COMMISSION'S ORDER

ON

GENERATION TARIFF FOR

HARYANA POWER GENERATION CORPORATION LIMITED

FY 2013-14

CASE No: HERC / PRO– 25 OF 2012

Panchkula

29th March, 2013

HARYANA ELECTRICITY REGULATORY COMMISSION

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

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BEFORE THE HARYANA ELECTRICITY REGULATORY COMMISSION
BAY NO. 33-36, SECTOR - 4, PANCHKULA - 134 112

CASE NO: HERC / PRO - 25 OF 2012

DATE OF ORDER: 29th March, 2013

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

IN THE MATTER OF

Petition for approval of Generation Tariff of Haryana Power Generation Corporation Limited (HPGCL) for FY 2013-14 (from 1.04.2013 to 31.03.2014) u/s 61 & 62 of the Electricity Act, 2003.

AND

IN THE MATTER OF

HPGCL, Panchkula …… Petitioner

1. UHBVNL ….. Interveners
2. Haryana Chamber of Commerce & Industry (HCCI)
3. Yamuna Nagar – Jagadhari Chamber of Commerce & Industries

Parties Present:-

1. Shri Anurag Agarwal, MD, HPGCL
2. Shri B.B. Gupta, FA/Hqr. HPGCL
3. Shri Vikash K. Gupta, CAO, HPGCL
4. M/s Promila Sheoran, HPGCL
5. Shri Amit Dewan, FA/ Hq, UHBVNL
6. Shri I.B. Srivastava, CE, UHBVNL

7. Shri V.K. Sodhi, Consultant, Yamuna Nagar – Jagadhari Chamber of Commerce & Industries.
8. Shri A.L. Aggarwal, Vice Preseident, HCCI.
9. Shri Rajneesh Garg, Vice Preseident, HCCI.
10. Shri Deepak Kanodia, XEN, HPPC
11. Shri D.K. Sharma, SE/HPPC
12. Shri C.B. Goel, Ex-Preseident, HCCI
13. Shri Manoj Garg, XEN, UHBVNL
14. M/s Manisha Chauhan, PWC Consultant, UHBVNL

ORDER

1. Haryana Power Generation Corporation (hereinafter referred to as HPGCL or the Petitioner), is a power generating company as defined in Section 2 (28) of the Electricity Act, 2003. HPGCL, vide their Memo No. HPGC/FIN/Reg – 417/446 dated 30.10.2012, had filed the present petition for approval of tariffs for their generating stations i.e. Panipat Thermal Power Station (PTPS Units 1 to 8), Deen Bandhu Chhotu Ram Thermal Power Station, Yamunanagar (DCR TPS Units 1 & 2), Rajiv Gandhi Thermal Power Station, Hisar (RG TPS Unit 1 & 2) and Mini Hydel power stations at Yamunanagar & Kakroi (WYC).

2. The details of the generating stations for which HPGCL had filed the present tariff petition including date of commercial operation of the different power stations provided by them are as under:-

Particulars	Installed Capacity as on 31.03.2012	Date of Commissioning / COD
Panipat Thermal Power Station, Panipat	Unit No-1: 117.8 MW	01/11/1979
	Unit No-2: 110 MW	27/03/1980
	Unit No-3: 110 MW	01/11/1985
	Unit No-4: 110 MW	11/01/1987
	Unit No-5: 210 MW	28/03/1989
	Unit No-6: 210 MW	31/03/2001
	Unit No-7: 250 MW	28/09/2004
	Unit No-8: 250 MW	28/01/2005
DCR TPS,Yamuna Nagar	Unit No-1: 300 MW	14/04/2008
	Unit No-2: 300 MW	24/06/2008
RG TPS, Hisar	Unit No-1: 600 MW	24/08/2010
	Unit No-2: 600 MW	01/03/2011
Western Yamuna Canal Hydro Project (Yamuna Nagar)	**Power House A**	
	Unit No-1: 8 MW	29/05/1986
	Unit No-2: 8 MW	13/06/1986
	Power House B	
	Unit No-1: 8 MW	15/05/1987
	Unit No-2: 8 MW	01/06/1987
	Power House C	
	Unit No-1: 8 MW	27/03/1989

Particulars	Installed Capacity as on 31.03.2012	Date of Commissioning / COD
	Unit No-2: 8 MW	18/04/1989
	Power House D	
	Unit No-1: 7.2 MW	16/04/2004
	Unit No-2: 7.2 MW	12/05/2004
Micro Hydro Power Station, Kakroi	0.30 MW	
Total Capacity	**3230.5 MW**	

3. The tariff(s) for HPGCL's generating stations for FY 2012-13 was determined by this Commission vide its order dated 29th March, 2012 in case no. HERC/PRO – 31 of 2011. The tariffs determined were as follows:

HERC Approved Tariff (FY 2012 -13)

	PTPS (Unit 1-4)	PTPS (Unit 5)	PTPS (Unit 6)	PTPS (Unit 7 & 8)	DCR TPS (Unit 1& 2)	RG TPS (Unit 1 &2)	WYC & Kakroi hydro	Total HPGCL
Energy Charges (Rs./kWh)	3.2288	2.5777	2.5777	2.5140	2.1347	2.2983	-	2.4153
Fixed Charges (Rs./kWh)	0.8310	0.4858	0.8475	0.8117	1.0193	0.9757	1.1687	0.9029
Total Charges Rs / kWh	4.0598	3.0635	3.4252	3.3257	3.1540	3.2740	1.1687	3.3182

In addition to the tariff(s) determined above HPGCL was also allowed to recover any difference in the actual cost of coal (at allowed transit loss) and secondary fuel oil and the respective GCVs vis – a- vis those allowed by the Commission on a projected basis through Fuel Price Adjustment (FPA) mechanism in accordance with the FPA formula approved by the Commission.

4. **HPGCL's Generation tariff Petition for FY 2013-14:**

HPGCL had filed the generation tariff petition for FY 2013 -14 largely based on the technical and financial parameters specified by the Haryana Electricity Regulatory Commission (Terms and Conditions of Generation Tariff) Regulations, 2008 and the principles adopted by HERC in Generation Tariff Orders for previous years as well as CERC (Terms and Conditions of Tariff) Regulations, 2009 wherever applicable. Further, HPGCL had proposed relaxations in norms for PTPS (Units 1 to 4) on account of the vintage of these power plants. In the case of other Power Plants norms have been proposed based on their achievability considering the performance history of past three years and other specific issues and operational constraints presently being faced by them.

A summary of the proposed generation tariff filed by HPGCL for FY 2013-14, for approval of the Commission, is presented in the following table.

PTPS Unit 1 to 8 (in Rs. Crore) for FY 2013-14

Station	PTPS (Unit 1-4)	PTPS (Unit-5)	PTPS (Unit-6)	PTPS (Unit-7)	PTPS (Unit-8)	PTPS (Unit 1-8)
Fuel Cost	926.728	423.706	423.706	504.412	504.412	2782.965
Depreciation	31.765	12.399	51.199	45.477	44.795	185.635
Interest & Finance Charges	4.985	1.466	9.671	22.465	22.465	61.053
Interest on Working Capital	70.829	32.30	48.084	50.491	50.470	252.174
Return on Equity	15.470	0.977	26.232	36.337	36.337	115.352
O&M Cost	166.158	39.404	39.404	46.910	46.910	338.787
Total Cost of Generation	1215.935	510.252	598.296	706.094	705.391	3735.966
Generation (Ex-Bus) Million Units	2132.98	1318.97	1320.54	1594.32	1594.32	7961.13
Cost per Unit (Rs./kWh)	5.70	3.87	4.53	4.43	4.42	4.69

DCR TPS & RG TPS (in Rs. Crore) for FY 2013-14

Station	DCR TPS Unit-1	DCR TPS Unit-2	DCR TPS Unit 1 –2	RG TPS Unit -1	RG TPS Unit-2	RG TPS Unit 1-2	Revised RG TPS #
Fuel Cost	458.229	458.229	916.458	1050.062	1050.062	2100.125	
Proposed Depreciation	51.892	51.892	103.784	93.393	93.393	186.786	
Interest & Finance Charges	82.683	82.683	165.365	163.818	163.818	327.635	
Interest on Working Capital	60.040	60.040	120.079	69.345	69.345	138.689	
Return on Equity	42.345	42.345	84.689	84.008	84.008	168.017	
O&M Cost	49.477	49.477	98.954	89.134	89.134	178.267	
Total Cost of Generation	744.4665	744.4665	1489.329	1549.760	1549.760	3099.519	2554.24
Generation (Ex-Bus) Million Units	1913.18	1913.18	3826.37	3952.51	3952.51	7905.02	
Cost per Unit (Rs./kWh)	3.89	3.89	3.89	3.92	3.92	3.92	4.126

revised vide supplementary tariff petition for FY 2013-14 dated 7/01/2013 (Memo No. HPGC/FIN/Reg-417/478).

WYC & kakroi (in Rs. Crore) FY 2013-14

Station	WYC &Karkoi	Total HPGCL
Fuel Cost	-	5799.548
Proposed Depreciation	9.099	485.304
Interest & Finance Charges	0.582	554.636
Interest on Working Capital	1.738	512.680
Return on Equity	2.517	370.575
O&M Cost	18.360	634.368

Total Cost of Generation	32.296	8357.111
Generation (Ex-Bus) Million Units	271.88	19964.40
Cost per Unit (Rs./kWh)	1.19	4.19

Additionally HPGCL had submitted that the Commission may consider need based R&M expenditure for PTPS (Units 3 & 4) as comprehensive R&M is commercially unviable. in order to sustain the operations of these plants at the existing levels the proposed expenditure, over a period of two years, is Rs. 144.68 Crore The Petitioner has sought three months time (from the date of submission of the present petition) to submit the detailed Capital Investment Plan for the proposed need based R&M of PTPS Units (3 & 4).

<u>Prayer</u>

In view of the above, the petitioner has prayed as under:-

a) Admit this Petition;
b) Permit the Petitioner to continue import of coal to meet coal shortage and coal quality requirement.
c) Permit the Petitioner to continue the practice of recovering fixed charges during back – down of the Units.
d) Grant relief in coal transit loss as proposed by them.
e) Grant additional interest on working capital to meet the additional short term borrowings necessitated due to non – payment of dues by the Discoms.
f) Grant three months time to the Petitioner to file the Capital Investment Plan for need based R&M of PTPS Units 3 & 4.
g) Pass such orders as the Commission may deem fit and proper and necessary in the facts and circumstances of the case, to grant relief in the operational norms related to Plant Load factor, Station Heat Rate, Auxiliary Consumption, Specific oil consumption and financial norms related to ROE, O&M expenses and interest on working capital as requested by them.
h) Approve the tariff for various Power Stations of the Petitioner based on the proposal given in the current petition.
i) Approve the other considerations expressed by the Petitioner in the current petition.
j) Condone any inadvertent omissions / errors / delays / short comings and permit the applicant to add/change/modify/alter this

filing and make further submissions as may be required at later stage.

5. HPGCL's Projections of Technical Parameters for FY 2013-14:

HPGCL had submitted that in their earlier tariff petition the technical parameters were being proposed by them based on HERC (Terms & Conditions for Determination of Generation Tariff) Regulation, 2008; and CERC Tariff Regulation, 2009 and the norms approved by the Commission in the previous generation tariff order(s). However, in the light of the judgment of the Hon'ble Appellate Tribunal for Electricity (APTEL) in Appeal No.91 of 2011 dated 15th May, 2011 (appeal preferred by the Petitioner against the Commission's order on generation tariff for FY 2011-12), HPGCL had submitted that they are not able to continue the same approach as the APTEL has maintained that since there is an existing Regulation of the State Commission so the Central Commission Regulation may not be adopted for the corresponding norms while determining the tariff.

Thus while making the present proposal regarding performance parameters for FY 2013-14, HPGCL has relied on the APTEL'S judgment in appeal No. 91 of 2011 dated 15th May, 2011 & Appeal no. 131 of 2011 dated 1st h March, 2012.

In the light of the above judgments, HPGCL had proposed the norms as per the HERC (Terms and Conditions for Determination of Generation Tariff) Regulations, 2008 and has requested for relaxation in certain norms based on the provisions of the HERC Regulations, 2008 cited below:

"11 (2) Target Availability / Plant Load Factor (PLF)

> … The Commission, based on an application made by the generating company and for reasons to be recorded in writing, may relax the norms of target availability for such period, as it may consider appropriate, for any generating station."

"11 (3) (a) Gross Station Heat Rate (Kcal/kWh):

> … The Commission may vary the normative heat rate from those indicated in these regulations on a case-to-case basis based on the levels of O&M and Life Extension (LE) that the station has been subjected to in the recent past or adopt the norms as specified by the CERC from time to time."

"11 (4) Secondary fuel oil consumption:

…. The Commission may relax the above norm on case to case basis based on inherent technology of the stations of older vintage.”

“11 (5) Auxiliary Energy Consumption;

…. The Commission may relax the above norms on a case-to-case basis based on unique plant lay out and inherent technology of the stations of older vintage.”

“*17. (4) Landed Cost of Coal: The landed cost of coal for the purpose of computation of energy charges shall be arrived at after considering 0.8% normative transit and handling losses of the quantity of coal dispatched by the coal supply company. The cost shall be considered as per the notifications of the Central Government or Coal Companies. In the absence of any recent notification, the weighted annual average cost of the current year adjusted for known changes shall be considered as the cost while computing generation tariff. The Commission may relax the norm in the light of achievability of the norm and circumstances specific to the generating station.”*

“33. Power to Relax – The Commission, for reasons to be recorded in writing, may vary any of the provisions of these regulations on its own or on an application made before it by an interested person.”

5.1. Plant Load Factor

The following table provides the PLF of HPGCL power plants, the best achieved up to FY 2011-12, the target fixed by the Commission for FY 2011-12 & 2012-13 and those achieved by the Petitioner during FY 2011-12 & 2012-13 (up to Sep. 2012) and the norms fixed by this Commission as per Tariff Regulations,2012 and the CERC.

