



COMMISSION'S ORDER

ON

**TRUE-UP FOR FY 2016-17, MID-YEAR PERFORMANCE REVIEW
FOR FY 2017-18 AND DETERMINATION OF GENERATION
TARIFF FOR THE FY 2018-19**

Case No. HERC/PRO-81 of 2017

31st October, 2018

HARYANA ELECTRICITY REGULATORY COMMISSION

BAYS NO. 33-36, SECTOR-4, PANCHKULA-134112

<https://herc.gov.in>

List of Abbreviations

Abbreviation	Full Description
A&G	Administrative & General
AAD	Advance Against Depreciation
APC/AEC	Auxiliary Power/Energy Consumption
ARR	Aggregate Revenue Requirement
ATE/APTEL	Appellate Tribunal for Electricity
CAGR	Cumulative Average Growth Rate
CERC	Central Electricity Regulatory Commission
Cr.	Crore
DCRTPP	Deen Bandhu Chotu Ram Thermal Power Plant, Yamunanagar
DHBVN	Dakshin Haryana Bijli Vitran Nigam
FGD	Flue Gas Desulphurisation
FPA	Fuel Price Adjustment
FTPS	Faridabad Thermal Power Station
GCV	Gross Calorific Value
GFA	Gross Fixed Assets
GoH	Government of Haryana
GoI	Government of India
HERC	Haryana Electricity Regulatory Commission
HPGCL	Haryana Power Generation Corporation Limited
IEGC	Indian Electricity Grid Code
Ind AS	Indian Accounting Standard
IoB	Indian Overseas Bank
MoC	Ministry of Coal, Government of India
MoEFCC	Ministry of Environment, Forest and Climate Change
MoP	Ministry of Power, Government of India
MU	Million Units
MYT	Multi Year Tariff
O&M	Operation & Maintenance
PFC	Power Finance Corporation
PLF	Plant Load Factor
PNB	Punjab National Bank
PPA	Power Purchase Agreement
PTPS	Panipat Thermal Power Station
REC	Rural Electrical Corporation
RGTPP	Rajiv Gandhi Thermal Power Plant, Hissar
R&M	Repair & Maintenance
SBI	State Bank of India
SCE	Shift Charge Engineer
SCR	Systematic Catalytic Reduction
SFOC	Secondary Fuel Oil Consumption
SHR	Station Heat Rate
SLDC	State Load Dispatch Centre
SNCR	Systematic Non Catalytic Reduction
STP	Sewage Treatment Plant
TO	Tariff Order
UHBVN	Uttar Haryana Bijli Vitran Nigam Limited
WYC	Western Yamuna Canal

BEFORE THE HARYANA ELECTRICITY REGULATORY COMMISSION

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

CASE NO: HERC / PRO - 81 of 2017

DATE OF HEARING : 10.09.2018

DATE OF ORDER : 31.10.2018

QUORUM

Shri Jagjeet Singh,

Chairman

INTHE MATTER OF

Petition filed by Haryana Power Generation Corporation Ltd. (HPGCL) for approval of True-up for the FY 2016-17, Mid-Year Performance Review for the FY 2017-18 and Determination of Generation Tariff for the FY 2018-19.

AND

IN THE MATTER OF

HPGCL, Panchkula

..... Petitioner

Present

1. Smt. Sukriti Likhi, IAS, MD, HPGCL.
2. Shri B.B. Gupta, Controller Finance, HPGCL
3. Shri Vipin Bihari Bansal, Director , HPGCL
4. Shri H.S. Saini, SE, HPGCL

ORDER

1 The Haryana Electricity Regulatory Commission (hereinafter referred to as HERC or the Commission), had notified the Multi Year Tariff Regulations i.e. 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 (hereinafter referred to as MYT Regulations, 2012) vide Notification dated 5.12.2012. The validity of the said Regulations was extended to cover the period up to the FY 2017-18. This issue was raised in the hearing held in the present case by the petitioner including the need to further extend the control period by a year or so as they have also filed the instant petition accordingly. Since the

MYT Regulations for the next control period is still not finalized, the Commission has considered it appropriate to deal with the present petition under the aegis of the MYT Regulations, 2012 including the first amendment brought into affect vide HERC Order dated 07.11.2016 read with second amendment order dated 15.10.2018. Appropriate adjustments, to meet with the ends of justice for all stakeholders including the petitioner, have been made wherever required

2 As per the mandate of Regulation 71.9 read with Regulation 75 of the MYT Regulations, 2012, the Generation Company i.e. HPGCL shall file revenue requirement details for determination of generation tariff for the ensuing year by 30th November of the preceding year i.e. by 30th November, 2017. Accordingly, the Petitioner HPGCL, vide its Memo No. HPGC/FIN/Reg-481/1440 dated 28.11.2017, submitted the present petition for approval of true-up for the FY 2016-17, mid- year performance review for the FY 2017-18, and determination of Generation Tariff for the FY 2018-19 under Section 61 and 62 of Electricity Act 2003.

3 The petition filed by HPGCL was made available on the website(s) of the Commission as well as that of the petitioner company for inviting objections / comments from the stakeholders. A Public Notice was also issued by HPGCL in the newspapers for inviting objections/suggestions from the stakeholders / General Public or any interested person as per the procedure laid down in the MYT Regulations, 2012 read with the Haryana Electricity Regulatory Commission (Conduct of Business) Regulations, 2004 as amended from time to time. The said public notice was inserted by HPGCL in the following Newspapers. The last date for filing objections was 28th December, 2017.

Name	Language	Date
Financial Express	English	02.12.2017
Dainik Tribune	Hindi	01.12.2017

4 Salient features of the Petition filed by HPGCL

4.1 HPGCL's Basis of Tariff Proposal

4.1.1 It has been submitted that the present petition is primarily based on the dispensations provided in the HERC MYT Regulations, 2012 including its subsequent

amendments and the relaxations approved by this Commission in its Order (s) dated 27.03.2015, 31.03.2016, 26.04.2017 for the FY 2015-16, FY 2016-17 & FY 2017-18 given the fact that similar grounds and circumstances persists. Additionally, it has been submitted that given the delay in framing MYT Regulations for the next control period, generation tariff for FY 2018-19 has been proposed with a few deviations in the HERC MYT Regulation, 2012. HPGCL has prayed that the Commission may consider and allow the relief as consequences of the following various appeals preferred by them in Hon'ble Punjab & Haryana High Court for certain relief in the technical and financial parameters as provided in MYT Regulations, 2012, appeal in the Hon'ble Supreme Court against Hon'ble APTEL's Order dated 18.09.2015 on certain issues relating to FY 2013-14 and ARR for control period 2014-17, appeal filed in the Hon'ble Supreme Court against Hon'ble APTEL's order dated 1.03.2012 on issues relating to FY 2010-11 and appeal filed in the Hon'ble APTEL against the HERC order dated 31.03.2016 on certain issues relating to recovery of fixed cost in FY 2014-15 and for remaining period of first control period.

HPGCL has submitted that pending decisions in above appeals, they have restricted itself, while proposing the technical and commercial parameters as per the MYT Regulations and relaxation considered by the Commission in its earlier Orders subject to any relief in the ibid cases. It has been submitted that HPGCL is seeking a few relaxations in the norms in view of the National Tariff Policy, 2016 with regard to certain performance parameters of the generating units, considering the past performance and achievability, in line with CERC IEGC Regulation as amended vide notification dated 06.04.2016.

4.1.2 HPGCL further submitted that they have adopted the Ind AS accounting standards beginning the FY 2015-16. The Annual Financial Statement of HPGCL for the FY 2016-17 as per Ind AS has been approved by the Board of Directors of HPGCL and are duly audited as per section 145 of the Companies Act, 2013. Opening balance sheet as on 01.04.2015 has considered transition date of Ind AS for the year ended 31.03.2017. Annual Accounts for FY 2015-16 have been re-casted as per Ind AS. The net difference in the recognition of Assets and Liabilities, in accordance with Ind AS on 01.04.2015 has been adjusted in opening reserves as on 01.04.2015 and further its impact on the profitability for FY 2015-16 has been adjusted in the FY 2016-17, with the following

implications:-

i) As per the report of the independent Actuary the terminal liability of the company for FY2016-17 is Rs. 478.07 cr. Accordingly, HPGCL has recognised provision amounting to Rs.321.13 Cr. on account of employee benefits in its Statement of Profit & Loss and Rs.156.94 Cr. on account of Acturial Gains & Losses in “Statement of Other Comprehensive Income” as per Ind AS.

ii) Major spares parts, i.e. of value exceeding Rs.5.00 lacs, which meet the definition of property, plant and equipment are capitalized. Parts of an item of property, plant and equipment that have different useful lives are recognized separately. Accordingly spares amounting to Rs. 144.97 cr. has been capitalised in the re-casted annual financial statement for FY 2015-16. Other spare parts are classified as inventory and recognized in the statement of profit and loss on consumption.

iii) Deemed Cost for Property, Plant & Equipment: Property, Plant and Equipment up to March 31, 2015 were carried in the balance sheet in accordance with Indian GAAP. Cost includes purchase price, initial estimate of the costs of dismantling and removing the item and restoring the site on which it is located (referred to as decommissioning cost) and expenditure that is directly attributable to bringing the asset to the location and condition necessary for it to be capable of operating in the manner intended by management. An amount of Rs. 44.51 cr. has been estimated for dismantling and removing the plant assets and restoring the site on which it is located.

4.2 Additional data/details provided by HPGCL

After initial scrutiny of the petition, a few additional data / information was sought by the Commission from the Petitioner. The same was provided by HPGCL vide Memo no. 1511/HPGCL/FIN/REG-481 dated 06.04.2018 and Memo No. 1609 / HPGCL / FIN / REG-481 dated 12.10.2018. The same, in brief, is presented below:-

1. The achievements of JV Company incorporated in the name of Solar Urja Nigam (SUN) formed with HSIIDC for development of Solar Parks in the State.

HPGCL's Reply

MNRE (Ministry of New and Renewable Energy), GoI vide letter no. 30/42/2015-16/NSM dated 15.01.2016 has allocated 500 MW capacity Solar Parks to Haryana. For setting up of Solar Park of 500 MW capacity, approximate 2500 acres of barren/

unutilized land is required. Initially 1360 Acres (approximately) of vacant Panchayat land of three villages namely Bugana (Hisar), Barahlu (Bhiwani) and Singhani (Bhiwani) was identified out of which only 825 acres was found useful for Solar Parks of 150-160 MW capacity. However, development activities relating to solar parks could not be initiated on this Panchayat land since land lease policy of GoH does not allow sub-leasing of the Panchayat land to the project developers. However, matter has repeatedly been taken up with Panchayat Department, GoH for amendment in the said policy.

2. The status of development of Kalyanpur-Badalpara coal block or allocation of an alternative coal block by Ministry of Coal.

HPGCL's Reply

- Kalyanpur - Badalpara Coal Block in Dumka Distt (Jharkhand) was allotted to HPGCL on 24.02.2016 for meeting the coal requirement of proposed 1X800 MW Deen Bandhu Chhotu Ram Thermal Power Plant, Yamunanagar. The coal block has estimated reserves of 102 Million Metric Tonne.
- Coal Block Development and Production Agreement (CBDPA) were signed between HPGCL and Ministry of Coal, Govt. of India on 30.03.2016.
- A Performance Security in the form of BG amounting to about Rs. 15.01 Crore was submitted with Ministry of Coal, GoI on 28.04.2016 by HPGCL.
- Consultant has been engaged for development of coal block.
- HPGCL applied for grant of Prospecting Licence to the Govt. of Jharkhand in 24th October, 2016 and now case file is with MoC, GoI since 1st May, 2017.
- Govt. Exploration agencies i.e. Central Mine Planning & Design Institute (CMPDI), Ranchi; Mineral Exploration Corporation Limited (MECL), Nagpur and Singareni Collieries Company Limited (SCCL), Hyderabad were requested to carry out Detailed Exploration for development of Kalyanpur-Badalpara Coal Block. These firms have conveyed their refusal for carrying out detailed exploration of the coal block due to local disturbances, pre-occupation and naxal activity in the area.
- An NIT was issued on 03.10.2016 for Detailed Exploration and Preparation of Geological Report (GR) for the Development of Kalyanpur-

Badalpara Coal Block. However, the NIT couldn't be finalized due to withdrawal of the bid by the L-1 bidder during validity period of the bid.

- Again, a fresh NIT was issued on 12.04.2017 for the same work, however, no firm participated in this NIT due to heavy Naxalite activities in the area, and other local disturbances.
- Vide DO letter dated 05.07.2017, Hon'ble Minister of State (IC), Power, Coal and New & Renewable Energy, Mines, Govt. of India, was requested to exchange the Kalyanpur-Badalpara Coal Block with a Detailed Explored Coal Block or to allocate a coal block where exploration is possible and allow to use extracted coal from that Coal Block for other existing Units of HPGCL.
- Hon'ble Union Minister of Railways & Coal, Govt. of India, vide D.O. letter dated 17.11.2017 has conveyed that Kalyanpur Badalpara Coal Block was allocated to HPGCL under MMDR Act, 1957 and Rule 4 of the Auction by Competitive Bidding of Coal Mines Rule, 2012 and there is no provision for exchange of coal blocks under these Acts.
- Meanwhile it has been learnt that UP Rajya Vidyut Utpadan Nigam Limited (UPRVUNL), Lucknow, who has been allotted Saharpur Jamarpani Coal Block, also in Dumka District, has awarded the work of assisting them for development of their coal block to M/s PFC Consultancy Limited (a wholly owned subsidiary of M/s PFC).
- In order to proceed further, M/s PFCCL (a reputed Govt. of India Public Sector Undertaking) was invited to give a presentation to HPGCL regarding development of Kalyanpur Badalpara Coal Block. The presentation was given by M/s PFCCL on 19.01.2018. They have submitted their budgetary proposal for Detailed Exploration & Preparation of Geological Report (GR) vide email dated 13.02.2018. The budgetary proposal is being scrutinized.
- Recently, HPGCL had a meeting with CMPDI, Ranchi on 28.02.2018, wherein HPGCL requested CMPDI to take up the exploration of Kalyanpur Badalpara Coal Block. CMPDI informed that they could not execute several contracts for outsourcing of detailed coal exploration in the Rajmahal Coalfield due to adverse Law & Order situation and the contracts had to be foreclosed. They suggested that HPGCL may take up the issue with the Jharkhand Govt. to

make the area conducive for future exploration and CMPDI may participate in the said meeting.

HPGCL had also held meeting with MECON Ltd, Ranchi (Govt of India Enterprise) on 28.02.2018 and they have been requested to submit the budgetary offer for Detailed Exploration & Preparation of GR for Kalyanpur Badalpara Coal Block. Their response is awaited.

3. Flexibility of use of coal being supplied by various coal companies and also reviewing the transportation routes at HPGCL thermal power station for cheaper cost of coal per kWh plant wise.

HPGCL's Reply

Plant wise detail of coal linkages

Name of Plant	Name of Coal Co.	Annual Contracted (ACQ) (Lac MT)	Quantity
PTPS, Panipat	Central Coalfields Ltd. (CCL)	26.65	44.65
	Bharat Coking Coal Ltd. (BCCL)	15.00	
	Western Coalfields Ltd. (WCL)	3.00	
DCRTPP, Ynr	Central Coalfields Ltd. (CCL)	28.00	28.00
RGTPP, Hisar (2x600MW)	Mahanadi Coalfields Ltd. (MCL)	15.00	47.02
	Eastern Coalfields Ltd. (ECL)	4.00	
	Northern coalfields Ltd. (NCL)	15.00	
	Central Coalfields Ltd. (CCL)	13.02	
HPGCL as whole			119.67

HPGCL has signed supplementary agreement on 12.04.2017 with subsidiary companies of Coal India Limited i.e. ECL, BCCL, CCL, MCL, NCL and WCL for implementation of policy regarding flexibility in utilization of domestic coal. As per clause no. 3(a) of said agreement, intra plant transfer of coal within the State, transfer of coal between one State to another State as well as between any State and Central Generating Company is allowed, so that maximum generation is achieved from most efficient cheaper power plants. Accordingly HPGCL is regularly transferring coal from one plant to another in order to produce cheaper power.

Further, in order to get cheaper coal and to bring down the fuel / variable cost of generation, HPGCL is trying to get maximum coal from collieries which are located closer to Haryana so that freight cost and subsequently, the variable cost of generation is reduced. The collieries of Northern Coalfields Ltd. (NCL) are at least distance (approx. 1200KM) from Haryana Power Plants whereas the collieries of MCL and ECL are located at approx. 1500KM distance. This issue regarding transfer of some of HPGCL

existing linkages to NCL stands submitted to Union Minister of Railways and Coal which is as under:-

Name of Power Plant	Existing ACQ in Lac MT	Proposed ACQ in Lac MT	Remarks
RGTPP, Hisar	MCL: 15.00	MCL: 10.00	Suitable heat equivalent quantities be considered for source rationalization
	ECL: 4.00	ECL: 0.00	
	NCL: 15.00	NCL: 24.00	
PTPS, Panipat	WCL: 3.00	WCL: 0.00	
	NCL: 0.00	NCL: 3.00	
Total proposed AACQ from NCL		27.00 Lac MT	

4. Has HPGCL paid any compensation on account short lifting of coal to Coal Companies during FY 2016-17 & FY 2017-18.

HPGCL's Reply

HPGCL has paid the compensation to the coal companies as per the universal Fuel Supply Agreement signed amongst the generators and coal companies as under:

Compensation paid during FY 2016-17 & FY 2017-18			(Amt in Cr)
	PTPS	DCRTPP	RGTPP
2016-17	9.96	Nil	Nil
2017-18	Nil	Nil	31.78

5. Third party sampling and analysis agency were appointed on September, 2017 for sampling and analysis of coal. The progress of claim submitted and credit notes be supplied.

HPGCL's Reply

HPGCL has signed tripartite MoU/agreement for Third Party Sampling work by Central Institute of Mining and Fuel Research (CIMFR) at Loading Ends. Further, Central Institute of Mining and Fuel Research, Dhanbad has started the work of Third Party Sampling and Analysis for coal supplies to HPGCL Thermal Power Stations from November, 2016 onwards. After persuasion at higher level HPGCL has been able to receive the credit notes of Rs. 12.71 Cr. and Rs 59.70 Cr. during FY 2016-17 and FY 2017-18 (till February, 2018) respectively against claim lodged on account of poor quality of coal supplied.

6. The progress of ERP implementation with details of its commencement, targeted schedule for completion and likely date of its operationlization be provided.

HPGCL's Reply

The work of ERP implementation in HPGCL was started by M/s L&T Infotech Ltd. w.e.f. 18th January, 2016. Further, the Implementation of ERP was put on hold w.e.f. 01.07.2016 as per directions of State Government. Presently, the matter regarding

ERP implementation is under consideration & is likely to be finalized shortly. Therefore, the revised timelines will be intimated after finalization of the matter.

7. Month wise unit wise, number of trappings due to operation faults and the time loss and number of manual trippings due to low demand / backing down for FY 2016-17 and FY 2017-18 be provided.

HPGCL's Reply

The requisite information has been enclosed.

8. An expenditure of Rs. 136.38 crore was approved by the Commission for capital works to be carried out during FY 2017-18. However, as per revised schedule of the capital works proposed for 2nd control period, an expenditure of Rs. 69.83 crore has been proposed for the FY 2017-18. The physical and financial progress of the works as per the capital expenditure approve by the Commission for FY 2017-18 and the reason for slippages be provided.

HPGCL's Reply

The reason for the slippage in execution of the proposed capital works has already been submitted by HPGCL in the Capital Investment Plan for the Second Control Period submitted to the Hon'ble Commission for approval (PRO 60 of 2017). The actual physical and financial progress of the capital works approved by the Commission for FY 2017-18 as on date is enclosed as Annexure-B. From the perusal of the aforesaid information it has been revealed that there is further slippage in the execution of the capital works submitted by the HPGCL in its CIP. Accordingly a revised CIP along with scheme wise reason for deviation has also been prepared and are submitted herewith as supplementary information at Annexure -B for kind consideration of the Hon'ble Commission. It is also pertinent to mention here that the slippage is mainly due to delay in overhauling schedule of the plant and also due to exploring better and competitive option for ensuring the techno commercial prudence. It is also not out of place to mention here that, due to delay in the execution of capital work there will be no impact on the tariff determination as the depreciation for the respective work is being claimed only in the year of its completion.

9. An expenditure of Rs. 4.37 crore, Rs. 11 crore and Rs. 14 crore was planned and got approved for WYC works in FY 2015-16, FY 2016-17 & FY 2017-18 respectively. However, no progress has been given for the expenditure on this work during these years

and an expenditure of Rs. 36 crore has been proposed for FY 2018-19. The reasons for not incurring the expenditure as per schedule be explained.

HPGCL's Reply

The requisite information has been provided.

10. An expenditure of Rs. 12.50 crore and Rs. 22.50 crore was approved for FY 2016-17 and FY 2017-18 respectively for revival of 20 nos. ESP fields and repairing of balance 36 nos. ESP fields of Unit 1 & 2 DCRTTP Yamuna Nagar. However, now as per the revised proposed expenditure, an amount of Rs. 45 crore has been envisaged. A detail note as to how this major expenditure is being intended to be incurred in a single year (FY 2018-19). The requirement and mode of revival / repairing of the ESPs fields be submitted. These ESPs fields had failed in the beginning itself whether the manufacturer/supplier was required to repair/replace within warrantee. If it was a designed problem, what action has been taken to recover the loss.

HPGCL's Reply

HPGCL has proposed an expenditure of Rs. 45 Crore for revival of 20 nos. ESP fields and repairing of balance 36 nos. ESP fields of Unit 1 & 2 DCRTTP Yamuna Nagar on the basis of the budgetary offer submitted by M/s Shanghai Electric Co. China (OEM). The expenditure was anticipated to be incurred as Rs. 12.50 cr. in F.Y. 2016-17, Rs. 22.50 cr. in FY 2017-18 and Rs. 10 cr. in FY 2018-19.

The work revival and repairing of ESP field can be carried out in the shut down unit only as such was planned to get it done during the overhauling. However due to the changing demand scenario the overhauling cannot be taken into hand in the scheduled period. As HPGCL is committed to generate power at the optimum cost so in the meanwhile HPGCL has also explored the alternative source other than OEM for observing techno commercial prudence. Accordingly e-tender was issued for the revival of 20 no. ESP fields and repairing of balance 36 nos. ESP fields of Unit-I & II, DCRTTP, Yamuna Nagar. A Work order no. 12/BM-05/2017-18/Vol.-I dated 25.10.2017 was also issued to M/s GE Power India Ltd. Noida selected on the basis of competitive bidding at a total cost of Rs.33 crore approximately.

Further the overhauling of Unit-1 was started on 01.02.2018 for a period of two months and the overhauling of Unit-2 will be started after the completion of overhauling of Unit-1. Accordingly an expenditure of Rs 23 crore will be incurred in the year 2017-18 and balance will be incurred in the year 2018-19 and the total amount of expenditure for

revival of 20 nos. ESP fields and repairing of balance 36 nos. ESP fields of Unit 1 & 2 DCRTTP Yamuna Nagar including the expenditure on the aforesaid work order will be capitalized during FY 2018-19 only. As such expenditure will be incurred in the phase manner but will be capitalized only in the year of completion thereof.

The ESP fields were damaged after the expiry of guarantee/warranty period of M/s Shanghai Electric Co. China (OEM). There was no design problem in ESP fields and first three row fields were failed over a passage of time. M/s R infra modified/improved ash evacuation system at their cost and now the system is healthy and all ESP hoppers are clearing on daily basis.

