Executive Summary of IPGCL's Petition for Truing up of FY 2012-13 to FY 2013-14 and approval of revised estimates for FY 2014-15 and Tariff for FY 2015-16

Introduction

1.1. The Generating Company, Indraprastha Power Generation Company Limited (IPGCL) has filed the petition for truing up for previous periods of FY 2012-13 to FY 2013-14 and approval of revised estimates for FY 2014-15 and Determination of Tariff for FY 2015-16.

1.2. This Executive Summary contains the summary of the Petition filed by IPGCL for truing up for FY 2012-13 to FY 2013-14 and approval of revised estimates for FY 2014-15 and Tariff for FY 2015-16.

Norms of Operation

1.3 Petitioner has taken into consideration actual performance parameters for FY 2012-13 to 2014-15 and based on these, petitioner has projected the parameters for FY 2015-16.

1.4 Petitioner requests the Hon'ble Commission to take lenient and practical view while truing up for the period FY 2012-13 to 2013-14, approval of revised estimates for FY 2014-15 and fixing the operational targets for Control Period FY 2015-16, considering the factors of technological obsolescence, aging of the stations and principles considered by Hon'ble CERC in its tariff regulation-2014 for MYT Year From FY 2014-15 to FY 2018-19.

Availability

1.5 The actual (for FY 2012-13 to FY 2014-15) & proposed (for FY 2015-16) Availability parameters for various stations of IPGCL are summarized is as given below:

Table 1: Availability (%)

Sl. No.	Particulars	FY 2012-13	FY 2013-14	FY 2014-15 (Upto Dec)	FY 2015-16 (Estimated)
A	Rajghat Power Station	66.94	65.77	61.12	75

B	Gas Turbine	84.22	86.94	66.11	80

IP Station

1.6 The station was more than 40 years old and has been closed down on 31.12.2009. Earlier, Petitioner has submitted true up petition for FY 2007-08 to 2011-12 for IP Station and the Commission vide its order dt. 31.07.2013 has trued up Rs.175.41 Cr. to be recovered by Petitioner due to approval of additional expenditure on various heads during the period by the Commission. However, Hon'ble Commission did not allow to recover above amount from DISCOMs.

Rajghat Power House (RPH)

1.7 In case of RPH, the petitioner may like to submit that earlier the Commission has approved the availability of 70% for FY 2011-12. However, the Hon'ble Commission has fixed the target availability of 75% for FY 2012-13 to 2014-15 and extended period of 2015-16. It is submitted that the average availability during the control period is 64.61% which is much below the target availability during the period.

1.8 The petitioner requests the Commission to relax and approve the availability of 70% for recovery of full fixed cost for FY 2012-13 to FY 2014-15 and extended period 2015-16.

Gas Turbine Power Station (GTPS)

1.9 Petitioner submits that in MYT Regulations, 2011, target availability for the Control period FY 2012-13 to FY 2014-15 and extended period for FY 2015-16 has been fixed at 80%. However, the Average Availability achieved by the station during the Control period is around 79.09%.

1.10 The Petitioner requests the Hon'ble Commission to relax the target availability for the Gas Turbine Power Station and allow the availability as achieved during FY 2012-13, 2013-14 and 2014-15 and allow 70% target availability in FY 2015-16.

Station Heat Rate

1.11 The actual (for FY 2012-13 to FY 2014-15) & proposed (for FY 2015-16) Station Heat Rate parameters for various stations of IPGCL are summarized is as given below:

Table 2: Station Heat Rates (kCal/kWh) for IPGCL Stations

Sl. No.	Particulars	Approved	FY 2012-13	FY 2013-14	FY 2014-15	FY 2015-16
			Actuals	Actuals	Actual (Upto Dec)	(Estimated)
A	Rajghat Power Station	3200	3317	3381	3359	3248
B	GT Power Station (Combined Cycle)	2450	2439	2416	2515	2500
C	GT Power Station (Open Cycle)	3125	3449	3442	3507	3440

1.12 For RPH, the petitioner has requested to true- up and allow the actual heat rate for FY 2012-13 to 2014-15 and the proposed heat rate of 3248kCal/kWh for FY 2015-16.

