



COMMISSION'S ORDER

ON

**TRUE-UP FOR FY 2017-18, MID-YEAR PERFORMANCE REVIEW
FOR FY 2018-19 AND DETERMINATION OF GENERATION
TARIFF FOR THE FY 2019-20**

Case No. HERC/PRO-59 of 2018

07th March, 2019

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 - 59 of 2018

DATE OF HEARING : 21.02.2019

DATE OF ORDER : _____

QUORUM

Shri Jagjeet Singh,

Chairman

Shri Pravindra Singh Chauhan,

Member

INTHE MATTER OF

Petition filed by Haryana Power Generation Corporation Ltd. (HPGCL) for approval of True-up for the FY 2017-18, Mid-Year Performance Review for the FY 2018-19 and Determination of Generation Tariff for the FY 2019-20.

AND

IN THE MATTER OF

HPGCL, Panchkula

..... Petitioner

Present

1. Shri Vineet Garg, 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 2019-20 by way of 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, 2018. However, the Commission, considering the request of HPGCL received vide memo no. 1633/HPGCL/FIN/Reg-487 dated 26.11.2018, had granted extension in time for the above said filing up to 15.12.2018, vide memo no. 3084/HERC/Tariff dated 05.12.2018. Accordingly, the Petitioner HPGCL, vide its Memo No. HPGC/FIN/Reg-487/1644 dated 13.12.2018, submitted the present petition for approval of true-up for the FY 2017-18, and determination of Generation Tariff for the FY 2019-20 under Section 61 and 62 of Electricity Act 2003. HPGCL further submitted that the Commission in its previous orders has not carried out mid-year review and has restricted its order for the true up for previous year and tariff determination for the coming year. Accordingly, HPGCL has submitted the indicative available data for FY 2018-19 for reference purpose only and not proposing Performance Review thereof.

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 14th January, 2019.

Name	Language	Date
The Financial Express	Hindi	19.12.2018
Dainik Tribune	Hindi	18.12.2018
The Financial Express	English	30.12.2018

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. 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. 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.

4.2 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. 1677/HPGC/FIN/REG-487 dated 04.02.2019. The same, in brief, is presented below:-

1. Unit-wise profitability showing separately O&M expenses (Employee cost, R&M & A&G), depreciation, interest, others (showing details of other items) of HPGCL plants, for the FY 2017-18.

HPGCL's Reply

HPGCL is maintaining its financial statements 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 prepared and is a part of the audited financial statement already submitted to the Hon'ble Commission. However, details of unit-wise expenditure has already been provided as Annex –A with the Tariff Petition. Details of unit wise Revenue is also enclosed herewith as Annexure--A1.

2. The Commission in its Order dated 31.10.2018 had directed HPGCL to maintain a memorandum account of such capitalisation of spares, dismantling etc. done otherwise than in accordance with HERC MYT Regulations. Accordingly, in the memorandum account submitted by HPGCL, value of such spares, dismantling cost etc. has not been accumulated in the gross block and accordingly, the depreciation on the same is not correctly calculated. Further, as observed by the Commission in its Order dated 31.03.2016, HPGCL has capitalized spares amounting to Rs. 154.60 crore (Rs. 75.52 crore in case of RGTS, Rs. 27.29 crore in the case of DCRTS and Rs. 51.79 crore in case of PTPS). However, the memorandum account submitted by HPGCL shows capitalization of spares amounting to Rs. 144.97 crore (Rs. 30.29 crore in case of RGTS, Rs. 7.73 crore in the case of DCRTS and Rs. 106.94 crore in case of PTPS). In this regard, HPGCL is directed to provide a correct memorandum account showing the cumulative breakup of gross block of fixed assets into allowed capitalization, spares & decommissioning cost capitalised, depreciation and net block of fixed assets.

HPGCL's Reply

In this regard, it is submitted that HPGCL had capitalized spares amounting to Rs.154.60 crores in FY2014-15 in accordance with erstwhile Accounting Standard -10. These were the spares which could have been used only in connection with an item of fixed asset and their use was expected to be irregular. The capitalization of these spares was carried out in accordance with erstwhile Accounting Standard -10 well before introduction of IND AS.

HPGCL has maintained the memorandum accounts as directed by Hon'ble Commission vide its order dated 31.10.2018, reproduce as under:

“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”

HPGCL has prepared & presented its financial statements as per Ind AS for first time in FY2016-17 and the comparative figures of FY2015-16 were also restated. HPGCL has capitalized the spares of Rs.144.97 crore in FY 2016-17 only.

Hence HPGCL has correctly stated the capitalization of spares as per provisions of Ind AS and as per the directives of the Hon’ble Commission.

3. Month-wise & Unit-wise (separately for PTPS 5,6,7,8, DCRTTP 1 & 2 and RGTPP 1 & 2) actual & deemed PLF of all the HPGCL power stations for the FY 2017-18, 2017-18 & 2018-19 (upto Dec., 2018). Further, exception report wherein full availability for any unit was not declared may be provided.

HPGCL’s Reply

The requisite information is enclosed as Annexure- B.

4. 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 are as under:-

- a) 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 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.
- b) 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.

- c) 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.
- d) The sale of Unrequisitioned 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 unrequisitioned power directly and Discoms (HPPC) shall sell the surplus power in the open market to take the advantage of bundle power.

- 5. HPGCL while filing the ARR for FY 2017-18 had submitted that DCRTTP, 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 DCRTTP 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 alongwith its reports on the assessment/measurement of Sox & Nox levels in respect of DCRTTP. HPGCL is again requested to expedite the submission of requisite information.

HPGCL's Reply

The desired clarification has already been submitted vides this office memo no. 1397/HPGCL/FIN/REG-472 Vol-II Dated: 01/9/2017 in reference to Hon'ble

Commission office memo 1793/HERC/Tech. dated 21.08.2017, however the copy of the same is enclosed as Annexure- C.

6. HPGCL has claimed capex amounting to Rs. 140.05 Crore for the FY 2019-20, Rs. 870.40 crore for the FY 2020-21 & Rs. 870.40 Crore for the FY 2021-22, for compliance of SOx and NOx norms. In this regard, HPGCL may refer to the Order dated 20.03.2017 passed by the CERC in Petition No. 72/MP/2016 (Maithon Power Limited v. Damodar valley Corporation and Ors.) and Order dated 27.04.2017 passed by UPERC in Petition No. 1132/2016 (Rosa Power Supply Company Ltd.), wherein it was decided as under:-

“the petitioner is directed to approach the Central Electricity Authority to decide specific optimum technology, associated cost and major issues to be faced in installation of different system like SCR, etc. The petitioner is also directed to take up the matter with the Ministry of Environment and Forest for phasing of the implementation of the different environmental measures. Accordingly, the petitioner is granted liberty to file appropriate petition at an appropriate stage based on approval of CEA and direction of MoEF which shall be dealt with in accordance with law”.

In view of the above, HPGCL may submit its revised capex proposed to be incurred on compliance of SOx, NOx norms along with the approved DPR.