Plant Load Factor (%)

Units	Best Achieved up to FY 2011-12	HERC Approval 2011-12	Achieved 2011-12	HERC Approval 2012-13	Achieved 2012-13 (end.sep.) 2012	HPGCL Filing for 2013-14	HERC norms dated 05.12.20 12 MYT	CERC norms dt. 19.01.09
PTPS1-4	72.45 (2003-04)	75	63.71	70	59.31	61.82	68	60 to 85
PTPS 5	96.23 (2007-08)	85	85.31	85	76.14	80	85	85
PTPS 6	97.49 (2009-10)	85	79.03	85	100.52	80	85	85
PTPS 7	98.91 (2007-08)	85	96.09	85	97.65	80	85	85

PTPS 8	96.93 (2009-10)	85	95.12	85	96.38	80	85	85
DCR TPS -1	91.99 (2011-12)	85	91.99	85		80	85	85
DCR TPS -2	76.97 (2009-10)	85	30.91	85		80	85	85
RG TPS-1	54.46 (2011-12)	85	54.46	85	27.65	80	85	85
RG TPS-2	51.10 (2011-12)	85	51.10	85	75.84	80	85	85
HPGCL Thermal	82.93 (2009-10)		66.60	-	55.01			
WYC & Kakroi Hydel	-	50		50		50	50	55-60

PTPS (Units 1-4)

It is observed from the above table that during FY 2012-13 the overall PLF of PTPS units 1-4 (up to Sept. 2012) was 59.31% against the target of 70% fixed by the Commission. The PLF achieved by these units individually during this period was 76.89%, 40.61%, 62.45% & 56.04% respectively. It is observed that the PLF of units under PTPS Units 1- 4 have been unsatisfactory except for Unit-1 which has achieved 76.89% PLF. The Petitioner while admitting the poor performance of these Units has attributed the same to vintage of these Units and lack of comprehensive R&M activities.

The Petitioner had submitted that that PTPS Unit 1, 3, & 4 are planned for annual over hauling as per normal maintenance schedule of 35,30 and 30 days respectively over and above the proposed need based R & M of PTPS Unit 3 &4. The proposed schedule for R&M of PTPS Unit 3 & 4 is as under:-

Proposed Shutdown Schedule for R & M of PTPS Units 3 and 4

PTPS Units 3 & 4	Period	No. of days
Unit 4	April-May 2013	50
Unit 4	August 2014 Onwards	90
Unit 3	Sep-Oct 2013	60
Unit 3	March 2015 Onwards	90

The Petitioner has proposed PLFs for these units for FY 2013-14 on the basis of average of last three years i.e. 69.08%, 54.13%, 61.36%, 62.20% respectively with an overall PLF of 61.82% for PTPS-1-4. The Petitioner has prayed for relaxation of norms of target availability / Pant load factor as per the provisions regulation 11(2) of HERC Regulation, 2008.

PTPS (Unit 5-8):

The individual PLFs of PTPS Units - 5 to 8 achieved (up to Sept.2012) during FY 2012-13 stands at 76.14%, 100.52%, 97.65% & 96.35% against the target of 85% fixed by Commission. The Petitioner has proposed normative PLF of 80% based on HERC Regulation, 2008 for FY 2013-14 for PTPS Unit 5 to 8.

DCR TPS (Units 1 & 2):

As regard DCR TPS Units 1-2, HPGCL has submitted that both the Units are under forced outages and are expected to come back to operation by the end of 2012. HPGCL has further submitted that due to the low quality of coal being received at the plant, these Units were running at below normative PLF levels even before the prolonged outage. For the purpose of generation tariff determination in FY 2013-14, the Petitioner, has proposed PLF of 80% as per HERC (Terms and Conditions for Determination of Generation Tariff) Regulations, 2008.

RG TPS (Units 1 & 2):

It is observed that during FY 2011-12 PLF of these units remained very low i.e. 54.46% & 51.40% respectively. The individual PLFs of RG TPS Units 1 & 2 achieved during FY 2012-13 (up to Sept. 2012) is at 27.65% & 75.84% against the HERC norms of 85%. The Petitioner has submitted that during FY 2012-13 Unit 1 of RG TPS has been under shut down for a long duration on account of turbine related problems which has resulted in a very low PLF of the Station. The PLF of the Units also suffered on account of poor quality of coal. For the FY 2013-14, the Petitioner has proposed 80% PLF as per HERC (Terms and Conditions for Determination of Generation Tariff) Regulations, 2008.

WYC & Kakroi :

In case of WYC & Kakroi hydro units, the overall PLF achieved (up to Sept 2012) during FY 2012-13 is 51.54%. The Petitioner has proposed a PLF of 50% for WYC and Kakroi Hydro Stations for FY 2013-14 on the basis of average PLF for the last three years which is 48.15%.

A summary of the proposed PLF for HPGCL's generating stations for FY 2013-14 submitted by the Petitioner for the consideration of the Commission is reproduced below:

HPGCL's Proposed PLF for FY 2013-14 (%)

PTPS (Unit-1)	69.08
PTPS (Unit-2)	54.13
PTPS (Unit-3)	61.36
PTPS (Unit-4)	62.20
PTPS (Unit-1 to 4)	61.82
PTPS (Unit-5 to 8)	80
DCR TPS Unit-1 & 2	80
RG TPS Unit-1 & 2	80 (revised proposal 70%)
WYC & Kakroi Hydro	50

It has been further submitted by the Petitioner, that in case intrastate ABT is implemented by the Commission in Haryana, the values as proposed above for each plant may be treated as Plant Availability Factor (PAF) instead of Plant Load Factor (PLF).

5.2. Auxiliary Power Consumption (%)

The following table provides the status of Auxiliary Power Consumption (%) of HPGCL plants the best achieved up to FY 2011-12, target fixed by the Commission FY 2011-12 & 2012-13 and achievement for FY 2011-12 & 2012-13 (up to Sept./12) and norms fixed by HERC and CERC in their regulations:-

Auxiliary Energy Consumption of HPGCL Plants (%)

Units	Best Achieved up to FY 2011-12	HERC Approval 2011-12	Achieved 2011-12	HERC Approval 2012-13	Achieved 2012-13 upto Sept/12	HPGCL Filing for 2013-14	HERC norms dated 05.12.2012/ MYT	CERC norms dt. 19.01.09
PTPS1-4	11.05 (2003-04)	11	12.54	11	12.57	12.04	11	9.50 to 12
PTPS 5	8.83 (2003-04)	9	10.49	9	11.60	10.38	9	8.50
PTPS 6	8.94 (2001-02)	9	11.19	9	9.93	10.27	9	8.50
PTPS 7	8.36 (2007-08)	8.5	9.02	8.5	9.50	9.0	8.5	8.50
PTPS 8	7.60 (2005-06)	8.5	9.09	8.5	9.45	9.0	8.5	8.50
DCRTPP-1	8.77 (2011-12)	8.5	8.77	8.5	Unit under for shut down	9.0	8.5	8.50
DCRTPS-2	9.32 (2008-09)	8.5	11.00	8.5	Unit under for shut down	9.0	8.5	8.50
*RGTPS-1	-	6	6.16	6	6.12	6	6	6.00
*RGTPP-2	-	6	6.59	6	5.73	6	6	6.00
WYC & Kakroi Hydel	0.68 (2011-12)	1	0.68	1	0.69	1.00	1.0 (including transformation losses of 0.5%	0.7 to 1

**RG TPS Unit-1 & 2 have steam driven BFPs)*

It may be seen from the above that the Auxiliary Energy Consumption of PTPS Units-1-4 achieved up to Sept. 2012 during FY 2012-13 stands at 12.57% against the target of 11% fixed by the commission.

The Auxiliary Energy Consumption of PTPS Units- 5&6 achieved (up to Sept.2012) during FY2012-13 are 11.60% & 9.93 % respectively, against the target of 9% fixed by the commission. Similarly, the Auxiliary Energy

Consumption of PTPS Units-7 & 8 achieved during this period has been indicated as 9.50 % & 9.45 % respectively against the target of 8.50%.

The Auxiliary Energy Consumption of DCR TPS Units 1 & 2 for the period ending Sept. 2012 in FY 2011 -12 is not available as these units remained under prolonged forced shut down.

The Auxiliary Energy Consumption of RG TPS Units 1 & 2 achieved up to Sept.2012 in FY 2012-13 has been indicated as 6.12% & 5.73% respectively against the HERC norm of 6%.

HPGCL has proposed Auxiliary Energy Consumption for various generating Units for FY 2013-14 as under: -

HPGCL's Proposed Auxiliary Energy Consumption FY 2013-14 (%)

Name of the Power Plant	FY 2013-14
PTPS (Unit-1 to 4)	12.04
PTPS (Unit-5)	10.38
PTPS (Unit-6)	10.27
PTPS (Unit-7 & 8)	9.00
DCR TPS, (Unit-1 & 2)	9.00
RGTPP, Unit-1 & 2)	6.00
WYC and Kakroi (Hydro)	1.00

PTPS (Units 1-4):

The Petitioner has sought relaxation in the norms of auxiliary energy consumption for PTPS Units 1-4. They have proposed auxiliary energy consumption for PTPS Units (1-4) as 12.04% on the basis of average of last three years citing vintage of these units and since no further comprehensive R & M of Units 3 & 4 is to be undertaken as these Units are being considered for phasing out in 2018-19. It has been further submitted that during frequent backing down of these Units, they are operated at lesser load but all auxiliaries remain in service thereby increasing the auxiliary consumption.

PTPS (Units 5-8) & DCR TPS (Units 1 & 2)

The Petitioner has submitted that PTPS Unit 5 has completed 23 years since its commissioning and is almost at the terminal stage of its normal design life. PTPS Unit 6 has also been performing below normative levels for the past few years in terms of auxiliary energy consumption. Thus for FY 2013-14, considering the historical performance of the PTPS Units 5 & 6, the Petitioner has prayed for relaxation in normative auxiliary energy consumption and has proposed an auxiliary consumption of 10.38% and 10.27% for PTPS Units 5 & 6 respectively ,based on the average of last three years.

For PTPS Unit 7 & 8 and DCR TPS Units 1 & 2 the Petitioner has proposed auxiliary energy consumption of 9% in accordance with the HERC (Terms and Conditions for Determination of Generation Tariff) Regulations, 2008.

RG TPS Units 1&2:

In the case of RG TPS (1&2), the Petitioner has proposed auxiliary energy consumption based upon the principle adopted by the Commission in their previous tariff orders.

WYC and Kakroi:

In the case of WYC & Kakroi, the auxiliary energy consumption (including transformation loss) is proposed as 1% for FY 2013-14 in accordance with the HERC (Terms and Conditions for Determination of Generation Tariff) Regulations, 2008. The relevant regulation cited by the Petitioner is reproduced below:

> *"24… (2) Auxiliary Energy Consumption for Micro Hydel Generating stations including WYC projects & Kakroi shall be 0.5% of the energy generated.*
> *(3) Transformation losses from generation voltage to transmission voltage shall be 0.5 % of energy generated."*

The Petitioner has submitted that the Commission may approve auxiliary energy consumption for the various plants/ Units as proposed above, considering the historical performance and regulatory norms.

5.3 Secondary Fuel Oil Consumption (SFC):

The following table provides the details of Specific Oil Consumption (ml/kWh) in respect of HPGCL plants, the best achieved till FY 2011-12, target fixed by the Commission for FY 2011-12 & 2012-13, performance of HPGCL for FY 2011-12 & 2012-13 (up to Sept./12) and norms fixed by HERC and CERC in their regulations:-

Secondary Fuel Oil Consumption for HPGCL Plants (ml/kWh)

Units	Best Achieved up to FY 2011-12	HERC Approval 2011-12	Achieved 2011-12	HERC Approval 2012-13	Achieved 2012-13 (upto.sept. 12)	HPGCL Filing for 2013-14	HERC norms dated 05.12.2012 MYT	CERC norms dt. 19.01.09
PTPS1-4	2.44 (2009-10)	2	5.56	2	5.47	4.60 (avg. of last 3 years	2	2 to 3
PTPS 5	1.00 (2007-08)	1	1.55	1	1.58	2	1	1
PTPS 6	0.54 (2006-07)	1	1.71	1	0.75	2	1	1
PTPS 7	0.37 (2009-10)	1	0.78	1	0.58	2	1	1
PTPS 8	0.35 (2007-08)	1	1.18	1	0.55	2	1	1
DCRTPS - 1	0.86 (2010-11)	1	0.93	1	Unit under shut down	2	1	1
DCRTPS -2	2.43 (2009-10)	1	6.15	1	Unit under shut down	2	1	1
RGTPS-1	4.40 (2011-12)	1	4.40	1	2.52	2	1	1
RGTPP-2	2.81 (2011-12)	1	2.81	1	1.06	2	1	1

It is observed from the above that Secondary Fuel Oil Consumption (ml/kWh) in most of the units (except PTPS Units 6, 7 & 8) has been showing an increasing trend as compared to the norms. The higher specific oil consumption has been attributed by HPGCL to frequent start / stop operations due to increased number of tripping.

PTPS (Units 1-4):

The Petitioner has proposed specific oil consumption For PTPS Units 1 to 4 based on the average of previous three years i.e. 4.60 ml/kWh considering the vintage of the Units and frequent backing down. HPGCL has further submitted that on every retake of the unit after boxing up, on an average 40-60 KL of Oil is consumed. Oil support is also necessitated due to receipt of wet coal.

PTPS (Units 5 & 8) /DCR TPS Units 1 & 2 / RG TPS Units 1 & 2:

In the case of PTPS Units 5 to 8, DCR TPS Units 1 & 2 and RG TPS Units 1 & 2 the Petitioner has proposed specific oil consumption as 2 ml/kWh in accordance with Regulation 11(4) of HERC (Terms and Conditions for Determination of Generation Tariff) Regulations, 2008.

The proposed specific Oil consumption for its generating Units by HPGCL for FY 2013-14 is as under:

HPGCL's Proposed Specific Oil Consumption (in ml/kWh) for FY 2013-14

Name of the Plant	FY 2013-14
PTPS Unit-1	2.97
PTPS Unit-2	3.48
PTPS Unit-3	5.97
PTPS Unit-4	6.23
PTPS (Unit-1 to 4)	4.60
PTPS Unit-5 to 8	2.00
DCRTPPUnit-1 & 2	2.00
RGTPPUnit-1 & 2	2.00

5.4 Station Heat Rate (SHR)

The Station Heat Rate (Kcal/kWh) of HPGCL Units, the best achieved up to FY 2011-12, target fixed by HERC for FY 2011-12 & 2012-13 vis-à-vis achievement of performance (up to Sept.2012) and the norms fixed by HERC and CERC as per regulations is presented in the table below:-

Station Heat Rate for HPGCL Plants. (Kcal/kWh)

Units	Best Achieved up to FY 2011-12	HERC Approval 2011-12	Achieved 2011-12	HERC Approval 2012-13	Achieved 2012-13 (upto sept.2012)	HPGCL Filing for 2013-14	HERC norms dated 05.12.2012, MYT	CERC norms dt. 19.01.09
PTP 1-4	3211 (2011-12)	3050	3211	3100	3117	3261.67	3150	2700 to 3100
PTPS 5	2675 (2011-12)	2500	2675	2550	2545	2500	2550	2500
PTPS 6	2693 (2010-11)	2500	2749	2550	2520	2500	2550	2500
PTPS 7	2452 (2008-09)	2500	2625	2500	2522	2500	2500	2500

PTPS 8	2446 (2008-09)	2500	2630	2500	2520	2500	2500	2500
DCRTPS -1	2391 (2009-10)	2343	2416	2343	Forced shutdown	2410	2344	2368
DCRTPS -2	2383 (2009-10)	2343	2408	2343	Forced shutdown	2410	2344	2368
*RGTPS-1	2659- (2011-12)	2386	2659	2386	2669	2450	2387	2422
*RGTPS-2	2613 (2011-12)	2386	2613	2386	2549	2450	2387	2422

*(RG TPS unit 1 & 2 have Steam Driven BFPs)

PTPS (Unit 1-4):

The Station Heat Rate (Kcal/kWh) of PTPS Units 1-4 achieved up to Sept. 2012 during FY 2012-13 stands at 3117 against the target of 3100 fixed by the Commission.