1.13 For GTPS, the petitioner requested to relax and true- up the actual heat rate achieved by the Station in Combined Cycle mode and Open cycle mode for the MYT period 2012-13 to 2014-15. It is further requested to allow the heat rates of 2500 kCal/kWh in combined cycle mode & 3440 kCal/kWh in open cycle mode for FY 2015-16.

1.14 Also for GTPS, the petitioner has requested the Commission to direct SLDC Delhi to back down any of the complete block of the station only and not partially. Further, it is requested that frequent backing down should not be resorted by SLDC.

Auxiliary Power Consumption

1.15 The achieved parameter of the Auxiliary power Consumption by the stations of IPGCL during the control period FY 2012-13 to 2014-15 estimated parameter for FY 2015-16 are summarized is as given below:

Table 3: Auxiliary power Consumption (%) for IPGCL Stations

Sl. No.	Particulars	FY 2012-13	FY 2013-14	FY 2014-15 (Upto Dec)	FY 2015-16 (Estimated)
A	Rajghat Power Station	13.27	15.16	15.02	12.50
B	GT Power Station	3.01	3.28	3.59	3.59

Rajghat Power House

1.16 It is submitted that the Commission has fixed the norm of 11.28% for the auxiliary power consumption of the station during the current MYT control period as well as in the next control period. However, the petitioner has requested to true- up the actual auxiliary power consumption as achieved by the station for the Control period from FY 2012-13 to 2014-15 and to approve the auxiliary power consumption of 12.50% for FY 2015-16.

Gas Turbine Power Station

1.17 PLF measures the actual generation of the station based upon the scheduled generation whereas the availability measures the capacity of the station to inject the power into the system.

1.18 Lower PLF of GTPS during FY 2012-13 to FY 2013-14 has resulted into higher Auxiliary Power Consumption of the station. It is further submitted that Auxiliary Power Consumption in combined cycle mode is around 3.59% for FY 2014-15. Therefore,

the petitioner has requested the Commission to true- up the actual auxiliary power consumption for FY 2012-13 to FY 2014-15 and allow the Auxiliary Power consumption of 3.59% in combined cycle mode for FY 2015-16.

Gross Generation and Net Generation

1.19 Based on the Availability and Auxiliary Consumption, the Gross and Net Generation for Gas Turbine Power Station and Rajghat Power House during the Control Period FY 2012-13 to FY 2014-15 as per actual and for FY 2015-16 as projected is as given below:

Table 4: Gross and Net Generation

Sl. No.	Particulars	FY 2012-13	FY 2013-14	FY 2014-15 (Up to Dec'14)	FY 2015-16 (Estimated)
A	**Rajghat Power Station**				
	Capacity (MW)	135	135	135	135
	Gross Generation(MU)	792.799	379.883	340.427	889.380
	Auxiliary Consumption	13.27%	15.16%	15.02%	12.50%
	Net Generation (MU)	687.577	322.301	289.282	778.208
B	**GT Power Station**				
	Capacity (MW)	270	270	270	270
	Gross Generation(MU)	1307.834	1040.949	721.429	1897.344
	Auxiliary Consumption	3.01%	3.28%	3.59%	3.59%
	Net Generation (MU)	1268.422	1006.792	695.562	1829.23
C	**Total IPGCL for Delhi**				

	Gross Generation(MU)	2100.633	1420.832	1061.856	2786.724
	Net Generation (MU)	1955.999	1329.093	984.844	2607.438

1.20 The petitioner requests the Commission to approve the gross and net generation for all the plants during the control period and the fixed cost to be allowed to be recovered based on the above generation targets for FY 2015-16.

Variable Cost for IPGCL

IPGCL plants can be broadly divided as:

1. **Coal Based Plants:** Rajghat Power Stations
2. **Gas Based Station:** GT Power Station

Fuel Price

1.21 IPGCL has considered weighted average price of fuels e.g. Coal, Oil and Gas prevailing during the three months of FY 2015-16 i.e. October to December, 2014 in line with the Regulations, 2011. These prices are kept constant for determination of fuel cost for FY 2015-16.