HPGCL's Reply

DPR for installation of FGD in RGTPP has already been sent to CEA on dated 16.11.2018 for vetting. The matter is being pursued with CEA for early vetting. Moreover, NTPC has already commissioned FGD/DSI in some of its power plants and for others plants are planned. To utilize the expertise of NTPC in this field, HPGCL engaged NTPC as consultant. The DPRs has been received by HPGCL and are under finalization stage. In view of this it is prayed to Grant in-principle approval of the capital schemes for the statutory requirement of installation of FGD plant and Low-cost NOx burners to meet the emission standards as per the new environmental norms.

7. Budget progress of ERP implementation with details of its commencement, targeted schedule for completion and likely date of its COD. Unit wise month 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 2017-18 and FY 2018-19.

HPGCL's Reply

Status report attached as Annexure- D and Tripping detail is attached as Annexure- E

8. An expenditure of Rs. 4.20 crore, Rs. 31.5 crore was planned and got approved for WYC works FY 2017-18 and FY 2018-19 respectively. However, an expenditure of Rs. 18 crore and Rs. 10 Crore has been proposed for FY 2018-19 and FY 2019-20 respectively in the revised capital expenditure plan. The reasons for not incurring the expenditure as per schedule be explained.

HPGCL's Reply

In order to reduce the financial burden of the capital overhauling of the remaining machines of WYC Hydro project, MNRE has granted the financial assistance amounting to Rs. 10.0 Crore for the Capital Overhauling/ R&M of machine C-1& C-2 in FY 2017-18. Further HPGCL is also planning the Capital Overhauling/ R&M of Machine A-1 in future with the financial assistance from the MNRE as per the scheme of Govt. of India. Hence HPGCL could not incur the approved expenditure and an expenditure of Rs. 18 crore and Rs. 10 Crore has been proposed for FY 2018-19 and FY 2019-20 respectively in the revised capital expenditure plan.

9. Capital investment of Rs. 23.00 crore and Rs. 22.00 crore was approved for FY 2017-18 and FY 2018-19 respectively for revival of 20 nos. ESP fields and repairing of balance 36 nos. ESP fields of Unit 1 & 2 DCRTTP Yamuna Nagar. However, as per the revised proposed expenditure, an amount of Rs. 23 crore has been shifted to FY 2019-20, the reason for sleep-age in execution of these major works be explained. 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

Capital investment of Rs. 23.00 crore and Rs. 22.00 crore was proposed for FY 2017-18 and FY 2018-19 respectively keeping in view the overhauling schedule of Unit-1&2 and the same was also approved by the Hon'ble Commission.

However, the overhauling of Unit-1 was started in FY 2017-18 and completed in FY 2018-19, sleepage in execution of the Capex amounting of Rs. 23.0 Crores is due to the non availability of the schedule for overhauling of Unit-2 in FY 2018-19. Now the overhauling of Unit-2 has been planned in FY 2019-20. As such Rs. 22.0 Cr & Rs. 23.0 has been proposed in FY 2018-19 & FY 2019-20 respectively for the revival of 20 nos. ESP fields and repairing of balance 36 nos. ESP fields of Unit 1 & 2 DCRTTP Yamuna Nagar.

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.

10. 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

The BoD of SUN in its 9th meeting held on 04.01.2019 had taken a note that since the main objective of the Company to develop the Solar Park in the State of Haryana could not be attained, since the sub-letting of Panchyat Land for such project has not been allowed by Panchyat Department ,Haryana, which was the primary mandate of the Corporation and as such there is no rational to retail the Corporation active and decided to close/strike off the name of the Company from the register of companies/MCA after obtaining formal permission of the State Government to close the Company.

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

HPGCL's Reply

Status of development of Kalyanapur-Badalpara coal block is given as under: -

- Ministry of Coal (MoC), Govt. of India allotted Kalyanpur Badalpara Coal Block to HPGCL on 24.02.2016 and subsequently the Coal Block Development and Production Agreement (CBDPA) was signed between MoC and HPGCL on 30th March, 2016.

- HPGCL requested to Central Mine Planning and Design Institute (CMPDI), Ranchi, Mineral Exploration Corporation Limited (MECL), Nagpur, Singareni Collieries Company Limited (SCCL), Hyderabad to undertake the job of detailed exploration of Kalyanpur Badalpara, Coal Block. However, these Govt Agencies refused due to heavy naxalite activities and local disturbances in the area.
- In view of above, HPGCL floated e-tenders four times i.e. on 03.10.2016, 12.04.2017, 14.03.2018 and 07.05.2018 for detailed exploration work of Coal Block, but, no firm agreed/participated in the tender due to heavy naxalite activities in the area.

After rigorous pursual by HPGCL, CMPDI, Ranchi has agreed to undertake the work of detailed exploration and preparation of Geological Report of Kalyanpur-Badalpara coal block vide their letter dated 10.09.2018. A Letter of Intent and detailed work order has been issued to CMPDI, Ranchi on 12.12.2018 and 01.01.2019 respectively.

12. 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

HPGCL has implemented the policy of Flexibility of use of domestic coal by interplant transfer of coal from linked coal companies for sustained running of plants and reduction of generation cost.

Further it has decided in 48th Steering Committee for Power Purchase that HPGCL shall spare 19 LacMT Coal under Flexible Coal Scheme to HPPC and HPPC will take further action to utilize this coal under ceiling tariff.

HPGCL has also review its ACQ with different coal companies as per detail given below:-

Name of Power Plant	Existing ACQ in Lac MT	Proposed ACQ in Lac MT
RGTPP, Hisar	MCL: 15.00	MCL: 10.00
	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

Name of Power Plant	Existing ACQ in Lac MT	Proposed ACQ in Lac MT
Total proposed AACQ from NCL		27.00 Lac MT

13. Compensation paid by HPGCL on account short lifting of coal to Coal Companies during FY 2017-18 and FY 2018-19 (end Dec. 2018).

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.

Short lifting compensation amount of Rs 58.069 Crore pertaining to FY 2016-17, has been paid to Bharat Coking Coal Limited (BCCL) in FY 2018-19 (end Dec., 2018).

14. Third party sampling and analysis agencies were appointed on Sept. 2017 for sampling and analysis of coal progress of claim submitted and credit notes received during FY 2017-18, FY 2018-19.

HPGCL's Reply

Ministry of Coal (MoC), Government of India (GoI) vide letter dated 26.11.2015 decided to engage Central Institute of Mining and Fuel Research (CIMFR), a Govt. of India organization, as third party sampling & analysis agency at coal loading ends. CIMFR started working as third party sampling and testing agency for HPGCL w.e.f. November, 2016.

Before engagement of CIMFR, the grade slippage claims of HPGCL against poor quality of coal were not honored by the coal companies. However, after engaging CIMFR, the coal companies have started honoring the grade slippage claims of HPGCL. The tentative amount of Quality claims lodged & received for 2017-18 & 2018-19 are detailed as below: -

Particulars	FY 2017-18		FY 2018-19	
	Claims Lodged	Credit note Received	Claims Lodged	Credit note Received
Amount / Cr.	224.76	78.04	123.08	7.95

15. Action taken report on the suggestions of various knowledge team constituted for boiler, turbine, C& I and fuel and the improvements achieved during FY 2017-18 along with unit-wise performance indicator [PLF, Aux. Consumption. SHR and FFC for FY 2017-18, FY 2017-18 and FY 2018-19.

HPGCL's Reply

The requisite information is enclosed as Annexure- F.

16. Copy of vender development policy already been framed for Vender Registration be supplied and status report in regard to vender development (staionwise) provided.