For PTPS (unit 1 to 4) the Petitioner has prayed to the Commission to allow relaxed SHR norms considering the vintage of the plant and non-viability of comprehensive R & M. It has been further submitted that these Units are running on partial load for a significant period on account of frequent backing down. During partial load operation, there is a reduction in efficiency and increase in net heat rate.

The Petitioner has proposed SHR for PTPS Units (1-4) based on average SHR of past three years i.e. 3261.67 Kcal/KWh for FY 2013-14.

PTPS (Units 5-8):

The Station Heat Rate (Kcal/kWh) of PTPS units 5 to 8 achieved till Sept.2012 during FY 2012-13 has been indicated by the Petitioner as 2545, 2520, 2522 & 2520 Kcal/kWh respectively against the target of 2550 Kcal/kWh for PTPS Units 5 & 6 and 2500 Kcal/kWh for Units 7 & 8 respectively.

The Petitioner has proposed SHR of above units as 2500 Kcal/kWh for FY 2013-14 based on the HERC Regulations, 2008, for the purpose of determination of generation tariff.

DCR TPS Units 1&2:

Unit 1 & 2 of DCR TPS remained under forced shut down during FY 2012-13 (up to Sept. 12) so the information in respect of SHR is not available. However, during FY 2011-12 these units have achieved SHR of 2416 (Unit – 1) & 2408 (Unit – 2) Kcal/kWh against the target of 2343 Kcal/kWh.

The Petitioner has proposed SHR for DCR TPS Units 1 & 2 as 2,410 kCal/kWh as per HERC Regulations, 2008 applicable for electrically operated boiler feed pump.

RG TPS Units 1&2:

The Station Heat Rate (Kcal/kWh) for RG TPS Unit 1 & 2 achieved upto Sept. 2012 in FY 2012-13 has been indicated as 2669 & 2549 Kcal/kWh respectively against the target of 2386 Kcal/kWh fixed by the Commission.The Petitioner has proposed SHR of 2,450 kCal/kWh for FY 2013-14 as per the HERC norms for power plants of capacity 300 MW and above.

A summary of the proposed SHR for different generating stations of HPGCL is presented in the table below.

HPGCL's Proposed Station Heat rate (in kCal/kWh) for FY 2013-14

Name of Plant / Unit	FY 2013-14
PTPS Unit-1	3,025.00
PTPS Unit-2	3,243.67
PTPS Unit-3	3,330.00
PTPS Unit-4	3,477.67
PTPS (Unit-1 to 4)	3,261.67
PTPS Unit-5	2,500.00
PTPS Unit-6	2,500.00
PTPS Unit-7	2,500.00
PTPS Unit-8	2,500.00
DCRTPS Unit-1	2,410.00
DCRTPS Unit-2	2,410.00
RGTPS Unit-1	2,450.00
RGTPS Unit-2	2,450.00

The Petitioner has prayed to the Commission to approve the SHR for the various plants/ Units as proposed above, considering the historical performance, operational constraints faced by them and regulatory norms. The hon'ble APTEL's judgment on SHR cited by the Petitioner is reproduced below:

… c) It is noted that the State Commission has evaluated the station heat rates for DCR TPS and RG TPS from designed heat rate multiplying it with deterioration factor of 1.065 prescribed in Central Commission's Tariff Regulations, 2009 without giving any reasons for deviation from its own 2008 Regulations. We feel, this is not a correct approach. State Commission ought to have followed its own Regulations or should have given detailed reasons for any deviation from these Regulations. Under the circumstances, we direct the State Commission to allow station heat rate with respect to DCR TPS and RG TPC in accordance with the provisions of its own Tariff Regulations, 2008."

5.5 Transit Loss of Coal (%)

The following table provides the trend in Transit Loss of Coal received at HPGCL power plant, best achieved by HPGCL up to FY 2011-12, target fixed by the Commission for FY 2011-12 & 2012-13, achievement by HPGCL for FY 2010-12 & 2011-13 (ending Sept. 2012) and norms fixed by HERC and CERC in their regulations:-

	Best Achieved up to FY 2011-12	HERC Approval 2009-10	Achieved 2009-10	HERC Appro--val 2010-11	Achieved 2010-11	HERC Approval 2011-12	Achie-ved 2011-12	HERC Approval 2012-13	Achieved 2012-13 (sept2012)	HPGCL Filing for 2013-14	# HERC norms dated 05.12.2012 MYT	CERC norms dt. 19.01.09
PTPP	1.76 (2008-09)	1.5	3.71	1	7.57	1	6.43	*1.5	5.15	4.35	1.5	0.8
DCRTPS		1.5	3.19	1	7.17	1	8.08	*1.5	4.55	3.34	1.5	0.8
RGTPS				1		1	5.44	*1.5	4.52	3.34	1.5	0.8

** HERC approved transit loss of coal to HPGCL for 2012-13@1.5% on coal receipt from indigenous coal mines with directions to finalize arrangement where the contractor/agent is bound to supply agreed quantity and quality of coal at power plant as well as stepping of procurement of washed coal to reign in transit loss of coal within 2% in six month.*

 # HERC norm less than or equal to 1.5%, CERC norm 0.8% for non-pithead power plants.

The Petitioner has submitted that in its previous tariff petitions they had sought relaxation in transit loss to the extent of actual transit losses being incurred, since they have little or no control over the same. The Commission had considered the plea in its Tariff Order for FY 2012-13 and relaxed the transit losses to 1.5% from earlier approved level of 1% in Tariff Order for FY 2011-12.

The Commission had also issued a directive in Tariff Order for FY 2012-13 with regard to appointment of coal agent and bringing down the coal transit losses to a level of 2%.

The Petitioner has submitted that they are committed to reduce the transit losses from the current levels in line with the Commission's directive and has appointed a coal agent in September 2012. The Coal Agent has been mandated to supervise the loading process and reduce the transit loss to the extent of 2%. Subsequent to the appointment of the Coal Agent and operationalization of the contract, the transit losses are expected to come down from the present levels to 2%, which is being proposed for approval for FY 2013-14 by the Petitioner.

They have sought relaxation in transit loss of coal citing the provisions in the HERC Regulations, 2008, as under:

> "17… (4): Landed Cost of Coal: The landed cost of coal for the purpose of computation of energy charges shall be arrived at after considering 0.8% normative transit and handling losses of the quantity of coal dispatched by the coal supply company. The cost shall be considered as per the notifications of the Central Government or Coal Companies. In the absence of any recent notification, the weighted annual average cost of the current year adjusted for known changes shall be considered as the cost while computing generation tariff. The Commission may relax the norm in the light of achievability of the norm and circumstances specific to the generating station."

It has been further added by the Petitioner that the normative transit loss of 0.8% as envisaged in HERC Regulations, 2008 is not attainable considering the long distance of HPGCL's power plants from collieries and its historical performance in this regard.

Therefore, in accordance with the Regulations where by the Commission has the powers to relax the norm in light of achievability, the Petitioner has proposed a coal transit loss of 2% for FY 2013-14 in line with the transit loss level suggested by the Commission post appointment of coal agent, in its Tariff Order for FY 2012-13.

6. HPGCL's Proposed Fixed Cost for FY 2013-14:

6.1 Return on Equity (ROE):

The Petitioner has proposed ROE at a rate of 14% on its equity base (average of opening and closing balance of equity capital), grossed up by the applicable tax rate i.e. Minimum Alternate Tax, in line with the Regulation 11 of HERC (Terms and Conditions for Determination of Generation Tariff) Regulations, 2008. HPGCL has further submitted that grant of ROE as per the Regulations of the State Commission has been upheld by the hon'ble APTEL in its judgment in Appeal No. 91 of 2011 dated 15th May, 2012. The proposed ROE for FY 2013-14 is presented below.

Return on Equity (In Rs. Millions)

Particulars	FY 2013-14
Opening Balance of Equity	21105.7
Closing Balance of Equity	21241.48
Average of Opening & Closing Balance of Equity Capital	21173.59
Return on Equity	**3705.75**
Effective Rate of Return with MAT (%)	**17.50**

6.2 Interest on Loan Capital and Finance Charges:

The Petitioner had proposed the actual interest rate as applicable to existing loans for computation of interest charges. Whereas the finance charges constitute of Guarantee fees and other Bank charges, etc. The basis of projections of the interest and finance charges is the actual charges incurred during the FY 2011-12, as per annual accounts.

The plant wise details of all the existing and new loans have been provided in the relevant forms as required by the Commission. The interest expenses and other finance charges for various plants, as proposed by the Petitioner, are summarized in the table that follows:

HPGCL's Proposed Interest and Finance Charges for 2013-14 (In Rs. Millions)

Station	Proposed Interest and Finance Charges FY 2013-14
PTPS Unit-1 to 4)	49.85
PTPS (Unit-5)	14.66
PTPS (Unit-6)	96.71
PTPS (Unit-7)	224.65
PTPS (Unit-8)	224.65
DCR TPS Unit-1	826.83
DCR TPS Unit-2	826.83
RG TPS Unit-1	1638.18
RG TPS Unit-2	1638.18
WYC & Kakroi	5.82
Total HPGCL	**5546.36**

6.3 Depreciation:

HPGCL has calculated station wise depreciation based on the approach adopted by this Commission in previous tariff orders on the opening Gross Fixed Asset (GFA) at the rates specified by the HERC. For the purpose of estimating the depreciation amount, HPGCL has considered the opening Gross Fixed Assets for FY 2013-14 based on the addition/deletion/transfers as estimated for FY 2013-14.

The table below presents the proposed Unit-wise depreciation for FY 2013 - 14.

Proposed Unit wise Depreciation (In Rs. Millions)

Station	Proposed Depreciation FY 2013-14
PTPS Unit-1 to 4)	317.65
PTPS (Unit-5)	123.99
PTPS (Unit-6)	511.99
PTPS (Unit-7)	454.77
PTPS (Unit-8)	447.95
DCR TPS Unit-1	518.92
DCR TPS Unit-2	518.92
RG TPS Unit-1	933.93
RG TPS Unit-2	933.93
WYC &Kakroi	90.99
Total HPGCL	**4853.04**

6.4 Interest on Working Capital (IoWC):-

The petitioner has projected working capital requirement as per HERC Regulations, 2008. The interest rate on the working capital requirement has been estimated at the rate of 13% as approved by the Commission in its generation tariff order for FY 2012-13. Additionally, HPGCL has submitted that due to non – payment of dues by the Discoms they have to rely on short term loans and hence interest on additional working capital loans may also be allowed by the Commission.

HPGCL's Proposed Working Capital Requirement for FY 2013-14 (In Rs. Millions)

Station	Working Capital as per HERC norms & actual spares	Additional Working Capital	HPGCL Proposed Working Capital for FY 2013-14
PTPS Unit-1 to 4	519.05	189.23	708..29
PTPS (Unit-5)	236.70	86.29	323..00
PTPS (Unit-6)	352.37	128.47	480..84
PTPS (Unit-7)	370.01	134.90	504..91
PTPS (Unit-8)	369.86	134.84	504..70
DCRTPP Unit-1	439.99	160.41	600..40
DCRTPP Unit-2	439.99	160.41	600..40
RGTPP Unit-1	508.18	185.27	693..45
RGTPP Unit-2	508.18	185.27	693..45
WYC &Karkoi	12.74	4.64	17..38
Total HPGCL	**3757.07**	1369.73	5126..80

6.5 Operation and Maintenance Expenses:-

The O&M expenses proposed by the Petitioner comprise of Repair & Maintenance (R&M) charges, Employees cost and Administrative expenses. The proposed O&M cost for PTPS Unit-1 to 4 is based on the average of actual annual audited / provisional O&M cost of the past three years. Initially the O&M expenses of FY 2009-10 and FY 2010-11 have been brought to the level of FY 2011-12 by applying escalation rate of 4% as per the provisions of HERC Regulations, 2008. Thereafter the average values have been further escalated by 7.43% per annum to arrive at O&M expenses for FY 2013-14. For rest of the power stations, O&M cost as approved by this Commission for FY 2012-13 have been escalated at an inflation rate of 7.43% to arrive at O&M expenses for FY 2013-14. Additionally, HPGCL has submitted that the 4% rate of escalation as provided in HERC Regulations, 2008 does not properly reflect the prevailing inflationary trends, hence they have considered an escalation factor of 7.43% based on the average rate of inflation (wholesale Price Index for three years ending FY 2011-12). HPGCL has submitted that this is also in line with this Commission's observations in Tariff order for FY 2010-11 dated 16th April, 2010 i.e. "*The guiding factor for working out O&M expenses should have been the actual level of such expenses during the preceding three years for the existing stations escalated by an appropriate factor to account for inflation".*

HPGCL's Proposed O&M Expenses for FY2013-14 (In Rs. Millions)

Station	Proposed O&M Expenses FY 2013-14
PTPS Unit-1 to 4	1661.58
PTPS (Unit-5)	394.04
PTPS (Unit-6)	394.04
PTPS (Unit-7)	469.10
PTPS (Unit-8)	469.10
DCR TPS Unit-1	494.77
DCR TPS Unit-2	494.77
RG TPS Unit-1	891.34
RG TPS Unit-2	891.34
WYC & Kakroi	183.60
Total HPGCL	**6343.68**

The Petitioner further submitted that they have kept a tight control on the employee expenses by opting for outsourced and contractual employees wherever possible.

7.0 Supplementary Tariff Petition:

HPGCL in their supplementary tariff petition filed vide memo no. HPGC/ FIN / Reg – 417/478 dated 7.01.2113, has proposed as under:

7.1 In view of coal shortage, problems of ash handling system and un – expected failure of equipments RG TPS could operate at only 52.69% PLF in FY 2012-13. Hence for FY 2013-14 the proposed PLF of RG TPS has been reduced to 70% from 80% originally proposed.

7.2 HPGCL, in their supplementary petition had further submitted that the amount proposed for undertaking need based R&M of PTPS (Units 3 & 4) may be allowed to be recovered as fixed charge in accordance with clause 10.10 (b) of the Power Purchase Agreement as they may not be able to recover the full cost of R&M as depreciation. Consequently, the fixed cost per unit in case of PTPS would increase from Rs. 1.264/Unit originally proposed to Rs. 1.470/Unit.