1.22 **Indigenous Coal/ Washed Coal:**

The price of coal is dependent on the distance of the power station from the coal mines. Apart from above, the coal prices also vary from mine to mine depending upon the factors related to the mines, including grade of coal. IPGCL is using washed coal of less than 34% ash content as per the directive of the Hon'ble Supreme Court.

1.23 **Gas:**

GT Power Station of IPGCL runs on the Natural Gas being supplied by GAIL and Liquid Fuel supplied by IOCL. The total (APM+PMT+LNG) allocation for GTPS was 1.44 MMSCMD which is sufficient to run six gas turbines. This allocation was reduced to 1.32 MMSCMD during the FY 2006-07. Out of the total allocation of 1.32 MMSCMD,

the contracted quantity of R-LNG is 0.60 MMSCMD and balance i.e. 0.72 MMSCMD comes from APM and PMT and these quantities were further subject to daily cuts in the range of 15% depending on the availability. In view of non availability of sufficient gas, Hon'ble Commission has approved the conversion of two Gas Turbines on dual fuel system in FY 2008-09. MoP&NG has further allocated 0.23 MMSCMD non-APM ONGC gas whose supply has been commenced from mid October, 2011.

1.24 The Company has an agreement with GAIL for supply of 0.6 MMSCMD R-LNG. As per the agreement with GAIL, the contracted quantity is subject to Take or Pay clause. Accordingly, the Company is to bear the cost of this contracted quantity even if there is no off take of supply. IPGCL is also using spot R-LNG, subject to availability on take and pay basis.

1.25 One module of the station has been converted on liquid fuel. The quantum of open cycle generation calculated in terms of percentage is around 1.5% of the total generation of the station in FY 2012-13 to 2014-15. However, the fuel requirement for FY 2015-16 has been computed based upon the type of fuel and also the operation of module in combined cycle mode. This fuel consumption is projected on the heat rate of 2500kCal/kWh in combined cycle mode at the gross calorific value of 9695 kCal/SCM for gas and 8946kCal/ltr for liquid fuel.

1.26 **Secondary oil:**

The cost of secondary fuel has been computed based upon the average price and GCV for the months of October to December, 2014 and no escalation has been provided. It is further submitted earlier Hon'ble Commission in its Regulation 2011, and tariff order for RPH for FY 2012-13 to 2014-15 had allowed secondary fuel oil for RPH for FY 2012-13 to FY 2014-15 as given in table 5.

1.27 The cost of the secondary fuel has been considered as part of fixed cost as per the Regulations, 2011 from FY 2012-13 to FY 2014-15. However, from November, 2011 petitioner is using only HSD in place of LDO and LSHS. The year wise consumption vis-à-vis allowed values of the same during previous years of current MYT period are furnished as under:

Table 5: Secondary Fuel allowed for RPH

Sl. No.	Particulars	FY 2012-13	FY 2013-14	FY 2014-15
	Allowed			
A	Secondary Fuel Oil (LDO) Consumption (ml/kWh)	1.50	1.50	1.50
B	Secondary Fuel Oil (LSHS) Consumption (gm/kWh)	3.75	3.75	3.75
	Actual			
C	Secondary Fuel Oil (HSD) Consumption (ml/kWh)	3.74	5. 93	3.23

1.28 Petitioner Requests Commission to allow recovery of HSD charges as secondary fuel as part of fixed charges as per Clause 7.1 (1) of MYT Regulation, 2011. The equivalent normative HSD calculated on weighted average heat content of per unit LDO, LSHS and HSD is 5.876 ml/kWh. The details of the GCV taken for individual fuel and equivalent HSD is tabulated as under :

Table 6: Equivalent HSD in lieu of LDO and LSHS

Sl. No.	Secondary fuel used in RPH	Unit	GCV of Secondary fuel (Kcal/ltr,gm)	Sp. Cons. Allowed by Commission (Kcal/kWh)	Sp. HSD Con. Equivalent to LSHS & LDO (ml/kWh)
1	LSHS	MT	10360	3.75	

2	LDO	KL	9027	1.5	
3	HSD	KL	8916		5.876

1.29 Petitioner therefore request Hon'ble Commission to allow 5.876 ml/kWh of HSD in lieu of 1.5 ml/kWh LDO and 3.75 gm/kWh LSHS.