11. New capital investment schemes of revival of 2 no. ESP of U-1 RGTPP and Energy Management System at RGTPP amounting to Rs 8 Crore and 0.55 Crore have been proposed for FY 2017-18. Details of the actual expenditure incurred till date in this regard be submitted.

HPGCL's Reply

The new Capital Investment schemes namely revival of 2 no. ESP of U-1 RGTPP and Energy Management System at RGTPP amounting to Rs 8.0 Crore and 0.55 Crore was submitted to Hon'ble Commission for FY 2017-18 keeping in view the Scheduled Capital Overhauling of the Unit. As the Capital Overhauling of the Unit has been postponed as such no expenditure has been incurred till date and the Capital Overhauling has been rescheduled in FY 2018-19, so the Capital Expenditure will be incurred accordingly. Accordingly CIP has also been revised and enclosed herewith as annexure-B for consideration of the Commission.

12. HPGCL has indicated that previously there was wrong calculation of station heat rate for RGTPP due to issues in coal measurement technique and equipment. Now HPGCL has started using correct technique and actual level of station heat rate is being reflected. Details in respect of the previous wrong calculation and correct technique adopted now for calculation of heat rate be provided.

HPGCL's Reply

HPGCL would like to submit that SHR for FY 2015-16 was lower than normative as there was an error in coal stock accounting as *the coal consumption of RC Feeders (Gravimetric Type) only was taken while computing the SHR* irrespective of actual coal consumption on the belief that both are same. However while taking the physical stock

on record at the end of the financial year by engaging *an outside agency (M/s S.K. Mitra) for its verification*, it has been observed that the actual coal consumption is more than what has been computed by RC Feeder method for calculation of SHR and hence it was calculated below normative level. To avoid such error HPGCL has started physical verification of its Coal Stock on monthly basis by engaging independent third agency and now coal consumption and SHR is being computed on the basis of physical verification of coal stock report submitted by the independent agency on monthly basis.

13. HPGCL has constituted different knowledge teams for boiler, turbine, C& I and fuel. A gist of the improvements as suggested by these teams alongwith the compliance report be supplied.

HPGCL's Reply

- HPGCL has constituted area wise expert Knowledge Teams, i.e., Boiler Knowledge Team (BKT), Turbine Knowledge Team (TKT), C&I Knowledge Team (CIKT), Fuel Knowledge Team (FKT) and Ash Knowledge Team (AKT) comprising of experienced officers from PTPS Panipat, DCRTTP Yamunanagar, RGTPP Khedar and Head office from respective area of expertise. Knowledge Teams in consultation with NTPC/BHEL experts, analyze the critical issues and give their recommendations. These Knowledge Teams visit HPGCL Power Stations to analyze critical issues faced during operation of Units, examine issues before and during Overhauling of the Units. Knowledge Team helps in preparation of scope of work to be undertaken during overhauling to gain maximum benefits. During overhauling, these teams inspect the quality of works, suggest suitable measures to take corrective action, ensure implementation of best practices to improve the quality of Overhauling of Units. Problem observed during the inspection of the Units by the knowledge team are got attended in a time bond manner.
- During trippings due to equipment failure, area wise knowledge teams analyze the fault and gives recommendations to avoid reoccurrence of similar faults in future.
- Major modifications/upgradation of the obsolete systems viz. DCS System of Unit-7 & 8 PTPS Panipat, has been carried out in consultation with C&I Knowledge Team to ensure reliable and efficient operation of the Unit after

modification. Similar exercise is being done in DCRTTP Units for upgradation of DCS System.

- Further, Efficiency improvement measure programs such as installation of VFD for reducing Auxiliary Consumption are being implemented in consultation with these Knowledge Teams to achieve the desired results.

With the implementation of recommendation of Knowledge Teams, the quality of inspection, overhauling works and the performance of HPGCL Thermal Generating Units has improved.

14. HPGCL has indicated that they have achieved the targets fixed in the PAT 1st cycle but the norms/targets of PAT 2nd cycle have been set more stringent. Details of the target fixed in PAT 1st cycle and PAT 2nd cycle alongwith the target achieved in PAT1st cycle be provided.

HPGCL's Reply

Targets of PAT-I Cycle

Station	Target for Net Heat Rate (Kcal/Kwh) to be achieved during FY 2014-15	Actual Achieved Net Heat Rate (Kcal/Kwh)	ESCerts Earned (TOE)
PTPS Panipat	2892	2834.23	51727
DCRTTP, Y.nagar	2836	2730.81	40950

Keeping in view of targets, achieved under PAT-I cycle, following targets has been allocated under PAT-II cycle required to be achieved during FY 2018-19:

Station	Target for Net Heat Rate (Kcal/Kwh)
PTPS Panipat	2837.12
DCRTTP Yamunanagar	2537.33
RGTPP Khedar	2514.39

15. Regarding indigenous vender development, HPGCL, indicated that a detailed vender development policy has already been framed for Vender Registration. A status report in this regard be submitted.

HPGCL's Reply

The requisite information is enclosed.

16. The Commission observed that no concrete action has been taken by HPGCL for selling its un-requisitioned power. HPGCL was directed to explore other possibility including medium/long term agreement with the industrial state promoted by HSIDC &

SEZS or with deemed licensee i.e. MES/railway etc. A status report in this regard be submitted.

HPGCL's Reply

The action taken by HPGCL in this regard has been reported as under:-

1. HPGCL made sincere efforts to sell its surplus power in the open market through open access mode. During FY 2015-16, HPGCL participated in some tenders through NTPC Vidyut Vyapar Nigam (NVVN) for sale of its surplus power on short term basis. The rates discovered in the tenders were very low i.e. around Rs 3.0 to Rs 3.50 per kwh upto the delivery point against the rate quoted by HPGCL i.e. Rs 5 to Rs. 5.50 per kwh, as such it could not sell its power in the open market.

2. Apart from above, efforts were made by HPGCL to sell the power directly to an individual industrial unit or group of industries in Haryana on medium/long term basis from a dedicated 210 MW Unit of PTPS Panipat. The possibility for selling the power to two big industrial Units of Haryana Viz Jindal Stainless Haryana Limited (JSHL), Hisar and Indian Oil Corporation Limited (IOCL), Panipat was explored but could not materialized.

3. Discussions were also held with IOCL and JSHL for sale of surplus power of Unit-5 PTPS Panipat. However it could also not be materialized as the landed cost, from where the power is proposed to be sold, would be very high, due to levy of charges such as Cross Subsidy Surcharge, Additional Surcharge, STU transmission charges/losses etc. HPGCL was not in a position to waive off the aforesaid charges, as it falls within the purview of DISCOMS/HVPSNL.

4. The sale of un-requisitioned Power to IOCL, other SEZs is not feasible due to leviability of transmission charges, cross subsidy charges, additional surcharge etc. which has to be paid by the Open Access Consumers.

Keeping in view the aforesaid bottlenecks now it has been decided in the Steering committee of Power Purchase that, HPGCL will not sell the un-requisitioned power directly and Discoms (HPPC) shall sell the surplus power in the open market to take the advantage of bundled power.

17. While justifying the proposed PLF of PTPS (Unit 5 & 6) of 82.50% as against the earlier benchmark of 35%, HPGCL has submitted that the HERC Regulation itself provides for 82.5% and these plants are capable or running at the specified PLF which is also established by the actual data i.e. during 18th April to 2nd May, 2018, PTPS Unit – 5 achieved actual PLF of about 86% and 87.79% during 9th May to 28th May, 2018. These were achieved without forced outages / backing down when M/s Adani Power Ltd. (Mundra / Gujarat) stopped supplying power to the Haryana Discoms. These Units are reliable and can be quickly brought back to bar to meet any contingency or to meet peaking power requirements of the Haryana Discoms even after remaining shutdown for 2 to 3 months. Higher PLF reduces the per unit cost and spreads out the impact throughout the year instead of the initial months.

On the issue of spares capitalised in the FY 2014-15 (Rs. 154.60 Crore) and the FY 2015-16 (rs. 144.97 Crore) and justification for diminishing value of depreciation proposed for FY 2016-17 and 2017-18, HPGCL has replied that the spares capitalised in the FY 2015-16 is higher as the implication of IND AS started from 1.04.2015 and the spares so capitalised upto the FY 2015-16 have different life and values. Accordingly the depreciation in the future years i.e. FY 2016-17 and the FY 2017-18 is on diminishing trend.

Regarding coal cost and GCV, HPGCL provided the requisite data. On the issue of increase in coal cost it has been submitted that there is inflationary trend in the cost of coal. Further, the higher rates of coal are due to consumption of washed coal high grade coal (G5, G7 grade) during the initial months of the FY 2017-18. The proposed coal cost is as per HERC Regulations. HPGCL has added that in case the coal price in the FY 2018-19 actually comes down the benefit of the same shall be passed on to the Discoms through Fuel Price Adjustment mechanism.

HPGCL in its reply has certified that actual funding is as per actuarial liability of the FY 2016-17.

On the issue of utilization of dry ash fund, HPGCL has submitted that they have dropped Capex regarding raising in height of Ash Dyke at DCRTTP & RGTPP as per the direction of the Commission regarding Capex work relating to handling / utilization OF

Fly Ash should be met out of Fly Ash Fund maintained by HPGCL. Further, the following upcoming expenditures have been proposed.

- i) PTPS : Commissioning of Ammonia Flue Gas Conditioning system amounting to about Rs. 3.90 Crore for controlling the SPM level in flue gas of PTPS Unit 6, 7 & 8 to meet with the statutory guidelines of MoEF.
- ii) DCRTPS: Providing of dust suppression system at Ash Dyke, providing forestation and green belt around ash dyke, transportation of pond ash to NHAI projects and other users as per MoEF guidelines.
- iii) RGTPS: Construction of floor in Ash Silo area, providing of lighting arrangement at Ash Dyke & Silo.

Further, HPGCL has submitted that the difference observed by the Commission between the revenue bills and balance sheet is only due to adjustments / provisions made and not due to missing of revenue bill.

18. HPGCL, while filing the ARR for FY 2017-18, had submitted that DCRTPP, Yamunanagar complies with the new Environment Norms on Sox & NOx and as such no action is envisaged to control SOx & NOx. On contrary, while submitting the reply to the directive issued by the Commission HPGCL has submitted that the DCRTPP Unit 1 & 2 do not comply with New Norms for NOx and Sox. Accordingly, HPGCL vide HERC letter No. 1793/HERC/Tech. dated 21.08.2017 was requested to clarify the issues giving basis for the earlier assessment of SOx & NOx levels and of recent assessment along with its reports on the assessment/measurement of Sox & Nox levels in respect of DCRTPP. HPGCL is again requested to expedite the submission of requisite information.

HPGCL's Reply

The reply for the same has been submitted vide this office memo no. 1397/HPGCL/FIN/REG-472 Vol-II Dated: 01/9/2017, however the copy of the same is again enclosed.

19. Sanction letters in respect of working capital loan granted by SBI to HPGCL, as applicable on 01.04.2016 and 01.04.2017.

HPGCL's Reply

The requisite information is enclosed.

20. Unit-wise profitability including breakup of O&M expenses (Employee cost, R&M & A&G) of HPGCL plants, for the FY 2016-17.

HPGCL's Reply

HPGCL is maintaining its financial statement in accordance with the IND AS and as per the provisions of the Indian Companies Act, 2013. Profit & Loss account of HPGCL as a whole is a part of the audited financial statement already submitted to the Hon'ble Commission. Unit wise profitability statement is not being prepared and as such the same is not a part of the audited financial statement. However as desired unit wise profitability has been prepared in consistent with the Audited Accounts of HPGCL for F.Y. 2016-17 by apportioning the expenditure amongst the HPGCL units and the same is enclosed.

21. Revised Standalone Financial Statements of HPGCL as on 31.03.2016, prepared in accordance with Ind AS.

HPGCL's Reply

Already stand submitted along with the main petition. May please refer Annexure-A of main petition at page No. 56 & 57.

22. Financial Statements of HPGCL for the FY 2016-17 includes financials for Solar business also, for which separate tariff has been determined. In this regard, HPGCL may file the financials for Solar Generation and other Business, separately.

HPGCL's Reply

It may please be noted that the financials of Solar unit were not presented separately since it is not a separate segment and the provisions of Segmental Reporting are not applicable to it. Hence Financial Statements of HPGCL are being prepared in accordance to the provisions of the Companies Act, 2013. However it is further intimated that Solar generating unit is an independent accounting unit as such the impact of the financials of SOLAR generation has not been taken into consideration in the financials of the HPGCL for submitting its petition for other than SOLAR generation business. As per audited accounts of HPGCL for FY 2016-17, its Financial statement include following expenses of Solar business:

Interest & Depreciation Rs.0.94 Crores & Rs.1.08 crores.

23. Forms prescribed for filing along with ARR Petition (Form 1 to 10 and Appendix I), have not been filed. Please file the same and ensure that filing is complete in all respect.

HPGCL's Reply

The requisite information has been provided.

24. Cost Audit Report for the FY 2016-17.

HPGCL's Reply

The requisite information has been provided.

25. Unit-wise details of spares amounting to Rs. 144.97 Crore capitalized.

HPGCL's Reply

The capitalization of the spares has been made in compliance of the Ind AS. The unit wise details of spares amounting to Rs. 144.97 Crore capitalized are as under:

PTPS-6	PTPS-7&8	DCRTPP	RGTPP	TOTAL / Cr.
21.39	85.55	7.74	30.29	144.97

26. Explain and provide plant-wise details of Rs. 44.51 crore, capitalized for dismantling and removing the plant assets.

HPGCL's Reply

It may be noted that as per provisions of Ind AS the cost of an item of property, plant and equipment includes the initial estimate of the costs of dismantling and removing the item and restoring the site on which it is located. Thus the changes in the measurement of any existing decommissioning, restoration or similar liability that is both will be recognized as part of the cost of an item of property, plant and equipment

Thus, in compliance with Ind AS, the dismantling cost for each of plant has been ascertained and the Plant wise details of capitalization for dismantling the plant are as under (Rs. in crores):-

PTPS Panipat	10.47
DCRTPP Yamunanagar	12.02
WYC, Yamunanagar	0.12
RGTPP, Hisar	21.83
FTPS, Faridabad	0.07
Total	44.51

27. Depreciation chart and Plant-wise summary for the FY 2015-16, 2016-17 & 2017-18, without including the spares capitalized in the FY 2014-15 (Rs. 154.60 crore) and in the FY 2015-16 (Rs. 144.97 crore).

HPGCL's Reply

The requisite information has been provided.

28. A brief note on the Energy Audit conducted by M/s. PCRA, M/s. STAG and M/s. Siri Energy & Carbon Advisory Services Pvt. Ltd.

HPGCL's Reply

The requisite information is enclosed.

29. HPGCL was having Rs. 239.31 Crore in Dry Fly Ash Fund at the beginning of the year and Rs. 60.81 Crore has been added during the FY 2016-17 on account of proceeds from sale of ash/ash products and is not treated as non-tariff income. However, only an amount of Rs. 3.73 Crore has been utilized out of this. In this regard, HPGCL may submit its plan for utilization of this fund.

HPGCL's Reply

As per the directions of Ministry of Environment, Forest and Climate Change (MoEFCC), Dry Fly Ash fund has to be utilized on Environmental Works only. HPGCL will utilize the fund in future accordingly. HPGCL is also utilizing the funds in raising of Ash Dykes etc. as per the direction of Hon'ble Commission.

30. Nature and details of profit amounting to Rs. 60.13 Crore from discontinued operations, during the FY 2016-17.

HPGCL's Reply

Faridabad Thermal Power Station (FTPS) was discontinued in FY2010-11. Since then, the expenses being incurred on account at FTPS were being presented as Profit/Loss from discontinued operation in compliance with Accounting Standard 24- Discontinued Operations. AS 24 vide its para no. 32 which states that

“the following should be shown on the face of the statement of profit & loss:

The amount of pretax profit or loss from ordinary activities attributable to discontinuing operations during the current financial reporting period and the income tax expense related thereto”

Indian Accounting Standards also make it obligatory for an entity to disclose profit or loss from discontinuing operations separately. Ind AS 01 vide its para 82 specifies that:

“In addition to items required by other Ind AS, the profit or loss section of statement of profit & loss shall include line items that presents the following amounts for the period

(ea) A single amount for the total of discontinued operations”

During the FY 2016-17, company has entered into a contract with MSTC for dismantlement and disposal of FTPS, Faridabad Plant. In accordance with the Ind AS rules the sale proceeds amounting to Rs.40.58 crores and writing back of provisions of Rs.19.55 crores (notional profit) has resulted in overall profit of Rs. 60.13 crores.

The details of Rs.19.55 crores is as under:

Provision of supply of material (capital)	Rs.4.81 crores
Provision of supply of material (O&M)	Rs.4.37 crores
Sundry Creditors Control Account	Rs.8.63 crores
Others	Rs.1.74 crores

31. Please explain gain from Fuel Surcharge Adjustment (Rs. 105.52 crore), shown in the Balance Sheet for the FY 2016-17.

HPGCL's Reply

FPA is computing as per the formula given in the HERC MYT Regulation 2012 under Regulation no. 33, based on actual GCV and Actual Rate in comparison to Normative GCV and Rate at the Normative SHR.

There was positive variation in the actual Coal Rate and actual GCV of Coal as compared to the normative, as such Fuel Surcharge Adjustment bill for F.Y. 2016-17 remains negative. The comparative rate of coal and GCV is given below:

	PTPS	DCRTPP	RGTPP
Normative Rate of Coal	4795	4427	4680
Actual Coal Rate	4489	4403	4651
Normative GCV	3647	3640	3526
Actual GCV	3828	3643	3603

32. Please provide details and explain the nature of income (Rs. 35.32 crore) shown under the head “Other Expenses”, (Note no. 36 D.8) of the Balance Sheet as on 31.03.2017.

HPGCL’s Reply

The income of Rs.35.32 is on account of writing back of outstanding provisions. Out of this amount an amount of Rs.19.55 crores was pertaining to FTPS, Faridabad.

33. A statement showing reconciliation of fixed assets addition during FYs 2016-17 & 2017-18 with the capex plan approved by the Commission.

HPGCL’s Reply

The requisite information has been provided / enclosed.

34. The terminal liabilities of employees has been abnormally increased from Rs. 132.51 crore in the FY 15-16 to Rs. 478.07 crore in the FY 16-17 (an increase of 260%). In this regard, HPGCL while explaining the abnormal increase in terminal liability in the FY 2014-15 had explained that the increase in the terminal liability is due to low opening corpus due to less contribution in the previous years. HPGCL may explain the abnormal increase in terminal liability.

HPGCL’s Reply

As per the AS-15, HPGCL is getting the valuation of its terminal liability from an independent actuary. The actuarial valuation of the HPGCL for F.Y. 2016-17 has been carried out by M/s Bhudev Chatterjee, a registered Fellow member of Institute of Actuaries of India. Actuarial valuation for previous year i.e. FY2015-16, was also carried out by same actuary. The liability on account of actuarial valuation has increased considerably in F.Y. 2016-17 as compared to F.Y. 2015-16, due to the provisions for the increased attributable to the following factors:

- HPGCL has adopted the pay scales as per VIIth pay commission and the same has resulted in considerable increase in salaries as well as pension burden of HPGCL.
- Haryana Govt. has extended the benefit of Gratuity facility to employees who joined the service after 01.01.2006. Approx 1200 employees have become eligible for Gratuity after implementation of this order and the increase in liability due to this has been taken care by Actuary in its report. The provision of the

liability from retrospective effect has to be taken into consideration in F.Y. 2016-17.

- The maximum amount of Gratuity payable has also been increased substantially from Rs.10 lacs to Rs.20 lacs per employee.
- HERC has allowed the employees cost considering the base year F.Y. 2011-12 for PTPS and F.Y. 2013-14 for DCRTTP and RGTPP with an escalation rate of 4%. Annual true up of the employees cost including terminal liabilities is being done but the same is not being taken into consideration while allowing the employees cost for the next year.
- The employee's attrition rate is also increasing.
- The impact of the decreasing trend in the interest rate has also affected the provisioning adversely.

The combined effect of these factors is visible in the enhanced actuarial valuation.

35. Please explain the nature of gain of Rs. 156.94 crore on account of Actuarial valuation and its effect in Balance Sheet and Terminal Benefit cost.

HPGCL's Reply

It may be noted that the overall actuarial liability of Rs.478.07 is inclusive of Actuarial loss recognized during the year amounting to Rs.156.94 crore. Due to implementation of Indian Accounting Standards (IFRS) in HPGCL, this loss has been shown separately in P&L statement as a part of "Other Comprehensive Income" and the balance actuarial liability of Rs.321.13 crores has been added to employee benefit cost in P&L statement.

Nature of Actuarial Gain or Loss:

From one plan year to the next, if the experience of the plan differs from that anticipated using the actuarial assumptions, an actuarial gain or loss occurs. For example, an actuarial gain would occur if the plan assets earned 12% for the year while the assumed rate of return used in the valuation was 8%. Other causes of actuarial gains or losses would include changes in actuarial assumptions and / or demographic changes in the population profile.

36. Details showing bifurcation of saving in the interest cost of Rs. 68.11 Crore into reduction in rate of interest and due to average method applied while allowing interest in the ARR Order dated 31.03.2016.

HPGCL's Reply

Particulars (FY 2016-17)	Amt.(Rs. in crore)
Actual opening Balance of outstanding Loan	3541.27
Actual closing Balance of outstanding Loan	2921.96
Total	6463.23
Average Loan (A)	3231.615
Actual Interest (B)	333.15
Actual Average rate of Interest (C)	10.31%
Allowed opening Balance of outstanding Loan	3544.11
Allowed closing Balance of outstanding Loan	3212.17
Total	6756.28
Average Loan (D)	3378.14
Interest allowed (E)	401.32
Allowed Average rate of Interest (F)	11.88%
Interest as per actual average rate (G= DxC)	348.26
Reduction in Average Rate of Interest (H= F-C)	1.57%
Savings due to reduction in average rate of interest (DxH)	53.06
Savings due to average method applied (G-B)	15.05
Total Savings	68.11

37. Cost of re-financing was allowed in the Order dated 26.04.2017. Therefore, please provide details of net saving after deducting cost of re-financing as per Regulation 21.1 (v).

HPGCL's Reply

The requisite information is enclosed.

Particulars	Interest Allowed	Actual Interest
FY 2015-16	457.7	500.38
FY 2016-17	401.32	333.21
Net Refinancing cost allowed vide Order dated 26.04.2017 after offsetting savings	42.68	-
Total	901.7	833.59
Net Savings after deducting cost of refinancing	68.11	

38. Details of equity contribution of Rs. 46.74 crore received during the FY 2016-17, specifically showing the scheme for which equity has been received and whether the same is in respect of CAPEX approved by the Commission.

HPGCL's Reply

The requisite information is enclosed.

39. In Petition no. PRO-20 of 2016, for determination of tariff of 10 MW Solar Power Plant, it was stated that the capital cost includes HPGCL shared cost. Accordingly, capital cost of Rs. 60.55 Crore was approved, subject to the following condition:

“In case actual capital cost as on the date of COD happens to be lower than Rs. 60.55 Crore, then the actual capital cost incurred by HPGCL, as on the date of COD, shall be considered and the levelised tariff of Rs. 4.88/- shall be reworked with all other parameters remaining the same i.e. as taken in the calculation for determination of levelised tariff of Rs. 4.88/kWh.”

In this regard, please provide details of actual capital cost incurred by HPGCL as on the date of COD of 10 MW Solar Power Plant.