8.0 Implementation of APTEL's Judgment:

8.1 HPGCL had submitted an application for implementation of judgment dated 14.12.2012 of Hon'ble APTEL in Appeal no. 108 of 2012 regarding relief granted to them for Station Heat Rate of DCR TPS & RG TPS and Return on Equity for FY 2012-13. HPGCL vide Memo No. HPGC/FIN/Reg-403/494 dated 8.02.2013 has requested to be allowed the relief as per Hon'ble APTEL's judgement in the current financial year with its holding cost to avoid booking of huge financial losses in their books of accounts.

8.2 HPGCL has also requested for implementation of APTEL's judgement in Appeal No. 91 of 2011 for FY 2011-12.

8.3 In addition to the above HPGCL had prayed that relief on ROE granted by APTEL may be given irrespective of the generation level as it is a fixed cost and has no correlation with actual generation.

8.4 HPGCL vide memo no. HPGC/FIN/Reg-417 – Vol – II/499 dated 22.02.2013 has further prayed that they may be allowed to recover fixed charges corresponding to the period of maintenance shutdown of RGTPS in FY 2012-13 and to allow similar relief in the subsequent years.

9.0 Public Proceedings:-

9.1 Section 64(2) of the Electricity Act 2003 provides that *"Every applicant shall publish the application, in such abridged form and* *manner, as may be specified by the Appropriate Commission".* Accordingly HPGCL published its petition in an abridged form providing salient features of their generation tariff application in two newspapers having wide circulation in Haryana, one each in Hindi and English, to ensure public participation. HPGCL, by way of public notice, informed the stakeholders about the proposed gross generation, net generation, fuel cost, O&M expenses, depreciation charges, interest and finance charges and return on equity proposed by them for FY 2013-14. Sources of availability of the relevant documents and an invitation to the public / interested organizations to file their objections, if any, by 3.12.2012 were also mentioned in the public notice.

The public notice issued by HPGCL appeared in the following newspapers:

Public Notice issued by HPGCL

Name of Newspaper	Language	Date of Publication
The Financial Express	English	4.11.2012
The Dainik Bhaskar	Hindi	3.11.2012

9.2 After receipt of clarifications/ additional information from the Petitioner the Commission issued public notice on 19.12.2012 & 20.12.2012 inviting objections/ comments/ suggestions from the stakeholders and general public. The public notice was placed in two newspapers, one each in English and Hindi having wide circulation in the State of Haryana. The interested persons / organizations were requested to file their objections / suggestions on or before 21.01.2013. The said notice inviting objections / suggestions on the generation tariff petition filed by HPGCL for FY 2013-14 was also placed on the Commission's website www.herc.nic.in .

The public notice was issued in the newspapers mentioned in the table below.

Public Notice Issued by the Commission

Name of Newspaper	Language / Edition	Date of Publication
The Times of India	English	19.12.2012
Dainik Bhaskar	Hindi	20.12.2012

The Commission, through the aforesaid public notice, also intimated that the public hearing on the generation tariff petition for FY 2013-14 of HPGCL will be held on 24.01.2013 at 11.30 A.M in the court room of the Commission.

9.3 **Public Response:-**

9.3.1 In response to the public notice issued by the Petitioner and subsequently by the Commission, objections / comments were received from the distribution licensee i.e. UHBVNL who would be purchasing power generated by the petitioner for onward distribution in their respective licensed areas. The Haryana Chamber of Commerce & Industry and Yamuna Nagar - Jagadhari Chamber of Commerce &

Industries also filed their objections / comments on HPGCL's generation tariff Petition for FY 2013-14.

The issues raised by the interveners in their written as well as oral submission in the public hearing held on 24.01.2013 and HPGCL's reply thereto are presented below.

9.4 Objections Filed by the Interveners and HPGCL's reply :

9.4.1 PLF:

The Haryana Chamber of Commerce & Industry vide letter dated HCC/HPGCL/051/13 dated 25th January, 2013 objected to the proposed PLF. They had submitted that for FY 2013-14 the proposed PLF in the case of PTPS Units 1-4 are extremely low. They submitted that the same may be considered as per HERC Regulations and the various generating stations should operate at least close to the norms fixed by HERC and should not be allowed to run inefficiently for so long.

The Jagadhri Chamber of Commerce & Industries vide their representation dated 24.01.2013 reiterated the above and submitted that HPGCL should adhere to the norms as per HERC Regulations and the inefficiencies of HPGCL should not be passed on to the electricity consumers of Haryana by compelling the Discoms to purchase power from open market at higher rates in view of poor PLF of HPGC powerhouses.

HPGCL's Reply:

In their reply to the objections on the proposed PLF for FY 2013-14, HPGCL submitted that relaxations have been sought on account of the vintage of PTPS (1-4) as they have already outlived their useful life of 25 years. Thus the proposed PLF is based on the average of last three years. Further, PTPS Units 1,3 and 4 are also planned to undergo annual overhauling according to the normal maintenance schedule over and above the proposed shutdown schedule for need based R&M necessitating shutdown for 35,30 and 30 days respectively and hence annual PLF has been proposed on the lower side vis – a – vis the HERC norms.

9.4.2 Auxiliary Energy Consumption:

UHBVN, the distribution licensee who purchases power from HPGCL, vide memo no. Ch-99/GM/RA/N/F-25/Vol-45 dated 7.01.2013 had submitted that the proposed auxiliary energy consumption for PTPS Units 1 to 8 and DCR TPS Units 1&2 are higher than what was allowed by this Commission in FY 2012-13. On this issue UHBVN relied on Hon'ble APTEL's judgment in Appeal No. 72 & 141 of 2009. The operative part of the judgment is reproduced below:.

"The Appellant (HPGCL) instead of adhering to the directions issued by the State Commission to monitor Auxiliary Power Consumption to analyze the trend and to submit a report to the Commission, has claimed higher auxiliary power consumption which can be only due to the inefficiency on the part of the Appellant.

As a matter of fact, the State Commission has repeatedly directed the Appellant to implement the recommendations of the Energy Audit Report to reduce the Auxiliary Power Consumption to national norms applicable. These directions have not been complied by the Appellant. Therefore, we are of the view that there is no merit in the claim of the Appellant for higher Auxiliary Power Consumption and as such rejection of the claim in respect of PTPS, Panipat is perfectly legal".

In view of the above judgment of the Hon'ble APTEL on the issue of Auxiliary Power Consumption, UHBVN has submitted that HPGCL's claim of higher Auxiliary Power Consumption for PTPS Units 1-8 and DCR TPS Units 1&2 may not be allowed by the Commission and the same may be allowed as per HERC Regulations or as allowed by the Commission in FY 2012-13.

The Yamunanagar – Jagadhri Chamber of Commerce and Industries while objecting to the higher Auxiliary Energy Consumption claims of HPGCL submitted that the plants should not be allowed to run inefficiently, hence Auxiliary Energy Consumption should be allowed as per HERC norms.

The Haryana Chamber of Commerce & Industry while reiterating the above submitted that even for power plants with cooling towers the Auxiliary Energy Consumption should not exceed 9%.

HPGCL's Reply:

In its reply dated 12.01.2013 HPGCL had submitted that their proposal in the case of PTPS (1-6) is based on the last three years average Auxiliary Energy Consumption due to vintage of the power plants. Additionally, due to backing down of the power plants despite the fact that they operate on lesser load all auxiliaries remain in service and hence Auxiliary Energy Consumption is adversely affected. Further, HPGCL has submitted that even the CERC allows relaxed norms for power plants of older vintage namely Tanda (4X110 MW), Talcher (4X60, 2 X 110 MW) and Bokaro (3X210 MW). In the case of DCR TPS and PTPS (7&8) HPGCL had submitted that relaxed Auxiliary Energy Consumption norms have been proposed based on their historical performance.

9.4.3 Specific Fuel Oil Consumption:

UHBVNL while objecting to the proposed specific oil consumption of 4.60 ml/kWh for PTPS (1-4) has submitted that the same is higher than the HERC norm of 2.0 ml/kWh. Additionally, they have submitted that the norm as per CERC for coal based station is only 1.0 ml/kWh. Hence Specific Fuel Oil consumption should be allowed as per the HERC norms if not as per CERC norms.

The Haryana Chamber of Commerce & Industry and Yamuna Nagar Jagadahri Chamber of Commerce & Industries in their objections on the proposed specific fuel oil consumption had submitted that as per cost sheet of HPGCL at Annexure B/2 the proposed specific oil consumption ranges from 2.0 to 6.23 ml/kWh while as per HERC Tariff Regulations 11(4) of HERC Regulations, 2008 and it should not exceed 2.0 ml/kWh during the post stabilization period of the power plant.

HPGCL's Reply:

HPGCL, in their reply to the above objections had submitted that PTPS (1-4) are the marginal units and have significant impact of frequent backing down on the request of the beneficiaries. Hence relaxation in specific oil consumption for PTPS (1-4) was proposed considering the vintage of these power plants and the substantial amount of backing down undergone by these Units. HPGCL further submitted that during partial load and also when low GCV coal / wet low coal is fired; oil support becomes essential to avoid flame failure. Thus HPGCL should not be discouraged to take oil support which is important from the boiler safety and grid security point of view. HPGCL further relied on the provision of relaxation of norms in HERC Regulations as well as the provision in the National Tariff Policy that the norms should be efficient, relatable to the past performance, capable of achievement and progressively reflecting increased efficiency.

9.4.4 Station Heat Rate (SHR):

UHBVNL , while objecting to the SHR sought by HPGCL has submitted that for PTPS (1-4), DCR TPS (1&2) and RG TPS (1&2) HPGCL has proposed SHR higher than those approved by the Commission in FY 2012-13 despite the fact that this Commission had advised HPGCL to improve the same. Thus UHBVN had submitted that given the present fuel scenario efficient utilization of fuel can only be achieved by improving the SHR. Hence HPGCL should be allowed SHR as per HERC norms in order to maintain high standards of thermal efficiency in the power plants of HPGCL.

The Haryana Chamber of Commerce & Industry and Yamuna Nagar Jagadahri Chamber of Commerce & Industries, in their objections on SHR, have submitted that the Commission should not allow SHR which is beyond the statutory provisions given in the HERC Tariff Regulations, 2008.

HPGCL's Reply:

To the above objections, HPGCL had submitted that PTPS (1-4) have already outlived their useful life of about 25 years, hence performance of these Units should not be judged according to HERC norms which are for the new units as well. Further in HERC Regulations there is a provision for relaxation of norms. HPGCL has further submitted that as far as the advice of the Commission on SHR is concerned, it needs to be noted that those were made keeping in view the comprehensive R&M of PTPS Units 3 & 4. However, owing to the commercial non – viability on comprehensive R&M only need based R&M is now proposed for these two units. Thus on account of vintage of these Units, gradual degradation of SHR in future is unavoidable.

9.4.5 Deprecation:

While objecting to the deprecation amount claimed by HPGCL for FY 2013-14, UHBVNL had submitted that HPGCL has not mentioned the rate at which they have depreciated different units of their power stations. It has been further submitted by UHBVNL that the depreciation claimed for some of the units seems to be higher as compared to the depreciation schedule provided in HERC Regulations, 2008. Additionally, they have objected to the depreciation claims for PTPS (Units 1-4) on the plea that as per HERC Regulations depreciation is allowed up to a maximum of 90% of the historical capital cost of the asset calculated annually based on straight line method over the useful life of the asset i.e. 25 years for coal / lignite based thermal generating stations. Hence the intervener had submitted that depreciation ought to be estimated as per HERC schedule of deprecation and only for those units which have not surpassed their useful life of 25 years.

HPGCL's Reply:

In reply to the above objections, HPGCL has submitted that they have claimed depreciation in accordance with the rates notified by the CERC and in line with the methodology approved by this Commission in the previous tariff orders. Further, HPGCL has submitted that the depreciation claims in the case of PTPS (1-4) even after 25 years of their useful life is due to asset addition, R&M and additional capitalisation in these units for which depreciable value of the assets still remains. Additionally, deprecation has also been claimed for the anticipated capitalisations of the proposed need based R&M in the case of PTPS (3&4). However, in their supplementary filing dated 7.01.2013 HPGCL has submitted to the Commission to treat the same as per the terms of the PPA.

9.4.6 Working Capital Requirement:

UHBVNL, while objecting to the claims of HPGCL has submitted that the Petitioner's request to allow inventory as per the actual level being maintained by them is higher than what was allowed by this Commission for FY 2012 – 13. The higher inventory holding can most probably be attributed to improper inventory and supply chain management practices of HPGCL. Hence UHBVN had submitted that such cost should not be passed on to the consumers in terms of higher tariff. Thus the Commission should consider working capital requirement as per HERC norms for FY 2013-14.

HPGCL's Reply:

In its reply to the above objection on the proposed working capital requirement, HPGCL has submitted that the intervener has failed to consider the circumstances of HPGCL under which it is forced to hold a higher level of inventory. HPGCL has submitted that Units of different capacities are established at PTPS which require separate inventory for each unit. Further, HPGCL has established DCR TPS and RG TPS with imported machinery from China, the spare parts for these Units are not available in India and it takes prolonged time to import them from OEM/OES. Therefore to avoid loss of generation HPGCL is forced to keep the critical spares for future requirement irrespective of its holding cost.

In addition to the above, HPGCL has submitted that additional interest cost on working capital has arisen due to non – compliance of this Commission's order by the Intervener i.e. UHBVNL in making payment for purchase of power to HPGCL. The outstanding receivables on this account as on 31.12.2012 is Rs. 3767.37 Crore which is equivalent to about 7 months of sale of power against the HERC norms of 2 months. Consequently, HPGCL had to raise additional working capital of about 5 months for which additional interest cost has been proposed in the generation tariff for FY 2013-14.

9.4.7 O&M expenses:

UHBVNL, while objecting to the proposed O&M expenses for FY 2013-14, had submitted that HPGCL instead of adhering to the HERC norms of escalation rate of 4% has adopted an escalation rate of 7.43%. Hence the O&M escalation may be restricted as per HERC norms while approving O&M expenses for FY 2013-14.

HPGCL's Reply:

In their rejoinder to the above objection, HPGCL has submitted that HERC norm of 4% is quite old i.e. 2008 and does not hold good in the present scenario. They have further submitted that even the CERC (Terms and Conditions of Tariff) Regulations, 2009 provides a higher escalation of 5.72% which is likely to be further increased in 2014 as CERC calculates the escalation factor based on average inflation rates (WPI) and CPI indices) of the preceding years. It has been further submitted that a trend analysis of average inflation based on CPI/WPI relevant to the Power Sector to calculate O&M escalation factor which yielded a three year average rate of 7.80% has been submitted to the Commission. The same is also relevant for FY 2013-14 and hence they may be allowed O&M escalation rate as proposed by them.