1.30 **Projected Fuel Cost:**

Considering the Gross Generation of the plant, SHR of the station, Gross Calorific Value and the Fuel Prices as explained above, total Fuel cost for each of the station works out as under:

Table 7: Variable Cost (for FY 2012-13 to 2014-15 & extended period 2015-16)

Sl. No.	Particulars	FY 2012-13	FY 2013-14	FY 2014-15 (Up to Dec'14)	FY 2015-16 (Estimated)
	RPH				
1	Gross Generation (MU)	792.799	379.883	340.427	889.380
2	Net Generation (MU)	687.577	322.301	289.282	778.208
3	Coal Consumption (MT)	717153.01	346849.39	310241.72	784548.14
4	Cost per Tone of Coal(Rs/MT)	3095.82	3331.28	3460	3438
5	Secondary Oil Consumption-HSD(Kl)	2984.85	2254.56	1100.447	5226
6	Cost of HSD (Rs/Kl)			62058	61000
7	Total Cost of Fuel(Rs Crores)	222.02	115.54	107.32	273.00

Sl. No.	Particulars	FY 2012-13	FY 2013-14	FY 2014-15 (Up to Dec'14)	FY 2015-16 (Estimated)
8	**Variable Cost in Rs/kWh**	**3.23**	**3.58**	**3.61**	**3.51**
Sl. No.	**Particulars**	**FY 2012-13**	**FY 2013-14**	**FY 2014-15**	**FY 2015-16 (Estimated)**
	GTPS				
1	Gross Generation(MU)	1307.834	1040.949	1892.160	1897.344
2	Net Generation (MU)	1268.422	1006.792	1824.231	1829.229
3	Gas Consumption				
4	APM (MMSCM)	182.395	170.780		
5	Rate/1000SCM	9456.561	10360.146		
6	Cost of APM Gas (Rs. Crore)	172.483	176.930		
7	NAPM (MMSCM)	50.709	42.037		
8	Rate/1000SCM	12961.31	13952.13		
9	Cost of NAPM Gas (Rs. Crore)	65.725	58.65		
10	PMT(MMSCM)	21.991	14.917		
11	Rate/1000 SCM	9418.184	10241.53		
12	Cost of PMT Gas (Rs. Crore)	20.712	15.277		
13	R-LNG (MMSCM)	72.497	35.107		

Sl. No.	Particulars	FY 2012-13	FY 2013-14	FY 2014-15 (Up to Dec'14)	FY 2015-16 (Estimated)
14	Rate/1000SCM)	24960.46	32339.78		
15	Cost for R-LNG (Rs.Crores)	180.955	113.54		
16	Spot R-LNG(MMSCM)	6.276	0		
17	Rate/1000SCM	39077.32	0		
18	Cost of Spot-RLNG (Rs. Crore)	24.526	0		
19	Total Gas Consumption (MMSCM)	333.868	262.841	487.92	489.26
20	Total Gas Cost (Rs. Crore)	464.40	364.395	680.07	681.93
21	HSD Consumption (kL)	89.72	20.44	176258	176740
22	Rate Rs./kL	28903.38	28897.18	61000.00	61000.00
23	Cost of HSD (Rs. Crore)	0.25	0.06	1075.17	1078.11
24	Total Fuel Cost (Rs. Crore)	464.40	346.40	680.07	681.93
25	**Variable Cost in Rs/kwh**	**3.66**	**3.62**	**3.73**	**3.73**

1.31 The petitioner has requested to true- up the actual Station Heat Rate, Auxiliary Power Consumption, Fuel Consumption and Plant Availability Factor, use of HSD in

lieu of LDO and LSHS as per the above submissions for RPH and GTP stations and also approve these parameters as submitted for FY 2012-13 to FY 2014-15 and extended period FY 2015-16.

Estimation of Fixed Cost

1.32 Total fixed cost for IPGCL for the period FY 2012-13, 2013-14 is based on actual audited accounts, FY 2014-15 is based on projections and for FY 2015-16 is based upon estimate.