HPGCL's Reply

The capital cost amounting to Rs. 60.55 Crore approved for 10 MW Solar Power Plant, was inclusive of 5% overhead charges. It was the first SOLAR project of the Govt. of Haryana. In order to execute the project in a time bound manner the emphasis was given to execute the main plant first and after that the overhead i.e development work. Accordingly an amount of Rs. 1.02 Crores has already been incurred on development work till 31.03.2017 and the development work amounting to Rs. 1.86 Crores are in hand and are at various stages of approval for execution of the same. The detail submission will be made to Commission separately on actual basis after completion of the work for truing up of the same.

40. True-up in respect of interest on working capital.

HPGCL's Reply

The requisite information has been provided / enclosed.

41. Unit-wise saving in oil cost.

HPGCL's Reply

The requisite information is enclosed.

42. Unit-wise (i.e. separately for PTPS-5, 6, 7, 8, DCRTTP-1, 2, RGTPP-1, 2) actual and deemed generation for the FY 2016-17.

HPGCL's Reply

In MU	PTPS-5	PTPS-6	PTPS-7	PTPS-8	DCRTPP	RGTPP
Actual Gen.	169.22	219.54	1126.89	690.27	3424.21	3805.33
Deemed	1830.56	1825.04	2130.85	2154.4	4780.64	9816.87

43. Justification for proposing reduced cost of coal for the FY 2018-19 than for the FY 2017-18.

HPGCL's Reply

The cost of coal for the FY 2017-18 is on the basis of including opening stock. The proposed coal cost for FY 2018-19 is on the basis of weighted average coal cost of the coal received during six months in FY 2017-18 (up to Sept. 2017), which is lower than that of weighted average coal cost including of opening stock of F.Y. 2017-18.

44. Details (including soft copy in excel) containing calculation of average GCV & Cost of Coal and Oil, for the FY 2017-18.

HPGCL's Reply

The requisite information is enclosed.

45. Status of disposal of de-commissioned plants of HPGCL be provided.

HPGCL's Reply

Disposal of PTPS Unit-1 to 4

Unit-1 to 4 of PTPS, Panipat were phased out w.e.f. 09.12.2015 with the approval of Govt. of Haryana. Expression of Interest on Global basis from the interesting parties for the sale of the complete units for their captive generation use on "as is where basis" was invited. However, even after 3 Nos. extensions, no response regarding the same was received. Further Metal and Scrap Trading Corporation Limited (MSTC Ltd.), New Delhi was engaged as Selling Agent and M/s RBSA Valuation Advisors LLP, Ahmedabad was appointed as Valuation Consultant for disposal of Unit-1 to 4, PTPS, Panipat on competitive e-bidding basis. Valuation Consultant has given the valuation report for the main plant & equipment on-04.08.2017. Disposal of Transformer Oils, Lubricating Oils (Turbine & BFP Oils) and old Batteries has separately made by auction through MSTC on the pattern of FTPS, Faridabad. Store assets were also auctioned twice keeping book value as reserve price, but auctioned for all the lots failed as all were well below the reserve price/STA. The store assets will be auctioned separately and two more

attempts shall be made by splitting the lots according to similarities of items for increasing the chances of successful auction. The reserve price for the main Plant & Machinery and Civil Structures has ascertained and recommended by the BoDs of HPGCL for approval of the Govt. of Haryana. The auction process shall be initiated after getting the same approved from the Govt. of Haryana.

DISPOSAL OF FTPS PLANT & EQUIPMENT

3x60 MW units at FTPS were phased out in 2010. After following a detailed procedure, the work of disposal of FTPS plant & equipment was finally awarded to M/s Chinara Steel Segment Centre Pvt. Ltd. with the approval of CM Haryana at Rs. 66.24 Crores on 28.04.2016 for which e-auction was conducted by MSTC Ltd. on 02.03.2016. The dismantlement of FTPS plant & equipment commenced w.e.f. 13.05.2016 and has been completed on 27.03.2018.

The Commission has taken note of the reply filed by the petitioner in response to various queries / additional information sought by the Commission.

5 True-up Petition for the FY 2016-17

5.1 That Generation tariff for the FY 2016-17 was determined by the Commission vide its order dated 31.03.2016 on the tariff Petition of HPGCL filed on dated 19.11.2015 as per HERC MYT Regulation, 2012. The tariff was determined based on the relevant data / information available up to September 2015. HPGCL has now submitted the petition for true-up for the FY 2016-17 based on the audited accounts for the FY 2016-17 in accordance with the regulation 13.1 of the MYT Regulations, 2012. A copy of the FY 2016-17 audited accounts has been provided.

5.2 True-up of Operation and Maintenance (O&M) expenses

5.2.1 The Petitioner has submitted the actual O&M Expenses as per audited accounts for FY 2016-17 remained at Rs. 883.75 Crore as against the approved O&M Expenses of Rs. 508.58 Crore. The primary reason for this significant difference between the approved and actual O&M expenses amounting to Rs. 375.17 cr. (883.75-508.58) is due to increase in uncontrollable expenses on account of terminal liabilities included in the employees cost.

5.2.2 It has been submitted that the actual employee cost including terminal liability as

per the audited accounts for the FY 2016-17 were Rs. 746.85 Cr. whereas the approved Employee cost included in the O&M expenses was Rs. 317.93 cr. only. The approved Employees cost considered by Commission in the O&M expenses for FY 2016-17 for DCRTTP and RGTPP was based upon the actual audited expenses of the base year FY 2013-14, whereas for PTPS it was based upon the actual audited expenses of the base year FY 2011-12 with an escalation rate of 4% per annum only. There was nominal terminal liability in the base year considered by the Commission. Though there is no increase in the number of employees but due to increasing rate of retirement and implementation of the 7th Pay Commission for the existing employees, terminal liabilities of the HPGCL has increased significantly. As per the actuarial valuation report carried out by independent actuary firm M/s Bhudev Chatterjee, the terminal liabilities of HPGCL for the FY 2016-17 are Rs. 478 Cr. Further, HPGCL is bound by the Rules and Regulations of State Government pertaining to employee's benefits (pay structure, D.A., annual increment). Any revision, therefore, in the pay structure of its employees is beyond the control of the HPGCL. All these factors leads to increase in the employees cost of HPGCL. Terminal liability is an uncontrollable expenditure under Regulation 8.3(b). The Commission has already admitted the above factors beyond the control of HPGCL while approving the True-up of FY 2012-13, FY 2013-14, FY 2014-15 and FY 2015-16.

5.2.3 The other O&M expenses i.e. R&M and A&G expenses approved by the Commission for FY 2016-17 were Rs. 190.66 cr. The actual R&M and A&G expense for the year remains Rs. 136.90 cr. only. The reduction in the R&M and A&G expense is due to change in the overhauling schedule of the generating station and due to change in accounting due to implementation of Ind AS. As per Ind AS accounting an amount of Rs. 25.82 cr. of the R&M expenses pertaining to the Capital overhauling of the generating station has been capitalised. The change in the accounting standard on the one hand has reduced R&M and A&G expenses but on the other hand has increased the depreciation and financing cost. The variation due to change of law is beyond control of HPGCL as such any variation positive or negative has been submitted for true up.

5.2.4 The Petitioner therefore prays to the Commission to allow the true up of the O&M cost amounting to Rs. 375.17 Cr. only i.e. the difference between the approved and actual O&M cost for FY 2016-17.

5.3 True-up of Depreciation

The Commission, as per its order dated 31.03.2016, had approved depreciation of Rs. 419.69 Crores. The actual depreciation of HPGCL in the FY 2016-17, as per audited accounts is Rs. 429.45 Crores i.e. higher than the approved depreciation by Rs. 9.76 Crore mainly on account of change in accounting standard with the implementation of Ind AS and the variations due to change of law is beyond control of HPGCL

The snapshot of status of claimed and balance claimable depreciation for the FY 2016-17 is given below:-

Rs. in Crore					
	Maximum Allowable Depreciation as per Regulations	Accumulated Depreciation upto FY 2015-16	Depreciation during the year FY 2016-17	Accumulated Depreciation upto FY 2016-17	Balance Claimable Depreciation
PTPS – 5	261.38	243.96	0.73	244.68	16.69
PTPS – 6	888.44	874.29	2.42	876.71	11.73
PTPS – 7-8	1,681.25	895.54	98.35	993.89	687.36
DCRTPP	2,031.98	810.42	108.89	919.31	1,112.67
RGTPP	3,852.93	1,069.23	211.88	1,281.10	2,571.83
Hydel	172.58	91.51	7.18	98.69	73.90
Total	8,888.56	3,984.94	429.45	4,414.38	4,474.18

Unit	Approved	Actual	Variance
PTPS –5-6	6.11	3.15	(2.96)
PTPS –7-8	91.45	98.35	6.90
DCRTPP	105.47	108.89	3.43
RGTPP	206.98	211.88	4.89
Hydel	9.69	7.18	(2.51)
Total	419.69	429.45	9.76

5.4 True-up of Interest Expenses

The Petitioner has submitted that as against the interest and finance charges on loan of Rs. 401.32 Crore approved by the Commission for the FY 2016-17, the actual amount incurred, as per the audited accounts, was Rs. 333.21 Crore, entailing net saving of Rs. 68.11 Crore, on account of the followings:-

(i) HPGCL by exercising financial prudence has restructured its loan by swapping the higher cost PFC loan of Rs. 1085.84 Cr. during FY 2015-16, pertaining to DCRTPP with cheaper Indian Overseas Bank loan with the approval of the State Govt. The rate of interest of IOB loan is@ 10.05% p.a. as compared to PFC interest rate of 12.50% p.a.

(ii) HPGCL swapped higher cost PFC loan of Rs 947.73 Cr. during FY 2015-16, pertaining to RGTPP with cheaper State Bank of India loan with the approval of the State Govt in FY 2015-16. The rate of interest of State Bank of India loan is @9.60% p.a. as compared to PFC interest rate of 11.45% p.a.

(iii) HPGCL swapped high cost REC loan of Rs 200 Cr. pertaining to RGTPP with cheaper PNB loan in FY 2016-17.

HPGCL submitted that as per the regulation 21.1 (v) of HERC MYT Regulation, 2012, the cost associated with the refinancing shall be borne by the beneficiaries and the net savings after deducting the cost of refinancing, shall be subject to incentive and penalty framework as mentioned in the regulation 12 which shall be dealt with at the time of midyear performance review or true-up. Accordingly, HPGCL requested to allow 60% incentive on the savings in interest charges.

Rs. Crore				
	Approved	Actual	Variance	True-up
Interest Expense	401.32	333.21	(68.11)	-27.25

HPGCL therefore, requested to allow Rs 40.87 Cr. (60% of 68.11) as incentive and pass through of Rs 27.25 Cr.

5.5 True-up of Return on Equity

HPGCL has submitted that the Commission had approved RoE of 10% Pre-tax amounting to Rs. 205.65 crore, for the FY 2016-17. Further, Govt. of Haryana has contributed an amount of Rs. 46.74 cr. as equity contribution during FY 2016-17. Accordingly the revised equity employed for FY 2016-17 excluding PTPS unit 1 to 4 as per audited accounts is tabulated below:-

Rs. Crore				
Unit	Opening	Additions	Closing	RoE @ 10%
PTPS – 5	5.08	-	5.08	0.51
PTPS – 6	152.71	1.24	153.95	15.33
PTPS – 7	212.01	7.53	219.54	21.58
PTPS – 8	211.99	7.53	219.52	21.58
DCRTPP-1	243.45	3.65	247.10	24.53
DCRTPP-2	243.45	3.65	247.10	24.53
RGTPP-1	483.78	11.57	495.35	48.96
RGTPP-2	483.78	11.57	495.35	48.96
Hydel	14.58	-	14.58	1.46
Total	2,050.83	46.74	2,097.57	207.42

Approved RoE	Actual RoE	True-up of RoE Cost
205.65	207.42	1.77

Hence, HPGCL has prayed that additional RoE for the FY 2016-17 amounting to Rs. 1.77 crore may be considered for trueing – up.

5.6 True-up of recovery of cost of Oil

HPGCL submitted that in FY 2016-17, it had incurred oil expense amounting to Rs. 26.76 Crore, which was considerably lower than the approved amount of Rs. 79.11 Crore i.e. by an amount of Rs. 52.35 Crore. The prime reason for low oil consumption is better operational performance of HPGCL despite frequent start-stop operation on instructions of Discoms/SLDC.

HPGCL submitted that Specific Fuel Oil Consumption in ml/kwh(SFC) had decreased from approved weighted average norm of 1.00 to 0.38 during the FY 2016-17, for all the HPGCL plants as a whole. Total saving in Oil cost amounting to Rs. 52.35 Crore has been bifurcated by HPGCL into saving due to low oil price (Rs. 3.16 Crore), due to SFC (Rs. 43.99 Crore) and due to low generation (Rs. 5.20 Crore).

HPGCL further submitted that as per Regulation 12.2 (b) of HERC MYT Regulations, 2012, SFC is subjected to incentive penalty framework. Hence HPGCL proposed to retain saving i.e Rs. 26.40 Crore (i.e. 60% of saving due to low SFC 60% of Rs 43.99 Crore) as an incentive and pass-through remaining Rs 25.96 Crore to Discom.

5.7 True-up of Auxiliary Consumption

HPGCL has submitted that in FY 2016-17, PTPS Units 5-8 were boxed-up for many months continuously, where-in they had to operate their essential auxiliary for long stretch of time without getting any revenue in return. Additionally the variable cost of units of auxiliary consumption for such months is being deducted from the monthly fixed cost of respective unit.

The Commission in its order dated 26.04.2017 has allowed for the refund of variable cost paid by HPGCL to the Discoms in FY 2015-16 on account of auxiliary consumption for the months the units were boxed-up.

Accordingly, during 2016-17 also, HPGCL has incurred variable cost to the tune of Rs. 2.98 cr. during boxing up of the units, as detailed under:-

Particulars	PTPS Unit-5	PTPS Unit-6	PTPS Unit-8	Total
Auxiliary Consumption when Boxed-up (MU)	4.28	2.94	0.85	8.07
Variable Cost (Rs/kWh)	3.71	3.71	3.58	
Variable Cost Refunded (RsCr.)	1.59	1.09	0.31	2.98

HPGCL has requested to allow the recovery of the energy charges amounting to Rs. 2.98 Cr. so credited to Discom during boxing up of the units as was allowed in the true up for FY 2015-16.

5.8 Total True-up for the FY 2016-17

A summary of the True-up claims as proposed by the HPGCL is presented in the table below:-

(Rs. Crore)

	O&M Expense	Depreciation Cost	Oil Expense	Interest Expense	RoE	Auxiliary Consumption during backing down	Total True-up
Total	375.17	9.76	-25.96	-27.25	1.77	2.98	336.47

In addition to the above claim, the Petitioner has prayed that the Commission may also allow carrying cost on the trued-up amount for six months for the year in which the same accrued and for twelve months of the current year. Additionally, it has been prayed that the carrying cost may further be allowed if recovery of the True-up amount is delayed beyond 1st April, 2018.

6 REVIEW OF CAPITAL EXPENDITURE PLAN

6.1 HPGCL has submitted that the Commission in its Order dated 26th April 2017 has approved the capital expenditure for the first control period up to FY 2017-18 of the various Capital Expenditure Works as presented in below, as per the submission of HPGCL in its Petition dated 30.11.2016 in Case no. HERC/PRO- 38 of 2016 regarding True-up for FY 2015-16, Mid-Year Performance Review for FY 2016-17 and Determination of Generation Tariff for the FY 2017-18:-

Sr. No.	Capital Expenditure work	As per Order dated 26.04.2017 (Rs. Cr.)		
		2015-16	2016-17	2017-18
1	Increase in the height of Ash Dyke of RGTPS	23.33	2.00	-
2	Additional Capital Expenditure at RGTPP– Setting up Zero Discharge system	17.58	1.5	-
3	Increase in the height of Ash Dyke of DCRTPS	-	32.0	32.0
4	Capital Overhauling at WYC	4.34	11.00	14.00
5	ERP System and allied works	-	15.00	20.00

Sr. No.	Capital Expenditure work	As per Order dated 26.04.2017 (Rs. Cr.)		
6	Procurement of one no. heat exchanger for Boiler Circulation Pump for RGTPP, Hisar	-	2.00	-
7	Balance Payment to R-Infra against EPC contract for RGTPP, Hisar	40.88	9.43	6.00
8	Procurement of one set of PA fan blades for RGTPP Hisar	-	-	1.40
9	Procurement of 2 No. Air Driers for Transport Compressors for RGTPP Hisar	-	-	0.75
10	Trunion Bearing Housing and adopter sleeves support and guide side of APH for RGTPP Hisar	-	-	2.00
11	Additional oxygen probes at APH inlet and outlet of Unit- I & II for RGTPP Hisar	-	-	1.25
12	Monitoring of flue gas temperature across furnace for RGTPP Hisar	-	-	0.20
13	Arrangement of Dust Suppression system at ash dyke for RGTPP Hisar	-	0.20	1.00
14	Construction of 2 no. Barracks for CISF for RGTPP Hisar	-	-	1.28
15	Installation of CCTV surveillance System in RGTPP Hisar	-	-	1.44
16	Construction of DAV school in power plant colony for RGTPS Hisar	-	0.20	3.00
17	Up-gradation of PTPS Unit-6, Centum-CS HMI to Centum-VPHMI by Yokogawa India	2.65	-	-
18	Continuous Monitoring Emission System (CEMS) and Effluent Quality Monitoring System (EQMS) for Units 5-8, PTPS	1.01	-	-
19	Installation of 100MT Weigh Bridge at PTPS	0.19	-	-
20	Extra Work carried out in PTPS Unit-7&8 Ash Handling & DM Plant	11.67	-	-
21	Replacement of PTPS Unit-7's PA Fan Blade	1.35	-	-
22	Rectification / repair work of ESP of PTPS Unit# 7 & 8, PTPS, Panipat	5.30	5.00	-
23	Installation of On-Line Stator End Winding Vibration Monitoring System in Unit# 7&8 PTPS	0.76	0.77	-
24	Revival of Fire Fighting System of Unit-6,PTPS,Panipat	-	0.60	-
25	Replacement of PTPS Unit-6 AD Line in Ash Handling & repair D2 of ESP Field	-	2.20	-
26	Replacement of damaged floor and Construction of Roads in PTPS Colony, Panipat as per new norms of Government of Haryana	-	1.55	-
27	Installation of CCTV in PTPS, Panipat	-	0.30	-
28	Replacement of CTs and CVTs in 220 KV Switchyard Unit#5&6 PTPS	-	-	1.70
29	Up-gradation of DCS System in Unit 7&8 PTPS Panipat	-	5.00	11.81
30	Purchase of Fire Tenders for PTPS	-	0.40	0.40
31	Up-gradation of PTPS Unit-6 HMI System of pro-control supplied by M/s BHEL	-	-	1.50
32	Energy Management System PTPS Unit- 7-8	-	-	0.70
33	Replacement of PTPS Unit-7&8 Fire Fighting, Hydrant and Spray pipelines	-	-	3.00
34	Replacement of PVC fills of PTPS Unit-7 & 8 Cooling Tower	8.05	5.00	3.50
35	Online Energy Management System (EMS) for DCRTTP	-	0.40	-
36	Up gradation of existing DCS system for DCRTTP 1 & 2	-	4.25	-
37	Installation of CCTV Camera System in DCRTTP Plant area	-	0.60	-
38	Revival of 20 no ESP fields and repairing of balance 36 no. ESP fields of Unit-1& 2 DCRTTP Yamunanagar	-	12.50	22.50
39	Providing of 2 No. VFD on Unit-1 DCRTTP ,6.6KV Motor of CEP	-	-	2.30
40	Purchase of LP Turbine Blades of DCRTTP Unit 1&2	-	8.45	-
41	Township for DCRTTP, Yamunanagar	15.50	1.75	1.75
42	Civil Works for WYC Hydrel Project	-	2.30	2.90
43	Raw Water Intake Channel	-	14.96	-
44	Mobile Coal Sampling System	-	0.66	-
Total		132.61	140.02	136.38

6.2 However Capital works mentioned at Scheme No. 1 & 3 above have been withdrawn from Capital Investment Plan (CIP) in view of the direction of the Commission for meeting such expenditure from the sale of Dry Fly Ash Fund. Further, HPGCL has to defer certain capital works due to revision in the overhauling schedule and also to exercise financial prudence in view of less scheduling of its generating plant. As such there are certain variations in the actual capex incurred on the capital works as approved in first control period. Accordingly the revised schedule capital expenditure on the approved capital works as presented in below has already been submitted by the HPGCL in its Capital Investment Plan to the Commission for approval vide case No. 60 of 2017:-

S.No	Capital Expenditure Work	Capex (Rs. Cr.)			
		2017-18	2018-19	2019-20	2020-21
1	Capital Overhauling at WYC	-	36.0	-	-
2	ERP System and allied works	6.00	21.00	8.00	-
3	Procurement of one no. heat exchanger for Boiler Circulation Pump for RGTPP, Hisar	2.00	-	-	-
4	Balance Payment to R-Infra against EPC contract for RGTPP, Hisar	7.41	-	-	-
5	Procurement of one set of PA fan blades for RGTPP Hisar	-	1.40	-	-
6	Procurement of 2 No. Air Driers for Transport Compressors for RGTPP Hisar	-	-	0.40	0.35
7	Trunion Bearing Housing and adopter sleeves support and guide side of APH for RGTPP Hisar	-	-	2.00	-
8	Additional oxygen probes at APH inlet and outlet of Unit- I & II for RGTPP Hisar	-	1.25	-	-
9	Arrangement of Dust Suppression system at ash dyke for RGTPP Hisar	1.00	2.00	1.50	-
10	Construction of 2 no. Barracks for CISF for RGTPP Hisar	0.28	1.00	-	-
11	Installation of CCTV surveillance System in RGTPP Hisar	-	2.00	-	-
12	Construction of DAV school in power plant colony for RGTPS Hisar	0.20	3.00	3.67	-
13	Rectification / repair work of ESP of PTPS Unit# 7 & 8, PTPS, Panipat	5.00	-	-	-
14	Installation of On-Line Stator End Winding Vibration Monitoring System in Unit# 7&8 PTPS	0.77	-	-	-
15	Revival of Fire Fighting System of Unit-6,PTPS,Panipat	-	0.60	-	-
16	Replacement of PTPS Unit-6 AD Line in Ash Handling & repair D2 of ESP Field	2.20	-	-	-
17	Replacement of damaged floor and Construction of Roads in PTPS Colony, Panipat as per new norms of Government of Haryana	1.55	-	-	-
18	Replacement of CTs and CVTs in 220 KV Switchyard Unit#5&6 PTPS	1.70	-	-	-
19	Up-gradation of DCS System in Unit 7&8 PTPS Panipat	16.81	-	-	-
20	Purchase of Fire Tenders for PTPS	0.80	-	-	-
21	Up-gradation of PTPS Unit-6 HMI System of pro-control supplied by M/s BHEL	-	1.50	-	-
22	Energy Management System PTPS Unit- 7-8	-	0.70	-	-
23	Replacement of PTPS Unit-7&8 Fire Fighting, Hydrant and Spray pipelines	-	3.00	-	-
24	Replacement of PVC fills of PTPS Unit-7 & 8 Cooling Tower	8.50	-	-	-

S.No	Capital Expenditure Work	Capex (Rs. Cr.)			
		2017-18	2018-19	2019-20	2020-21
25	Up gradation of existing DCS system for DCRTTP 1 & 2	-	4.25	-	-
26	Installation of CCTV Camera System in DCRTTP Plant area	0.60	-	-	-
27	Revival of 20 no ESP fields and repairing of balance 36 no. ESP fields of Unit-1& 2 DCRTTP Yamunanagar	-	45.00	-	-
28	Providing of 2 No. VFD on Unit-1 DCRTTP , 6.6KV Motor of CEP	2.30	-	-	-
29	Township for DCRTTP, Yamunanagar	3.50	-	-	-
30	Civil Works for WYC Hydel Project	-	7.50	-	-
31	Mobile Coal Sampling System	0.66	-	-	-
Total		61.28	130.20	15.57	0.35

6.3 Additional Capitalization submitted in CIP Petitioner no. HERC/PRO-60 of 2017:

In addition to the capital works referred in forgoing paras, new capital works are also projected for execution in the FY 2017-18 in second control period and the same has already been submitted by HPGCL to the Commission for consideration and approval in its Capital investment Plan vide case No. 60 of 2017. List of New Capital works for Second control period is tabulated below:

S.No			Capex (Rs. Cr.)			
			2017-18	2018-19	2019-20	2020-21
1	RGTPP	Revival of 02 Nos of ESP fields of RGTPP Unit I	8.00	-	-	-
2	RGTPP	Supply, Erection, Testing and Commissioning of Energy Management System at 2x600 MW RGTPP, Khedar, Hisar	0.55	-	-	-
3	PTPS	Modernization of Boiler Lift for PTPS Unit 8	-	0.70	-	-
4	DCRTTP	Replacement of DAVR in DCRTTP Units 1 & 2	-	1.50	-	-
5	DCRTTP	Providing of 2 No. VFD on Unit-II DCRTTP 6.6KV Motor of CEP	-	2.36	-	-
6	RGTPP	Improvement work of Cooling Towers of RGTPP Unit I & II	-	8.00	8.00	-
7	RGTPP	Installation of Variable Frequency Drive in Condensate Extraction Pump (CEP) of RGTPP Unit I & II	-	5.21	-	-
8	RGTPP	Replacement of 2 Nos. Stator of BCP of RGTPP Unit I & II	-	5.21	-	-
9	RGTPP	Upgradation of C&I system for RGTPP Hisar	-	3.00	3.00	-
Total			8.55	25.98	11.00	0.00

6.4 HPGCL has to incur significant capital expenditure to meet with the new environmental norms. Due to non-availability of details of the anticipated expenditure and also in view of submission made by various power producers to the Govt. of India seeking certain relaxation in the old plant, no expenditure has been projected in the Capital Investment Plan of HPGCL referred above. HPGCL will approach to the Commission for approval of Capex Plan regarding implementation of MoEFCC norms, at appropriate time with anticipated expenditure.