9.4.8 Other Objections:

i) UHBVNL has objected to the proposal of HPGCL regarding payment and cap on fuel price adjustment. Wherein the payment of fuel price adjustment is proposed to be made by the Discoms / HPPC within seven days of the presentation of the bill without availing any rebate, and in case of non – payment within seven days, surcharge for delayed payment from the date of presentation of the bill is proposed to be levied. The payment time currently allowed by this Commission is 60 days and there is no basis to change the terms of payment. Additionally, UHBVN has submitted that as of now there is no cap on fuel price adjustment claimed by HPGCL as against 10% cap of the approved per unit variable power purchase cost imposed on them by this Commission. Hence, UHBVN has submitted that the same cap should also be imposed on HPGCL while claiming any fuel price adjustment from the Discoms or they should also be allowed to pass on the entire FSA to the consumers.

HPGCL's Reply:

In response to the above, HPGCL has submitted that the objections raised by UHBVN are neither correct nor in accordance to the HERC Regulations, 2008. HPGCL had further submitted that there is no restriction in the regulations to claim FPA bill from the date of its presentation. In the past HPGCL has allowed the grace period of 60 days in the case of FPA bills also and no change in the terms of payment of FPA has been proposed. The FPA is the incremental cost of generation due to rise in the per kilo calorie cost of fuel in the current month vis-a-vis normative per kilo calorie rate considered by the Commission. In case the incremental cost is also recovered with a gap of 60 days then HPGCL will have to un-reasonably bear the holding cost of the same. HPGCL has also pointed out that the Discoms and the Generating Company are governed by different sets of Regulations notified by HERC. Consequently, HPGCL has submitted that their proposal for levying surcharge for delayed payment of FPA from the date of presentation of bill is justified.

ii) UHBVNL, in their objections had pointed out some variations in price of Coal and GCV. They had submitted that the same in the case of RG TPS is on the higher side.

HPGCL's Reply:

In its reply to the above, HPGCL had submitted that the actual rate of Coal (with normative transit loss) and GCV of coal as on fired basis at the respective power plants has been used for the purpose of the proposed generation tariff for FY 2013-14. Thus a comparison of what was allowed by the Commission in FY 2012-13 and those proposed for FY 2013-14 is not appropriate. Further, HPGCL had submitted that for RG TPS there is no Coal Supply Agreement (CSA) with Coal India Limited (CIL). Thus the Coal is being received at RG TPS from MCL and NCL through MOU route. In order to bridge the gap in coal requirement additional coal is also procured on 'as is where is' basis from WCL, coal diverted from other power plants of HPGCL and imported coal etc. While doing so HPGCL has to incur additional freight cost leading to higher cost of landed coal at RG TPS.

10.0 State Advisory Committee (SAC):-

In its consultative process the Commission convened a meeting of the State Advisory Committee (SAC) constituted under Section 87 of EA 2003 on 25.03.2013 in order to have the benefit of their views on various issues in respect of generation tariff for FY 2013-14. The members were briefed on different aspects of HPGCL's generation tariff petition as well as their past performance. It was suggested by the SAC Members that HERC should determine tariff on multi- year basis with truing up the tariff at the end of control period or once in between. On the issue of determining performance parameters, it was suggested that the Commission should be guided by HERC norms or in its absence the CERC norms, provisions of the Electricity Act, 2003, Tariff Policy and various judgments of the Hon'ble Appellate Tribunal for Electricity. The Members expressed concerns over non – achievement of the benchmarks set by the Commission especially by PTPS (Unit 1-6) and high transit loss of coal. The Commission has kept in mind the comments / suggestions and feedback of the Members while fixing various parameters in determining HPGCL's generation tariff for FY 2013-14.

11.0 COMMISSION'S ANALYSIS of HPGCL's TARIFF PETITION & DETERMINATION OF GENERATION TARIFF FOR FY 2013-14:

The major items of expenditure and the operating parameters proposed by HPGCL as per their original petition as well as the additional information / data and revised proposed tariff submitted to the Commission for determination of generation tariff and HERC approval of the same are discussed in the paragraphs that follow. Additionally the Commission has also considered the submissions made by HPGCL during the public hearing, submissions of UHBVNL and reply of HPGCL to the queries raised at the time of public hearing as well as suggestions of the SAC members while finalizing different technical and financial norms for determination of generation tariff for FY 2013-14.

Haryana Electricity Regulatory Commission (Terms and Conditions for Determination of Tariff for Generation, Transmission, Wheeling and Distribution & Retail Supply under Multi Year Tariff Framework) Regulations, 2012, have been framed and notified by the Commission on 5.12.2012. These Regulations were finalised after due deliberations subsequent to inviting objections / suggestions from the interested parties and after holding detailed discussions with the stakeholders as well as keeping in view the performance of the generating units of the Petitioner.

The Commission vide memo no. 3760-63/HERC/Tariff/ARR 2013-14 dated 17.09.2012 directed HPGCL to file their generation tariff petition in accordance with the Tariff Regulations notified by the Commission including the principles / parameters enunciated for FY 2013-14 in the final draft MYT Regulations. However, HPGCL did not take into consideration the MYT Regulations in their present petition filed vide memo no. HPGC/FIN/Reg 417/446 dated 30.10.2012.

11.1 Performance of HPGCL Generating Stations:

The performance of HPGCL over the years as per their generation tariff Petition for FY 2013 – 14 is presented in the following table:

Performance of HPGCL (2000-01 to 2010-11 up to Sept 2012)

Particulars	2000-01	2001-02	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13 upto Sep,12
Installed Capacity (MW)	863.3	1073.3	1073.3	1073.3	1337.7	1587.7	1587.7	2187.7	2085.5	2085.5	3230.5	3230.5	3230.5
PLF (%)	49.73	60.8	66.44	74.91	69.46	67.00	78.78	78.94	75.01	82.93	76.28	66.60	55.01
Auxiliary Consumption (%)	11.80	11.11	10.56	10.47	11.04	10.08	9.80	9.93	9.66	9.77	10.06	9.06	9.02
Coal Consumption (Gms/kWh)	816	789	770	764	784	741	721	735	712	706	772	781	
Oil Consumption (ml/kWh)	5.97	3.29	3.43	3.35	3.97	3.74	1.85	1.66	2.87	1.61	3.08	2.47	1.75
Gross Gen (MUs)	3792	5311	6212	6997	6915	9181	10780	10845	13519	11566	11217.94	18533.32	7653.44
Station Heat Rate (Kcal/kWh)	3505	3432	3365	3318	3287	3074	2894	2916	2762	2684	2728	2686.06	2625.16
Transit Loss of Coal (%)	-	6.58	6.48	4.19	4.23	4.79	3.06	6.0	2.31	4.0	7.57 (PTPS), 7.17 DCR TPS	5.26(PTPS), 9.09 DCR TPS, 6.96 RGTPS	

It is evident from the table above that substantial generation capacity has been added since 2000-01 which would go a long way in mitigating the power shortages in the State as well as reducing the need to purchase short term expensive power. However, the Commission notes with concern that despite 1200 MW & 600 MW capacities added under new thermal projects i.e. RG TPS & DCR TPS respectively and phasing out of the poorly performing power stations at Faridabad, which had outlived their useful life, in the last three to four years the overall PLF and Station Heat Rate (SHR) of HPGCL power stations have not shown the desired improvement. The deterioration noticed in the Secondary Fuel oil consumption since FY 2009-10 and transit loss of coal is a cause for concern and calls for concerted efforts to reverse the trend.

11.2 Plant Load Factor (PLF) %:

The Commission had notified the MYT Regulations in the Haryana Gazette (extraordinary) on 5.12.2012. The new norms provide following Normative Annual Plant Availability Factor (NAPAF) which is considered equivalent to the Pant Load Factor of the generating plants.

HPGCL had proposed PLFs of 69.08%, 54.13%, 61.36% & 62.20% for PTPS units 1 to 4 respectively (overall 61.82%) based on the average of actual PLF during the preceding three complete years of operation. This was objected to by the interveners on the plea that the PLF proposed by HPGCL is not in line with HERC Generation Tariff Regulations, 2008 and in the past the Commission has also expressed its concern regarding the deterioration in PLF of HPGCL's power stations. Moreover, Panipat TPS units 1&2 have already demonstrated PLFs of 80% & above in the months of June to October during FY 2011-12 and PLFs of nearly 70% can be expected from units 3 &4. The average of PLFs of last three years has been low due to certain forced outages of long durations which are not expected or desired to be repeated in future.

Thus the Commission for the purpose of generation tariff determination for PTPS (1-4) has considered PLF of 68% applicable for FY 2013-14 in line with regulation 28(1)(a) of HERC Regulations dated 5th December, 2012.

PTPS Unit 5 to 8:-

The individual PLFs of PTPS unit- 5 to 8 achieved up to 09/2012 during FY 2012-13 stands at 76.14%, 100.52%, 97.65% & 96.38% against the HERC norms (Regulations) of 85%. It is observed that the individual PLFs of PTPS units-6, 7 & 8 and overall PLF of PTPS units 5 to 8 are better than the norm.

HPGCL has proposed the normative PLF of 80% for FY 2013-14 for PTPS unit 5 to 8 as per HERC Regulations, 2008 which has been repealed. Consequently, the Commission has considered PLF for PTPS (Units 5 to 8) at 85% as per the provisions of regulation 28(1)(a) of HERC Regulations dated 5th December, 2012 for determining generation tariff for FY 2013-14.

DCR TPS (Yamuna Nagar) Unit 1 & 2:

The individual PLFs of DCR TPS unit-1 & 2 achieved up to 09/2012 during FY 2012-13 as reported by HPGCL is nil due to prolonged outages against the HERC norms (Regulations) of 85%. It is observed that DCR TPS unit 1 has achieved better PLF as compared to the norm of 85% in FY 2011-12. However, DCR TPS unit 2 failed to achieve the norm since its commissioning. Reportedly DCR TPS units 1 & 2 have been under prolonged forced shutdown since 25.09.2011 due to turbine rotor problem. At the time of filing original tariff application, HPGCL expected that DCR TPS unit 2 will be put under operation during FY 2012-13 and proposed the normative PLF of 80% for FY 2013-14 for DCR TPS unit 1 & 2.

The Commission has considered the above submissions of the Petitioner with respect to PLF of DCR TPS units 1& 2 and is of the view that the Commission determines generation tariff on normative basis in accordance with the HERC Regulations, 2012. Accordingly full fixed cost is recoverable at a normative PLF of 85% and no capacity charges are payable at zero availability (PLF). While fuel cost is recoverable on the basis of actual ex – bus energy delivered / sent out from the generating stations. Hence the energy charges get automatically adjusted based on actual sent out energy. However, recovery of fixed charges below the target availability has to be on a pro – rata basis. As, so far, the Commission has not introduced Intra – State ABT mechanism in Haryana relating PLF in case it is below the normative level for recovery of fixed charges on a monthly basis would become somewhat difficult. **Consequently, for the purpose of estimating generation tariff for FY 2013-14, in the case of DCR TPS Unit 1 & 2 the Commission in line with HERC Regulations, 2012 has retained the PLF at 85%.** It needs to be noted that non – availability of a generating station for a prolonged period imposes significant cost on the electricity consumers of Haryana in terms of loss of productivity or substituting the same with short term expensive power or prohibitively expensive CPP running on liquid fuel.

RG TPS (Hisar) Unit 1 & 2:-

The individual PLFs of RG TPS units 1 & 2 achieved up to 09/2012 during FY 2012-13 stands at 27.65% & 75.84% only against the target of 85% fixed by HERC. It is observed that the PLFs of RG TPS units 1 &2 are quite low. HPGCL has attributed the reasons for low PLFs to certain teething troubles, high ash content in coal, inadequate coal supply etc.

HPGCL had proposed the normative PLF of 80% for FY 2013-14 for RG TPS units 1 & 2 which was revised to 70% in the supplementary tariff petition filed by HPGCL.

The Commission is of the view that generation tariff is determined in accordance with the norms as per the tariff regulations in vogue. The Commission finds no reasons for relaxing the norms as such, however, for the limited purpose of working out target generation for FY 2013-14 the Commission has considered PLF of 70% as proposed by HPGCL. However, full fixed cost recovery shall be at the normative PLF of 85% and in case of under – achievement of PLF the fixed cost shall be reduced on pro – rata basis.

WYC & Kakroi (Hydro):

In case of WYC & Kakroi hydro units, the last three years average PLF reported by HPGCL is 48.15%. For FY 2013-14 they have proposed a normative PLF of 50%. The Commission has considered the same as the proposal is in accordance with HERC Regulations, 2012.

In the light of the discussions and partly accepting the objections of the Interveners the Commission has considered PLF for various power plants of HPGCL as per HERC latest norms, 2012

As per regulation 28(1) normative annul plant availability factor (NAPAF) in % for FY 2013-14 are as under:

Existing Plants:

Name of the Power Plants	**FY2013-14 (%)**	MYT Period		
		2014-2015	2015-2016	2016-2017
Panipat TPS (Units 1 to 4)	**68**	70	70	70
Panipat TPS (Units 5 & 6)	**85**	85	82.5	82.5
Panipat TPS (Units 7 & 8)	**85**	85	85	85
DCR TPS, Yanuma Nagar (Unit 1 & 2)	**85**	85	85	85

Rajiv Gandhi TPS, Khedar (Hisar) (Units 1 & 2)	**85**	85.	85	85

Keeping in view of above, the vintage of PTPS units- 1 to 4 & pending renovation of PTPS unit -3 & 4, the Commission considers appropriate to consider target PLF for these units during FY 2013-14 at 68% and that of PTPS units -5 to 8, DCR TPS unit-1 & 2 and RG TPS Units-1 & 2 at 85% and that for WYC & Kakroi hydro units at 50% as per provision in the Regulation 28 (1) [Terms & Conditions for Determination of Tariff under Multiyear Tariff Framework] Regulations, 2012.

11.3 Auxiliary Energy Consumption (%):

The Auxiliary energy consumption of PTPS units-5&6 achieved (ending sept.2012) during FY2012-13 has been indicated as 11.60% & 9.93 % respectively against the target of 9% fixed by the commission. Similarly, the Auxiliary consumption of PTPS units-7 & 8 achieved during this period has been indicated as 9.50 % & 9.45 % respectively against the target of 8.50%.

The Auxiliary energy consumption of DCRTPS units 1 & 2 for the period ending Sept. 2012 in FY 2011 -12 is not available as these units remained under forced shut down. However, the Auxiliary Consumption of these units remained 8.77% and 11% against the target of 8.5 % approved by the Commission. The Auxiliary consumption of RGTPP units 1 & 2 achieved up to Sept.2012 in FY 2012-13 has been indicated as 6.12% & 5.73% respectively against the Commission's target of 6%.

It is observed that the auxiliary consumption in respect of all the old and new thermal units of HPGCL is on the higher side. The petitioner has submitted that the auxiliary consumption of a generating station depends on quality of coal it receives at the feeding point, the nos. of frequent start-ups and shut downs it encompasses and the ageing of the equipment of the station. In addition, the no. of drives being used in actual operation on account of the decline in the above mentioned factors would lead to an increase in auxiliary energy consumption.