HPGCL's Reply

The requisite information is enclosed as Annexure- G.

17. HPGCL has claimed additional interest on working capital amounting to Rs. 16.49 for the FY 2017-18 (approved IWC Rs. 174.55 Crore, actual IWC Rs. 191.04 crore). However, note 34 of the Financial Statements for the FY 2017-18 shows actual interest on working capital amounting to Rs. 15.38 Crore only. Therefore, HPGCL may justify the claim made by it.

HPGCL's Reply

As per HERC MYT Regulation, 2012 the Working Capital is computed on normative basis as per the techno commercial parameter approved by the Hon'ble Commission. Normative working capital requirement for FY 2017-18 computed and approved by the Hon'ble Commission as per the approved norms was Rs. 1654.50 cr., however due to variation in the Fuel prices the same has increased to Rs. 1845.80 Cr. The rate of interest on working capital requirement allowed by the Hon'ble Commission is also in accordance of the approved norms of HERC and no relaxation has been granted by the Hon'ble Commission on this account.

HPGCL has managed it working capital requirement prudently out of the internal accruals and with the borrowing from banks and financial institutions. In FY 2017-18, HPGCL has used its internal accrual to the maximum extent to reduce its interest burden even by deferring its certain liabilities. Had HPGCL has discharge its unpaid obligation in time and deploy its internal accrual outside the business the actual working capital borrowings would be even more than the approved norms. HPGCL is also able to tie up cheaper borrowings due to its improved credit rating. Cumulative result of all the above efforts of HPGCL leads to reduce its interest and financing charges.

Hence saving in the interest on working capital is fully justified and is due to continuous and dedicated efforts of the HPGCL toward prudent financial management.

18. The Commission had in its Order dated 26.04.2017, had allowed the interest & finance charges amounting to Rs. 295.41 Crore as claimed by HPGCL, on the basis of restructuring. Therefore, the savings due to restructuring were already factored in while allowing interest & finance charges of Rs. 295.41 Crore. As against this, actual interest & finance charges are Rs. 206.87 crore. HPGCL need to explain the saving in the interest cost amounting to Rs. 88.54 Crore due to reduction in rate of interest and due to average method applied while allowing interest in the ARR Order dated 26.04.2017.

HPGCL's Reply

The requisite information is enclosed as Annexure- H.

19. Details of equity contribution of Rs. 10.75 crore received during the FY 2017-18, 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 as Annexure- I.

20. Cost Audit Report for the FY 2017-18.

HPGCL's Reply

The requisite information is enclosed as Annexure- J.

21. HPGCL was having Rs. 296.38 Crore in Dry Fly Ash Fund at the beginning of the year 2017-18 and Rs. 54.72 Crore has been added during the FY 2017-18 on account of proceeds from sale of ash/ash products and is not treated as non-tariff income. However, only an amount of Rs. 4.32 Crore has been utilized out of this. In this regard, HPGCL may submit its plan for utilization of this fund.

HPGCL's Reply

HPGCL has dropped the capex regarding Raising in height of Ash Dyke at DCRTTPP& RGTPP as per the direction of Hon'ble Commission regarding Capex work relating to handling/utilization of Fly Ash should be met out of Fly Ash Fund maintained by HPGCL. Moreover the following upcoming expenditure are proposed:-

1. PTPS: Commissioning of Ammonia Flue Gas Conditioning System, Plantation of trees at the boundaries of ash dyke, channelization of ash dyke.
2. DCRTTP: Providing of dust suppression system at Ash Dyke, Providing forestation & green Belt around ash dyke, providing proper access to ash dyke Transportation of pond ash to NHAI projects/other user as per MOEF Guidelines.
3. RGTPP: Construction of floor in Ash Silo Area, Providing of Lighting arrangement at Ash Dyke & Silo, installation of CCTV Camera for surveillance at dry ash disposal site, installation of Ash brick manufacturing plant etc.

22. Unit-wise saving in oil cost.

HPGCL's Reply

Particulars	PTPS	DCRTTP	RGTPP	HPGCL as whole
Amt in cr.	6.55	12.52	26.00	45.07

23. Details (including soft copy in excel) containing calculation of average GCV & Cost of Coal and Oil, for the FY 2017-18 including plant-wise monthly price store ledger (PSL) of last three months and copy of relevant invoices.

HPGCL's Reply

The requisite information is enclosed as Annexure- K.

24. Copy of all the revenue bills (SOP, FSA, Reimbursements) along with the supporting data, so as to reconcile the same with the revenue of Rs. 5277.48 crore shown in the Audited Financial Statements for the FY 2017-18. Any item shown as other/miscellaneous is required to be elaborated in detail.

HPGCL's Reply

The requisite information is enclosed as Annexure- L.

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

HPGCL's Reply

Disposal of PTPS Unit-1 to 4

- The entire hazardous items such as lube oil, transformer oil, batteries etc. have been disposed off.
- Auction has been uploaded on MSTC portal for store assets.

- The work of disposal of main plant has been awarded to M/S HR Commercials Pvt. Ltd. with a quoted rates of Rs.149.63 Crores.
- Sale order/acceptance letter has been issued by MSTC on 26.12.2018 and lifting order for dismantling of first segment was issued to the firm on 18.01.2019. Total completion period of the work is 27 Months.

26. A report on the Compliance of directives given in the Order dated 31.10.2018.

HPGCL's Reply

The requisite information is enclosed as Annexure- M.

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 2017-18

5.1 That Generation tariff for the FY 2017-18 was determined by the Commission vide its order dated 26.04.2017 on the tariff Petition of HPGCL filed on dated 29.11.2016 as per HERC MYT Regulation, 2012. The tariff was determined based on the relevant data / information available. HPGCL has now submitted the petition for true-up for the FY 2017-18 based on the audited accounts for the FY 2017-18 in accordance with the regulation 13.1 of the MYT Regulations, 2012. A copy of the audited accounts for FY 2017-18 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 2017-18 remained at Rs. 938.82 Crore (net of solar business – Rs. 938.43 Crore) as against the approved O&M Expenses of Rs. 633.93 Crore. The primary reason for this significant difference between the approved and actual O&M expenses amounting to Rs. 304.50 cr. (938.43 – 633.93) 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 2017-18 were Rs. 745.94 Cr. whereas the approved Employee cost included in the O&M expenses was Rs. 404.47 Cr. only. The approved Employees cost considered by Commission in the O&M expenses

for FY 2017-18 was based upon the actual audited expenses of the base year FY 2015-16 with an escalation rate of 4% per annum only. 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 I Sambasiva Rao, the terminal liabilities of HPGCL for the FY 2017-18 are Rs. 485 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, FY 2015-16 and FY 2017-18.

- 5.2.3 The other O&M expenses i.e. R&M and A&G expenses approved by the Commission for FY 2017-18 were Rs. 229.46 cr. The actual R&M and A&G expense for the year remains Rs. 192.88 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 defer certain work following conservative approach.
- 5.2.4 The Petitioner therefore prays to the Commission to allow the true up of the O&M cost amounting to Rs. 304.50 Cr. only i.e. the difference between the approved and actual O&M cost for FY 2017-18 net of savings on account of R&M and A&G expenses.