6.5 The summary of capital expenditure proposed for the second control period is as under:-

Particulars	FY 2017-18	FY 2018-19	FY 2019-20	FY 2020-21	Total
Approved Capital schemes	61.28	130.2	15.57	0.35	207.4
New proposed Capital schemes	8.55	25.98	11.00	-	45.53
Total	69.83	156.18	26.57	0.35	252.93

7 HPGCL's Proposed Technical Parameters

7.1 Plant Load Factor (PLF)

The Petitioner has proposed the PLF of its various power plants for the FY 2017-18 and FY 2018-19 as under:-

PLF (%)	HERC Approved		HPGCL Proposed	
	FY 2017-18	FY 2018-19	FY 2017-18	FY 2018-19
PTPS 5-6	35	NA	35	82.50%
PTPS -7-8	85	NA	85	85.00%
DCRTPS-1-2	85	NA	85	85.00%
RGTPS-1-2	85	NA	85	85.00%
WYC and Karkoi	37	NA	37	37.00%

The Petitioner has submitted that Commission in its previous orders had approved PLF for PTPS unit- 5 & 6 at 35% with the expectation that these thermal power plants would dispatch intermittently i.e. during the peak power demand months only. HPGCL contemplates the utilization of the unsolicited demand with sales through Open Access or banking. Accordingly the Commission is requested to approve PLF of 82.5% for PTPS unit- 5&6. Continuation of PTPS unit-5 has also been considered in FY 2018-19 keeping in view the negligible incremental fixed cost of R&M and A&G expenses only and due to the other reasons and benefits of Discoms. CUF for WYC, Hydel project Bhudkalan Yamunangar, has been kept at 37% which is 50% of the available capacity. Two machines of the Hydel project shall remain under shut down condition due to envisaged Capital overhauling, as per earlier submissions of HPGCL and as approved by the Commission in its previous orders.

HPGCL further submits that in view of HPGCL submission regarding the Incentive in form of over recovery of fixed cost based on Deemed PAF, Commission in its order dated 26.04.2017 stated that:-

“The Commission carefully examined the relevant provisions of HERC MYT Regulations, 2012 and observes that in order to apply incentive and penalty framework

w.r.t. Plant Availability Factor (PAF), actual PAF should fall below or exceed the level specified by the Commission. Thus, deemed PLF / PAF cannot form the basis of claiming any incentive as such. Accordingly, claim of HPGCL on incentive due to higher deemed generation than the approved generation, does not hold much merit, accordingly the said claim is not considered for the purpose of incentive under the HERC MYT Regulations, 2012.”

In this regard HPGCL has submitted that the procedure/formula for the Incentive in form of over recovery of fixed cost is neither defined in HERC MYT Regulation, 2012 nor the same has been defined by Commission in any Tariff Order. HPGCL has requested the Commission to define the procedure in case the actual PAF exceed the level specified by Commission, so that HPGCL can approach the Commission for incentive in the case of over recovery of fixed cost.

7.2 Auxiliary Energy Consumption

HPGCL has submitted that the generation from DCRTPS Yamunanagar is scheduled to the maximum extent among all the HPGCL power plants due to its relatively low variable cost. Depending upon the requirement during various slots of the day, the DCRTPP Units are operated at a relatively high PLF, and are rarely closed down. Due to partial back down of these units the aux. Cons. remains on higher side then the approved norms. The annual PLF of the DCRTPS, Yamaunagar for the FY 2016-17 was 65.15% which is significantly lower than the approved norms. Even after excluding the boxing up of the unit on the instructions of the beneficiary the average loading of the DCRTPP, Yamunanagar also remains low at 77.6%. There is no express provision in the regulation to govern the Aux. Cons. according to the loading of the generating station. As per the CERC IEGC Regulations the relaxation in the Aux. Cons. at the loading range of 75% to 84.99% in case of subcritical generating station is 0.35%. Accordingly, HPGCL proposes that auxiliary consumption for DCRTPP be relaxed from 8.5% to 8.85% as per the conditions laid down in the CERC notification considering an average loading of 77.6%. However, the auxiliary consumption of other units has been proposed as per the norms with the relaxation approved by the Commission in its earlier orders dated 31.03.2016 and 26.04.2017.

The auxiliary consumption approved by the Commission and proposed by

HPGCL for the FY 2017-18 and FY 2018-19 are as under:-

Unit No.	Approved		Proposed	
	FY 17-18	FY 18- 19	FY 17-18	FY 18- 19
PTPS 5-6	10.00%	NA	10.00%	10.00%
PTPS –7-8	9.00%	NA	9.00%	9.00%
DCRTPP	8.50%	NA	8.50%	8.85%
RGTPP	6.00%	NA	6.00%	6.00%
WYC Hydel	1.00%	NA	1.00%	1.00%

7.3 Secondary Fuel Oil Consumption (SFC)

Secondary fuel consumption proposed by HPGCL in line with the Commission Order dated 26.04.2017 regarding Generation Tariff for FY 2017-18 as tabulated below:-

Secondary Fuel Oil Consumption (ml/kWh)	Approved		Proposed	
	FY 17-18	FY 18- 19	FY 17-18	FY 18- 19
PTPS 5-6	1.0	NA	1.0	1.0
PTPS –7-8	1.0	NA	1.0	1.0
DCRTPS-1-2	1.0	NA	1.0	1.0
RGTPS-1-2	1.0	NA	1.0	1.0

7.4 Station Heat Rate (SHR)

The Petitioner has submitted that 2x600 MW RGTPP, Hisar had to face maximum boxing up of the units on the instructions of the DISCOMs. The annual PLF of RGTPP, Hisar for FY 2016-17 was 36.20% only. After excluding the boxing up of the units on the instructions of the beneficiary the average loading of the RGTPP, Hisar for the year was also significantly low at 62.0%. There is no express provision in the regulation for allowing the SHR according to the loading pattern of the generating station. As such in line with CERC's IEGC regulations, the SHR for RGTPP is proposed with a relaxation of 6%, as per the conditions laid down in the CERC notification considering average loading of FY 2016-17. Accordingly HPGCL requests the Commission to relax the SHR norms for RGTPP to 2530 kcal/kWh. The SHR for the other units is being proposed as per norms approved by the Commission.

The SHR approved by the Commission and that proposed by HPGCL is as under:-

SHR (kCal/kWh)	Approved		Proposed	
	FY 17-18	FY 18- 19	FY 17-18	FY 18- 19
PTPS 5-6	2550	NA	2550	2550
PTPS –7-8	2500	NA	2500	2500
DCRTPS-1-2	2344	NA	2344	2344
RGTPS-1-2	2387	NA	2387	2530

7.5 Calorific Value and Price of Coal

HPGCL has proposed GCV of Coal and Secondary Fuel (Oil) for the FY 2017-18 and the FY 2018-19 as per the actual weighted calorific value of coal/Oil for PTPS, DCRTPS and RGTPS during April to September of the FY 2017-18, as under:-

Particulars	PTPS	DCRTPS	RGTPS
Gross Calorific Value of Coal (kcal/Kg)	3798	3567	3539
Gross Calorific Value of Oil(kcal/Kg)	10107	10485	10400

HPGCL has proposed weighted average cost of Coal and Secondary Fuel (Oil) for the FY 2017-18 as per the actual weighted average cost of coal/Oil for PTPS, DCRTPS and RGTPS during April to September of the FY 2017-18. Whereas, for the FY 2018-19 the coal rates has been proposed on the basis of actual weighted average receipt basis without any escalation, as under:-

Coal Cost (Rs/MT)	PTPS	DCRTPS	RGTPS
2017-18	5073	4713	4902
2018-19	4573	4767	4811

Oil Cost (Rs/KL)	PTPS	DCRTPS	RGTPS
2017-18	31285	38409	38412
2018-19	31285	38409	38412

7.6 Fuel / Variable Cost for the Control Period

In view of the above, the Petitioner has propose fuel cost in the FY 2017-18 and the FY 2018-19 as under:-

Fuel Cost	2017-18		2018-19	
	Generation (Ex-bus)	Per Unit Fuel Cost	Generation (Ex-bus)	Per Unit Fuel Cost
	in MU	Rs/ Unit	in MU	Rs/ Unit
PTPS – 5-6	1158.95	3.77	2731.81	3.40
PTPS – 7-8	3387.93	3.65	3387.93	3.29
DCRTPS	4072.22	3.38	4072.22	3.42
RGTPS	8399.02	3.51	8399.02	3.64
Total	17018.11	3.52	18591.04	3.50

7.7 Annual Fixed Cost

The Petitioner has submitted that the annual fixed cost for the FY 2017-18 has been determined by the Commission vide its Order dated 26.04.2017. However, component wise changes required as per the actual are also proposed for the performance review for FY 2017-18.

It has further been submitted that, the Commission had extended the first control

period up to the FY 2017-18. However, the Regulations for the second control period is still awaited. As such various components of fixed cost for FY 2018-19 has been proposed in line with the approval of the Commission for previous year i.e. FY 2016-17.

Accordingly, HPGCL proposed the fixed cost for the FY 2017-18 & 2018-19, as under:-

7.8 Operation and Maintenance Expenses (O&M)

7.9 That the Commission, vide its Order dated 07.11.2016, had amended the base year for determining O&M Expenses for FY 2017-18 as FY 2015-16 and also extended the first control period up to 2017-18.

7.10 That the Commission approved O&M norms for FY 2017-18 have been considered with no changes in the proposed expenses for the FY 2017-18 and changes if any with the actual occurs will be submitted at the time of true up of the FY 2017-18.

7.11 That the norms for the second control period are yet to be decided by the Commission. However HPGCL after study of the CERC regulations and based on accepted industry practices had proposed that O&M expenses should be escalated at 5.72% for the second control period. Accordingly for arriving at the O&M expenses for FY 2018-19, the approved O&M expenses for FY 2017-18 have been escalated by 5.72% by keeping the base year as FY 2015-16 as approved by the Commission.

7.12 That the Commission in its order dated 26.04.2017 had restricted the O&M expenses for PTPS Units - 5 & 6 (as 50% of R&M and A&G, 90% of employees cost) for the purpose of tariff determination for the FY 2017-18. However, as 82.5% PLF as per the norms of HERC MYT Regulation, 2012 has been considered for these units for generation tariff for FY 2018-19, thus 100% O&M expense of FY 2017-18 as provided in the Regulations has been considered with 5.72% escalation.

7.13 That expense on account of Capital Overhauling has not been separately projected by HPGCL for the FY 2017-18 & FY 2018-19 while projecting the R&M Expenses and will approach the Commission at the time of True-up of the Year as per the Accounting Standards.

7.14 That the Ministry of Power vide Clause 6.2 (5) of their Tariff Policy dated 28.01.2016 had prescribed that thermal power plants located within 50 km of the Sewage

Treatment Plant (STP) of the Municipality/ local bodies/ similar organisations shall, in order of their closeness to the sewage treatment plant, mandatorily use treated sewage water from these plants. The associated cost on this account shall be factored into the fixed cost, so, as not to disturb the merit order of power plant, and be allowed as pass through in the tariff. Further, Secretary, Ministry of Urban Development, GoI, vide DO letter dated 25.05.2017 directed that that clause 6.2(5) of the tariff Policy dated 28.01.2016 may be implemented. Principal Secretary to Govt of Haryana, Power Department, vide Memo No. Ch-04/DSC-58 (61) dated 07.06.2017 also directed that the possibility of use STP water in Thermal Power Plants with in radius of 50 km be examined. HPGCL has accordingly planned to conduct a study for all three plants wherein a third party would be appointed for carrying out the feasibility study, preparation of DPR and Cost estimation etc. The work is expected to start in the second half of FY 2018-19. HPGCL submitted that the usage of STP treated water involves huge capital expenditure and logistics and therefore will affect the generation cost. Presently, raw water from the canals of irrigation department is being used. Cost of raw water is being treated as part of the O&M expense. Usage of STP water will leads to increase in the cost of water used in the thermal plant for generation of power and accordingly O&M expenditure will increase. The actual increase due to usage of the STP is yet to be ascertained as such no expenses on this account has been projected in the O&M expenses for FY 2018-19. However in view of expected implementation of usage of STP water in the 2nd half of FY 2018-19, it has been requested that the Commission may provide appropriately in the tariff order for pass through of such expenditure in the O&M expense as provided in the National Tariff Policy.

7.15 Considering above submissions HPGCL has tabulated proposed O&M Expense for FY 2017-18 and FY 2018-19 as follows:

S.N	Unit	Approved		Proposed	
		FY 17-18	FY 18- 19	FY 17-18	FY 18- 19
1	PTPS 5-6	110.98	N.A	110.98	156.09
2	PTPS –7-8	154.19	N.A	154.19	163.01
3	DCRTPS 1-2	148.98	N.A	148.98	157.50
4	RGTPS 1-2	184.61	N.A	184.61	195.17
5	WYC Hydel	35.17	N.A	35.17	37.19
	Total	633.93	N.A	633.93	708.95

7.16 Depreciation

HPGCL, for its various power plants, has proposed revised depreciation for the FY 2017-18 and projected depreciation for the FY 2018-19, based on Capital Investment Plant submitted on 01.08.2017 (PRO-60 of 2017) and changes in the approved capitalization. The details of Gross Fixed Assets for FY 2017-18 and FY 2018-19 has been submitted as under:

FY 2017-18 (Rs. in Crore)					
SNo.	Unit	Opening GFA	Additions	Deletions	Closing GFA
1	PTPS – 5	291.90	-	-	291.90
2	PTPS – 6	1,009.59	4.68	-	1,014.27
3	PTPS –7-8	1,913.37	32.65	-	1,946.02
4	DCRTPP 1-2	2,322.55	6.40	-	2,328.95
5	RGTPP 1-2	4,369.33	18.62	-	4,387.95
6	WYC Hydel	197.76	-	-	197.76
	Total	10,104.50	62.35	-	10,166.85

FY 2018-19 (Rs. in Crore)					
SNo.	Unit	Opening GFA	Additions	Deletions	Closing GFA
1	PTPS – 5	291.90	-	-	291.90
2	PTPS – 6	1,014.27	2.10	-	1,016.37
3	PTPS –7-8	1,946.02	4.40	-	1,950.42
4	DCRTPP 1-2	2,328.95	53.11	-	2,382.06
5	RGTPP 1-2	4,387.95	26.07	-	4,414.02
6	WYC Hydel	197.76	43.50	-	241.26
	Total	10,166.85	129.18	-	10,296.03

7.17 Capitalisation has been considered only for the completed works and in the year in which it has proposed to be completed. The depreciation rate has been applied on the average of opening and closing asset at the rate notified in HERC, MYT Regulations, 2012.

7.18 PTPS Unit 5 has outlived its useful life as defined in the HERC MYT Regulation. As per the regulation 23 (b) of the HERC MYT Regulations, 2012, depreciation shall be allowed up to maximum of 90% of historical capital cost of the asset. As per Appendix II of the aforementioned Regulations, the useful life of the thermal generating station is 25 years. Though the unit has been proposed to run in FY 2018-19, however as PTPS unit-5 has outlived its useful life, it is proposed to claim the entire unclaimed depreciable value of the unit in FY 2017-18, as specified in para 8.3 above i.e. Rs. 16.68 crore.

7.19 In view of the above, the depreciation proposed by HPGCL for the FY 2017-18 & 2018-19 is as under:-

(Rs. in crore)				
	HERC (Approved)		HPGCL (Proposed)	
	FY 2017-18	FY 2018-19	FY 2017-18	FY 2018-19
PTPS – 5	1.85	N.A	16.68	-
PTPS – 6	2.82	N.A	1.72	2.16
PTPS –7-8	53.86	N.A	62.23	63.83
DCRTPP-1-2	107.63	N.A	107.22	108.63
RGTPP-1-2	208.20	N.A	202.82	203.88
WYC Hydel	3.24	N.A	6.55	11.68
Total	377.60	N.A	397.24	390.19

7.20 Interest & Finance Charges

HPGCL has submitted that Interest and Finance charges for the first control period were approved by the Commission in the MYT order based upon the available loan portfolio and rate of interest at that time. However there are certain changes in the loan portfolios due to swapping of high cost bearing loans with the cheaper one in FY 2015-16 and FY 2016-17 and also due to additional capitalisation required in the control period.

Fresh debts for the capex Schemes given in the CIP in the Debt: Equity ratio of 80:20 has been considered for capitalized assets during each year of the control period. Further, HPGCL has restructured its loan by swapping higher cost loans with cheaper loan exercising its financial prudence. HPGCL is expected to incur interest and finance charges of Rs 178.18 Cr. against Rs 240.40 Cr. before restructuring in FY 2018-19 which is a gain of Rs 62.22 Cr. According to Clause 21.1 (v) of the HERC MYT Regulations 2013, HPGCL is eligible for incentive on the net savings resulting from restructuring of loan. Accordingly HPGCL requests the Commission to approve interest expenses of Rs 215.52 Cr. including incentive (60%) from restructuring to be retained by HPGCL of Rs 37.33 Cr for FY 2018-19. HPGCL highlights that allowance of incentive by the Commission on account of financial prudence further encourages HPGCL to work more efficiently. The Commission is again requested to allow the incentive for FY 2018-19 and also in subsequent years at the time of tariff filing.

7.21 Interest and finance charges as proposed by HPGCL for the FY 2017-18 & the FY 2018-19 is as under:-

Interest Cost (Rs. Cr.) - FY 2017-18

Unit	Interest Expense post restructuring	Interest Expense pre restructuring	Benefit from restructuring	Benefit proposed to be retained	Total interest expense	Interest Expense approved
PTPS- 5	0.00	0.00	-	-	0.00	3.17
PTPS -6	2.96	2.96	-	-	2.96	3.17
PTPS 7-8	8.37	8.37	-	-	8.37	8.55
DCRTPP	62.76	92.10	29.34	17.61	80.36	87.02
RGTPP	150.15	194.46	44.31	26.59	176.74	190.99
WYC Hydel	0.31	0.31	-	-	0.31	2.52
Total	224.54	298.20	73.66	44.20	268.74	295.41

Interest Cost (Rs. Cr.) - FY 2018-19

Unit	Interest Expense post restructuring	Interest Expense pre restructuring	Benefit from restructuring	Benefit proposed to be retained	Total interest expense
PTPS- 5	-	-	-	-	1.72
PTPS -6	1.72	1.74	-	-	1.72
PTPS 7-8	1.95	1.97	-	-	1.95
DCRTPP	48.53	69.29	20.78	12.47	61.00
RGTPP	122.29	163.70	41.61	24.97	147.26
WYC Hydel	3.70	3.70	-	-	3.70
Total	178.18	240.40	62.22	37.33	215.52

7.22 Return on Equity

HPGCL submitted that Regulation 20 of HERC MYT Regulations, 2012 specifies the Return on Equity capital at a ceiling of 14% per annum on the opening equity base of the particular year and also on 50% of allowable capital cost for the assets put to use during the year. However, HERC in its MYT Order dated 29.05.2014, has allowed the return on equity at 10% per year. Thereafter the rate of RoE has been kept by the Commission at 10% on year to year basis. However, the norms for the second control period are yet to be decided by the Commission. Accordingly HPGCL has considered Return on Equity at 14%. Further, HPGCL has considered 20% of the capitalization planned for FY 2017-18 and FY 2018-19 to be funded with equity in line with Regulation 20.4 of the HERC MYT Regulations 2012.

Accordingly, the details of the equity capital and RoE in the FY 2017-18 and the FY 2018-19, proposed by HPGCL is as under:-

Details of Equity Employed and RoE in FY 2017-18 (Rs Cr.)

S. N	Unit	Opening	Additions	Closing	Proposed RoE @ 14%	Approved RoE@10%
1	PTPS – 5	5.08	-	5.08	0.71	0.56
2	PTPS – 6	153.95	0.94	154.89	21.62	15.13

S. N	Unit	Opening	Additions	Closing	Proposed RoE @ 14%	Approved RoE@10%
3	PTPS 7-8	439.06	6.53	445.59	61.93	43.05
4	DCRTPP	494.20	1.28	495.48	69.28	48.76
5	RGTPP	990.70	3.72	994.42	138.96	97.52
6	WYC Hydel	14.58	-	14.58	2.04	1.47
	Total	2,097.57	12.47	2,110.04	294.53	206.49

Details of Equity Employed in FY 2018-19 (Rs Cr.)

S. N	Unit#	Opening	Additions	Closing	Proposed RoE@ 14%
1	PTPS – 5	5.08	-	5.08	0.71
2	PTPS – 6	154.89	0.42	155.31	21.71
3	PTPS 7-8	445.59	0.88	446.47	62.44
4	DCRTPP	495.48	10.62	506.10	70.11
5	RGTPP	994.42	5.21	999.64	139.58
6	WYC Hydel	14.58	8.70	23.28	2.65
	Total	2,110.04	25.84	2,135.88	297.21

7.23 Interest on Working Capital (IWC)

HPGCL has submitted that Regulation 22.1 of HERC MYT Regulations, 2012 lists the components of working capital to be considered for estimating tariff. Further, Regulation 22.2 of the aforementioned Regulations state that the 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 raises debt. The Commission in its tariff order dated 26.04.2017 has considered appropriate a margin of 1.25% over the applicable base rate of SBI. SBI base rate applicable as on 01.04.2017 was 9.10% p.a.