1.33 Fixed cost calculations consist of the following items:

a. Operation & Maintenance Expenses
b. Interest on loan
c. Depreciation
d. Return on Equity
e. Interest on Working Capital
f. Cost of secondary fuel oil (for coal based stations only)
g. Income Tax
h. Special allowance in lieu of R&M or separate compensation allowance, wherever applicable

Operation & Maintenance Expenses

1.34 O&M expenses comprise of Employees Expenses, Repairs and Maintenance, Administrative and General Expenses, etc. The O&M expenses as per actual for FY 2012-13 to FY 2014-15 and as estimated for FY 2015-16.

Table 8: O&M Cost for IPGCL Power Plants (Rs. Crore)

Sl. No.	Particulars	FY 2012-13	FY 2013-14	FY 2014-15	FY 2015-16 (Estimated)
A	For RPH	73.67	72.69	76.21	82.70
B	For GTPS	84.18	65.15	63.92	69.58

C	**IPGCL (as a whole)**	**157.85**	**137.84**	**140.13**	**152.28**

1.35 The petitioner has requested to approve the O&M costs as per actual for FY 2012-13 to FY 2014-15 and as estimated for FY 2015-16.

Interest on loan

1.36 IPGCL has made certain capital additions during the Control period FY 2012-13, 2013-14 to FY 2014-15. The same has been funded through internal accruals/ loan from GNCTD. As per Regulation, 70% of the capital additions have been considered to be funded through Loans. Accordingly, interest on this normative loan has been taken @ 11.50% per annum, as per the Regulations.

1.37 Accordingly, Petitioner requests the Hon'ble Commission to approve the Interest for FY 2012-13 to FY 2014-15 and extended period 2015-16 has been shown below:

Table 9: Interest on Loan

Sl. No.	**Particulars**	**FY 2012-13**	**FY 2013-14**	**FY 2014-15**	**FY 2015-16 (Estimated)**
A	For RPH	6.69	6.36	6.42	6.40
	For GTPS	15.24	14.53	14.56	14.41
	IPGCL (as a whole)	**21.93**	**20.89**	**20.98**	**20.81**

Depreciation

1.38 The petitioner has followed Straight Line method for computing Depreciation. The Depreciation amount for the first control period FY 2012-13 to FY 2014-15 and projected depreciation for FY 2015-16 has been summarized as shown below:

Table 10: Depreciation for IPGCL Power Plants

Sl. No.	Particulars	FY 2012-13	FY 2013-14	FY 2014-15	FY 2015-16 (Estimated)
A	For RPH	13.49	13.25	12.96	12.91
B	For GTPS	22.36	24.53	24.87	23.32
C	**IPGCL (as a whole)**	**35.85**	**37.78**	**37.83**	**36.23**

1.39 The petitioner has submitted that RPH is going to complete its useful life of 25 years in May, 2015. However total accumulated depreciation till date has been only 69%. The plant is to be depreciated up to 90% at the end of useful life. It is anticipated that RPH will be closed down in FY 2016-17. Accordingly, in order to avoid burden of balance depreciation in the year 2016-17 only, the petitioner has requested the Commission to allow the remaining amount of depreciation up to the value of 90% during FY 2015-16 and FY 2016-17 proportionally.

1.40 The petitioner has submitted that GTPS has already completed its useful life of 25 years in 2011. However, the depreciation recovered by FY 2014-15, in line with Regulations, is not 70% of the asset value, even after operation of 29 years. The petitioner has requested the Commission to allow recovery of balance of Depreciation up to 90% of book value during FY 2015-16.

Return on Equity

1.41 The subscribed and paid up equity capital of IPGCL was fixed at Rs. 140 Crore as on July 1, 2002 in accordance with the Transfer Scheme. The total equity was bifurcated plant wise, on the basis of Gross Fixed Assets of the Company, as under:

Table 11: Equity Bifurcation for IPGCL Power Plants

Sl. No.	Particulars	Amount (Rs. Crores)
A	IP Power Station	1.20
B	Rajghat Power Station	59.56
C	GT Power Station	79.24
	Total	**140.00**

1.42 The Hon'ble Commission has fixed the pretax base rate of 15.5% in draft Generation Tariff Regulation in line with Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2009 for the period FY 2009-14. However, the Hon'ble Commission has reduced the rate of return on equity to 14% in the final Delhi Electricity Regulatory Commission (Terms and Conditions for Determination of Generation Tariff) Regulations, 2011.