5.3 True-up of Depreciation

The Commission, as per its order dated 26.04.2017, had approved depreciation of Rs. 377.60 Crores. The actual depreciation of HPGCL in the FY 2017-18, as per audited accounts is Rs. 412.29 Crores (net of solar business –Rs. 409.21 Crores).

The variation in the approved depreciation and net allowable depreciation for the FY 2017-18 is given below:-

Rs. in Crore

S. No.	Unit	Approved	Actual as per audited accounts	Depreciation on Decommissioning as per	Depreciation on Inventory Capitalised as per Ind AS	Net allowable depreciation	Variance
A	B	C	D	E	F	G=(D-E-F)	H=(G-C)
1	PTPS –5-6	4.67	17.53			17.53	12.86
2	PTPS –7-8	53.86	59.78	0.52	6.63	52.63	(1.23)
3	DCRTPP	107.63	107.61	1.02	1.05	105.54	(2.09)
4	RGTPP	208.20	219.28	1.47	2.36	215.45	7.25
5	Hydel	3.24	5.00			5.00	1.76
6	Solar	-	3.08	-		-	-
	Total	377.60	412.29	3.01	10.04	396.15	18.56

Depreciation for FY 2017-18 on account of capitalization of spares and Decommissioning Cost in accordance to the Ind AS, is Rs.10.04 Cr. and Rs. 3.01 Cr. respectively. Net allowable Depreciation for FY 2017-18 exclusive of Solar business and depreciation on spares and Decommissioning Cost in accordance to the Ind AS is Rs. 396.15 Cr (412.29-3.08-10.04-3.01).

As per HERC MYT Regulation, 2012, “*Depreciation shall be calculated annually over the useful life of the assets at the rate specified in Appendix-II upto 31st March of the 12th year from the date of commercial operation of the assets. From 1st April of 13th year from the commercial date of operation of the asset, the remaining depreciable value if any out of the 90% of the capital cost of the asset shall be equally spread over the balance useful life of the asset.*”

PTPS Unit-5 has already reached its useful life, therefore the remaining depreciation of Rs 16.0 Cr. has been claimed in FY 2017-18.

As per HERC MYT Regulations 2012 useful life of battery is 5 years. Since the batteries in RGTPP have exceeded their useful life, balance depreciation of the batteries amounting to Rs. 9 Cr. has also been claimed in FY 2017-18.

In view of the above, HPGCL has prayed to approve difference of Rs 18.56 Cr. as true-up of depreciation for FY 2017-18.

5.4 True-up of Interest Expenses

The Petitioner has submitted that as against the interest and finance charges on loan of Rs. 295.41 Crore approved by the Commission for the FY 2017-18, the actual amount incurred, as per the audited accounts, was Rs. 209.89 Crore (net of Solar Business –Rs. 206.87 Crore), entailing net saving of Rs. 88.54 Crore, on account of

restructuring of its loan portfolio by HPGCL during FY 2015-16, 2016-17 & 2017-18. Refinancing cost of such restructuring amounting to Rs. 42.68 Cr has already been allowed and adjusted by the Commission in its order dated 26.04.2017 and 31.10.2018 respectively.

HPGCL submitted that it had swapped the higher interest bearing PFC loan of Rs. 1085.84 Cr. pertaining to DCRTTP and PFC loan of Rs 947.73 Cr. pertaining to RGTPP during FY 2015-16, with cheaper Indian Overseas Bank and State Bank of India loan with the approval of the State Govt. The rate of interest of IOB loan was @ 10.05% p.a. and State Bank of India loan was @ 9.60% p.a. as compared to PFC interest rate of 12.50% p.a. and 11.45% p.a. respectively. Further Rs 200 Cr. REC loan pertaining to RGTPP has been swapped with cheaper PNB loan in FY 2016-17. This has led to a significant reduction in the interest costs. Further swapping of the IOB and other banks was done in 2016-17 and 2017-18.

Interest and Finance charges for FY 2017-18 as per pre-restructuring Loan portfolio excluding solar business is given below: -

Particulars	ROI	Opening Bal	Additions during the year	Repayments during the year	Closing Balance	Interest during the year	Remarks
PFC Loan (PTPS 5-6)	7.00%	0.38	-	0.38	-	0.03	
PFC Loan (PTPS 7-8)	13.00%	57.56	-	57.56	-	1.18	
GPF Bonds	7.90%	61.04	-	6.78	54.26	4.22	
PFC Loan (DCRTTP)	12.50%	874.59	-	120.66	753.93	101.78	Takeover by IOB - State Bank of India
REC (RGTPP)	12.25%	926.83	-	103.32	823.51	107.21	Partial (Rs. 200 crore) takeover by Punjab National Bank
PFC Loan (RGTPP)	11.45%	844.86	-	101.65	743.21	90.92	Takeover by State Bank of India
APDP Loan	12.50%	3.55	-	0.15	3.40	0.44	
LIC Loan	8.50%	12.07	-	12.07	-	0.51	
Andhra Bank (Misc. Capex)	8.65%	81.16	-	20.11	61.05	6.15	Taken over by PNB
Andhra Bank (RGTPP)	8.65%	171.65	-	38.24	133.40	13.19	Taken over by PNB
Total		3,033.68	-	460.92	2,572.76	325.64	

HPGCL further submitted that as per MYT Regulations, the Commission may allow to retain 60% of the savings however, in its earlier orders has considered to pass on 50% of the net savings to the beneficiaries, accordingly, HPGCL is proposing to pass on 50% of the savings on interest and finance charges to the beneficiaries and consider the true up of interest and finance charges as given in the below table:

Particular	Approved interest & Finance Charges	Actual interest & Finance Charges	Pre-restructuring interest & Finance Charges	Allowable interest & Finance Charges	True-up
1	2	3	4	5=3+50%(4-3)	6=5-2
Interest and Finance Charges	295.41	206.87	325.64	266.26	(29.15)

HPGCL therefore, requested to allow Rs 29.15 Cr. as pass through of Interest & Finance charges.

5.5 True-up of Return on Equity

HPGCL has submitted that the Commission had approved RoE of 10% Pre-tax amounting to Rs. 206.49 crore, for the FY 2017-18. Further, Govt. of Haryana has contributed an amount of Rs. 10.75 cr. as equity contribution during FY 2017-18. However, an amount of Rs. 27.08 Crore of equity contribution was disallowed by the Commission in its Tariff Order dated 31.10.2018. Accordingly the revised equity employed for FY 2017-18 excluding PTPS unit 1 to 4 as per audited accounts is tabulated below:-

Rs. Crore

Unit #	Opening as per audited accounts	Disallowed vide order dt. 30.10.2016	Opening considered for true-up	Additions	Closing	RoE @ 10%
PTPS 5-6	159.03		159.03	2.82	161.85	16.04
PTPS 7-8	439.08	9.06	430.02	5.78	435.78	43.29
DCRTP	494.20	4.82	489.38	0.15	489.53	48.95
RGTPP	990.70	13.20	997.50	1.31	978.81	97.82
Hydel	14.58		14.58	0.69	15.27	1.49
Total	2,097.57	27.08	2,070.49	10.75	2,081.24	207.59

Approved RoE	Actual RoE	True-up of RoE Cost
206.49	207.59	1.10

Hence, HPGCL has prayed that additional RoE for the FY 2017-18 amounting to Rs. 1.10 crore may be considered for trueing – up.