The fuel cost i.e. cost of coal and cost of oil in the working capital requirement for FY 2017-18 was considered as per the information available at the time of filing of tariff petition for the year i.e. as per the prevailing price upto Aug. 2016.

HPGCL has re-assessed the normative working capital requirement in present Petition considering actual weighted average rate of coal and oil for April-September of FY 2017-18 for calculation of fuel cost for FY 2017-18 and for FY 2018-19 without any escalation.

The Commission has relaxed norms for maintenance spares of RGTPP and DCRTPP @ 15% of the allowed O&M expenses for the first control period till FY 2017-18. HPGCL has considered the same relaxation for FY 2018-19 for projections of maintenance spares and request the consideration of the same.

Accordingly HPGCL has estimated the working capital requirements and the interest on working capital @ 10.35% (9.10%+1.25%).

HPGCL has provided the following details of IWC in the FY 2017-18 and the FY 2018-19:-

FY 2017-18	Coal Stock	Oil Stock	O&M Expenses	Maint. Spares	Receivables	Total W/C Requirement	Int. on W/C	Approved Int. on W/C
	2 Months	2 Months	1 Months	10/15/7.5 %	1Month		10.35%	10.55%
PTPS – 5	36.41	0.34	4.69	5.63	25.14	72.20	7.47	6.84
PTPS – 6	36.41	0.34	4.55	5.47	25.74	72.51	7.50	6.93
PTPS 7-	206.36	1.94	12.85	15.42	131.22	367.79	38.07	34.77
DCRTPP	229.58	2.86	12.42	22.35	153.67	420.87	43.56	41.40
RGTPP	490.23	5.72	15.38	27.69	313.92	852.95	88.28	83.64
WYC	-	-	2.93	2.64	3.75	9.32	0.96	0.97
Total	998.98	11.19	52.83	79.19	653.45	1795.64	185.85	174.55

FY 2018-19	Coal Stock	Oil Stock	O&M Expenses	Maint. Spares	Receivables	Total W/C Requirement	Int. on W/C
	2 Months	2 Months	1 Months	10/15/7.5 %	1Month		10.35%
PTPS – 5	77.35	0.79	6.50	7.80	46.84	139.29	14.42
PTPS – 6	77.35	0.79	6.50	7.80	48.93	141.38	14.63
PTPS 7-8	186.02	1.94	13.58	16.30	121.18	339.03	35.09
DCRTPP	232.21	2.86	13.13	23.63	154.31	426.13	44.10
RGTPP	510.12	5.72	16.26	29.28	322.69	884.07	91.50
WYC Hydel	-	-	3.10	2.79	4.69	10.58	1.10
Total	1083.06	12.10	59.08	87.60	698.64	1940.48	200.84

7.24 HPGCL has further requested to allow recovery of all expenditure relating to petition filing fees including publication of notices etc. and any other statutory fees/regulatory fees, taxes and levies and also SLDC charges from the beneficiaries as per actual.

In accordance with the above submissions, HPGCL has proposed total fixed cost of Rs. 1847.45 Crore in the FY 2017-18 and Rs. 1885.34 Crore in the FY 2018-19.

7.25 HPGCL's Prayer

- Admit this Petition.
- Provide appropriate provision for considering the relaxation or relief granted by any appellate authority on the appeals of the petitioner.

- c) Frame HGC Regulations in line with IEGC Regulations. Also the regulation for second control period to be notified at the earliest. Also decide the difficulty petition filed by HPGCL for amendment in HGC, 2009.
- d) Consider and provide suitably for relaxation/ compensation for deterioration in the technical factor viz auxiliary consumption, SHR and SFC due to massive and frequent backing down and poor quality of coal in view of the CERC IEGC Regulation fourth amendment, 2016 and removal of difficulty petition filed by HPGCL (HERC case No. 29 of 2016) for amendment in HGC, 2009.
- e) Decide the Tariff petition filed for 2x0.2MW Kakroi Mini Hydel project (case no. HERC/PRO-34 of 2017).
- f) Grant in-principle approval of the capital scheme for the statutory requirement of installation of FGD plant to meet the standards for emission of SO_x under the new environmental norms.
- g) Consider and allow the operation of PTPS 5 in FY 2018-19 and determine the generation tariff for the unit thereof as proposed.
- h) Approve revised schedule of capital expenditure plan for FY 2017-18 to FY 2020-21.
- i) Approve True-up of FY 2016-17 at Rs 336.47 cr. with appropriate holding cost according to audited financial statements as per Ind AS.
- j) Consider and allow the impact of Terminal liability expense for Truing-up O&M Expense of FY 2016-17.
- k) Consider and allow sharing of gains due to saving in interest and finance charges as per Clause 12.4 of HERC MYT Regulations, 2012.
- l) Consider and allow sharing of gains due to saving in secondary fuel consumption as per Clause 12.4 of HERC MYT Regulations, 2012.
- m) Consider and allow recovery of energy charges credited to Discom for the months when the units were boxed-up on the instructions of the beneficiaries in FY 2016-17 and as a pass through expenses for future period.
- n) Define the procedure for the calculation of incentive in form of over recovery of fixed cost in case the actual PAF exceed the level specified by Commission.
- o) Consider and approve the relaxed norms for SHR of RGTPP and APC of DCRTTPP in line with CERC notification dt 6.04.2016 till the time HERC regulations are notified.
- p) Allow relaxed Technical Parameters for FY 2018-19 based upon relaxation provided by the Commission in Generation Tariff for FY 2015-16, FY 2016-17 and FY 2017-18
- q) Consider and approve the revised Mid-year Performance Review for 2017-18 and provide appropriate provision to claim the differential amount of revised tariff.
- r) Determine Generation Tariff for 2018-19 as proposed by the petitioner.
- s) 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 as the filing is being done based on the best available information.

- t) Treat the filing as complete in view of substantial compliance as also the specific requests for waivers with justification placed on record.

8 Procedural Aspects, Analysis & Order of the Commission

In line with Section 64 of the Electricity Act, 2003 and Haryana Electricity Regulatory Commission (Conduct of Business) Regulations, 2004, the Commission scheduled a hearing on 10.09.2018 in order to afford an opportunity to the stakeholders to present their objections / suggestions on the present petition of HPGCL. The Commission heard the oral submissions of HPGCL in the said hearing as no other Objector had either filed objections or was present in the public hearing held on 10.09.2018. In the said hearing, the Petitioner mostly reiterated its written submissions and hence the same, for the sake of brevity, are not being reproduced here.

8.1 State Advisory Committee (SAC)

In order to take forward the consultation process, a meeting of the State Advisory Committee constituted under Section 87 of the Act, was convened on 30.10.2018 to discuss the petition filed by HPGCL and to seek suggestions /comments of the SAC. However, no suggestions /comments specific to determination of HPGCL's Generation Tariff were offered by the SAC Members. The comments / suggestions were mostly confined to the performance of the Discoms in Haryana. However, representative of HPGCL pointed out that in Yamunanagar and Panipat they have coal upto 5 days whereas in Hisar the coal supply is on full swing and the Railway sends the coal as per the requirements of the power plant by seeing their consumption on day to day basis. In Faridabad the minimum staff of 22 employees is there. Hon'ble Chairman, HERC pointed out that the staff, of power plants proposed to be phased out, should be utilized by exploring the possibilities of Small Hydro Projects, Solar projects and Biogas etc. For this purpose, HPGCL should contact Irrigation department, PGIMS Rohtak, Universities, Gaushalas and other big institutions for installing the projects such as Hydro, Solar, Bio-gas, Bio-mass etc. Bricks made from the utilisation of Fly Ash should be promoted so that the environmental problem arising out of Fly Ash is solved and there is a good source of income also.

9 Commission's Analysis and Order

The Commission has taken into account the petition filed by HPGCL, additional information provided by them from time to time, oral submissions made in the public

hearing held on 10.09.2018.

At the onset, the Commission reiterates that the present order is confined to the true up of FY 2016-17 as well as determination of generation tariff for the FY 2018-19 in accordance with the HERC MYT Regulations, 2012 and its subsequent amendments except for a few relaxations in the norms that may be considered on merit. Hence, the issues pertaining to the FY 2017-18 shall be considered by the Commission while undertaking similar exercise in the FY 2018-19 in line with the HERC MYT Regulations, 2012.

10 FY 2016-17 True-Up

In line with the Regulations in vogue, the Commission, While reckoning with the true-up petition of HPGCL for the FY 2016-17, has considered the actual expenditure as per the audited accounts of the FY 2016-17 vis-à-vis the expenses as approved by the Commission vide its Order for the FY 2016-17. Accordingly, the Commission has allowed or disallowed, as the case may be, recovery of the true-up amount in accordance with the provisions of the MYT Regulations, 2012 as discussed in the subsequent paragraphs.

11 True-up of O&M Expenses for the FY 2016-17

In accordance with the relevant provisions of the HERC MYT Regulations, 2012, regarding the true-up process, the Commission has examined the audited accounts of HPGCL for the FY 2016-17, true-up petition of HPGCL submitted vide memo no. HPGC/FIN/Reg-481/1440 dated 28.11.2017 and additional information submitted by HPGCL vide its letter no. 1511/HPGCL/FIN/REG-481 dated 06.04.2018. It is observed that HPGCL has sought true-up of Employee Cost including terminal benefits amounting to Rs. 375.17 Crore.

The Commission, in its Order dated 31.03.2016, had reduced the PLF for PTPS (units 5-6) from the normative 82.5% to 35% and accordingly while considering O&M expenses, for the FY 2016-17 for DCRTS and RGTPS, Employee Cost including terminal benefits, was based on the actual audited expenses of the base year FY 2013-14. For PTPS it was the same was based on the actual audited expenses of the base year FY 2011-12 with an escalation rate of 4% per annum. There was nominal terminal liability in the base year considered by the Commission. Despite the fact that there is no increase in

the number of employees but due to increasing rate of retirement and implementation of the 7th Pay Commission for the existing employees, terminal liabilities of the HPGCL has increased significantly. As per the actuarial valuation report carried out by independent actuary firm M/s Bhudev Chatterjee, the terminal liabilities of HPGCL for the FY 2016-17 is Rs. 478 Cr. Further, HPGCL is bound by the Rules and Regulations of State Government pertaining to employee's benefits (pay structure, D.A., annual increment). Any revision, therefore, in the pay structure of its employees is beyond the control of the HPGCL. All these factors leads to increase in the employees cost of HPGCL. It has been submitted that the terminal liability is an uncontrollable expenditure under Regulation 8.3(b) of the MYT Regulations.

The other O&M expenses i.e. R&M and A&G expenses approved by the Commission for FY 2016-17 were Rs. 190.65 cr. The actual R&M and A&G expense for the year remained at Rs. 136.90 cr. only. It has been submitted that the reduction in the R&M and A&G expense is due to change in the overhauling schedule of the generating station and due to change in accounting due to implementation of Ind AS. As per Ind AS accounting an amount of Rs. 25.82 cr. of the R&M expenses pertaining to the Capital overhauling of the generating station has been capitalised. The change in the accounting standard on the one hand has reduced R&M and A&G expenses but on the other hand has increased the depreciation and financing cost. The variation due to change of law is beyond control of HPGCL as such any variation positive or negative has been submitted for true up.

The Petitioner has therefore prayed to the Commission to allow the true up of the O&M cost amounting to Rs. 375.17 Cr. only i.e. the difference between the approved and actual O&M cost for FY 2016-17.

The Commission has carefully examined the contention of the Petitioner that the actual Employees cost in the FY 2016-17 including terminal liability of Rs. 478 Crore was Rs. 746.85 Crore as against Rs. 317.93 crore allowed by the Commission in the MYT Order dated 31.03.2016 leading to a shortfall in the allowed employees cost of Rs. 428.92 Crore (Rs. 746.85 Crore – Rs. 317.93 Crore). The shortfall of Rs. 428.92 Crore has been further reduced by savings in other O&M expenses amounting to Rs. 53.75 Crore (Rs. 190.65 Crore allowed minus Rs. 136.90 Crore actually incurred) and net true-up amounting to Rs. 375.17 Crore has been sought on account of Employee Cost and

terminal liabilities.

In this regard, the Commission sought additional information from HPGCL regarding the abnormal increase in terminal liabilities from Rs. 132.51 crore in the FY 15-16 to Rs. 478.07 crore in the FY 16-17 (an increase of 260%).

In response to the above HPGCL has submitted that as per the AS-15, it is getting valuation of its terminal liability from an independent actuary. The actuarial valuation of the HPGCL for the FY 2016-17 has been carried out by M/s Bhudev Chatterjee, a registered Fellow member of Institute of Actuaries of India. Actuarial valuation for previous year i.e. FY 2015-16, was also carried out by same actuary. The liability on account of actuarial valuation has increased considerably in the FY 2016-17 as compared to the FY 2015-16 due to the provisions for the increased attributable to the following :-

- HPGCL has adopted the pay scales as per the recommendations of the 7th pay Commission and the same has resulted in considerable increase in salaries as well as pension burden of the HPGCL.
- Haryana Govt. has extended the benefit of Gratuity facility to employees who joined the service after 01.01.2006. Hence, about 1200 employees have become eligible for Gratuity after implementation of this order and the increase in liability due to this has been taken care by Actuary in its report. The provision of the liability from retrospective effect has to be taken into consideration in the FY 2016-17.
- The maximum amount of Gratuity payable has also increased substantially from Rs.10 lacs to Rs.20 lacs per employee.
- The HERC has allowed employees cost considering the base year as the FY 2011-12 for PTPS and the FY 2013-14 for DCRTPS and RGTPS with an escalation rate of 4%. Annual true up of the employees cost including terminal liabilities is being done but the same is not being taken into consideration while allowing the employees cost for the next year.
- The employee's attrition rate is also increasing.
- The impact of the decreasing trend in the interest rate has also affected the provisioning adversely. The combined effect of these factors is visible in the enhanced actuarial valuation.

The Commission further sought the explanation w.r.t. the nature of loss of Rs. 156.94 crore on account of Actuarial valuation and its effect in Balance Sheet and Terminal Benefit cost.

Regarding the above HPGCL has replied that the overall actuarial liability of Rs. 478.07 crore is inclusive of Actuarial loss recognized during the year amounting to Rs.156.94 crore. Due to implementation of Indian Accounting Standards (IFRS) in HPGCL, this loss has been shown separately in P&L statement as a part of “Other Comprehensive Income” and the balance actuarial liability of Rs. 321.13 crores has been added to employee benefit cost in P&L statement.

From one plan year to the next, if the experience of the plan differs from that anticipated using the actuarial assumptions, an actuarial gain or loss occurs. For example, an actuarial gain would occur if the plan assets earned 12% for the year while the assumed rate of return used in the valuation was 8%. Other causes of actuarial gains or losses would include changes in actuarial assumptions and / or demographic changes in the population profile.

In this regard, the Commission observes that the Regulation 8.3(b) of the MYT Regulations, 2012, occupying the field, provides as under:-

(b) The items in the ARR shall be treated as “controllable” or “uncontrollable” as follows:-

<i>ARR Element</i>	<i>Controllable/Uncontrollable</i>
<i>Terminal liabilities with regard to employees on account of changes in pay scales or dearness allowance due to inflation.</i>	<i>Uncontrollable</i>

In view of the above, the terminal liabilities incurred on account of changes in pay scales or dearness allowance due to inflation shall be considered as uncontrollable and accordingly considered for true up. **Hence, the Commission allows true – up of Rs. 375.17 Crore on account of employee cost & terminal liabilities, as sought in the Petition.**

12 True-up of Depreciation

The Commission has carefully examined the submissions of HPGCL i.e. the actual depreciation in the FY 2016-17 was Rs. 429.45 Crore as against the approved depreciation of Rs. 419.69. Thus, actual depreciation is higher than the approved

depreciation by Rs. 9.76 crore, due to change in accounting standard with the implementation of Ind AS, which is a change of law, beyond the control of HPGCL.

The Commission while undertaking true up exercise for the FY 2014-15 observed that:

“the spares capitalized by HPGCL amounting to Rs. 154.60 crore is not in conformity with the regulation 18.5.2 of MYT Regulation, 2012, hence the same cannot be allowed and accordingly, the depreciation charged on the same during the FY 2014-15, amounting to Rs. 8.08 crore (RGTPP – Rs. 3.99 crore, DCRTTP – Rs. 1.43 crore and PTPS 2.66 crore) is disallowed.”

Accordingly, the Commission had directed HPGCL to submit details of depreciation pertaining to capitalization of such spares. HPGCL in its letter dated 06.04.2018 submitted that the depreciation on capitalized spares is Rs 20.32 Crore.

The Commission further observed that HPGCL has capitalized an amount of Rs. 44.51 Crore towards dismantling and removing the plant assets. HPGCL was directed to provide detail of the same.

In reply, HPGCL has submitted that as per provisions of Ind AS the cost of an item of property, plant and equipment includes the initial estimate of the costs of dismantling and removing the item and restoring the site on which it is located. Thus the changes in the measurement of any existing decommissioning, restoration or similar liability that is both will be recognized as part of the cost of an item of property, plant and equipment.

Thus, in compliance with Ind AS, the dismantling cost for each of plant has been ascertained and the Plant wise details of capitalization for dismantling the plant are as under (Rs. in crores):-

PTPS Panipat	10.47
DCRTTP Yamunanagar	12.02
WYC, Yamunanagar	0.12
RGTPP, Hisar	21.83
FTPS, Faridabad	0.07
Total	44.51

The Commission observed that capitalization of spares pertaining to earlier years and capitalization of dismantling cost, may be in order to comply with the Indian Accounting Standard, are not in conformity with the regulation 18.5.2 of MYT Regulation, 2012, hence the same cannot be considered as change of law.

HPGCL in its letter dated 06.04.2018 submitted that the depreciation on capitalized spares is Rs 20.32 Crore. Depreciation on dismantling cost was not provided by HPGCL. However, the same has been computed @ 5.28% of Rs. 44.51 Crore i.e. Rs. 2.35 Crore.

HPGCL was further intimated that Financial Statements of HPGCL for the FY 2016-17 includes financials for Solar business also, for which separate tariff has been determined and was required to file the financials for Solar Generation and other Business, separately.

In reply, HPGCL has submitted that the financials of Solar unit were not presented separately since it is not a separate segment and the provisions of Segmental Reporting are not applicable to it. Hence Financial Statements of HPGCL are being prepared in accordance to the provisions of the Companies Act, 2013. However it has been further intimated that Solar generating unit is an independent accounting unit as such the impact of the financials of SOLAR generation has not been taken into consideration in the financials of the HPGCL for submitting its petition for other than SOLAR generation business. As per audited accounts of HPGCL for FY 2016-17, its financial statement includes following expenses of Solar business i.e. Interest & Depreciation Rs.0.94 Crores & Rs.1.08 crores.

Therefore the actual allowable depreciation for the FY 2016-17 comes to Rs. 405.70 Crore (i.e. Rs. 429.45 Crore minus Rs. 20.32 Crore minus Rs. 2.35 Crore minus Rs. 1.08 Crore), against the approved depreciation of Rs. 419.69 Crore. Therefore, the depreciation approved in excess amounting to Rs. 13.99 Crore (Rs. 419.69 Crore minus Rs. 405.70 Crore) is now trued up.

13 True-up for the Interest and Finance Charges

The Commission has examined the submissions of HPGCL that the actual interest and finance charges of HPGCL in the FY 2016-17 were Rs. 333.21 Crore as per the audited accounts for the year, as against the approved interest and finance charges on loan of Rs 401.32 Crore. The Petitioner submitted that net saving of Rs. 68.11 Crore (Rs. 401.32 Crore minus Rs. 333.21 Crore), has arisen, on account of the followings:-

- i) HPGCL by exercising financial prudence has restructured its loan by swapping the higher cost PFC loan of Rs. 1085.84 Cr. during FY 2015-16,

pertaining to DCRTTP with cheaper Indian Overseas Bank loan with the approval of the State Govt. The rate of interest of IOB loan is@ 10.05% p.a. as compared to PFC interest rate of 12.50% p.a.

- j) HPGCL swapped higher cost PFC loan of Rs 947.73 Cr. during FY 2015-16, pertaining to RGTPP with cheaper State Bank of India loan with the approval of the State Govt in FY 2015-16. The rate of interest of State Bank of India loan is@9.60% p.a. as compared to PFC interest rate of 11.45% p.a.
- k) HPGCL swapped high cost REC loan of Rs 200 Cr. pertaining to RGTPP with cheaper PNB loan in FY 2016-17.

HPGCL has submitted that as per the regulation 21.1 (v) of HERC MYT Regulation, 2012, the cost associated with the refinancing shall be borne by the beneficiaries and the net savings after deducting the cost of refinancing, shall be subject to incentive and penalty framework as mentioned in the regulation 12 which shall be dealt with at the time of midyear performance review or true-up. Accordingly, HPGCL requested to allow 60% incentive on the savings in interest charges.

Rs. Crore				
	Approved	Actual	Variance	True-up
Interest Expense	401.32	333.21	(68.11)	-27.25

HPGCL has, therefore, requested to allow Rs 40.87 Cr. (60% of 68.11) as incentive and pass through of Rs 27.25 Cr.

In this regard, the Commission sought additional details from HPGCL showing bifurcation of saving in the interest cost of Rs. 68.11 Crore into reduction in rate of interest and due to average method applied while allowing interest in the ARR Order dated 31.03.2016. Further, the cost of re-financing was allowed in the Order dated 26.04.2017. Therefore, HPGCL was also directed to provide details of net saving after deducting cost of re-financing as per Regulation 21.1 (v). HPGCL submitted the requisite details as under:-

Particulars (FY 2016-17)	Amount (Rs. crore)
Actual opening Balance of outstanding Loan	3541.27
Actual closing Balance of outstanding Loan	2921.96
Total	6463.23
Average Loan (A)	3231.615
Actual Interest (B)	333.15
Actual Average rate of Interest (C)	10.31%

Particulars (FY 2016-17)	Amount (Rs. crore)
Allowed opening Balance of outstanding Loan	3544.11
Allowed closing Balance of outstanding Loan	3212.17
Total	6756.28
Average Loan (D)	3378.14
Interest allowed (E)	401.32
Allowed Average rate of Interest (F)	11.88%
Interest as per actual average rate (G= DxC)	348.26
Reduction in Average Rate of Interest (H= F-C)	1.57%
Savings due to reduction in average rate of interest (DxH)	53.06
Savings due to average method applied (G-B)	15.05
Total Savings	68.11

Particulars	Interest Allowed	Actual Interest
FY 2015-16	457.7	500.38
FY 2016-17	401.32	333.21
Net Refinancing cost allowed vide Order dated 26.04.2017 after offsetting savings	42.68	-
Total	901.7	833.59
Net Savings after deducting cost of refinancing		68.11

The Commission observes that HPGCL has saved an amount of Rs. 53.06 Crore on account of reduction in average rate of interest. However, it is also observed that cost associated with the refinancing, amounting to Rs. 42.68 Crore, was fully allowed to HPGCL, during true-up exercise for the FY 2015-16 in the Order dated 26.04.2017. Further, interest amounting to Rs. 0.94 pertains to Solar Business as discussed at para 15. Therefore, net saving of interest after deducting cost of re-financing as per Regulation 21.1 (v), is Rs. 9.44 Crore (Rs. 53.06 Crore minus Rs. 42.68 Crore minus Rs. 0.94 Crore), which is subject to incentive and penalty framework as mentioned in the regulation 12.4. **Accordingly, HPGCL is now entitled to retain 50% of the saving i.e. Rs. 4.72 Crore (50% of Rs. 9.44 Crore) and balance saving of Rs. 63.39 Crore shall be pass through, as under:-**

	Approved	Actual	Variance	(Rs. in Crore)	
				Saving to be retained by HPGCL	True-up
Interest Expense	401.32	333.21	(68.11)	4.72	(63.39)

14 True-up of Return on Equity (ROE)

HPGCL has submitted that the Commission had approved RoE of 10% Pre-tax amounting to Rs. 205.65 crore, for the FY 2016-17. Further, Govt. of Haryana has contributed an amount of Rs. 46.74 cr. as equity contribution during the FY 2016-17. Accordingly the revised equity employed for FY 2016-17 excluding PTPS unit 1 to 4 as per audited accounts is tabulated below:-

Rs. Crore

Unit	Opening	Additions	Closing	RoE @ 10%
PTPS – 5	5.08	-	5.08	0.51
PTPS – 6	152.71	1.24	153.95	15.33
PTPS – 7	212.01	7.53	219.54	21.58
PTPS – 8	211.99	7.53	219.52	21.58
DCRTPP-1	243.45	3.65	247.10	24.53
DCRTPP-2	243.45	3.65	247.10	24.53
RGTPP-1	483.78	11.57	495.35	48.96
RGTPP-2	483.78	11.57	495.35	48.96
Hydel	14.58	-	14.58	1.46
Total	2,050.83	46.74	2,097.57	207.42

Approved RoE	Actual RoE	True-up of RoE Cost
205.65	207.42	1.77

Hence, HPGCL has prayed that additional RoE for the FY 2016-17 amounting to Rs. 1.77 crore may be considered for truing – up.