1.43 The petitioner has requested the Commission to compute the Return on Equity as per CERC generation tariff regulation, 2014 as given under:

Rate of pre-tax return on equity = Base rate / (1-t)

Where t stands for applicable tax rate including Surcharge and Cess

1.44 Revised tax rates with gross as per above provisions for IPGCL will be as follows:

Table 12: Income Tax Grossed for IPGCL

Sl. No.	Particulars		FY 2012-13	FY 2013-14	FY 2014-15	FY 2015-16 (Estimated)
	RPH					
A	Average Equity (Rs. Cr.) as approved by Hon'ble Commission	A	73.04	74.00	74.35	74.37

Sl. No.	Particulars		FY 2012-13	FY 2013-14	FY 2014-15	FY 2015-16 (Estimated)
B	Base Rate of return on equity	B	14%	14%	14%	14%
C	Normal Income tax as considered by Hon'ble Commission	C	32.445%	33.99%	33.99%	33.99%
D	Gross up return on equity	D (B/(1-C)	20.72%	21.21%	21.21%	21.21%
E	Return on equity (Rs. Cr.)	E (AxD)	15.14	15.70	15.77	15.77
F	Base Return on Equity (Rs. Cr.)	F (AxB)	10.2256	10.36	10.4090	10.4118
G	Income tax component (Rs. Cr.)	G (E-F)	4.9144	5.34	5.41	5.3582
H	Approved in Tariff Order (Rs. Cr.)	H (FxC)	2.76	2.76	2.76	--
I	Difference (Rs. Cr.)	I	2.1544	2.58	2.65	5.3582
	GTPS					
A	Average Equity (Rs. Cr.) as approved by Hon'ble Commission	A	130.78	135.16	135.95	136.02
B	Base Rate of return on equity	B	14%	14%	14%	14%
C	Normal Income tax as considered by Hon'ble Commission	C	32.445%	33.99%	33.99%	33.99%
D	Gross up return on equity	D (B/(1-C)	20.72%	21.21%	21.21%	21.21%
E	Return on equity (Rs. Cr.)	E (AxD)	27.10	28.67	28.83	28.85
F	Base Return on Equity (Rs. Cr.)	F (AxB)	18.3092	18.9224	19.033	19.0428
G	Income tax component (Rs. Cr.)	G (E-F)	8.7908	9.7476	9.797	9.8072
H	Approved in Tariff Order (Rs. Cr.)	H (FxC)	5.42	5.42	5.42	--
I	Difference (Rs. Cr.)	I	3.3708	4.3276	4.377	9.8072

1.45 Accordingly Hon'ble Commission is prayed to rectify the error apparent on record and allow the Income Tax as under:

Table 13: Grossed up Income Tax for IPGCL Stations

Sl. No.	Particulars	FY 2012-13	FY 2013-14	FY 2014-15
A	GTPS	27.10	28.67	28.83
B	RPH	15.14	15.70	15.77
C	IPGCL total	42.24	44.37	44.60

Interest on Working Capital

1.46 The rate of Interest for FY 2012-13 to FY 2014-15 has been computed in line with the Generation Tariff Regulations, 2011. The base Rate of State Bank of India is 10% w.e.f 07.11.2013. The rate of Interest for FY 2012-13 to FY 2014-15 is computed as 13.5% by additionally allowing 350 basis points on base rate of SBI. The interest on working capital during the Control period from FY 2012-13 to FY 2014-15 and extended period 2015-16 is summarized as under:

Table 14: Interest on Working Capital

Sl. No.	Particulars	FY 2012-13	FY 2013-14	FY 2014-15	FY 2015-16 (Estimated)
A	RPH	16.33	11.39	19.67	20.11
B	GTPS	24.13	19.31	51.77	52.28
C	Total	**40.46**	**30.70**	**71.44**	**72.39**

The petitioner has requested to true –up the Interest on Working Capital for FY 2012-13 to FY 2013-14 and approve revised estimate for FY 14-15 and for extended period 2015-16 on normative basis as submitted.