5.6 True-up of recovery of cost of Oil

HPGCL submitted that in FY 2017-18, it had incurred oil expense amounting to Rs. 31.17 Crore, which was considerably lower than the approved amount of Rs. 76.24 Crore i.e. by an amount of Rs. 45.07 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 0.43 during the FY 2017-18, for all the HPGCL plants as a whole. Total saving in Oil cost amounting to Rs. 45.07 Crore has been bifurcated by HPGCL into saving due to low oil price (Rs. 1.50 Crore), due to SFC (Rs. 41.57 Crore) and due to low generation (Rs. 2.00 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. 20.78 Crore (i.e. 50% of saving due to low SFC i.e. Rs 41.57 Crore) as an incentive and pass-through remaining Rs 24.29 Crore to Discom.

5.7 True up of interest on working capital

HPGCL submitted that the Commission in its Order dated 26.04.2017 regarding generation tariff for FY 2017-18 had projected average coal and oil prices at prevailing market prices. However, there has been variation in prices of coal and oil during the FY 2017-18. Therefore, while computing the true-up of working capital FY 2017-18, actual rate of coal and oil prevailing in FY 2017-18 has been considered.

Due to variation in the Fuel prices the normative working capital requirement for FY 2017-18, as per the approved norms of the HERC, has increased to Rs. 1845.80 Cr against the approved working capital requirement of Rs. 1654.50 cr.

HERC has approved the Interest on Working Capital @ 10.55% (9.30%+1.25%). SBI Base Rate as on 01.04.2017 was 9.10%, accordingly for computing the Interest on Working Capital for the true up of FY 2017-18 has been considered @ 10.35% (9.10%+1.25%).

The below table summarizes True-up of interest on working capital for FY 2017-18.

	Approved IWC (Rs. Cr) @ 10.55%	Actual IWC (Rs. Cr) @ 10.35%	True-up of IWC(Rs. Cr)
Total	174.55	191.04	16.49

HPGCL has requested to allow the difference of Rs 16.49 Cr. as true-up of interest on working capital for FY 2017-18.

5.8 True-up of Auxiliary Consumption

HPGCL has submitted that in FY 2017-18, 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 31.10.2018 has allowed for the refund of variable cost paid by HPGCL to the Discoms in FY 2016-17 on account of auxiliary consumption for the months the units were boxed-up.

Accordingly, during 2017-18 also, HPGCL has incurred variable cost to the tune of Rs. 2.64 cr. during boxing up of the units, as detailed under:-

Plant	PTPS Unit-5	PTPS Unit-6	PTPS Unit-7	PTPS Unit-8	Total
Auxiliary Consumption when Boxed-up (MU)	4.62	1.54	0.76	1.08	8.00
Variable Cost (Rs/kWh)	3.33	3.33	3.22	3.22	
Variable Cost paid to Discoms (RsCr.)	1.54	0.51	0.24	0.35	2.64

HPGCL has requested to allow the recovery of the energy charges amounting to Rs. 2.64 Cr. so credited to Discom during boxing up of the units.

5.9 Total True-up for the FY 2017-18

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 & Fin. Charges	RoE	IWC	Auxiliary Consumption during backing down	Total True-up
Total	304.50	18.56	(24.29)	(29.15)	1.10	16.49	2.64	289.85

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 i.e. FY 2018-19. 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, 2019.

6 REVIEW OF CAPITAL EXPENDITURE PLAN

6.1 HPGCL has submitted that the Commission in its Order dated 31st Oct., 2018 has approved the capital expenditure for the first control period up to FY 2020-21 of the

various Capital Expenditure Works as presented in below, as per the submission of HPGCL in its Petition dated 28.11.2017 in Case no. HERC/PRO- 81 of 2017 regarding True-up for FY 2016-17, Mid-Year Performance Review for FY 2018-19 and Determination of Generation Tariff for the FY 2018-19:-

Sr. No.	Capital Expenditure work	As per Order dated 31.10.2018 (Rs. Cr.)			
		2017-18	2018-19	2019-20	2020-21
1	Capital Overhauling at WYC	4.20	31.8	-	
2	ERP System and allied works	-	23	12	
3	Procurement of one no. heat exchanger for Boiler Circulation Pump for RGTPP, Hisar	-	2	2	
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	-	1.4	-	
6	Procurement of 2 No. Air Driers for Transport Compressors for RGTPP Hisar	-	-	0.4	0.35
7	Trunion Bearing Housing and adopter sleeves support and guide side of APH for RGTPP Hisar	-	-	2	
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	-	0.8	3.7	
10	Construction of 2 no. Barracks for CISF for RGTPP Hisar	-	0.28	1	
11	Installation of CCTV surveillance System in RGTPP Hisar	-	2	-	
12	Construction of DAV school in power plant colony for RGTPS Hisar	-	3	3.87	
13	Rectification/repair work of ESP of PTPS -7&8 PTPS Panipat	5.0			
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		0.6		
16	Replacement of PTPS Unit-6 AD Line in Ash Handling & repair D2 of ESP Field	1.30	0.9		
17	Replacement of damaged floor and Construction of Roads in PTPS Colony, Panipat as per new norms of Government of Haryana	0.55	1		
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	0.4	0.4		
21	Up-gradation of PTPS Unit-6 HMI System of pro-control supplied by M/s BHEL		1.5		
22	Energy Management System PTPS Unit- 7-8		0.7		
23	Replacement of PTPS Unit-7&8 Fire Fighting, Hydrant and Spray pipelines		3		
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	22		
28	Providing of 2 No. VFD on Unit-1 DCRTTP , 6.6KV Motor of CEP		2.3		
29	Township for DCRTTP, Yamunanagar		2.35		
30	Civil Works for WYC Hydel Project		7.5		
31	Revival of 02 Nos of ESP fields of RGTPP Unit I		8		
32	Supply, Erection, Testing and Commissioning of Energy Management System at 2x600 MW RGTPP, Khedar, Hisar		0.55		
33	Modernization of Boiler Lift for PTPS Unit 8		0.7		
34	Replacement of DAVR in DCRTTP Units 1 &2		1.5		
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	8	
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	3	

Sr. No.	Capital Expenditure work	As per Order dated 31.10.2018 (Rs. Cr.)			
40	Mobile Coal Sampling System		0.66		
Total		64.78	153.83	33.97	0.35

6.2 HPGCL further submitted that completed Capex. Scheme for FY 2017-18 has been dropped in the revised capex. plan for FY 2018-2021. Scheme of Replacement of PTPS Unit-7&8 Fire Fighting, Hydrant and Spray pipelines (Sr. No. 23 of above Table), has been dropped considering financial prudence. There are certain variations in the actual capex. incurred vis-a-viz approved expenditure tabulated above due to revision in the overhauling schedule. In view of the above, the revised schedule of the approved capital works is presented in below for consideration and approval: -