In FY 2012-13 Generation Tariff Order the Commission had observed that the number of trippings is abnormally high. The trippings attributed to tube failure and grid disturbances are understandable to a certain extent. It is reiterated that HPGCL should analyze the tripping during FY 2012-13 and take appropriate corrective measures to minimize the same and submit a report within two months from the date of this order. However, no relaxation in auxiliary energy consumption is admissible on this account.

The Commission observes that as per HERC Regulation,2012, the target Auxiliary Power Consumption (%) has been determined at 11% for PTPS units 1-4, 9% for PTPS Units 5& 6, 8.5% for PTPS (7&8) & DCR TPS and 6% for RG TPS.

The relevant provision of Regulation 28 (2) of HERC (Terms & Conditions for Determination of Tariff under Multiyear Tariff Framework) Regulations, 2012 is presented below:

(2) Auxiliary Energy Consumption

(a) Existing Plants

Plant Name (Units)	2013-2014 (%)	MYT Period		
		2014-2015 (%)	2015-2016 (%)	2016-2017 (%)
Panipat TPS (Unit 1 to 4)	11	11	11	11
Panipat TPS (Units 5 & 6)	9	9	9	9
Panipat TPS(Units 7 & 8)	8.50	8.50	8.50	8.50
DCR TPS, Yamuna Nagar (Units 1&2)	8.50	8.50	8.50	8.50
RG TPS, Khedar (Hisar) (Unit 1&2)	6	6	6	6

In view of the above Auxiliary Energy Consumption (%) for PTPS units 1to 4 is allowed at 11% and that 9% for PTPS units 5 & 6 as per HERC norms which are already relaxed as compared to CERC norms. HPGCL is advised to pay special attention for reduction in number of tripping, minimize start / stop operations and take all other remedial measures so as to reduce the Auxiliary energy consumption to the normative levels. Auxiliary Consumption (%) for PTPS units- 7 & 8 and DCR TPS units-1 & 2 is allowed at 8.5 % and that for RG TPS units 1 & 2 at 6 % and WYC & Kakroi Hydel Plants as 1 % (inclusive of transformation loss) as per the Regulation 28 (2) HERC (Terms & Conditions for Determination of Tariff under Multiyear Tariff Framework) Regulations, 2012.

11.4 Specific Oil Consumption (ml/kWh):

For FY 2013-14, HPGCL has proposed Specific Oil Consumption (ml/kWh) at 4.60 for PTPS (1 to 4), 2 ml/kWh PTPS unit 5 to 8, DCR TPS unit 1 & 2 and RG TPS units 1 &2. HPGCL has proposed Specific Oil Consumption 4.6 (ml/kWh) for PTPS units 1 to 4 on the basis of average Consumption for the last 3 years against the normative consumption of 2 ml/kWh as per HERC norm. For PTPS units 5 to 8, DCR TPS units 1 & 2 and RG TPS units 1 & 2, the specific oil consumption has been proposed as 2 ml/kWh as per HERC Regulations 2008 (Terms & Condition for Determination of Generation Tariff).

The Commission observes that specific oil consumption is increasing for most of the power plants; hence HPGCL has not taken appropriate measures to rein in the same within the target set by the Commission. The norms fixed by the Commission in these regulations are not the best achievable thus the performance can be even still better by improving upon the efficiency and adopting best pracrices.

Regulation 28 (4) HERC [Terms & Conditions for Determination of Tariff under Multiyear Tariff Framework] Regulations, 2012 notified by the Commission provides as follows:

(4) Secondary Fuel Oil Consumption (SFC)
(Existing Plants)

Plant Name (Units)	2013-2014 (ml/kWh)	MYT Period		
		2014-2015 (ml/kWh)	2015-2016 (ml/kWh)	2016-2017 (ml/kWh)
Panipat TPS (Unit 1 to 4)	2.00	2.00	2.00	2.00
Panipat TPS (Units 5 & 6)	1.00	1.00	1.00	1.00
Panipat TPS(Units 7 & 8)	1.00	1.00	1.00	1.00
DCR TPS, Yamuna Nagar (Units 1&2)	1.00	1.00	1.00	1.00
Rajiv Gandhi TPS, Khedar (Hisar) (Unit 1&2)	1.00	1.00	1.00	1.00

Thus the Commission has laid down norms for secondary fuel oil consumption for FY 2013-14 as 2 ml/kWh for PTPS units 1-4 and for PTPS units 5 to 8, DCRTPS Units 1 & 2 & RGTPS Units 1 & 2 as 1.0 ml/kWh. The Commission, in view of the objections raised by the interveners has considered Specific Fuel Oil Consumption as per the provisions of HERC Regulations, 2012 for computation of FY 2013-14 generation tariff. As per regulation 28(4) the Secondary Fuel Oil Consumption (SFC) norm applicable for FY 2013-14 for PTPS (1-4) is 2 ml/kWh and for all other existing thermal power plants it is 1.0 ml/kWh. The same has been considered by the Commission for FY 2013-14.

11.5 Station Heat Rate (Kcal/kWh):-

HPGCL has proposed station heat rate for PTPS units -1 to 4, as 3261.67 based on the average of last three years station heat rate of its units on the plea of vintage and non viability of comprehensive R& M of units 3 & 4 which are being considered for decommissioning. HERC has not been averse to allowing relaxed norms for the old units provided there is a road map for improving the parameters in a reasonable time frame. HPGCL has proposed station heat rate of 2500 Kcal/Kwh for 210 / 250 MW PTPS units 5 to 8 which are within the norms of Regulation 2008. Which have been amended in its Regulation 28(3) (Terms & Conditions for Determination of Generation Tariff under Multiyear Tariff Framework) Regulations, 2012 and is as under:

Station Heat Rate (Existing Plants)

Plant Name (Units)	2013-2014 (kCal/kWh)	MYT Period		
		2014-2015 (kCal/kWh)	2015-2016 (kCal/kWh)	2016-2017 (kCal/kWh)
Panipat TPS (Unit 1 to 4)	3150	3150	3150	3150
Panipat TPS (Units 5 & 6)	2550	2550	2550	2550
Panipat TPS(Units 7 & 8)	2500	2500	2500	2500
DCR TPS, Yamuna Nagar (Units 1&2)	2344	2344	2344	2344
Rajiv Gandhi TPS, Khedar (Hisar) (Unit 1&2)	2387	2387	2387	2387

Note: Station heat rate norms for Deen Bandhu Chhottu Ram TPS (Unit 1 and 2) and Rajiv Gandhi TPS (Unit 1 and 2) have been determined considering their design heat rate as 2201 kCal/kWh and 2241 kCal/kWh respectively and multiplying the same with a factor of 1.065.

In view of above, the SHR for PTPS units (1-4) the SHR of 3150 Kcal/kWh is approved as laid down in the regulation 28(3) which has been framed after due deliberation and discussion with the stakeholders and taking into the account the condition/ vintage of the generating units of HPGCL.

The proposed station heat rate of 2550 Kcal/kWh is approved for PTPS Unit 5 & 6 and 2500 Kcal/kWh for PTPS Units 7 & 8 of PTPS in accordance with HERC Regulations, 2012.

DCR TPS (1 & 2) and RG TPS (1 &2):

For DCRTPP units 1 & 2 and RGTPP unit 1 &2 the Petitioner has proposed SHR of 2410 and 2450 Kcal/kWh respectively in line with the HERC Regulation 2008.

The Commission observes that though these units faced some serious problems leading to forced outages of longer duration especially in case of DCR TPS units 1 & 2 and RG TPS Units 1, however, now it is expected that these units should generate on sustained basis and perform better. In view of above, the station heat rate for DCR TPS Units 1 & 2 and RG TPS Units 1 & 2 have been considered as 2344 kcal/kWh and 2387 kcal/kWh respectively in accordance with the new Regulation 28(3) (Terms & Conditions for Determination of Generation Tariff under Multiyear Tariff Framework) Regulations, 2012.

11.5 Transit Loss of Coal (%):

In their objections on the proposed loss of coal in transit, UHBVNL has submitted that as per HERC norms the same is 0.8% as against 2% proposed by HPGCL. However, the same was relaxed by the Commission to 1.5% in FY 2012-13 with a direction to HPGCL to appoint a coal agent to bring down the loss of coal in transit within 2% in 6 months time. Hence 2% should have been achieved by the end of September, 2012 and was to be improved in subsequent months. Instead of improving transit loss of coal to align with the HERC norms, HPGCL has proposed 2% transit loss of coal. Additionally, UHBVNL has relied on the judgment of hon'ble APTEL's in Appeal No. 42 & 43 of 2008 wherein HPGCL's claim of relaxation in transit loss of coal was found to be without any merit. Thus UHBVNL has submitted that the cost on account of mismanagement of coal transit loss on part of HPGCL cannot be recovered from the consumers. Hence the Commission should allow 0.8% coal transit loss as per HERC Regulations, 2008.

The Haryana Chamber of Commerce & Industry in their objection to the claims of HPGCL on loss of coal in transit has submitted that the same has shown a dismal trend over the past years and at times this loss has increased beyond 8%. Thus, they have submitted that anything beyond 0.8% as per HERC norms ought not to be allowed as it will only increase the landed cost of coal thereby increasing the cost of energy generated burden of which is again borne by the electricity consumers of Haryana.

In their reply to the above objections, HPGCL has submitted that the actual transit loss of coal during FY 2011-12 is up to 6.65% despite the best efforts put in by HPGCL. Hence HERC norm of 0.8% is not achievable. Additionally, the judgment of Hon'ble APTEL cited by the interveners is quite old and not relevant to the current period. Further despite engaging a coal agent the minimum level of transit loss achieved is 1.64% in November, 2012 that too in the BCCL area only. Hence the proposed transit loss of 2% sought by HPGCL is comparable to other generators of equal distance. HPGCL has further submitted that CERC Regulations, 2009 in the Statement of Objects and Reasons provides that for the state sector projects, the Commission expects the State Commission to specify suitable norms after due regard to the actual situation and distance involved in the transportation of coal in respect of stations being regulated by them.

It is observed by the Commission that transit loss of coal in case of HPGCL plants is as high as 6.43% for PTPS 8.08% for DCRTPS and

5.44% for RGTPS during FY 2011-12 and 5.15%, 4.55%, 4.52% ending Sept. 2012 during FY 2012-13 for PTPS, DCRTPP & RGTPP respectively against the target of 1.5 % fixed by the Commission. The transit coal losses are much higher as compared to other thermal powerhouses in the neighboring states.

HPGCL has reported that they are in a process of arranging washed coal which is billed on 'delivered at destination basis' which would reduce the transit loss, cartage and improve the GCV. It has been further submitted that RG TPS is having coal linkage of 5.5 MTPA (Million tonne per annum) of 'F' grade coal with MCL which is being washed by four (4) washery operators and is also exploring the possibility of appointing washery operators for their other thermal stations.

As per HERC Regulation, dated 19.12.2008 & CERC Regulation, dated 19.1.2009, the transit loss of coal is to be allowed at 0.8%.

The Commission in its Regulations 32 (HERC Regulation Terms & Conditions for Determination of Tariff under Multiyear Tariff Framework) Regulations, 2012 (given hereunder) has provided norms for transit loss of coal to the tune of **≤ 1.5%** for non pit head thermal stations and for pit head station it is 0.2%.

"32 ***LANDED COST OF FUEL FOR THERMAL POWER PROJECTS***

The landed cost of fuel for the month shall include price of fuel corresponding to the grade and quality of fuel inclusive of royalty, taxes and duties as applicable, transportation cost by rail/road or any other means, for the purpose of computation of energy charge and in case of coal, shall be arrived at after considering normative transit/moisture and handling losses as percentage of the quantity of coal dispatched by the coal supply company during the month as follows:

(i) Non-pithead generating plants : ≤ 1.5%

(ii) Pit head generating plants : 0.2%

In view of the submission made by the Petitioner and the norms as provided in the Regulations 32 (HERC Regulation Terms & Conditions for Determination of Tariff under Multiyear Tariff Framework) Regulations, 2012, the transit loss of coal for PTPS Units 1-8, DCR TPS

Unit 1 & 2 and RG TPS Unit 1 & 2 is allowed at 1.5%. However, to achieve this target the petitioner must make sincere efforts and adopt realistic approach in this regard.

It view of the above discussions and the fact that the Hon'ble APTEL in its various judgments have upheld the normative coal transit loss allowed by the Commission, the Commission has considered 1.5% coal transit loss on coal procured from indigenous sources for FY 2013-14.

In case any Fuel Price Adjustment (FPA) is claimed by HPGCL with reference to the base rate of coal and GCV considered by the Commission in the instant tariff the same shall be subject to 1.5% coal transit loss on indigenous coal irrespective of the actual coal transit loss.

In accordance with the above discussions the targets approved by the Commission for determination of generation tariff for FY 2013-14 are as follows.