Special allowance in lieu of R&M for Rajghat Power House

1.47 Petitioner requests the Commission to allow special Repair & Maintenance allowance for coal based stations under Clauses 6.15 & 6.44 of MYT 2011 regulation as shown below:

Table 15: Special allowances for RPH

Sl. No.	Particulars	FY 2012-13	FY 2013-14	FY 2014-15	FY 2015-16 (Estimated)
A	Compensation as per Clause 6.15 on account of Renovation & Modernization	5.1861	5.4827	5.7963	6.1278
B	Compensation as per Clause 6.44 for acquiring new assets of capital nature.	0.8775	0.8775	0.8775	0.8775
C	**Total**	**6.0636**	**6.3602**	**6.6738**	**7.0053**

Annual Fixed Cost of IPGCL

1.48 The total actual Fixed Cost for the control period FY 2012-13, 2013-14 & 2014-15 (Estimated) and projection for the FY 2015-16 is as shown below:

Table 16: Total Fixed Cost of RPH

Sl. No.	Particulars	FY 2012-13	FY 2013-14	FY 2014-15	FY 2015-16 (Estimated)
A	O&M Expenses	73.67	72.69	76.21	82.70
B	Depreciation	13.49	13.25	12.96	12.91
C	Interest Charges	6.69	6.36	6.42	6.40

D	Return on Equity	15.14	15.70	15.77	15.77
E	Interest on Working Capital	16.33	11.39	19.67	20.11
F	Secondary Fuel Oil	13.06	13.44	31.79	31.88
G	Income Tax	4.91	5.33	5.36	5.36
H	**Total Fixed Cost**	**143.28**	**138.15**	**168.18**	**175.13**
I	**Net Generation (MU)**	687.577	322.301	753.908	778.208
J	**Fixed Cost/Unit (Rs/kWh)**	**2.084**	**4.286**	**2.231**	**2.250**

Table 17: Total Fixed Cost of GTPS

Sl. No.	**Particulars**	**FY 2012-13**	**FY 2013-14**	**FY 2014-15**	**FY 2015-16 (Estimated)**
A	O&M Expenses	84.18	65.15	63.92	69.58
B	Depreciation	22.36	24.53	24.87	23.32
C	Interest Charges	15.24	14.53	14.56	14.41
D	Return on Equity	27.10	28.67	28.83	28.85
E	Interest on Working Capital	24.13	19.31	51.77	52.28
F	Income Tax	8.79	9.74	9.80	9.81
G	**Total Fixed Cost**	**181.80**	**161.94**	**193.75**	**198.24**
H	**Net Generation (MU)**	1268.422	1006.792	1824.231	1829.230
I	**Fixed Cost/Unit (Rs/kWh)**	**1.433**	**1.608**	**1.062**	**1.084**

Table 18: Fixed Cost of RPH and GTPS Stations

Sl. No.	Particulars	FY 2012-13	FY 2013-14	FY 2014-15	FY 2015-16 (Estimated)
A	RPH	2.084	4.286	2.231	2.250
B	GTPS	1.433	1.608	1.062	1.084

The petitioner has prayed to true up the cost and parameters from FY 2012-13 to FY 2013-14 based on the actual performance and approve as proposed for FY 2014-15 and FY 2015-16. The submissions for the deviation of various parameters and costs have been detailed out in the petition and are beyond the control of the petitioner.

Capital Expenditure

1.49 Petitioner has submitted that Capital Expenditure was incurred on various activities during the MYT control period FY 2012-13 to FY 2014-15 and extended period 2015-16

1.50 In this regard, Petitioner may like to submit that RPH and GTPS are designated consumers under Perform Achieve & Trade (PAT) Scheme of Bureau of Energy Efficiency (BEE), Ministry of Power, GOI, Notification on 30th March, 2012. The PAT framework has been developed considering the legal requirement under Energy Conservation Act, 2010. The PAT scheme is involved in Order to incentivize industry to achieve better energy efficiency improvement than their specified Specific Energy Consumption (SEC) improvement targets in a cost effective manner. BEE, the nodal agency for implementation of PAT had given target to RPH power station of petitioner to reduce its net specific heat rate (NSHR) from average heat rat of 4011 to 3766 Kcal/kWh during 2012-13 to 2014-15 and Gas Turbine Power Station of petitioner to reduce its net specific heat rate (NSHR) from average heat rat of 2815 to 2649 Kcal/kWh during 2012-13 to 2014-15. This has been computed for average annual net generation of 696 MU in case of RPH and 1308 MU in case of GTPS. Earlier, the petitioner had submitted energy efficiency improvement scheme of the