S. No.	Ref. of above	Capital Expenditure Work	(Rs. Cr.)		
		Year	2018-19	2019-20	2020-21
1	1	Capital Overhauling at WYC	18	10	-
2	2	ERP System and allied works	10	25	-
3	3	Procurement of one no. heat exchanger for Boiler Circulation Pump for RGTPP, Hisar	2	-	-
4	4	Balance Payment to R-Infra against EPC contract for RGTPP, Hisar	6.7	2.73	-
5	5	Procurement of PA fan blades for RGTPP Hisar	0.6	1.1	-
6	6	Procurement of 2 No. Air Driers for Transport Compressors for RGTPP Hisar	-	-	0.75
7	7	Trunion Bearing Housing and adopter sleeves support and guide side of APH for RGTPP Hisar	-	-	2
8	8	Additional oxygen probes at APH inlet and outlet of Unit- I & II for RGTPP Hisar	0.45	0.8	-
9	9	Arrangement of Dust Suppression system at ash dyke for RGTPP Hisar	1	2	1.5
10	10	Construction of 2 no. Barracks for CISF for RGTPP Hisar	0.28	1	-
11	11	Installation of CCTV surveillance System in RGTPP Hisar	-	2	-
12	12	Construction of DAV school in power plant colony for RGTPS Hisar	0.2	3	3.67
13	15	Revival of Fire Fighting System of Unit-6,PTPS,Panipat	-	-	0.6
14	16	Replacement of PTPS Unit-6 AD Line in Ash Handling & repair D2 of ESP Field	1	1.2	-
15	17	Replacement of damaged floor and Construction of Roads in PTPS Colony, Panipat as per new norms of Government of Haryana	1.55	-	-
16	21	Up-gradation of PTPS Unit-6 HMI System of pro-control supplied by M/s BHEL	-	1.5	-
17	22	Energy Management System PTPS Unit- 7-8	-	0.7	-
18	25	Up gradation of existing DCS system for DCRTTP 1 & 2	4.25	-	-
19	27	Revival of 20 no ESP fields and repairing of balance 36 no. ESP fields of Unit-1& 2 DCRTTP Yamunanagar	22	23	-
20	28	Providing of 2 No. VFD on Unit-1 DCRTTP , 6.6KV Motor of CEP	2.3	-	-
21	29	Township for DCRTTP, Yamunanagar	-	2.4	-
22	30	Civil Works for WYC Hydel Project	-	7.5	-
23	31	Revival of 02 Nos of ESP fields of RGTPP Unit I	5	3	-
24	32	Supply, Erection, Testing and Commissioning of Energy Management System at 2x600 MW RGTPP, Khedar, Hisar	0.55	-	-
25	33	Modernization of Boiler Lift for PTPS Unit 8	0.7	-	-
26	34	Replacement of DAVR in DCRTTP Units 1 &2	0.75	0.75	-
27	35	Providing of 2 No. VFD on Unit-II DCRTTP ,6.6KV Motor of CEP	-	2.36	-
28	36	Improvement work of Cooling Towers of RGTPP Unit I & II	8	8	-
29	37	Installation of Variable Frequency Drive in Condensate Extraction Pump (CEP) of RGTPP Unit I & II	-	5.21	-
30	38	Replacement of 2 Nos. Stator of BCP of RGTPP Unit I & II	5.21	-	-
31	39	Upgradation of C&I system for RGTPP Hisar	-	3	3
32	40	Mobile Coal Sampling System	-	0.66	-
Total			90.54	106.91	11.52

6.3 HPGCL further submitted that it has to incur significant capital expenditure to meet with the new environmental norms. Accordingly, it has submitted its new capital investment plan in respect of RGTPP, DCRTTP and PTPS. Primarily this shall include installation of FGD plants and low NOx burners & Secondary Over Fire Air (SOFA)

Dampers. To meet with the new environmental norms, if required, Capex. Plan for installation of NOx SCR/SNCR or installation of any other pollution control equipment will be submitted separately to the Commission for approval.

6.4 Additionally, HPGCL submitted that it has planned the following new Capital investment Schemes :

- Up-gradation of existing PLC & SCADA system of CHP, AHP, DM Plant & Mill Reject Handling System at DCRTTP, Yamuna Nagar
- Procurement of ID Fan Blades, RGTPP
- Data Center, Data Recovery centre etc. for ERP Solution

The Scheme wise overview of the new Capital investment Works is as under;

6.4.1 Up-gradation of existing PLC & SCADA system of CHP, AHP, DM Plant & Mill Reject Handling System at DCRTTP, Yamuna Nagar

Estimated capital cost: - Rs 2.25 Cr.

Claim under HERC MYT Regulation, 2012: The additional capitalization has been claimed under 18.5.2(e) read with Regulation 9.2 which relates to additional works / services including replacement of assets which have become necessary for efficient and successful operation of the project, but not included in the original project cost.

Purpose of investment: The PLC & SCADA system installed in CHP, AHP, DM Plant & Mill Reject Handling System is of M/s Rockwell Automation make (with 1756-L63 controller) which was supplied & commissioned by M/s R-infra under respective package for 2x300 MW DCRTTP. Presently, the Operating station & Engineering station of the CHP, AHP, DM Plant & MRHS at DCRTTP are running on Microsoft Windows XP Professional operating system. The Microsoft Windows XP Professional is no longer being supported by Microsoft Incorporation in view of the fast pace of change of technology. The software and hardware of the existing installed systems have also been obsolete. To up-grade Hardware & Software system supporting latest versions of Microsoft Windows, as earlier supported version of Windows XP has been discontinued by Microsoft Incorporation, USA.

Capital Structure: The additional capitalization will be funded by 100% Debt.

Capitalization Schedule: The PLC & SCADA system will be revived in FY 2019-20 at

expense of Rs 2.25 Crore and will be capitalised in the same year.

Financing Plan including identified sources of investment: HPGCL is in deliberation with various banks/FIs for funding the capital expenditure.

Details of physical parameters / targets: PLC & SCADA system has been installed for Auto controlled operation of CHP, AHP, DM Plant & MRHS. The installed system is of Rockwell Automation India Pvt Ltd (A division of Rockwell USA). Presently, installed systems are based on Windows XP which has been discontinued by Microsoft Incorporation, USA, so, the software and some of the hardware parts need to be up-graded to make compatible with the latest version of Microsoft Windows. Some of the hardware has also been discontinued by Rockwell Automation.

Presently running system has no backup support from Rockwell Automation due to discontinuing of Microsoft Windows XP.

As per Appendix-II of the HERC MYT Regulation, 2012 the useful life of the IT equipment is 6 years only. In view of the above up-gradation of the system is essential and inevitable.

Cost-benefit analysis and payback period: Up- gradation is required for trouble free operation of CHP, AHP, DM Plant & Mill Reject Handling System.

Envisaged reduction in O&M cost/losses: N.A

6.4.2 Procurement of blades for Induced Draft (ID) fan for RGTPP Hisar for Rs. 1.4 Crore

Claim under HERC MYT Regulation, 2012: The additional capitalization has been claimed under 18.5.2(e) which relates to any additional works / services which have become necessary for efficient and successful operation of the project, but not included in the original project cost.

Purpose of investment

Both the units of 2 X 600 MW RGTPP are equipped with 4 no. ID fans and there is no standby ID fan in both the units. In case of outage of ID fan the plant has to be run on partial load with oil support. As on date no set of ID fan blade is available at site. Keeping in view the long delivery period and to avoid long outage on account of ID fan, it is proposed to procure the blades as insurance spares.

Capital Structure

The additional capitalization will be funded by 100% Debt.

Capitalization Schedule

The ID Fan Blade will be procured in FY 2019-20 at cost of Rs 1.40 Crores and would be capitalized in the same year.