Units	PLF%	Auxiliary Consumption %	Specific Fuel Oil Consumption ml/kWh	Station Heat rate kcal /kWh	Transit Loss of Coal%
PTPS-1 to 4	68	11	2	3150	
PTPS– 5 & 6	85	9	1	2550	
PTPS – 7 &8	85	8.5	1	2500	
DCRTPP -1	85	8.5	1	2344	
DCRTPP -2	85	8.5	1	2344	1.5%
RGTPP -1	85	6	1	2387	
RGTPP -2	85	6	1	2387	
WYC and Kakroi Hydel	50	1.0	-	-	

12.0 Tariff Objective:-

While determining generation tariff for FY 201314, the Commission has taken into consideration the filing of proposed tariff dated 30/10/2012, supplementary tariff filing / clarifications provided by HPGCL from time to time, oral submission / presentation made by HPGCL at the time of public hearing held on 24.01.2013, objections raised by UHBVNL, Haryana Chamber of Commerce & Industry, Yamuna Nagar – Jagadhari Chamber of Commerce & Industries and HPGCL's reply thereto as well as the suggestions of SAC. The Commission has made efforts to balance the interest of the Petitioner as well as the electricity consumers of the State while determining the generation tariff for FY 2013-14 within the overall framework of the relevant provisions of **HERC (Terms and Conditions for Determination of Tariff for Generation, Transmission, Wheeling and Distribution & Retail Supply under Multi Year Tariff Framework) Regulations, 2012 notified on 5.12.2012.**

12.1 Determination of Fuel Cost / Variable Charges:

The fuel cost / variable charge has been calculated based on the parameters approved by the Commission for FY 2013-14. The details are presented in Table(s) given below:

FUEL / VARIABLE COST FOR FY 2013-14 (PTPS 1-8)

			Unit 1	Unit 2	Unit 3	Unit 4	Unit 5	Unit 6	Unit 7	Unit 8
Gross Generation	MU	A	701.71	655.25	655.25	655.25	1563.66	1563.66	1861.50	1861.50
Installed Capacity	MW		117.8	110	110	110	210	210	250	250
PLF (%)			68.00	68.00	68.00	68.00	85.00	85.00	85.00	85.00
Auxiliary Energy Consumption	%		11%	11%	11%	11%	9.00%	9.00%	8.50%	8.50%
Generation (Ex-bus)	MU	A1	624.52	583.17	583.17	583.17	1422.93	1422.93	1703.27	1703.27
Station Heat Rate (SHR)	Kcal/kwh	B	3150	3150	3150	3150	2550	2550	2500	2500
Specific Oil Consumption	ml/kwh	C	2	2	2	2	1	1	1	1
Gross Calorific Value of Oil	Kcal/litre	D	10107	10107	10107	10107	10107	10107	10107	10107
Gross Calorific Value of Coal	K.cal/Kg	E	3477	3477	3477	3477	3476.88	3476.88	3476.88	3476.88
Overall Heat	G.cal	F=(A*B)	2210389.78	2064031.2	2064031.2	2064031.2	3987333.0	3987333.0	4653750.0	4653750.0
Heat from Oil	G.cal	G=(A*C*D)/1000	14184.85	13245.62	13245.62	13245.62	15804.43	15804.43	18814.79	18814.79
Heat from Coal	G.cal	H= (F-G)	2196204.93	2050785.58	2050785.58	2050785.58	3971528.57	3971528.57	4634935.21	4634935.21
Oil Consumption	KL	I=G*1000/D=A*C	1403	1310	1310	1310	1564	1564	1862	1862

Coal Consumption	MT	**J=(H*1000/E)**	631659.69	589835.02	589835.02	589835.02	1142267.94	1142267.94	1333073.10	1333073.10
Cost of Oil per KL	Rs/KL	K	45774.61	45774.61	45774.61	45774.61	45774.61	45774.61	45774.61	45774.61
Cost of Coal #	Rs/MT	L	3888.00	3888.00	3888.00	3888.00	3888.00	3888.00	3888.00	3888.00
Total Cost of Oil*	Rs .Mln	M=(K*I)/10^6	64.24	59.99	59.99	59.99	71.58	71.58	85.21	85.21
Total Cost of Coal	Rs.Mln	N=(J*L)/10^6	2455.89	2293.28	2293.28	2293.28	4441.14	4441.14	5182.99	5182.99
Total Fuel Cost	Rs.Mln	O=M+N	2520.13	2353.27	2353.27	2353.27	4512.71	4512.71	5268.20	5268.20
Fuel Cost/Kwh	Rs.	P=N/A1	3.93	3.93	3.93	3.93	3.12	3.12	3.04	3.04

 # weighted average rate of indigenous coal divided by 0.985 plus weighted average rate of imported coal.

** Cost of Secondary Fuel Oil to be recovered as fixed charge.*

FUEL / VARIABLE COST (FY 2013-14) for RG TPS and DCR TPS

Parameters	**Unit**	**Derivation**	**RG TPS**		**DCR TPS**		**WYC**
			Unit 1	**Unit 2**	**Unit 1**	**Unit 2**	
Gross Generation	MU	A	3679.20	3679.20	2233.80	2233.80	274.63
Installed Capacity	MW		600	600	300	300	62.7
PLF (%)			70.00	70.00	85.00	85.00	50.00
Auxiliary Energy Consumption	%		6.00%	6.00%	8.50%	8.50%	1.00%
Generation (Ex-bus)	MU	A1	3458.45	3458.45	2043.93	2043.93	271.88
Station Heat Rate (SHR)	Kcal/kwh	B	2387	2387	2344	2344	NA
Specific Oil Consumption	ml/kwh	C	1	1	1	1	NA
Gross Calorific Value of Oil	Kcal/litre	D	10303	10303	10091	10091	NA
Gross Calorific Value of Coal	K.cal/Kg	E	3756.75	3756.75	3602.28	3602.28	NA
Overall Heat	G.cal	F=(A*B)	8782250.4	8782250.4	5236027.2	5236027.2	NA
Heat from Oil	G.cal	G=(A*C*D)/1000	37907.28	37907.28	22540.58	22540.58	NA
Heat from Coal	G.cal	H= (F-G)	8744343.12	8744343.12	5213486.62	5213486.62	NA
Oil Consumption	KL	I=G*1000/D=A*C	3679	3679	2234	2233.80	NA
Coal Consumption	MT	J=(H*1000/E)	2327635.09	2327635.09	1447274.12	1447274.12	NA
Cost of Oil per KL	Rs/KL	K	42515.92	42515.92	38697.00	38697.00	NA
Cost of Coal #	Rs/MT	L	3713.00	3713.00	3152.00	3152.00	NA
Total Cost of Oil *	Rs .Mln	M=(K*I)/10^6	156.42	156.42	86.4414	86.4414	NA
Total Cost of Coal	Rs.Mln	N=(J*L)/10^6	8642.51	8642.51	4561.81	4561.81	NA
Total Fuel Cost	Rs.Mln	O=M+N	8798.93	8798.93	4648.25	4648.25	NA
Fuel Cost/Kwh	Rs.	P=N/A1	2.50	2.50	2.23	2.23	NA

 # weighted average rate of indigenous coal divided by 0.985 plus weighted average rate of imported coal

**** Cost of Secondary Fuel Oil to** be recovered as fixed charge.*

Note: Primary Fuel Price Adjustments (FPA) shall be applicable as per the provisions of regulation 33 of HERC Regulations, 2012.

12.2 Determination of Fixed Cost:

The fixed cost of HPGCL's power plants has been determined in accordance with the HERC Regulations NO. HERC/26/2012 dated 5th December, 2012 namely Haryana Electricity Regulatory Commission (Terms and Conditions for Determination of Tariff for Generation, Transmission, Wheeling and Distribution and Retail Suplly under Multi Year Tariff Framework) Regulations, 2012 as applicable to the Generation Company for FY 2013-14.

As per regulation 15.3 the fixed cost of generating plant (thermal or hydro as the case may be) comprises of the following elements:-

- Return on Equity.
- Interest and Finance Charges on Loan Capital.
- Interest on allowed working capital.
- Depreciation.
- Operation and Maintenance Expenses.
- Cost of secondary fuel oil (only for thermal).
- Foreign Exchange Rate Variation, if any.
- All statutory levies and taxes, if any, excluding taxes on income.

The petitioner's submission and Commission's analysis / order on each of the annual fixed cost components mentioned above are dealt with in the paragraph that follows.

12.3 Operation & Maintenance (O&M) Expenses:-

The O&M charges comprise of repair and maintenance charges (R&M), employees cost and administrative & general expenses. The Petitioner has claimed O&M expenses of Rs. 6343.68 Millions for their power plants.

PTPS (units- 1 to 4)	Rs. 1661.58 Millions based on escalation by 4% of the O&M expenses of FY 2009-10 and 2010-11 to arrive at FY 2011-12 base. The average value has been further escalated by 7.43% per annum to arrive at FY 2013-14 O&M expenses.
All Other Thermal Units	Rs. 4498.5 Millions, the O&M allowed by this Commission in FY 2012-13 has been escalated by 7.43% to arrive at the O&M

	expenses for FY 2013-14.
WYC & Kakroi, Hydel	Rs. 183.6 Millions as allowed for FY 2012-13 escalated @ 7.43%

The Commission observes that as per Haryana Electricity Regulatory Commission (Terms and Conditions for Determination of Tariff for Generation, Transmission, Wheeling and Distribution & Retail Supply under Multi Year Tariff Framework) Regulations, 2012, the provision for O&M is as under.

"(5)Operation and maintenance expenses: The O & M expenses (in Rs. Lac per MW) for the existing plants, except for Panipat TPS Unit 1-4, have been based on actual O & M expenses for FY 2011-12 as per audited accounts for the respective plants escalated @ 4% per annum. The Commission feels that Panipat TPS Unit 1-4 has a very large component of wages. The Commission realizes that though the wage rate may not be controllable but the number of employees is certainly controllable. Therefore, the Commission, for reasons of its social consequences, does not recommend any retrenchment, but feels that efforts should be made to bring down per MW wage cost through natural attrition and by not filling any vacant posts / creating new posts. Therefore, if any vacancies are filled / created, the Commission shall not allow the additional cost of such manpower unless adequately justified. So in the case of Panipat TPS Unit 1-4, the O&M expenses (in Rs. Lac per MW) are also based on audited expenses for FY 2011-12 but, whereas the A&G and R&M expenses have been escalated @ 4% per annum, no escalation has been allowed in the case of employees expenses in view of the above.

For the new plants, Commissioned after 1st April, 2012, the normative O & M expenses have been kept at the same level as the normative O & M expenses for existing plants of the same/similar capacities.

The norms for O & M expenses (in Rs. Lac per MW) for the existing plants and the plants Commissioned on or after 1st April 2012 shall accordingly be as under:

(a) Existing Plants:

Plant (Unit)	2013-2014	MYT Period		
		2014-2015	2015-2016	2016-2017
Panipat TPS (Unit 1 to 4)	31.21	31.74	32.29	32.86
Panipat TPS (Unit 5 & 6)	20.26	21.07	21.91	22.78
Panipat TPS (Unit 7 & 8)	15.01	15.61	16.24	16.89
DCR TPS, Yamuna Nagar (Unit 1&2)	12.05*	12.53	13.03	13.55
Rajiv Gandhi TPS (Unit 1&2)	6.05*	6.29	6.54	6.80

** Keeping in view that actual O & M expenses for FY 2011-12 in case of DCR TPS and Rajiv Gandhi TPS, based on which above normative O & M expenses have been determined, are not representative because of the fact that during FY 2011-12 one or the other unit of these plants have remained under shut down, the O&M expenses of these two plants for FY 2013-14 would be trued-up based on actual expenses. The per MW expenses worked out based on actual expenses for FY 2013-14, escalated @ 4% per annum, shall be considered as the revised normative O & M expenses for subsequent years for these two plants and new plants of same/similar capacities."*

In view of the above O&M expenses considered by the Commission as applicable for FY 2013-14 are presented in the table below.

Approved O&M Expenses for FY 2013-14 (Rs. Millions)

	Capacity MW	Norm/MW/Rs. Mln	O&M Expenses Rs. Millions
PTPS -1	117.8	3.121	367.65
PTPS - 2	110	3.121	343.31
PTPS -3	110	3.121	343.31
PTPS -4	110	3.121	343.31
PTPS -5	210	2.026	425.46
PTPS -6	210	2.026	425.46
PTPS -7	250	1.501	375.25
PTPS -8	250	1.501	375.25
DCR TPS 1	300	1.205	361.5
DCR TPS 2	300	1.205	361.5
RG TPS 1	600	0.605	363
RG TPS 2	600	0.605	363
WYC & Kakroi Hydro	62.7		183.6
Note: DCR TPS & RG TPS to be trued up as per MYT Regulations			
O&M TOTAL			4631.60

12.4 Depreciation:

The Petitioner has calculated station wise depreciation on the 90% of the opening Gross Fixed Assets as per the deprecation rates notified by this Commission. Accordingly the Commission allows Rs. 4853.04 Millions as deprecation charges for FY 2013-14 as proposed by HPGCL. The snapshot of the depreciation proposed and allowed by the Commission, subject to truing up, are as under:

PTPS	**Gross Block 31.3.2013 (Rs. Millions)**	**Gross Block 31.03.2014 (Rs. Millions)**	**Depreciation Allowed (Rs. Millions)**
1	2056.69	2056.69	107.95
2	2342.61	2342.61	123.32
3	629.56	629.56	43.47
4	650.22	650.22	42.91
5	2,543.72	2543.72	123.99
6	9,919.27	9,919.27	511.99
7	9,363.42	9,363.42	454.77
8	9,237.96	9,237.96	447.95
Sub Total	36,743.45	36,743.45	1,856.35
DCR TPS			
1	10,835.43	10,835.43	518.92
2	10835.44	10,835.44	518.92
Sub Total	21,670.87	21,670.87	1,037.84
RG T PS			
1	19266.68	19266.68	933.93
2	19266.68	19266.68	933.93
Sub Total	38533.36	38533.36	1867.86
WYC & Kakroi	2019.02	2019.02	90.99
Corp Office	185.8	185.8	0
TOTAL		99152.5	4853.04

12.5 Interest and Finance Charges on Loan:

HPGCL has claimed Rs. 5546.36 million as interest and finance charges on long-term loans for FY 2013-14. The Commission examined the details of all the long-term loans including repayments and drawls and respective interest rates for the generating plants that would be operational in FY 2013-14.

Based on the schedule of loans along with respective interest rates submitted by HPGCL the Commission allows Rs. 5523.64 Millions interest charges in FY 2013-14 as against Rs. 5546.36 Millions claimed by HPGCL. The interest amount has been calculated on the average loan i.e. average of the opening and closing balance on loans at the weighted average interest rate as per the provisions of HERC Regulations, 2012. The details are provided below:

	Loans as on 31.03.2013 (Rs. Millions)	Loans as on 31.03.2014(Rs. Millions)	Average Loan(Rs. Millions)	Interest (Rs. Millions)
PTPS-1	85.48	85.07	85.275	7.67
PTPS-2	89.56	85.07	87.315	7.81
PTPS-3	85.48	85.00	85.24	7.67
PTPS-4	85.48	85.07	85.275	7.67

Total 1-4	**346**	**340.21**		
PTPS 5	163.19	162.41	162.8	14.65
PTPS 6	1249.22	1007.14	1128.18	95.90
Total 5 & 6	**1412.41**	**1169.55**		
PTPS 7	2589.67	2014.19	2301.93	223.29
PTPS 8	2589.67	2014.19	2301.93	223.29
Total PTPS 7&8	**5179.34**	**4028.38**		
DCR TPS1	6786.53	6183.28	6484.905	
DCRTPS2	6786.53	6183.28	6484.905	
Total DCR TPS 1 &2	**13573.06**	12366.56	12969.81	1653.65
RG TPS1				
RGTPS2				
Total RG TPS 1&2	**28078.48**	25301.78	26690.13	3276.21
Hydro	74.33	47.26	60.795	5.82
TOTAL				**5523.64**

- *need based R&M of Rs. 143.99 Millions & Rs. 172.83 Millions for PTPS (Units 3 & 4) respectively have not been considered by the Commission in the absence of proper justification including cost – benefit analysis, pay – back and other details of the proposed Renovation & Modernization..*

12.6 Interest on Working Capital:

HPGCL has claimed interest on working capital loans amounting to Rs. 5126 Millions comprising of Rs. 3757.07 Millions as per HERC Regulations, 2008 and additional interest of Rs. 1369.73 Millions on additional working capital requirement due to non – payments of their dues by the Discoms.

The Commission has considered interest on working capital related borrowings as per HERC Regulations, 2012 and the interest on the same have been allowed @ 13% as proposed by HPGCL. The relevant regulation on working capital loan and interest thereto is reproduced below.