GTPS station of the petitioner. The schemes undertaken for energy efficiency improvement are capital in nature. Due to implementation of above schemes at GTPS station petitioner was able to achieve target TOE (Tones of Oil Equivalent) during FY 2012-13, however, during FY 13-14 and 14-15 due to backing down and partial operation on instruction of SLDC the heat rate and auxiliary have increased substantially. In case of RPH due to envisaged closure during previous years of MYT period no capex scheme were proposed and only need based O&M was taken up. BEE have also denied to exclude the station from PAT Scheme. In case, station runs in FY 15-16 and 16-17 i.e. first 2 years of next PAT cycle of FY 15-16, 16-17, & 17-18 petitioner needs to implement energy saving schemes to achieve the target set by BEE for the period. Therefore, the Petitioner had to frame some action plan for energy efficiency improvement during next PAT cycle before notification for next PAT cycle.

1.51 The schemes approved for GTPS has been considered to be funded through the debt and equity of 70:30 ratio for calculating the fixed cost. It is to further inform that Commission had approved certain capex Schemes in FY 2012-13, 2013-14, FY 2014-15 or prior period of FY 2007-8 to 2010-11 for GTPS . The most of the schemes has already been implemented, however some of the Schemes as detailed below would spill over to FY 2015-16. There is no Capex Scheme proposed for GTPS for FY 2015-16.

Table 19: Capital Expenditure for GT Station

Sr. No.	Description	2015-16	Remarks
1	Standby 7.50 MVA Auxiliary Transformer	60.00	
2	Renovation/ up-gradation of 66kV Breakers	60.00	
3	Replacement of halon Gas and Renovation of fire fighting System/Equipments	150.00	

4	Renovation of exhaust Plenum insulation of three GTs for efficiency Improvement	375.00	Implementation completed in GT#3&4 and in progress in GT#2
5	Energy conservation Initiatives –BFP speed control/capacity review etc for APC reduction	200.00	Procurement under progress
6	**SWAS System Renovation**	**50.00**	**Under process**
7	**Procurement of Steam Turbine rotor/Guide Blades carrier /inner casing /steam glands for steam Turbine**	**1664.19**	**With Hon,ble Commission for approval**
8	**Replacement of 27 Nos. of Steel Gates at Yamuna Barrage**	**600.00**	**'A'**

'A' - Further, the scheme for replacement of ITO Barrage Gates was approved in MYT period 2007 to 2011 to replace 27 Nos. of gates of Yamuna Barrage as the gates were erected & commissioned more than 40 years back by Haryana Irrigation Deptt. The raw water to RPH & GTPS is drawn through intake channel of this barrage. In order to maintain a particular level of water in the river these gates are required to be operated as per requirement from time to time. These gates have outlived their lives due to toxic / acidic nature of raw water. Therefore, Hon'ble Commission has approved to replace these gates for total capital cost of Rs.6.00 Cr. during FY 2007 to 2011. Out of 27 gates only 14 gates have been replaced during 2007 to 2011-12 and 5 gates have been planned during MYT 2012 to 2014 and remaining 8 Nos. of gates are planned to be replaced in FY 2015-16 & 2016-17. Out of this total cost Rs.468.00 lacs have already been incurred till FY 2014-15 and Rs.200.00 lacs will be required for replacing 8 Nos. of gates in phased manner during 2015 to 2017. The details of expenditure incurred and proposed to be incurred are summarized as under:

Table 20: Capital Expenditure schemes for ITO Barrage

Sr. No.	MYT Period / FY	No of Gates replaces	Actual Expenditure (Rs. Crore)
1	2007 - 12	14	3.48
2	2012 – 15	5	1.19
3	2015 -16	4	1.00
4	2016 – 17	4	1.00
5	**TOTAL**	**27**	**6.67**