Financing Plan including identified sources of investment

HPGCL is in deliberation with various banks/FIs for funding the capital expenditure

Details of physical parameters / targets: N.A

Cost-benefit analysis and payback period: NA

Envisaged reduction in O&M cost/losses: The capital expenditure will cut down time in case any blade of ID fan is damaged. In case of non-availability of the spares, the Unit may have to run on partial load with oil support.

6.4.3 Data Center , Data Recovery centre etc. for ERP Solution

Claim under HERC MYT Regulation, 2012: The additional capitalization has been claimed under 18.5.2(e) which relates to any additional works / services which have become necessary for efficient and successful operation of the project, but not included in the original project cost.

Purpose of investment

HPGCL has engaged M/s L&T Infotech Ltd. as an Implementation Partner for implementation of ERP. The work of ERP in HPGCL was resumed by M/s L&T Infotech and presently the work is under process. In order to implement the ERP Software the additional associated IT Hardware such as Data Centre, Data Recovery Centre etc. will also requires.

Data Center and Data Recovery Center:- It is required for hosting the ERP Solution database and for designing, implementing & maintenance of ERP in primary data center (DC) and secondary data center (DR) site for hosting SAP ERP applications as per the SAP landscape. In view of providing continuous availability of the SAP applications along with complete managed services and disaster recovery services (in case of disaster at primary site) the DR infrastructure is envisaged to enable HPGCL to deliver services

quickly, while improving productivity and enhancing performance even in case of disaster.

LAN (Local Area Network): -LAN is required for interconnections between sites and corporate office for efficient communication, software and resource sharing and centralization of data for successful implementation of ERP.

Capital Structure

The additional capitalization will be funded by 100% Debt.

Capitalization Schedule

The Data Center , Data Recovery centre etc. for ERP Solution will be procured as per requirement till FY 2021-22 at cost of Rs 20.00 Crores and would be capitalized as per the HERC MYT Regulation,2012.

Financing Plan including identified sources of investment

HPGCL is in deliberation with various banks/FIs for funding the capital expenditure

Details of physical parameters / targets: N.A

Cost-benefit analysis and payback period: NA

Envisaged reduction in O&M cost/losses: The capital expenditure will improve the efficiency of the system and better monitoring, analysis of the data in respect of plants .

The gist of proposed New Capital works is tabulated below:-

SN	Scheme	Investment			
		2018-19	2019-20	2020-21	2021-22
1	Installation of FGD RGTPP	-	-	314.9	314.9
2	Installation of FGD DCRTTP	-	-	251.3	251.3
3	Installation of FGD PTPS 6	-	-	95	95
4	Installation of FGD PTPS 7-8	-	-	209.2	209.2
5	Installation of Low NOx Burner & SOFA RGTPP	-	55.4	-	-
6	Installation of Low NOx Burner & SOFA DCRTTP	-	46.8	-	-
7	Installation of Low NOx Burner & SOFA PTPS 7-8	-	37.85	-	-
8	Up-gradation of existing PLC & SCADA at DCRTTP	-	2.25	-	-
9	Procurement of ID fan blades, RGTPP	-	1.4	-	-
10	Data Center , Data Recovery centre etc. for ERP Solution	-	10	5	5
	TOTAL	-	153.7	875.4	875.4

6.5 The summary of capital expenditure proposed (approved and new scheme) for the second control period is as under: -

Particulars	FY 2018-19	FY 2019-20	FY 2020-21	FY 2021-22	Total
Approved Capital schemes	90.54	106.91	11.52	0.00	208.97
New proposed Capital schemes	0.00	153.70	875.40	875.40	1904.50
Total	90.54	260.61	886.92	875.40	2113.47

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 2018-19 and FY 2019-20 as under: -

PLF (%)	HERC Approved		HPGCL Proposed	
	FY 2018-19	FY 2019-20	FY 2018-19	FY 2019-20
PTPS 5-6	82.50	NA	82.50	82.50
PTPS –7-8	85.00	NA	85.00	85.00
DCRTPS-1-2	85.00	NA	85.00	85.00
RGTPS-1-2	85.00	NA	85.00	85.00
WYC and Karkoi	37.00	NA	37.00	43.50

HPGCL submitted that the Commission, in line with the proposal of HPGCL, had approved the CUF of WYC Hydel Project for the available capacity and as per the norms prescribed in the Regulation. It was considered that two machines to be overhauled every year. The overhauling of machine C-1 and C-2 was planned in FY 2018-19 with the financial assistance from MNRE, in principal approval of which was already been granted by MNRE. The overhauling work of C-1 machine is under progress and expected to be completed by the end of FY 2018-19 and that of machine C-2 by FY 2019-20. Overhauling of machine no. A-2, B-1 and B-2 have already been completed till FY 2017-18. Overhauling of machine A-1 has been deferred and is now being planned to be executed with financial assistance from MNRE after FY 2019-20.

As per above in FY 2019-20 7 out of 8 machine will be available for generation as such HPGCL proposes that the CUF for WYC, Hydel project be considered at 43.50% which is 50% of available capacity for FY 2019-20.

7.2 Auxiliary Energy Consumption

HPGCL has proposed auxiliary consumption for the FY 2019-20 as per the norms with the relaxation approved by the Commission in its earlier orders.

The auxiliary consumption approved by the Commission and proposed by HPGCL for the FY 2018-19 and FY 2019-20 are as under:-

Unit No.	Approved		Proposed	
	FY 2018-19	FY 2019-20	FY 2018-19	FY 2019-20
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%	8.50%
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 HERC MYT Regulations is as tabulated below: -

Secondary Fuel Oil Consumption (ml/kWh)	Approved		Proposed	
	FY 18-19	FY 19-20	FY 18-19	FY 19-20
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 2017-18 was 44.53% 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 76.55%. 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 compensation of 2.25% in line with CERC's IEGC Regulations, 2010 and as per the conditions laid down in the CERC notification dated 06.04.2016 considering average loading of FY 2017-18. 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 18-19	FY 19-20	FY 18-19	FY 19-20
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	2441

7.5 Calorific Value and Price of Coal

HPGCL has proposed GCV of Coal and Secondary Fuel (Oil) for the FY 2018-19 and the FY 2019-20 as per the actual weighted calorific value of coal/Oil for PTPS, DCRTPS and RGTPS during April to September of the FY 2018-19, as under:-

Particulars	PTPS	DCRTPS	RGTPS
Gross Calorific Value of Coal (kcal/Kg)	3855	3605	3641
Gross Calorific Value of Oil(kcal/Kg)	10482	10458	10757

HPGCL has proposed weighted average cost of Coal and Secondary Fuel (Oil) for the FY 2019-20 as per the actual weighted average cost of coal/Oil for PTPS, DCRTPS and RGTPS during April to September of the FY 2018-19 without any escalation.