The Commission directed HPGCL to submit details of equity contribution of Rs. 46.74 crore received during the FY 2016-17, specifically showing the scheme for which equity has been received and whether the same is in respect of CAPEX approved by the Commission.

In reply, HPGCL submitted the details of equity contribution of Rs. 46.74 Crore, received during the FY 2016-17, as under:-

SN	Particulars	Equity Received (Rs. Crore)	Capex approved by the Commission
1	Extra works carried out in Unit-7& 8 PTPS, Panipat.	3.5	Yes
2	For mandatory & recommended spare of PTPS FY 2014-15	9.06	No
3	Raising of Ash Dyke PTPS	3.74	Yes

4	For mandatory & recommended spare of DCRTTP for FY 2014-15	4.82	No
5	Purchase of LP Turbine Blades of DCRTTP	2.48	Yes
6	Raw Water intake channel RGTPP	4.49	Yes
7	For mandatory & recommended spare of RGTPP for FY 2014-15	13.2	No
8	Zero discharge scheme RGTPP	5.45	Yes
	TOTAL	46.74	

The Commission examined the above details submitted by HPGCL and observed that equity contribution in respect of sr. no. 2,4 & 7 are not approved by the Commission. Therefore, HPGCL is not entitled to RoE on the same. Accordingly, the RoE allowed for the FY 2016-17 has been re-computed as under:-

Rs. in Crore

Unit	Opening	Additions	Disallowed	Closing	RoE @ 10%
1	2	3	4	5=2+3-4	6
PTPS – 5	5.08	-	-	5.08	0.51
PTPS – 6	152.71	1.24	-	153.95	15.33
PTPS – 7	212.01	7.53	4.53	215.01	21.35
PTPS – 8	211.99	7.53	4.53	214.99	21.35
DCRTTP-1	243.45	3.65	2.41	244.69	24.41
DCRTTP-2	243.45	3.65	2.41	244.69	24.41
RGTPP-1	483.78	11.57	6.60	488.75	48.63
RGTPP-2	483.78	11.57	6.60	488.75	48.63
Hydel	14.58	-	-	14.58	1.46
Total	2,050.83	46.74	27.08	2,070.49	206.08

Therefore, the true-up amount of return on equity @ 10% works out to Rs. 0.43 Crore (Rs. 205.65 Crore minus Rs. 206.08 Crore). Hence, the Commission allows the same.

15 True-up of recovery of cost of Oil

HPGCL submitted that in the FY 2016-17, it had incurred oil expense amounting to Rs. 26.76 Crore, which was considerably lower than the approved amount of Rs. 79.11 Crore i.e. by an amount of Rs. 52.35 Crore. The prime reason for low oil consumption is better operational performance of HPGCL despite frequent start-stop operation on the instructions of Discoms/SLDC.

HPGCL submitted that Specific Fuel Oil Consumption in ml/kwh(SFC) had decreased from approved weighted average norm of 1.00 to 0.38 during the FY 2016-17, for all the HPGCL plants as a whole. Total saving in Oil cost amounting to Rs. 52.35 Crore has been bifurcated by HPGCL into saving due to low oil price (Rs. 3.16 Crore), due to SFC (Rs. 43.99 Crore) and due to low generation (Rs. 5.20 Crore).

HPGCL further submitted that as per Regulation 12.2 (b) of HERC MYT Regulations, 2012, SFC is subjected to incentive penalty framework. Hence HPGCL proposed to retain saving i.e Rs. 26.40 Crore (i.e. 60% of saving due to low SFC 60% of Rs 43.99 Crore) as an incentive and pass-through remaining Rs 25.96 Crore to Discom.

The Commission, after due deliberations on this issue including the details submitted by the Petitioner, observes that as per Regulation 12.2 (b) of HERC MYT Regulations, 2012, SFC is subjected to incentive penalty framework. The savings on account of decline in the price of fuel oil and due to lower requirement arising out of low generation cannot not be considered as efficiency gains. Thus, out of the total savings of Rs. 52.35 Crore only Rs. 43.99 Crore is on account of efficiency gains as per HERC MYT Regulations. Consequently, HPGCL shall retain 50% of the saving in Oil cost due to improved SFC amounting to Rs. 22 Crore (50% of Rs. 43.99 Crore) and the balance saving in Oil cost i.e. Rs. 30.35 Crore (Rs. 52.35 Crore minus Rs. 22 Crore), shall be passed on to the beneficiary.

16 True-up of Auxiliary Energy Consumption

HPGCL has submitted that in FY 2016-17, PTPS Units 5-8 were boxed-up for several months continuously. Hence, they had to operate their essential auxiliary machines for long stretch of time without getting any revenue in return. Additionally the variable cost of units of auxiliary consumption for such months is being deducted from the monthly fixed cost of respective unit.

The Commission in its order dated 26.04.2017 had allowed for the refund of variable cost paid by HPGCL to the Discoms in the FY 2015-16 on account of auxiliary energy consumption for the months the units were boxed-up.

Accordingly, during the 2016-17 also, HPGCL has incurred variable cost to the tune of Rs. 2.98 cr. during boxing up of the units, as detailed under:-

Particulars	PTPS Unit-5	PTPS Unit-6	PTPS Unit-8	Total
Auxiliary Consumption when Boxed-up (MU)	4.28	2.94	0.85	8.07
Variable Cost (Rs/kWh)	3.71	3.71	3.58	
Variable Cost Refunded (RsCr.)	1.59	1.09	0.31	2.98

HPGCL has requested the Commission to allow recovery of the energy charges amounting to Rs. 2.98 Cr. so credited to Discom during boxing up of the units as was

allowed in the true up for FY 2015-16.

The Commission has examined the submission of HPGCL and observes that due to frequent backing downs/shut-start operation PTPS (5-8) due to low demand could attain PLF ranging from 9.20% (PTPS – 5) to 31.52% (PTPS – 8) only. However, in order to keep these stations ready certain auxiliary motors had to be kept running thereby auxiliary energy consumption occurs even during the period that these stations remained boxed – up. The Commission finds some merit in the submissions of HPGCL on this issue and hence allows refund of variable cost amounting to Rs. 2.98 Crore as prayed for.

17 True-up of Non-tariff Income

The Commission observes that HPGCL has reported non operating income (excluding prior period income due to adjustment in provisions of earlier years) of Rs. 48.13 Crore in the FY 2016-17. In terms of the Commission's Order dated 31.03.2016 & 26.04.2017, non operating income needs to be reduced from true-up amount approved by the Commission. Accordingly, Rs. 48.13 Crore has been reduced from the amount eligible for true up in the present Order.

In view of the above discussions, the Commission allows true-up expenses for the FY 2016-17 as under:-

	(Rs. Crore)	
	HPGCL (Proposed)	HERC (Allowed)
O&M Expenses	375.17	375.17
Depreciation cost	9.76	-13.99
Interest Cost	-27.25	-63.39
ROE	1.77	0.43
Oil Cost	-25.96	-30.35
Auxiliary Energy Consumption (due to backing down)	2.98	2.98
Non Tariff Income	-	-48.13
Total True-up	336.47	222.72
Add: Holding Cost @ 9.95% from 01.04.2017 to 30.09.2018 (18 months)		33.24
Total True-up including holding cost		255.96

HPGCL shall recover the aforesaid amount of Rs. 255.96 Crore from the Discoms i.e. UHBVNL and DHBVNL. The major difference between the true-up amount as worked out by HPGCL and that approved by the Commission is on account of disallowance of depreciation, interest cost and non tariff income.

18 Capital Investment Plan (CIP)

HPGCL has submitted that Commission vide its Order dated 26th April 2017 has approved the capital expenditure for the first control period up to FY 2017-18 for various Capital Expenditure Works as per the submission made in its petition dated 30.11.2016 in Case no. HERC/PRO- 38 of 2016 regarding True-up for FY 2015-16, Mid-Year Performance Review for FY 2016-17 and Determination of Generation Tariff for the FY 2017-18. Subsequently, HPGCL submitted the detailed proposal in respect of the new capital works along with its cost benefit analysis as required under HERC Regulations vide Petition dated 02.08.2017 in Case No. 60 of 2017 to the Commission. The CIP submitted by HPGCL has been discussed in detail at para 9 of the Order. The summary of capital expenditure proposed by HPGCL, for the second control period is as under:-

Particulars	FY 2017-18	FY 2018-19	FY 2019-20	FY 2020-21	Total
Approved Capital schemes	61.28	130.2	15.57	0.35	207.4
New proposed Capital schemes	8.55	25.98	11.00	-	45.53
Total	69.83	156.18	26.57	0.35	252.93

20.1 The Commission has made some observations and sought reply from HPGCL. The reply submitted by the HPGCL is as under:-

Observation 1

An expenditure of Rs. 136.38 crore was approved by the Commission for capital works to be carried out during FY 2017-18. However, as per the revised schedule of capital works proposed for the second control period, an expenditure of Rs. 69.83 crore has been proposed for the FY 2017-18. HPGCL was asked to provide the physical and financial progress of the works as per the capital expenditure approve by the Commission for the FY 2017-18 including the reason for slippages.

In reply to above, HPGCL have submitted that the reason for the slippage in execution of the proposed capital works has already been submitted by HPGCL in the Capital Investment Plan for the Second Control Period submitted to the Commission for approval (PRO 60 of 2017). The actual physical and financial progress of the capital works approved by the Commission for FY 2017-18 as on date is also enclosed as Annexure-B. From the perusal of the aforesaid information it has been revealed that there is further slippage in the execution of the capital works submitted by the HPGCL in its CIP. Accordingly a revised CIP along with scheme wise reason for deviation has also

been prepared and are submitted herewith as supplementary information at Annexure -B for kind consideration of the Hon'ble Commission. It is also pertinent to mention here that the slippage is mainly due to delay in overhauling schedule of the plant and also due to exploring better and competitive option for ensuring the techno commercial prudence. It is also not out of place to mention here that, due to delay in the execution of capital work there will be no impact on the tariff determination as the depreciation for the respective work is being claimed only in the year of its completion.

Observation 2

An expenditure of Rs. 4.37 crore, Rs. 11 crore and Rs. 14 crore was planned and got approved for WYC works in FY 2015-16, FY 2016-17 & FY 2017-18 respectively. However, no progress has been given for the expenditure on this work during these years and an expenditure of Rs. 36 crore has been proposed for FY 2018-19. The reasons for not incurring the expenditure as per schedule be explained.

Regarding the above it has been submitted that the status of the machines as follows. Initially an amount of Rs. 44.68 cr. was proposed by HPGCL in its capital investment plan for capital works of various machines (A-1,A-2,B-1,B-2,C-1&C-2) of WYC Hydel project. Machine No. A-2, B-1& B-2 has already been done at the cost given below. It has now come to the notice that MNRE may provide financial assistance for R&M of small Hydro project. Accordingly in order to reduce the financial burden of the capital overhauling of the remaining machines of WYC Hydro project, HPGCL has applied to MNRE for the financial assistance in August-2017. In principal has been also been granted by MNRE for machine C-1&C-2. Capital Overhauling/ R&M of Machine A-1, C-1&C-2 has been planned with the financial assistance from the MNRE as per the scheme of Govt. of India. Accordingly the net expenditure of the capital overhauling of the six machines as per revised scope and after considering the MNRE grant is expected to reduce to Rs. 36.27 cr. only which is as under:

S. N.	Machine	Latest Status	Amount (Rs. in Cr.) Revised Exp.	Reasons
1	A1	Deferred	8.5	Overhauling plan has been deferred and planned to get it done with the MNRE financial assistance along with the other machines (D1 and D2) in the second control period.
2	A2	Overhauled in FY 2014-15	2.79	
3	B1	Overhauling on 2.03.2018	4.17	
4	B2	Overhauled in FY 2014-15	3.81	

S. N.	Machine	Latest Status	Amount (Rs. in Cr.) Revised Exp.	Reasons
5	C1	Planned in FY 2018-19	17.00	Overhauling was planned in FY 2016-17. However Now HPGCL is in the process of getting the capital overhauling / R&M of these machines with revised scope in FY 2018-19. The delay in overhauling is due to observance of financial prudence in the public interest by reducing the financial burden for the same.
6	C2	Planned in FY 2018-19		
	TOTAL		36.27	

Observation 3

An expenditure of Rs. 12.50 crore and Rs. 22.50 crore was approved for FY 2016-17 and FY 2017-18 respectively for revival of 20 nos. ESP fields and repairing of balance 36 nos. ESP fields of Unit 1 & 2 DCRTTP Yamuna Nagar. However, now as per the revised proposed expenditure, an amount of Rs. 45 crore has been envisaged. A detail note as to how this major expenditure is being intended to be incurred in a single year (FY 2018-19). The requirement and mode of revival / repairing of the ESPs fields be submitted. These ESPs fields had failed in the beginning itself whether the manufacturer/supplier was required to repair/replace within warrantee. If it was a designed problem, what action has been taken to recover the loss.

It has been submitted that HPGCL has proposed an expenditure of Rs. 45 Crore for revival of 20 nos. ESP fields and repairing of balance 36 nos. ESP fields of Unit 1 & 2 DCRTTP Yamuna Nagar on the basis of the budgetary offer submitted by M/s Shanghai Electric Co. China (OEM). The expenditure was anticipated to be incurred as Rs. 12.50 cr. in F.Y. 2016-17, Rs. 22.50 cr. in FY 2017-18 and Rs. 10 cr. in FY2018-19.

The work revival and repairing of ESP field can be carried out in the shut down unit only as such was planned to get it done during the overhauling. However due to the changing demand scenario the overhauling cannot be taken into hand in the scheduled period. As HPGCL is committed to generate power at the optimum cost so in the meanwhile HPGCL has also explored the alternative source other than OEM for observing techno commercial prudence. Accordingly e-tender was issued for the revival of 20 no. ESP fields and repairing of balance 36 nos. ESP fields of Unit-I & II, DCRTTP, Yamuna Nagar. A Work order no. 12/BM-05/2017-18/Vol.-I dated 25.10.2017 was also

issued to M/s GE Power India Ltd. Noida selected on the basis of competitive bidding at a total cost of Rs.33 crore approximately.

Further the overhauling of Unit-1 was started on 01.02.2018 for a period of two months and the overhauling of Unit-2 will be started after the completion of overhauling of Unit-1. Accordingly an expenditure of Rs 23 crore will be incurred in the year 2017-18 and balance will be incurred in the year 2018-19 and the total amount of expenditure for revival of 20 nos. ESP fields and repairing of balance 36 nos. ESP fields of Unit 1 & 2 DCRTTP Yamuna Nagar including the expenditure on the aforesaid work order will be capitalized during FY 2018-19 only. As such expenditure will be incurred in the phase manner but will be capitalized only in the year of completion thereof.

The ESP fields were damaged after the expiry of guarantee/warranty period of M/s Shanghai Electric Co. China (OEM). There was no design problem in ESP fields and first three row fields were failed over a passage of time. M/s R infra modified/improved ash evacuation system at their cost and now the system is healthy and all ESP hoppers are clearing on daily basis.

Observation 4

New capital investment schemes of revival of 2 no. ESP of U-1 RGTPP and Energy Management System at RGTPP amounting to Rs 8 Crore and 0.55 Crore have been propped for FY 2017-18. Details of the actual expenditure incurred till date in this regard be submitted.

To the above HPGCL has submitted that the new Capital Investment schemes namely revival of 2 no. ESP of U-1 RGTPP and Energy Management System at RGTPP amounting to Rs 8.0 Crore and 0.55 Crore was submitted to Hon'ble Commission for FY 2017-18 keeping in view the Scheduled Capital Overhauling of the Unit. As the Capital Overhauling of the Unit has been postponed as such no expenditure has been incurred till date and the Capital Overhauling has been rescheduled in FY 2018-19, so the Capital Expenditure will be incurred accordingly. Accordingly CIP has also been revised and enclosed for the consideration of the Hon'ble Commission.

The Commission had approved the Capital Investment Plan of Rs.136.38 cr. for the petitioner for FY 2017-18 vide its order dated 30.04.2017. However, vide the instant petition for true-up of FY 2016-17, review of mid-year performance for 2017-18 and application for tariff determination for FY 2018-19, the petitioner has proposed its capex

for 2017-18 to be Rs.69.83 cr. Commission observes that there has been reduction of Rs. 75 cr. approximately in its capex of 136.38 cr. approved by the Commission for FY 2017-18. From the perusal of the revise capax details submitted by the petitioner and the justification given in response to observations raised by the Commission, it is observed that works amounting to Rs. 75 cr. have been deferred which mainly constitute works of over hauling of Hydel units (Rs. 32 cr.), ERP system (14 cr.) RGTPP works (Rs. 10.84 cr.), revival and repairing of ESP fields of DCRTPP (22.5 cr.) and raising of Ash dyke works for DCRTPP.

Further new capital works of Rs. 8.55 cr. have also been projected to be carried out during FY 2017-18 thereby, revising the Capital Investment in FY 2017-18 to be Rs. 69.83 cr. and projected the capax for FY 2018-19 as Rs. 156.18 cr., for FY 2019-20 the capax projection are Rs. 26.57 cr. and for FY 2020-21 the capax has been projected as Rs. 0.35 cr.

In view of position explained by HPGCL in its reply to the observation raised by the Commission approves the Capital Investment for the period as under:-

Sr. No.	Capital Expenditure work	CAPEX (Rs. Cr.)			
		2017-18	2018-19	2019-20	2020-21
1	Capital Overhauling at WYC	4.20	31.80	-	-
2	ERP System and allied works	-	23	12	-
3	Procurement of one no. heat exchanger for Boiler Circulation Pump for RGTPP, Hisar	-	2	2.0	-
4	Balance Payment to R-Infra against EPC contract for RGTPP, Hisar	0.80	6.61	-	-
5	Procurement of one set of PA fan blades for RGTPP Hisar	-	1.40	-	-
6	Procurement of 2 No. Air Driers for Transport Compressors for RGTPP Hisar	-	-	0.40	0.35
7	Trunion Bearing Housing and adopter sleeves support and guide side of APH for RGTPP Hisar	-	-	2.00	-
8	Additional oxygen probes at APH inlet and outlet of Unit- I & II for RGTPP Hisar	-	1.25	-	-
9	Arrangement of Dust Suppression system at ash dyke for RGTPP Hisar	-	0.80	3.70	-
10	Construction of 2 no. Barracks for CISF for RGTPP Hisar	-	0.28	1.00	-
11	Installation of CCTV surveillance System in RGTPP Hisar	-	2.00	-	-
12	Construction of DAV school in power plant colony for	-	3.00	3.87	-

Sr. No.	Capital Expenditure work	CAPEX (Rs. Cr.)			
	RGTPS Hisar				
13	Rectification / repair work of ESP of PTPS Unit# 7 & 8, PTPS, Panipat	5.00	-	-	-
14	Installation of On-Line Stator End Winding Vibration Monitoring System in Unit# 7&8 PTPS	0.77	-	-	-
15	Revival of Fire Fighting System of Unit-6,PTPS,Panipat	-	0.60	-	-
16	Replacement of PTPS Unit-6 AD Line in Ash Handling & repair D2 of ESP Field	1.30	0.90	-	-
17	Replacement of damaged floor and Construction of Roads in PTPS Colony, Panipat as per new norms of Government of Haryana	0.55	1.00	-	-
18	Replacement of CTs and CVTs in 220 KV Switchyard Unit#5&6 PTPS	1.70	-	-	-
19	Up-gradation of DCS System in Unit 7&8 PTPS Panipat	16.81	-	-	-
20	Purchase of Fire Tenders for PTPS	0.40	0.40	-	-
21	Up-gradation of PTPS Unit-6 HMI System of pro-control supplied by M/s BHEL	-	1.50	-	-
22	Energy Management System PTPS Unit- 7-8	-	0.70	-	-
23	Replacement of PTPS Unit-7&8 Fire Fighting, Hydrant and Spray pipelines	-	3.00	-	-
24	Replacement of PVC fills of PTPS Unit-7 & 8 Cooling Tower	8.50	-	-	-
25	Up gradation of existing DCS system for DCRTTP 1 & 2	-	4.25	-	-
26	Installation of CCTV Camera System in DCRTTP Plant area	0.60	-	-	-
27	Revival of 20 no ESP fields and repairing of balance 36 no. ESP fields of Unit-1& 2 DCRTTP Yamunanagar	23.00	22.00	-	-
28	Providing of 2 No. VFD on Unit-1 DCRTTP , 6.6KV Motor of CEP	-	2.30	-	-
29	Township for DCRTTP, Yamunanagar	1.15	2.35	-	-
30	Civil Works for WYC Hydel Project	-	7.50	-	-
31	Revival of 02 Nos of ESP fields of RGTPP Unit I	-	8.00	-	-
32	Supply, Erection, Testing and Commissioning of Energy Management System at 2x600 MW RGTPP, Khedar, Hisar	-	0.55	-	-

Sr. No.	Capital Expenditure work	CAPEX (Rs. Cr.)			
33	Modernization of Boiler Lift for PTPS Unit 8	-	0.70	-	-
34	Replacement of DAVR in DCRTTP Units 1 & 2	-	1.50	-	-
35	Providing of 2 No. VFD on Unit-II DCRTTP ,6.6KV Motor of CEP	-	2.36	-	-
36	Improvement work of Cooling Towers of RGTPP Unit I & II	-	8.00	8.00	-
37	Installation of Variable Frequency Drive in Condensate Extraction Pump (CEP) of RGTPP Unit I & II	-	5.21	-	-
38	Replacement of 2 Nos. Stator of BCP of RGTPP Unit I & II	-	5.21	-	-
39	Upgradation of C&I system for RGTPP Hisar	-	3.00	3.00	-
40	Mobile Coal Sampling System	-	0.66	-	-
Total		64.78	153.83	33.97	0.35

19 Mid-Year Performance Review for FY 2017-18 and Generation Tariff for FY 2018-19

HPGCL has submitted that there have been some operational constraints which have major impact on the overall operations and technical efficiency of its generating stations. HPGCL prayed the Commission to give due consideration to these constraints while reviewing the performance of the various plants (their units) of HPGCL and finalizing and approving the generation tariff thereof. Accordingly, HPGCL has submitted mid-year performance review for the FY 2017-18 and Generation Tariff for the FY 2018-19 in-line with regulation 11 of the HERC MYT Regulations, 2012, as under:-

Technical Parameters

The Commission has considered the technical and financial parameters proposed by HPGCL and the rationale thereto as also earlier re-produced in the present Order and allows as under:-

Plant Load Factor (PLF%)

HPGCL has provided the actual performance of the generating stations for the past years including first six months of FY 2017-18. The Plant Load Factor of HPGCL Units for the last five years is given as under:-

Unit #	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18 (upto Sept)
PTPS 5-6	81.55%	36.33%	32.34%	9.02%	10.57%	11.70%
PTPS 7-8	89.90%	79.35%	62.48%	31.00%	41.49%	51.32%
DCRTPP	18.33%	66.06%	66.89%	76.97%	65.15%	61.64%
RGTPP	47.5%	41.69%	54.42%	44.21%	36.20%	40.39%
HPGCL Thermal	53.65%	47.04%	49.15%	39.18%	39.60%	42.66%
Hydel	45.22%	37.37%	32.85%	34.45%	37.55%	36.42%

It has been submitted that with the exception of Hydel, PLF of all the units has been significantly lower than the normative PLF. This downfall is primarily due to backing down of majority of stations for considerable periods of time. This has further lead to the deterioration in the operating performance.

