six months from the date of issue of FY 2005-06 order i.e. 2nd May 2005. The reply submitted vide memo no. HPGC/FIN/Reg-205/415 dated 21/03/2006 states that "Action is being taken to get the lab accredited at the earliest". Since HPGCL has not committed any time period for the same the Commission directs HPGCL to accomplish the task of getting its Chemical test laboratory at PTPS & FTPS accredited within 3 months from the date of issue of this order and keep the Commission posted on the progress made regarding the same (Para 3.9 Pg.41).
7. We direct HPGCL to take all necessary steps including discussion with the Northern Railways, New Delhi (member of State Advisory Committee). During the SAC meeting held on 22/03/2006 the representative of the Northern Railways offered to assist and desired information on sectors where maximum pilferage of coal from the Railway Wagon is taking place. HPGCL should bring down coal transit losses to 1% within 3 years time with an annual reduction target of 0.5% (Para 3.9 Pg.42).
8. The Commission notes with concern the inordinate delay in finalisation / audit of annual accounts and directs HPGCL to ensure timely closure and audit of accounts (Para 3.11 Pg 44).
9. We direct HPGCL to examine the CERC rates as contained in Appendix II of their Regulations dated 26/03/2004 and also work out alternatives as to how the gap between depreciation amount available and loan repayments can be bridged in the absence of AAD as stipulated in the National Tariff Policy. The Commission

may not allow any transitional loan for the purpose. The analysis / strategy may be provided to the Commission within 6 months from the date of this order (Para 3.12 Pg.45).

- 10.** The Commission directs HPGCL to monitor its receivables and take steps to manage its receivables in a prudent way and in tune with its 'payables' so as to reduce the same (Para 3.14 Pg.48).
- 11.** The Commission directs HPGCL to strengthen its internal audit work (Para 3.16 Pg. 49).
- 12.** In view of this the Commission directs HPGCL to undertake a detailed analysis of its human resources, assess its medium to long – term needs and submit a human resource management / development plan for consideration of the Commission within six months from the date of issue of this order (Para 3.17, Pg.49).