" 22. INTEREST ON WORKING CAPITAL

22.1 ***Components of working capital****:*

For the purpose of computing working capital the components mentioned in the table below shall be considered:

Generating company
I. ***<u>Coal-based Thermal Generating Plants:</u>*** *a) Cost of coal for 2 months corresponding to the normative availability;* *b) Cost of secondary fuel oil for 2 months corresponding to the normative availability;* *c) Normative O&M expenses for 1 (one) month;* *d) Maintenance spares @ 10% of the O&M expenses;* *e) Receivables equivalent to fixed and variables charges for 1 (one) month for sale of electricity calculated corresponding to normative availability.* *II.* ***<u>Open-cycle / Combined Cycle Gas Turbine Thermal Generating Plants</u>:*** *a) Fuel cost for 1 (one) month corresponding to the normative annual plant availability factor, duly taking into account mode of operation of the generating plant on gas fuel and liquid fuel;* *b) Liquid fuel stock for ½ month corresponding to the normative annual plant availability factor, and in case of use of more than one liquid fuel, cost of main liquid fuel;* *c) Maintenance spares @ 15% of normative operation and maintenance expenses;* *d) Normative operation and maintenance expenses for one month.* *e) Receivables equivalent to capacity charges and energy charges for 1 (one) month for sale of electricity calculated on normative plant availability factor, duly taking into account mode of operation of the generating plant on gas fuel and liquid fuel; and* *III****. <u>Hydro power plants</u>****:* *a) Normative operation and maintenance expenses for 1 (one) month* *b) Maintenance spares @ 7.5% of normative operation and maintenance expenses;* *c) Receivables equivalent to fixed cost for 1 (one) month*

22.2 ***Rate of Interest***

Rate of interest on working capital shall be equal to the base rate of SBI as applicable on 1st April of the relevant financial year plus an appropriate margin that realistically reflects the rate at which the generating company/licensees can raise debt from the market."

The computation of normative working capital and interest thereto is presented in the following table.

Normative Working Capital FY 2013-14 (Rs. millions)

ITEMS	DERIVATION	PTPS					RG TPS	DCR TPS	
		Units 1to4	**Units 5**	**Unit 6**	**Unit 7**	**Unit 8**	**Unit 1 & 2**	**(Unit 1 & 2)**	**WYC**
Coal Stock	2 months	1555.96	740.19	740.19	863.83	863.83	2880.84	1520.60	0
Oil Stock	2 months	40.70	11.93	11.93	14.20	14.20	52.14	28.81	0
O&M Expenses	1 months	116.47	35.46	35.45	31.27	31.27	60.50	60.25	15.30
Maint. Spares	10% of O&M	139.76	42.55	42.55	37.53	37.53	72.60	72.30	18.36
Receivables	2 months	2022.49	895.95	993.12	1137.03	1136.03	4233.31	4292.25	50.24
W/C Requirement		3875.37	1726.07	1823.24	2083.86	2082.86	7299.39	5974.22	83.90
Int (@13%		503.80	224.39	237.02	270.90	270.77	948.92	776.65	10.91

12.7 Return on Equity (ROE):

The petitioner has claimed Return on Equity (ROE) @ 14% pre tax grossed up by Minimum Alternative Tax. Accordingly ROE including impact of income tax amounting to Rs. 3705.75 Millions have been sought by HPGCL for FY 2013-14. The Commission has examined the ROE claim of HPGCL in the light of the fact that ROE is in the nature of dividend payout to the shareholders (in this case the State Government) and no such payout is made unless a company has outperformed the industry benchmark leading to profit or has reserves and surplus created out of better performance of the company in the past. In the present case neither is applicable. To the contrary the Commission observes that HPGCL in most of the cases have failed to achieve even the minimum benchmark set by the Commission i.e. PLF reported by HPGCL in FY 2012-13 up to September, 2012 for PTPS (1-4), RG TPS (1-2), DCR TPS (1-2) are significantly below the norms. Similarly the Auxiliary Energy Consumption norms set by the Commission for most of the HPGCL's power plants except RG TPS (Unit – 1) were not met. Further the Secondary Fuel Oil Consumption (ml/kWh) in the case of PTPS (1-4), DCR TPS (1-2) and RG TPS (Unit – 1) were in excess of the target set by this Commission and the same holds good for the Station Heat Rate norms in the case of PTPS (1-4), DCR TPS (1-2) and RG TPS (1-2).

In addition to the above, the Commission in all its previous generation tariff orders for HPGCL has raised its concern regarding high transit loss of coal and have been directing HPGCL to take necessary step to rein in the same within the norm of less than / equal to 1.5%. However, coal transit loss reported for FY 2010-11 was in excess of 7% and in FY 2012-13 it was in the range of 4.52% to 5.15%. This, the Commission observes, is an avoidable cost and also waste of resources i.e. coal which is already in short supply.

In view of the above discussions the Commission restricts ROE to 7% in accordance with the provisions of HERC Regulations, 2012. The relevant regulation is reproduced below.

" 20. RETURN ON EQUITY

20.1 The rate of return on equity shall be decided by the Commission keeping in view the incentives and penalties and on the basis of overall performance subject to a ceiling of 14% provided that the ROE shall not be less than the net amount of incentive and penalty .

20.2 Return on equity shall be allowed on equity employed in assets in use considering the following and subject to regulation 20.1 above:

i. Equity employed in accordance with regulation 19.1 and 19.2 on assets (in use) commissioned prior to the beginning of the year; plus

II. 50% of equity capital portion of the allowable capital cost for the assets put to use during the year.

Provided that for the purpose of truing up, return on equity shall be allowed from the COD on pro-rata basis based on documentary evidence provided for the assets put to commercial operation during the year.

20.3 Return on equity invested in work in progress shall be allowed from the actual date of commercial operation of the assets.

20.4 There shall be no Return on Equity for the equity component above 30%".

The details of the ROE allowed by the Commission for FY 2013-14 are presented in the table that follows.

		Equity as on 31/03/2013 (Rs. Millions)	Equity as on 31/03/2014 (Rs. Millions)	Average Equity (Rs. Millions)	ROE 7% (Rs. Millions
	Particulars				
A	THERMAL				
	TPS, Panipat				
	1X110 MW Unit-1	490.3	490.3	490.3	34.3
	1X110 MW Unit-2	0	0	0	0.00
	1X110 MW Unit-3	162.85	236.92	199.885	14.0
	1X110 MW Unit-4	162.85	224.56	193.705	13.6
	1X210 MW Unit-5	55.8	55.8	55.8	3.9
	1X210 MW Unit-6	1498.8	1498.8	1498.8	104.9
	2X250 MW Unit-7&8	4152.4	4152.4	4152.4	290.7
	2x300 DCR TPS, YNR	4838.9	4838.9	4838.9	338.7
	RGTPS 1&2	9600	9600	9600	672
	Total				
B	**HYDEL**				
	WYC Stage-I				
	WYC Stage-II				
	Kakroi				
	Dadupur Mini Hydel				
	Total Hydel	145.8	143.8	144.8	10.1
C	**GENERAL ASSETS**				
	Corporate Office	0			
	Grand Total (A+B+C)	21107.7	21241.48	21174.59	1482.2

As there is no expense claimed by the petitioner on account of foreign exchange rate variation (FERV) for any of its generating stations the Commission has not considered the same.

12.7 Fixed Expenses for FY 2013-14 approved by the Commission.

A summary of the fixed expenses approved by the Commission is presented in the table given below.

Fixed Expenses / Charges for FY 2013-14 (Rs. Millions)

EXPENSES	**PTPS-1to4**	**PTPS-5**	**PTPS -6**	**PTPS -7**	**PTPS - 8**	**DCR TPS 1**	**DCR TPS 2**	**RGTPS 1 & 2**	**WYC & Kakroi**	TOTAL
Operation & Maintenance (O&M)	1397.58	425.46	425.46	375.25	375.25	361.50	361.50	726.00	183.60	4632
Depreciation	317.65	123.99	511.99	454.77	447.95	518.92	518.92	1867.86	90.99	4853
Interest & Finance	30.82	14.65	95.99	223.29	223.29	826.83	826.83	3276.21	5.82	5524
W/C Interest	503.00	224.00	237.02	270.95	270.77	388.33	388.33	948.92	10.91	3243
ROE	62	4	105	145	145	169	169	672	10	1482.17
Fixed Cost	**2311.72**	**792.39**	**1375.36**	**1469.56**	**1462.61**	**2264.93**	**2264.93**	**7490.99**	**301.42**	**19733.90**
Secondary Fuel oil Cost	244.21	71.58	71.58	85.21	85.21	86.44	86.44	312.84	0.00	1044
Total Fixed Cost	2555.93	863.97	1446.94	1554.77	1547.82	2351.37	2351.37	7802.83	301.42	20777.42
Generation (ex-bus) MU	2374.03	1422.93	1422.93	1703.27	1703.27	2043.93	2043.93	6916.90	271.88	19903
Fixed Cost (Rs/kWh)	1.0766	0.6072	1.0169	0.9128	0.9087	1.1504	1.1504	1.1282	1.1087	**1.0439**

13.0 Based on the parameters approved by the Commission, the approved tariff for HPGCL's power plants for FY 2013-14 is as per the table below:

Approved Tariff (FY 2013-14)

	PTPS (Unit 1-4)	PTPS (Unit 5)	PTPS (Unit 6)	PTPS (Unit 7 & 8)	DCR TPS (Unit 1&2)	RG TPS (Unit 1 &2)	WYC & Kakroi hydro	Total HPGCL
Fuel / Variable Energy Charges (Rs./kWh)	**3.9324**	**3.1211**	**3.1211**	**3.0430**	**2.2319**	**2.4990**	**-**	**2.7630**
Fixed Charges * (Rs. Millions)	**2555.93**	**863.97**	**1446.94**	**3102.59**	**4702.74**	**7803.83**	**301.42**	**20777.42**

* including cost of secondary fuel oil.

The recovery of fixed charges as determined above shall be as per the provisions of HERC Regulations, 2012. The relevant provision is reproduced below.

*"**30 RECOVERY OF ANNUAL FIXED CHARGES (CAPACITY) CHARGES FOR THERMAL POWER PROJECTS***

(a) A generating plant shall recover full capacity charge at the normative annual plant availability factor specified for it by the Commission. Recovery of capacity charge below the level of target availability shall be on pro-rata basis. No capacity charge shall be payable at zero availability;

(b) Payment of capacity charge by the beneficiaries shall be on monthly basis in proportion to allocated / contracted capacity. The total capacity charges payable for a generating plant shall be shared by its beneficiaries as per their respective percentage share / allocation in the capacity of the generating plant;

(c) The capacity charge payable to a thermal generating plant (in Rs.) for a calendar month shall be calculated in accordance with the following formula:

(i) Generating plants in commercial operation for less than ten (10) years on 1st April of the financial year:

AFC x (NDM / NDY) x (0.5 + 0.5 x PAFM / NAPAF)

Provided that in case the plant availability factor achieved during a financial year (PAFY) is less than 70%, the total capacity charge for the year shall be restricted to

AFC x (0.5 + 35 / NAPAF) x (PAFY / 70)

(ii) *For generating plants in commercial operation for ten (10) years or more on 1st April of the financial year:*

AFC x (NDM / NDY) x (PAFM / NAPAF)

Where,
AFC = Annual fixed cost specified for the year, in Rupees.
NAPAF = Cumulative Normative annual plant availability factor in percentage
NDM = Number of days in the month
NDY = Number of days in the year
PAFM = Plant availability factor achieved during the month, in percent:
PAFY = Plant availability factor achieved during the year, in percent

Note: Until Intra – State ABT is implemented, Plant Availability Factor (PAF), wherever mentioned, shall mean Plant Load Factor (PLF). For working out annual PLF for the purpose of recovery of annual fixed charges, deemed generation on account of backing down on the instructions of SLDC or on the request of Discoms shall be included.

(d) *In case HPGCL's power stations are backed down on the instructions of the distribution licensees and at the same time the Discoms are drawing power at a lower rate from some other sources i.e. generators, traders etc. or resorting to drawls under UI mechanism, the Discoms shall compensate HPGCL to the extent of fixed cost corresponding to loss of generation due to backing down. In such cases HPGCL shall have the right to sell power not scheduled by the Discoms to a third party provided any revenue earned on this account shall first be adjusted against the fixed cost to be recovered from the Discoms."*

14.0 In Compliance with the judgment of Hon'ble APTEL in Appeal No. 91 of 2011 and Appeal No. 108 of 2012, an amount of Rs. 578.19 millions has been claimed by HPGCL for FY 2011-12 and Rs. 4880 millions for FY 2012-13 in the ARR filing . The Commission is of the view that the relief claimed by HPGCL is part of power purchase cost of the Discoms for FY 2011-12 and FY 2012-13; accordingly HPGCL may recover the amount as FPA from the Discoms and submit the details to this Commission.

15.0 HPGCL has also raised the issue of outstanding receivables from the Discoms. The Commission observes that HPGCL had filed a petition regarding the same vide memo no. HPGC/FIN/Reg-287/382 dated 4th July, 2012. After the preliminary hearing on 3.10.2012 the parties were directed to place on record their replies as well as the resume of the meeting held on 11.07.2012 under the Chairmanship of the Hon'ble Chief Minister, Haryana wherein certain decisions were taken regarding the non-payment of HPGCL's dues over and above 60 days of the date of billing. The case was posted for further hearing on 6.11.2012, however, HPGCL vide their Memo No. 8113/FA/Hq/HPGCL/Reg 287 dated 30.10.2012 sought deferment of the hearing on the plea that the issue is under settlement with mutual discussions which was acceded to by the Commission. Thus HPGCL is at liberty to file a fresh petition for adjudication in case they have failed to amicably resolve the issue.

16.0 The Commission has considered the submission of HPGCL that they may be allowed to recover fixed charges corresponding to the period of maintenance shutdown of RGTPS in FY 2012-13 and to allow similar relief in the subsequent years. After examining the issue at length, the Commission holds that normative PLF of 85% in the case of RG TPS has been determined after taking into account normal maintenance schedule and hence any prolonged shutdown or forced outages which may render the machines un-available cannot be reckoned with for recovery of proportionate fixed charges. Consequently in view of the above discussions and regulation 30 (a) of HERC Regulations, 2012 the Commission disallows the claim of HPGCL on this account.

17.0 All other terms and conditions not explicitly dealt with in this order shall be as per the relevant provisions of the **Haryana Electricity Regulatory Commission (Terms and Conditions for Determination of Tariff for Generation, Transmission, Wheeling and Distribution & Retail Supply under Multi Year Tariff Framework) Regulations, 2012**

The generation tariff approved for FY 2013-14 shall be implemented w.e.f 1st April 2013.

This order is signed, dated and issued by the Haryana Electricity Regulatory Commission on 29th March, 2013.

Date: 29th March, 2013
Place: Panchkula

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