HPGCL has submitted that there has been a significant amount of backing down since FY 2013-14. It can be seen that quantum of backing down is increasing with each passing year. On an average 6.40% of the installed capacity of the HPGCL was backed down in FY 2012-13 which has increased to 50.54% in FY 2017-18 (Till September). Further the frequency of the backing down of the HPGCL units is consistently high.

HPGCL in present petition has submitted the mid-year performance review for FY 2017-18 and generation tariff for the FY 2018-19 in line with Regulation 11 of the HERC MYT Regulations, 2012. HPGCL has also made some assumptions based on its suggestion made to the Commission for the new tariff regulations for the second control period.

Based on the actual performance of HPGCL for first six months of FY 2017-18, HPGCL has provided likely trajectory of performance for FY 2017-18 and FY 2018-19 in accordance to the HERC MYT Regulations, 2012. HPGCL has forecasted the performance parameters and likely impact on cost of generation based on the norms set by the Commission and has taken deviations from the regulations or previous Tariff order where factors affecting HPGCL are beyond the control of utility or due to any force majeure event.

HPGCL has submitted that there has been a significant amount of backing down of its generating stations since FY 2013-14 onwards on instruction of SLDC/Discoms. The quantum of plant wise backing down in previous years is as under:-

Unit #	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18
PTPS – 1-4	631.95	3263.35	3193.45	587.07	-	-
PTPS – 5-6	273.66	1806	2413.74	3084.65	3266.83	1366.12
PTPS – 7-8	195.95	779.75	1368.23	2671.46	2468.22	1025.53
DCRTPP	199.24	602.55	585.38	1081.53	1373.34	808.12
RGTPP	489.93	1995.17	2304.47	4184.4	6011.54	2837.6
Overall %	6.40%	30.20%	35.20%	39.00%	55.06%	50.54%

From the table referred above it reveals that quantum of backing down of HPGCL generating stations is increasing with each passing year. On an average 30.20% of the installed capacity of the HPGCL was backed down in 2013-14 which has increased to 55.06% in 2016-17. There is also tremendous increase in the frequency of the backing down of the HPGCL units as given below:-

Number of Start and Stop Operations due to Backing down (in Numbers)

Year	PTPS	DCRTPP	RGTPP	HPGCL
2013-14	34	5	9	48
2014-15	69	4	5	78
2015-16	29	11	18	58
2016-17	33	11	16	60
2017-18 (upto Sept)	18	8	11	37

It is submitted that significant backing down has adversely impacted the operational parameters of HPGCL generating station due to the following reasons:-

i) While the HPGCL generating units are backed down, there are certain auxiliaries that are necessary to be run at part load as well as full load, which leads to higher auxiliary consumption for the reduced generation or no generation for which no variable cost is being recovered from the beneficiaries.

ii) Turbine Cycle heat rate of plants rise with fall in loading of the plant and hence backing down increases SHR of the plant leading to inefficiency.

iii) Due to the unplanned backing down, the coal consumption reduces significantly and leads to piling up of coal stock at the plants. The coal companies generally have erratic coal supply schedules, which are beyond the control of HPGCL. The piling of coal stock/ non-movement of coal stock not only creates the operational issues for stacking of coal but also increases the risk of smouldering and loss in the gross calorific value of the coal stored.

iv) Backing down also affects the operational life due to increase in start-stop operation and cycling of units from full load to partial load and vice-versa. The same also undermines efficiency of the power plants, consequently increasing the repair and maintenance expenses.

v) HPGCL is obligated to purchase coal in line with the contractual agreement with the coal companies. As per the Coal Supply Agreement, in case of post 2009 plants if HPGCL does not lift the minimum stipulated quantity, a significant amount (in the range of 10% to 40% of the coal cost) becomes payable as compensation on account of short lifting to the coal companies, considering it as the deemed delivered quantity. In case of pre 2009, the trigger level for lifting of coal is 90% of ACQ and compensation on account of short lifting is payable to coal companies below 90%. Due to uncertainty of running/backing down of HPGCL Thermal Power Stations, the coal supplies have to be regulated time to time. On the one hand, HPGCL has to struggle with the problem of excessive coal stock and on the other hand it has to pay compensation for short lifting which increases the effective coal cost per ton as well as apprehension of termination of coal linkage.

vi) As HPGCL plants are dedicated to supply in Haryana, so the Hon'ble Commission is requested to direct distribution licensees under its purview to allow 'minimum technical run' of HPGCL plant below which there is an increase in auxiliary consumption and specific oil consumption.

vii) Backing down also leads to stacking of coal in HPGCL plants. Prolonged stacking of coal leads to problems like smouldering of coal stock and moisture ingress which leads to decrease in coal GCV which still further increase variable cost of HPGCL plants and forms a viscous circle with backing down.

Though, there is a provision in the HERC regulations that PLF of HPGCL shall be calculated considering the backing down impact for recovering annual fixed charges but there is no express provision for recovering consequential damages on account of abnormally high auxiliary consumption, Specific oil consumption and SHR. Also there is no such provision in the HERC, HGC Regulation, 2009 also.

As Per Regulation 7.3 (c) of HGC, 2009 Hon'ble Commission shall continue to review the HGC to make it compatible with the IEGC. In the event of any inconsistencies; the provisions of IEGC shall prevail.

Central Electricity Regulatory Commission (CERC) has amended its IEGC Regulation, 2010 vide notification dated 06th April 2016 and relaxed the norms of Aux. Cons., Oil Cons. and SHR as under:

“..... (i) In case of coal / lignite based generating stations, following station heat rate degradation or actual heat rate, whichever is lower, shall be considered for the purpose of compensation:

Unit loading as a % of Installed Capacity of the Unit	Increase in SHR (for supercritical units) (%)	Increase in SHR (for sub-critical units) (%)
85-100	Nil	Nil
75-84.99	1.25	2.25
65-74.99	2	4
55-64.99	3	6

(ii) In case of coal / lignite based generating stations, the following Auxiliary Energy Consumption degradation or actual whichever is lower, shall be considered for the purpose of compensation:

S No.	Unit loading as a % of Installed Capacity of the Unit	% Degradation in AEC Admissible
1	85-100	Nil
2	75-84.99	0.35
3	65-74.99	0.65
4	55-64.99	1.00

(iii) Where the scheduled generation falls below the technical minimum schedule, the concerned CGS or ISGS shall have the option to go for reserve shut down and in such cases, start-up fuel cost over and above seven (7) start / stop in a year shall be considered as additional compensation based on following norms or actual, whichever is lower:

Unit Size (MW)	Oil Consumption Per Start-up		
	Hot	Warm	Cold
200/210/250 MW	20	30	50
500 MW	30	50	90
660 MW	40	60	110

(iv) *In case of gas based Central Generating Station or inter-State Generating Station, compensation shall be decided based on the characteristic curve provided by the manufacturer and after prudence check of the actual operating parameters of Station Heat Rate, Auxiliary Energy Consumption, etc.*

(v) *Compensation for the Station Heat Rate and Auxiliary Energy Consumption shall be worked out in terms of energy charges.*

(vi) *The compensation so computed shall be borne by the entity who has caused the plant to be operated at schedule lower than corresponding to Normative Plant Availability Factor up to technical minimum based on the compensation mechanism finalized by the RPCs.*

(vii) *No compensation for Heat Rate degradation and Auxiliary Energy Consumption shall be admissible if the actual Heat Rate and / or actual Auxiliary Energy Consumption are lower than the normative Station Heat Rate and / or normative Auxiliary Energy Consumption applicable to the unit or the generating station.*

(viii) *There shall be reconciliation of the compensation at the end of the financial year in due consideration of actual weighted average operational parameters of station heat rate, auxiliary energy consumption and secondary oil consumption.*

(ix) *No compensation for Heat Rate degradation and Auxiliary Energy Consumption shall be admissible if the actual Heat Rate and / or actual Auxiliary Energy Consumption are lower than the normative station Heat Rate and / or normative Auxiliary Energy Consumption applicable to the unit or the generating station in a month or after annual reconciliation at the end of the year.....”*

Appropriate similar provision is also required to be provided in the HERC, HGC Regulation, 2009 for relaxing the norms of auxiliary consumption, Specific oil consumption and SHR during the excessive backing down period.

Under Regulation 7.5 of the HGC regulation, the Commission has power to remove difficulty regarding giving effect to the provisions of these regulations. However the Commission has yet to amend the HGC regulation.

Abstract of unit wise Tripping and Backing Down during FY 2016-17 & FY 2017-18 (End. Feb) and period of non working of plants.

	2016-17				2017-18			
RGTPP	Tripping	Hrs	Backing down	Hrs	Tripping	Hrs.	Backing Down	Hrs.
Unit-I	4	130.44	9	4120.74	6	427.36	11	3288
Unit-II	4	301.54	7	3243.02	11	637.28	8	2530
DCRTPP I	8	426.74	5	1345.48	4	153.33	5	1289.50
DCRTPP II	9	684.96	6	1456.83	9	242.61	5	804.80
PTPS-5	4	11.65	3	7811.73	1	4.45	4	6647.88
PTPS-6	2	73.10	6	7539.55	3	65.89	8	5366.34
PTPS-7	5	261.89	12	3547.06	10	112.81	12	2756.76
PTPS-8	3	154.01	12	5557.4	1	92.37	12	3647.05

HPGCL has also filed a petition (HERC case No. 29 of 2016) dated 14.09.2016 before the Commission for removal of difficulty requesting that till the time the Commission amends the HGC Regulation, 2009, appropriate order to remove the difficulty being faced by HPGCL in respect of its RGTPP and DCRTPP generating stations should be notified. The aforesaid petition is also yet to be decided by the Commission.

Considering the delay in amending the HGC regulation and also decision on the difficulty petition of the HPGCL, the technical parameters for review of FY 2017-18 and for generation tariff determination for 2018-19, has been considered as per the HERC MYT, Regulation, 2012 with reasonable deviations in line with CERC notification dated 06.04.2016 regarding amending the IEGC Regulation as per their achievability considering past performance and submissions made by HPGCL regarding regulation for second control period.

HPGCL has proposed PLF of its plants for FY 2017-18 and FY 2018-19 as under:

S.N	Unit #	Approved		Proposed	
		FY 17-18	FY 18-19	FY 17-18	FY 18-19
1	PTPS 5-6	35.00%	N.A	35.00%	82.50%
2	PTPS 7-8	85.00%	N.A	85.00%	85.00%

S.N	Unit #	Approved		Proposed	
		FY 17-18	FY 18-19	FY 17-18	FY 18-19
3	DCRTPP	85.00%	N.A	85.00%	85.00%
4	RGTPP	85.00%	N.A	85.00%	85.00%
5	WYC Hydel	37.00%	N.A	37.00%	37.00%

It has been submitted that the Commission in its previous orders had approved PLF for PTPS unit- 5&6 at 35% with the expectation that these thermal power plants would dispatch intermittently i.e. during the peak power demand months only. HPGCL contemplates the utilization of the unsolicited demand with sales through Open Access or banking. Accordingly the Commission is requested to approve PLF of 82.5% for PTPS unit- 5&6.

It has been submitted that continuation of PTPS unit-5 has also been considered in FY 2018-19 keeping in view the negligible incremental fixed cost of R&M and A&G expenses only and due to the other reasons and benefits of Discoms, it will be in the interest of the State and in order to meet the peak demand of the State to allow continuation of PTPS unit-5 in 2018-19 as well as a reserve source by paying marginal amount of Rs. 28.94 cr. on account of R&M and A&G.

HPGCL will incur only the need base expenditure on maintenance of the plant and may also carry out its Residual Life Assessment Study to analyse the cost benefit of continuing operations from the unit.

It is therefore proposed that the 210 MW unit-5, PTPS, Panipat may not be retired and may be kept in operation for at least three more years.

HPGCL has accordingly projected the generation from PTPS unit-5 as per the HERC, MYT Regulation, 2012 at a normative PLF of 82.5%.

CUF for WYC, Hydel project Bhudkalan Yamunangar, has been kept at 37% which is 50% of the available capacity. Two machines of the Hydel project shall remain under shut down condition due to envisaged Capital overhauling, as per earlier submissions of HPGCL and as approved by the Commission in its previous orders.

HPGCL further submitted that in view of HPGCL submission regarding the Incentive in form of over recovery of fixed cost based on Deemed PAF Hon'ble Commission in its order dated 26.04.2017 stated that

“The Commission carefully examined the relevant provisions of HERC MYT Regulations, 2012 and observes that in order to apply incentive and penalty

framework w.r.t. Plant Availability Factor (PAF), actual PAF should fall below or exceed the level specified by the Commission. Thus, deemed PLF / PAF cannot form the basis of claiming any incentive as such. Accordingly, claim of HPGCL on incentive due to higher deemed generation than the approved generation, does not hold much merit, accordingly the said claim is not considered for the purpose of incentive under the HERC MT Regulations, 2012. “

In this regard it is submitted that the procedure/formula for the Incentive in form of over recovery of fixed cost is neither defined in HERC MYT Regulation, 2012 nor the same has been defined by the Commission in any Tariff Order. HPGCL request the Commission to define the procedure in case the actual PAF exceed the level specified by Commission, so that HPGCL can approach the Commission accordingly for Incentive in the form of over recovery of fixed cost. The Commission observed the unit wise Plant load Factor of the HPGCL Plants.

Unit wise PLF (%) of HPGCL plants for Last 6 years

PLF (in %)	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18
PTPS – 5	63.05	25.75	28.29	8.84	9.20	7.67
PTPS – 6	100.05	46.90	36.39	8.33	11.93	20.31
PTPS – 7	88.61	79.46	60.68	23.6	51.46	58.34
PTPS – 8	91.19	79.24	64.27	37.15	31.52	35.95
DCRTPS-1	9.39	83.05	75.34	75.89	70.07	54.85
DCRTPS-2	27.26	49.08	58.44	77.96	60.23	76.36
RGTPS-1	34.48	52.87	67.02	43.76	37.83	44.93
RGTPS-2	60.51	30.50	41.85	45.20	34.57	44.13
HPGCL	53.65	47.04		34.45	39.60	
Hydel	45.22%	37.37%	32.85	34.45		

The petitioner has supplied the unit wise Deemed Plant Load Factor of its plants, which is as under:-

Deemed PLF (%) in Last 6 Years

Plants	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18
PTPS – 5	76.32	72.68	97.86	87	99.51	85.64
PTPS – 6	101.65	98.13	98.02	79.8	99.21	82.89
PTPS – 7	93.96	93.99	94.98	80.4	97.30	94.81
PTPS – 8	94.79	100.32	92.44	96.4	98.38	81.41
DCRTPS-1	14.11	95.49	85.53	94.80	96.48	76.49
DCRTPS-2	30.13	59.57	70.51	97.46	86.07	95.22
RGTPS-1	40.33	78.23	90.55	76.17	100.32	97.49
RGTPS-2	63.99	43.10	62.13	88.71	86.46	89.94
HPGCL	60.10	77.48	84.70	34.4	94.66	

Commission observed that during FY 2016-17 HPGCL is able to achieve normative PLF but for the backing down on instructions of DISCOMs or SLDC. However, in FY 2017-18 the deemed PLF in case of PTPS-8 and DCRTPS-1 are below the normative value. HPGCL needs to take appropriate action to achieve the targets fixed by the Commission.

In view of the position explained above by the petitioner in its Annual Performance Review Petition for FY 2017-18, the PLF for HPGCL Plants for the year FY 2017-18 & FY 2018-19, the PLF, proposed by the HPGCL, has been allowed as under :-

Plant	Approved		Proposed	
	FY17	FY 18	FY17	FY 18
PTPS-5-6	35.00%	NA	35.00%	82.50%
PTPS-7-8	85.00%	NA	85.00%	85.00%
DCRTPP-1-2	85.00%	NA	85.00%	85.00%
RGTPP-1-2	85.00%	NA	85.00%	85.00%
WYC Hydel	37.00%	NA	37.00%	37.00%

Auxiliary Energy Consumption (%)

The table given below provides the unit wise Auxiliary Consumption (%) for last six years as filed by the Petitioner:-

Auxiliary Energy Consumption (%)

Unit #	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18 (upto Sept)
PTPS 5-6	10.53%	11.53%	11.93%	14.34%	14.24%	14.27%
PTPS 7-8	9.51%	9.55%	9.88%	10.09%	9.60%	9.74%
DCRTPP	10.46%	9.05%	8.83%	8.56%	8.82%	8.55%
RGTPP	5.93%	5.83%	5.95%	5.82%	6.01%	6.24%

HPGCL has submitted that despite its best efforts, auxiliary consumption is historically above the normative levels approved by the Commission especially for PTPS unit 6-8. The reasons for which are primarily attributable to the factors beyond the control of HPGCL such as backing down wherein the key auxiliaries have to be kept functioning despite the fact that there is no generation for which there is no provision in the HERC MYT Regulations, 2012. In case of partial backing down also auxiliary equipment power requirement is not necessarily reduced proportionate to reduction in power generation.

It has further stated that Commission in its Order dated 27.03.2015 regarding generation tariff for FY 2015-16 has appreciated the difficulties faced by HPGCL on account of backing down and poor quality of coal to some extent and had relaxed auxiliary consumption for PTPS Units 5-6 from 9% to 10%. Hon' ble Commission has further relaxed the auxiliary consumption for PTPS 7-8 from 8.5% to 9% in its previous order. Relaxation is also required in case of DCRTTP units due to partial loading of these units as the generation from DCRTTP Yamuna Nagar is scheduled to the maximum extent among the HPGCL Units due to its relatively low variable cost. Depending upon the requirement during various slots of the day, the DCRTTP Units are operated at a relatively high PLF, and are rarely closed down. Due to partial back down of these units the aux. Cons. remains on higher side then the approved norms.

The annual PLF of the DCRTTP, Yamuna Nagar station for FY 2016-17 was 65.15% which is significantly lower than the approved norms. Even after excluding the boxing up of the unit on the instructions of the beneficiary the average loading of the DCRTTP, Yamuna Nagar also remains low at 77.6%.

There is no express provision in the regulation to govern the Aux. Cons. according to the loading of the generating station.

As per the CERC IEGC Regulation the relaxation in the Aux. Cons. at the loading range of 75% to 84.99% in case of subcritical generating station is 0.35%. Accordingly, HPGCL proposes that auxiliary consumption for DCRTTP be relaxed from 8.5% to 8.85% as per the conditions laid down in the CERC notification considering an average loading of 77.6%. However the auxiliary consumption of other units has proposed as per the norms with the relaxation approved by the Commission in its earlier orders dt. 31.03.2016 and 26.04.2017.

The Commission agree to the contention of the Petitioner that auxiliary energy consumption for a generating station depends on quality of coal received at the feeding point, number of frequent start-ups and shut downs it encompasses, the ageing of equipment and number of drives used in the actual operation on account of the above factors.

The Commission had allowed Auxiliary Energy Consumption in its Order dated 31st March, 2016, 1% over and above the norms in case of PTPS (5-6) and for other Units of PTPS and other plants of HPGCL the auxiliary energy consumption was kept as per the Regulation 28 (2) of the MYT Regulations, 2012, for Units 5 and 6 at 10% for

PTPS Units- 7 and 8 and DCRTPS Units-1 and 2 was allowed at 8.5 % and that for RGTPS Units 1 and 2 at 6 % and WYC & Kakroi Hydel Plants as 1 % (inclusive of transformation loss).

The following table provides the trend in the auxiliary energy consumption for HPGCL plants for the last five years:-

Unit wise Auxiliary Consumption (%) for last 5 years

Unit #	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18
PTPS 5	12.28	12.67	14.33	15.95	16.12	12.28
PTPS 6	10.78	11.24	14.34	12.52	10.61	10.78
PTPS 7	9.56	10.10	10.84	9.20	8.97	9.56
PTPS 8	9.53	9.67	9.34	10.00	9.48	9.53
DCRTPS-1	8.70	8.66	8.45	8.67	8.62	8.70
DCRTPS-2	9.65	8.97	8.66	8.90	8.36	9.65
RGTPS-1	5.67	5.99	5.88	6.03	5.92	5.67
RGTPS-2	6.12	5.65	5.75	6.12	5.89	6.12
HPGCL	8.49					

The HPGCL has proposed auxiliary energy consumption in present petition for FY 2017-18 and FY 2018-19 as under:-

Unit No.	Approved		Proposed	
	FY 17-18	FY 18- 19	FY 17-18	FY 18- 19
PTPS 5-6	10.00%	NA	10.00%	10.00%
PTPS -7-8	9.00%	NA	9.00%	9.00%
DCRTPP	8.50%	NA	8.50%	8.85%
RGTPP	6.00%	NA	6.00%	6.00%
WYC Hydel	1.00%	NA	1.00%	1.00%

The Commission is of considered view that HPGCL must continue to put in sincere efforts to bring down the auxiliary energy consumption of its generating units as per the norms and is not inclined to further relax the norms as approved in its last Order for FY 2017-18 with a view to consider the same at the time of True-up for the year based on actual data.

Secondary Fuel Oil Consumption

HPGCL has submitted Unit-wise specific oil consumption for past 5 years as under:-

Oil Consumption (ml/kwh)	2013-14	2014-15	2015-16	2016-17	2017-18
PTPS - 5	2.09	1.60	1.95	2.22	4.04
PTPS - 6	1.26	1.63	3.91	2.11	2.60

Oil Consumption (ml/kwh)	2013-14	2014-15	2015-16	2016-17	2017-18
PTPS - 7	0.54	0.72	1.39	0.78	0.61
PTPS - 8	0.54	0.61	0.91	1.02	1.26
DCRTPS-1	0.54	0.51	0.50	0.59	0.54
DCRTPS-2	1.28	1.05	0.48	0.86	0.47
RGTPS-1	0.54	0.28	0.66	0.48	0.49
RGTPS-2	0.72	0.56	0.69	0.62	0.74
HPGCL	0.85				

HPGCL has submitted that the specific oil consumptions of relatively new generating Units have improved over the years. The table given above reveals that the new generating stations of the HPGCL are able to achieve the normative level of specific oil consumption when allowed to run at the optimum level. However, the backing down of Units increases the specific oil consumption of Units especially the old ones as the Units need to be run on oil support during the start-ups and while running at partial capacity. Even in the new Units, if the running of the power plants is below the minimum technical run, it leads to higher oil consumption.

Further, oil support is frequently required for stability of the furnace and to prevent the Units from tripping due to poor quality of coal.

Secondary fuel consumption proposed by HPGCL in line with the Commission Order dated 26.04.2017 regarding Generation Tariff for FY 2017-18 as tabulated below:-

Secondary Fuel Oil Consumption (ml/kWh)	Approved		Proposed	
	FY 17-18	FY 18- 19	FY 17-18	FY 18- 19
PTPS 5-6	1.0	NA	1.0	1.0
PTPS -7-8	1.0	NA	1.0	1.0
DCRTPS-1-2	1.0	NA	1.0	1.0
RGTPS-1-2	1.0	NA	1.0	1.0

The commission observed that the HPGCL has been able to achieve the normative level of specific oil consumption when allowed to run its plants at the optimum level. However, the old units PTPS 5-8 the specific oil consumption is still higher than the norms which needs to be improved upon with focus to achieve the bench work.

The commission approves the specific oil consumption of the HPGCL plants for FY 2018-19 as proposed by the Petitioner which is in line with the MYT Regulations 2012 as amended from time to time.

Station Heat Rate (SHR)

The unit wise station Heat rate of the HPGCL plants for the past 5 years is as under:-

Station Heat Rate (in Kcal/kwh)

Unit	2013-14	2014-15	2015-16	2016-17	2017-18
PTPS - 5	2577	2537	2548	2499	2721
PTPS - 6	2579	2546	2514	2519	2653
PTPS - 7	2494	2482	2495	2478	2562
PTPS - 8	2497	2464	2491	2465	2551
DCRTPS-1	2383	2337	2331	2315	2321
DCRTPS-2	2392	2341	2328	2317	2317
RGTPS-1	2375	2387	2384	2589	2523
RGTPS-2	2369	2395	2392	2573	2505
HPGCL	2447				

HPGCL has submitted that as a result of better operation and maintenance practices despite adverse conditions of high backing down and low quality of coal, plants of HPGCL have exceeded the performance parameters set by Hon'ble Commission with regards to SHR. HPGCL has been able to achieve the norms even under the adverse conditions due to its efficient operation of the Units at optimum possible parameters. It has implemented various standard O&M practices including the regular monitoring and review by the expert groups and also at various levels of the management.

HPGCL submits that there has been a sudden jump in SHR of RGTPP in FY 2016-17. It has been submitted that RGTPP's loading as percentage of plant capacity is around 62% which is significantly low. Relaxation in SHR due to operation at lower MCR, in the range of 55% -65%, extended by CERC in IEGC Regulation is 6% has been requested. This translates to a SHR of 2530 kcal/kWh which is requested to be considered and allowed by the Commission.

HPGCL has submitted that 2X600 MW RGTPP, Hisar had to face maximum boxing up of the units on the instructions of the beneficiary. The annual PLF of RGTPP, Hisar for FY 2016-17 was 36.20% only. After excluding the boxing up of the units on the instructions of the beneficiary the average loading of the RGTPP, Hisar for the year was also significantly low at 62.0%.

Further there is no express provision in the regulation for allowing the SHR according to the loading pattern of the generating station. As such in line with CERC's

IEGC regulations, the SHR for RGTPP is proposed with a relaxation of 6% as per the conditions laid down in the CERC notification considering average loading of FY 2016-17. HPGCL requested the Commission to relax the SHR norms for RGTPP to 2530 kcal/kWh. The SHR for the other units has been proposed as per norms approved by the Commission.

The SHR proposed by HPGCL for FY 2017-18 and FY 2018-19 is as under.

S.N	SHR(kcal/kWh)	Approved		Proposed	
		FY 17-18	FY 18- 19	FY 17-18	FY 18- 19
1	PTPS 5-6	2550	NA	2550	2550
2	PTPS 7-8	2500	NA	2500	2500
3	DCRTPP	2344	NA	2344	2344
4	RGTPP	2387	NA	2387	2530

HPGCL has requested the Commission to approve the SHR for the various plants/ Units as proposed above, considering the historical performance, operational issues and regulatory norms.

The Commission observed that HPGCL has been able to achieve the station heat rate for its plants during FY 2016-17 except for RGTPP units, where in the SHR for unit I & II is 2581 Kcal/Kwh. During FY 2017-18 up to Sept.2017 the Station Heat Rate for its plants PTPS 5-6 is 2863 Kcal/Kwh, PTPS7-8 is 2665 Kcal/Kwh, DCRTPP 1-2 is 2351 Kcal/Kwh and RGTPP1-2 is 2543 Kcal/Kwh which is very high. HPGCL is required to continue its efforts for further improvement in its critical performance parameter. Further, there is no specific provision in the regulations, to compensate for the degradation of the performance. Parameters like SHR in line with the amended CERC IEGC Regulation, 2016 quoted by the petitioner.

The Commission observes that HPGCL has requested the Station heat rate for its plants as per its proposal which is the same as approved by the Commission in its last Order dated 30th April, 2017 in case no. HERC/PRO-38 of 2016 regarding generation tariff for FY 2017-18, except for RGTPP where SHR for FY 2018-19 has been projected as 2530 Kcal/Kwh instead of 2387 Kcal/Kwh as per norms MYT Regulation, 2012. The Commission does not find Petitioner's request to be justified and approves the SHR as per prevailing Norms in this regard.

Calorific Value and Price of fuel (Coal & Oil)

HPGCL has submitted that the GCV of Coal has been proposed for the FY 2017-18 and the FY 2018-19 as per the actual weighted calorific value of coal for PTPS,

DCRTPS and RGTPS during April to Sept. of FY 2017-18, as under:-

GCV of coal (kcal/Kg) for FY 2017-18 and FY 2018-19

Gross Calorific Value of Coal (kcal/Kg)			
Particulars	PTPS	DCRTPP	RGTPP
Calorific Value of Coal(Kcal/kg)	3798	3567	3539

The petitioner has further submitted that the GCV of secondary fuel (oil) has also been proposed for the FY 2017-18 and the FY 2018-19 as per the actual weighted calorific value of oil for PTPS, DCRTPS and RGTPS during April to Sept. of FY 2017-18 as under:-

GCV of oil (kcal/Kl) for FY 2017-18 and FY 2018-19

Gross Calorific Value of Coal (kcal/Kg)			
Particulars	PTPS	DCRTPP	RGTPP
Calorific Value of Oil(Kcal/kg)	10107	10485	10400

HPGCL has proposed the weighted average cost of coal and oil for the FY 2017-18 on the basis of the respective power plant in April to Sept. of FY 2017-18. HPGCL has proposed coal and oil price for FY 2018-19 on the basis of actual weighted average cost of receipt of coal without any fuel price escalation.

The weighted average landed price of coal and oil has been proposed by the petitioner as under:-

Coal (Rs/MT) for FY 2017-18 and FY 2018-19

Particulars	PTPS	DCRTPP	RGTPP
2017-18	5073	4713	4902
2018-19	4573	4767	4811

Cost of Oil (Rs/KL) for FY 2017-18 and FY 2018-19

Particulars	PTPS	DCRTPP	RGTPP
2017-18	31285	38409	38412
2018-19	31285	38409	38412

HPGCL, on the basis of technical parameters as proposed and fuel price and GCV considered for FY 2017-18 and FY 2018-19, has proposed fuel cost as summarized in the following tables:

		2017-18		2018-19		
Fuel Cost	Generation (Ex-bus)	Total Variable Coal	Per Unit Fuel Cost	Generation (Ex-bus)	Total Variable Coal	Per Unit Fuel Cost
	in MU	(Rs. Cr.)	Rs/ Unit	in MU	(Rs. Cr.)	Rs/ Unit
PTPS – 5-6	1158.95	436.86	3.77	2731.81	928.26	3.40
PTPS – 7-8	3387.93	1238.18	3.65	3387.93	1116.14	3.29
DCRTPS	4072.22	1377.46	3.38	4072.22	1393.24	3.42
RGTPS	8399.02	2941.39	3.51	8399.02	3060.71	3.64
Total	17018.11	5993.90	3.52	18591.04	6498.36	3.50

The Commission has taken on record the proposal filed by the petitioner w.r.t GCV and price of the coal and the same shall be considered for generation tariff determination for the FY 2018-19.

20 Determination Generation Tariff for FY 2018-19

While determining the generation tariff for the FY 2018-19, the Commission has considered the followings:-

- i) PLF for WYC (hydro) has been pegged 37% (given non-availability of two machines). While PLF of all other power stations have been pegged at 85% (PTPS 5-6 - 82.50%) line with the HERC MYT Regulations in vogue.
- ii) Auxiliary Energy Consumption for PTPS (Units 5-6) & PTPS (Units 7-8) has been relaxed from 9% to 10% & 8.5% to 9%, respectively, in line with the previous Order of the Commission. In the case of all other power plants the auxiliary energy consumption has been considered as per the MYT Regulations in vogue.
- iii) For working out fuel cost, the Commission has considered GCV and Cost of coal, based on data/information provided by HPGCL, on the basis of weighted average of GCV and cost of coal for the period from April, 2017 to September, 2017.
- iv) O&M Expenses have been taken, in accordance with the Commission's Order dated 07.11.2016 amending the MYT Regulations, 2012 i.e. base year, for projecting normative values for annual determination of the

ARR/Tariff petition(s) for the FY 2018-19 shall be the FY 2015-16 based on the audited accounts of the licensees and the generating company. O&M expenses of the HPGCL's power plants have been further increased by the apportioned employees cost of PTPS (1-4) in line with the previous Order of the Commission.

- v) The Commission had approved relaxed norms for maintenance spares of RGTPS and DCRTPS @ 15% of the allowed O&M expenses for the control period 2014-15 to 2017-18. The same relaxation has been continued for the FY 2018-19 as prayed for by HPGCL.
- vi) The Commission, in its Order dated 31.03.2016, had disallowed spares capitalized (Rs. 154.60 Crore) by HPGCL in FY 2014-15. HPGCL has further capitalized spares amounting to Rs. 144.97 Crore during the FY 2015-16. The Commission further observed that HPGCL has capitalized an amount of Rs. 44.51 Crore towards dismantling and removing the plant assets. HPGCL was directed to provide detail of the same. The Commission observed that capitalization of spares pertaining to earlier years and capitalization of dismantling cost, may be in order to comply with the Indian Accounting Standard, are not in conformity with the regulation 18.5.2 of MYT Regulation, 2012, hence the same cannot be allowed, as change of law. Accordingly, the depreciation on the same, equivalent to the FY 2016-17 as per the SLM method of depreciation, is disallowed for FY 2018-19 also.
- vii) Interest and Finance charges, have been allowed after considering the 50% of the savings due to restructuring under Regulation 12.4, as against 60% proposed by HPGCL.
- viii) Interest on working capital, in line with the MYT Regulations, has been calculated @ 9.95% p.a. (base rate of SBI i.e. 8.70% + margin of 1.25%).
- ix) Return on Equity has been calculated @ 10% p.a., in line with the previous Order of the Commission and as reduced by the amount of equity disallowed in the true-up Order.

- x) The SLDC charges determined by the Commission for the FY 2017-18 shall be billed separately by HPGCL to the beneficiaries.
- xi) As all expenditure relating to petition filing fee including publication of notices etc. and any other statutory fees/regulatory fees etc. is recovered as part of the A&G expenses therefore no separate provision is required for recovery of the same.

Accordingly, the generation tariff (fuel & fixed cost) has been determined by the Commission for the FY 2018-19. The computational details are provided in the tables that follow.

ENERGY/VARIABLE CHARGES FOR PTPS AND RGTPS (FY 2018-19)

Parameters	Unit	Derivation	Unit 5	Unit 6	Unit 7	Unit 8	RG TPS	Unit 1	Unit 2	DCR TPS	Unit 1	Unit 2	WYC	Total HPGCL
Installed Capacity (MW)			210	210	250	250	600	600	600	300	300	300	62.4	2782.4
Gross Generation	MU	A	643.86	643.86	1,861.50	1,861.50	4,467.60	4,467.60	2,233.80	2,233.80	2,233.80	2,233.80	202.25	18615.77
PLF (%)			82.50	82.50	85.00	85.00	85.00	85.00	85.00	85.00	85.00	85.00	37	
Auxiliary Energy Consumption	%		10.00%	10.00%	9.00%	9.00%	6.00%	6.00%	6.00%	8.50%	8.50%	8.50%	1.00%	7.42%
Generation (Ex-bus)	MU	A1	579.47	579.47	1693.97	1693.97	4199.54	4199.54	2043.93	2043.93	2043.93	2043.93	200.23	17234.05
Station Heat Rate (SHR)	Kcal/kwh	B	2550	2550	2500	2500	2387	2387	2387	2344	2344	2344		
Specific Oil Consumption	ml/kwh	C	1	1	1	1	1	1	1	1	1	1		
Gross Calorific Value of Oil	Kcal/litre	D	10107	10107	10107	10107	10400	10400	10400	10485	10485	10485		
Gross Calorific Value of Coal	Kcal/Kg	E	3798	3798.00	3798.00	3798.00	3539.00	3539.00	3539.00	3567.00	3567.00	3567.00	NA	
Overall Heat	G.cal	F=(A*B)	1641843.00	1641843.00	4653750.00	4653750.00	10664161.20	10664161.20	5236027.20	5236027.20	5236027.20	5236027.20	NA	
Heat from Oil	G.cal	G=(A*C*D)/E	6507.49	6507.49	18814.18	18814.18	46463.04	46463.04	23421.39	23421.39	23421.39	23421.39	NA	
Heat from Coal	G.cal	H= (F-G)	1635335.51	1635335.51	4634935.82	4634935.82	10617698.16	10617698.16	5212605.81	5212605.81	5212605.81	5212605.81	NA	
Oil Consumption	KL	I=G*1000/D	643.86	643.86	1861.50	1861.50	4467.60	4467.60	2233.80	2233.80	2233.80	2233.80	NA	
Coal Consumption	MT	J=(H*1000/E)	430578.07	430578.07	1220362.25	1220362.25	3000197.28	3000197.28	1461341.69	1461341.69	1461341.69	1461341.69	NA	
Cost of Oil per KL	Rs/KL	K	31285.00	31285.00	31285.00	31285.00	38412.00	38412.00	38409.00	38409.00	38409.00	38409.00	NA	
Cost of Coal	Rs/MT	L	4573.00	4573.00	4573.00	4573.00	4811.00	4811.00	4767.00	4767.00	4767.00	4767.00	NA	
Total Cost of Oil #	Rs .Mln	M=(K*I)/10 ⁴	20.14	20.14	58.24	58.24	171.61	171.61	85.80	85.80	85.80	85.80		
Total Cost of Coal	Rs.Mln	N=(J*L)/10 ⁴	1969.03	1969.03	5580.72	5580.72	14433.95	14433.95	6966.22	6966.22	6966.22	6966.22	NA	57899.83
Total Fuel Cost	Rs.Mln	O=M+N	1969.03	1969.03	5580.72	5580.72	14433.95	14433.95	6966.22	6966.22	6966.22	6966.22	NA	57899.83
Fuel Cost/Kwh	Rs.	P=O/A1	3.40	3.40	3.29	3.29	3.44	3.44	3.41	3.41	3.41	3.41	NA	3.36

Cost of Secondary Fuel Oil reduced from Energy Charges and added to the Fixed Charges of the respective Power Plants.

Having determined fuel / variable cost as above, the Commission has proceeded to determine fixed cost components of generation tariff as under:-

WORKING CAPITAL AND INTEREST FOR FY 2018-19 (RS. MILLION)

HERC COMPUTATION OF WORKING CAPITAL AND INTEREST									
RS. MILLION FY 2018-19									
ITEMS	DERIVATION	PTPS				RGTPS	DCR TPS	WYC	TOTAL
		Units 5	Unit 6	Unit 7	Unit 8	Unit 1 & 2	(Unit 1 & 2)		
Coal Stock	2 months	328.17	328.17	930.12	930.12	4811.32	2322.07	0	9649.97
Oil Stock	2 months	3.36	3.36	9.71	9.71	57.203	28.60	0	111.93
O&M Expenses	1 months	64.84	63.110	71.99	61.65	159.99	129.12	30.48	581.18
Maint. Spares	10%/7.5% of O&M	77.81	75.73	86.38	73.98	287.99	232.41	27.44	861.74
Receivables	1 month	238.38	249.21	597.26	588.50	3027.90	1517.97	45.73	6264.94
W/C Requirement		712.56	719.58	1695.45	1663.95	8344.40	4230.17	103.65	17469.76
Int (@ 9.95%)		70.90	71.60	168.70	165.56	830.27	420.90	10.31	1738.24

FIXED COST FOR FY 2018-19 (RS. MILLION)

			HERC FIXED COST COMPUTATION FY 2018-19 (Rs Million)							
EXPENSES	PTPS-5	PTPS -6	PTPS -7	PTIPS - 8	RGTPS 1	RGTPS 2	DCR TPS 1	DCR TPS 2	WYC	TOTAL
Operation & Maintenance (O&M)										
a) R&M Expenses	273.23	268.06	382.12	305.96	340.10	340.10	256.98	256.98	33.52	2457.04
b) A&G Expenses	13.16	14.85	22.05	18.79	34.25	34.25	35.10	35.10	6.52	214.06
c) Employees Cost	305.06	287.74	290.66	246.01	359.34	359.34	296.12	296.12	199.89	2640.28
d) Employee Cost of PTPS 1-4, as per HPGCL	186.67	186.67	169.01	169.01	226.27	226.27	186.50	186.50	125.87	1662.77
Total O & M (a+b+c+d):	778.12	757.31	863.84	739.77	959.96	959.96	774.69	774.69	365.81	6974.16
Depreciation	0.00	0.00	265.01	287.11	978.49	974.69	527.18	526.68	116.74	3675.88
Interest & Finance	17.20	17.30	9.80	9.80	714.98	714.98	294.55	294.55	37.00	2110.15
W/C Interest	70.90	71.60	168.70	165.56	415.13	415.13	210.45	210.45	10.31	1738.24
ROE @ 10%	5.10	155.10	220.80	220.80	495.20	495.20	249.20	249.20	18.90	2109.50
Fixed Cost	871.32	1001.31	1528.14	1423.04	3563.75	3559.95	2056.07	2055.57	548.76	16607.93
Cost of Oil	20.14	20.14	58.24	58.24	171.61	171.61	85.80	85.80	0.00	671.58
Total Fixed Cost	891.47	1021.46	1586.38	1481.27	3735.36	3731.56	2141.87	2141.37	548.76	17279.50
Generation (ex-bus) MU	579.47	579.47	1693.97	1693.97	4199.54	4199.54	2043.93	2043.93	200.23	17234.05

TARIFF	PTPS -5	PTPS -6	PTPS -7	PTPS - 8	RGTPS 1	RGTPS 2	DCR TPS 1	DCR TPS 2	WYC	TOTAL
Fuel Cost Rs/kWh	3.40	3.40	3.29	3.29	3.44	3.44	3.41	3.41	NA	3.36
Fixed Cost Rs. million)	891.47	1021.46	1586.38	1481.27	3735.36	3731.56	2141.87	2141.37	548.76	17279.50

The recovery of fixed charges to the extent determined above, by the Commission, for the FY 2018-19 shall be as per the provisions of the MYT Regulations, 2012. It is made clear that as per clause 30(a) of the MYT Regulations, 2012, a generating plant shall recover full capacity charge at the normative annual plant availability factor specified for it by the Commission and the recovery of capacity charge below the level of target availability i.e. normative PLF shall be on pro-rata basis and further that no capacity charge shall be payable at zero availability.

Accordingly, HPGCL shall ensure that fixed charges recovered for any of its power plants for which fixed charges have been determined by the Commission in its present Order, during the year, do not exceed the fixed charges as determined by the Commission.

Further, in case of annual PLF of any unit, including deemed generation, is lower than the normative PLF given in the order, the recoverable annual fixed charges shall get reduced on pro-rata basis. In view of above, it is ordered that HPGCL shall recover monthly fixed charges in line with the provision of MYT Regulations, 2012, subject to the condition that total recovered fixed charges for a Unit up to the end of a month shall not be more than the admissible approved fixed charges for that Unit as worked out corresponding to the cumulative PLF (after including deemed generation) up to the end of that month. For example at the end of 3rd month, if the deemed PLF is 80% and the

normative PLF is 85%, the admissible approved fixed charges would be $AFC/4$ (0.80/0.85) where AFC are the approved annual fixed charges. In case cumulative PLF at the end of 3rd month is more than the normative PLF, the admissible approved fixed charges will be $AFC/4$.

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 the FY 2018-19 shall be implemented w.e.f. 01.04.2018.

21 Commission's Directive

1. It has been observed that HPGCL has capitalised the spares of value exceeding Rs. 5.00 lacs, as plant and equipment and dismantling cost etc., in accordance with Ind AS Accounting Standards. However, the capitalisation of the same is not in accordance with HERC MYT Regulations. Therefore, HPGCL is required to maintain a memorandum account of such capitalisation done and submit the same along with petitions for generation tariff. HPGCL is directed not to claim Depreciation & Interest cost on such capitalization.

2. HPGCL is directed to optimize inventory of the Power Plant for spares and other maintenance equipments etc. and restrict itself in piling up of inventory. Further, the Commission allows 30 days stock of maintenance spares in the generation tariff. Therefore, every efforts should be made by HPGCL to keep the stock of maintenance spares within the allowed limits. HPGCL is also directed to furnish month-wise detail of number of days maintenance stock kept by it. Further, the inventory be also hosted on the website of HPGCL, so that users of other plants can easily access the same and if need arises, utilise the same.

3. Ministry of Environment, Forest & Climate Change (MoEF&CC) has recently announced stringent standards for coal based thermal power plants which may entail huge capital investment. HPGCL in its petition has submitted that HPGCL will approach to the Commission for approval of Capex Plan regarding implementation of MoEF&CC norms, at appropriate time with anticipated expenditure. It has been observed that HPGCL has kept

considerable funds in Dry Fly Ash Fund account maintained out of proceeds from sale of ash/ash products and by not treating the same as non-tariff income. The utilisation of this fund is minimal. Accordingly, HPGCL is directed that other than utilising these funds in raising of Ash Dykes etc., as directed earlier, the fund may also be used for the utilisation for incurring capital expenditure on implementation of MoEFCC norms/standards.

4. It is observed that HPGCL has to increase the height of Ash Dykes, since the stock of Ash is increasing and HPGCL is not able to dispose off the same in time. In this regard, HPGCL should make efforts for the speedy disposal of the same including utilisation of the same in Brick Kilns etc, even by subsidizing transportation for the same and expenditure on subsidizing transportation may be met out of Dry Fly Ash Fund Account.

5. In the current scenario, where focus is shifting from thermal generation to Renewable Energy, the HPGCL should make efforts for optimum utilization of its Human Resources. HPGCL is suggested to diversify its business model and explore other business options available in Renewable Energy Sector & explore the following action plan, to utilise the surplus staff:-

a) Setting up of Small/Micro Hydro Power Plants in discussions with the irrigation department.

b) Setting up of Biomass, Biogas, Solar Power and Waste to Energy Plants in discussions HAREDA, Gaushala Ayog, Local Urban Development Body etc.

c) Setting up of rooftop solar power in Universities/ Educational Institution/Medical colleges/ Government Hospitals/ Government buildings etc. Further, possibilities may also be explored for setting up of solar power plants in River Reservoir etc.

6. HPGCL may explore the feasibility of installing battery power storage system in order to utilise its surplus power during peak hours and minimise the frequent stop-start operations, in its power plants at Panipat.

This Order is signed, dated and issued by the Haryana Electricity Regulatory Commission on 31.10.2018.

Date: 31.10.2018
Place: Panchkula

(Jagjeet Singh)
Chairman