The Hon'ble Supreme Court in its Order dated 24.10.2017 in WP (c) 13029/ 1985 in the matter of M.C. Mehta Vs. Union of India directed to place a ban on use of furnace oil and pet coke in the states of U.P, Haryana and Rajasthan w.e.f. 01.11.2017. Accordingly, in exercise to power delegated under Section 5 of the Environment (Protection) Act, 1986 and in view of the Hon'ble Supreme Court's Order, Central Pollution Control Board (CPCB) vide notification dated 15.11.2017 directed the concerned states for prohibition on use of pet coke and furnace oil by any industry, operation or processes with immediate effect until further orders. Accordingly in compliance to the direction of Hon'ble Apex court, HPGCL has started use of light diesel oil (LDO) instead of furnace oil. LDO is more expensive than furnace oil, the weighted average cost of oil for FY 2018-19 and FY 2019-20 significantly higher than that of FY 2017-18. The below tables show weighted average price of coal and oil considered for FY 2018-19 and FY 2019-20.

Coal Cost (Rs/MT)	PTPS	DCRTPS	RGTPS
2018-19	4950	4719	4879
2019-20	4950	4719	4879

Oil Cost (Rs/KL)	PTPS	DCRTPS	RGTPS
2018-19	51627	46757	53066
2019-20	51627	53915	53066

7.6 Fuel / Variable Cost for the Control Period

In view of the above, the Petitioner has propose fuel cost in the FY 2019-20 as under:-

	2019-20		
Fuel Cost	Generation (Ex-bus)	Total cost of coal	Per Unit Variable cost
	in MU	Rs. Crore	Rs/ Unit
PTPS – 5-6	2739	992	3.62
PTPS – 7-8	3397	1193	3.51
DCRTPS	4099	1368	3.34
RGTPS	8422	2917	3.46
Total	18658	6470	3.47

8 Annual Fixed Cost

The Petitioner has submitted that the Commission had extended the first control period up to the FY 2019-20, vide its Order dated 15.10.2018. As such various components of fixed cost for FY 2019-20 has been proposed in line with the approval of the Commission for previous year i.e. FY 2018-19, as under:-

8.1 Operation and Maintenance Expenses (O&M)

- 8.1.1 That the Commission, vide its Order dated 07.11.2016, had amended the base year for determining O&M Expenses for the remaining period of the control period to FY 2015-16.
- 8.1.2 That the Commission approved O&M norms for FY 2018-19 vide its Order dated 31.10.2018 accordingly with annual escalation of 4%.
- 8.1.3 HPGCL has proposed O&M expenses for FY 2019-20 with 4% escalation in line with the Regulations on the approved O&M expenses of FY 2018-19.
- 8.1.4 Considering above submissions HPGCL has tabulated proposed O&M Expense for FY 2018-19 and FY 2019-20 as follows:

S.N	Unit	Approved	Proposed
		FY 18-19	FY 19- 20
1	PTPS 5-6	153.54	159.68
2	PTPS –7-8	160.36	166.78
3	DCRTPS 1-2	154.94	161.14
4	RGTPS 1-2	191.99	199.67

5	WYC Hydel	36.58	38.04
	Total	697.42	725.31

8.2 Depreciation

8.2.1 HPGCL has submitted that there are certain changes in capitalization schedule for F.Y 2018-19 and FY 2019-20. Changes in the capitalization schedule are due to change in the overhauling schedule or addition/ deletion in the approved capital investment plan. Depreciation has been considered only for the capex. schemes which has been completed during the year as per the HERC Regulation. The depreciation rate has been applied on the average of opening and closing asset at the rate notified in HERC, MYT Regulations, 2012. The depreciation claim is within the maximum allowable limit. Gross Fixed Assets for FY 2018-19 and for FY 2019-20 after considering the addition in FY 2018-19 and FY 2019-20 is tabulated below:-

FY 2018-19 (Rs. in Crore)					
SNo.	Unit	Opening GFA	Additions	Deletions	Closing GFA
1	PTPS – 5	292.99	-	-	292.99
2	PTPS – 6	1002.02	0.52	-	1002.54
3	PTPS –7-8	2055.91	1.73	-	2057.64
4	DCRTPP 1-2	2293.77	29.30	-	2323.07
5	RGTPP 1-2	4407.80	22.91	-	4430.71
6	WYC Hydel	200.55	18.00	-	218.55
	Total	10253.04	72.46	-	10325.50

FY 2019-20 (Rs. in Crore)					
SNo.	Unit	Opening GFA	Additions	Deletions	Closing GFA
1	PTPS – 5	292.99	-	-	292.99
2	PTPS – 6	1002.54	3.70	-	1006.24
3	PTPS –7-8	2057.64	46.16	-	2103.80
4	DCRTPP 1-2	2323.07	86.69	-	2409.46
5	RGTPP 1-2	4430.71	107.56	-	4537.75
6	WYC Hydel	218.55	17.50	-	236.05
	Total	10325.50	261.61	-	10586.29

8.2.2 HPGCL further submitted that HERC in its tariff order dated 31.10.2018 had directed as under:-

“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.”

In compliance to the directives of the Commission, HPGCL has prepared a summary of GFA and accumulated depreciation based upon the memorandum account of its Gross Fixed Assets and the accumulated depreciation considering the IND AS adjustment and its impact with and without considering the IND AS adjustments. Abstract of the Gross Fixed Assets for FY 2018-19 and for FY 2019-20 excluding the impact of the spares and decommissioning cost capitalized as per IND AS is as under:

FY 2018-19 (Rs. in Crore)

SNo.	Unit	Opening GFA	Additions	Deletions	Closing GFA
1	PTPS – 5	291.15	-	-	291.15
2	PTPS – 6	996.71	0.52	-	997.22
3	PTPS –7-8	1898.77	1.73	-	1900.50
4	DCRTPP 1-2	2250.94	29.30	-	2280.24
5	RGTPP 1-2	4335.85	22.91	-	4358.76
6	WYC Hydel	199.84	18.00	-	217.84
	Total	9973.26	72.46	-	10045.72

FY 2019-20 (Rs. in Crore)

SNo.	Unit	Opening GFA	Additions	Deletions	Closing GFA
1	PTPS – 5	291.15	-	-	291.15
2	PTPS – 6	997.22	3.70	-	1000.92
3	PTPS –7-8	1900.50	46.16	-	1946.66
4	DCRTPP 1-2	2280.24	86.69	-	2366.93
5	RGTPP 1-2	4358.76	107.56	-	4466.32
6	WYC Hydel	217.84	17.50	-	235.34
	Total	10045.72	261.61	-	10307.33

- 8.2.3 PTPS Unit 5 has outlived its useful life as defined in the HERC MYT Regulation. The balance depreciation of the unit has been claimed under the true up for FY 2017-18. Therefore, no depreciation has been claimed on the unit.
- 8.2.4 In view of the above submission, Depreciation proposed by HPGCL for FY 2018-19 and FY 2019-20 exclusive of depreciation on capitalization of spares and decommissioning cost as per IND AS is as under:-

S.N	Unit #	Approved	Proposed
		FY 18- 19	FY 19-20
1	PTPS 5	-	-
2	PTPS6	-	1.82
3	PTPS 7-8	55.21	62.64
4	DCRTPP	105.39	109.18
5	RGTPP	195.32	206.99
6	WYC Hydel	11.67	18.53
	Total	367.59	399.15

8.3 Interest & Finance Charges

- 8.3.1 HPGCL has submitted that it has restructured its loan by swapping higher cost loans with cheaper loan. Interest and Finance charges for FY 2018-19 were approved by the Commission in the order dated 31.10.2018 based upon the available loan portfolio and saving on account of restructuring of loans. 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 by exercising its financial prudence has made advance repayment of State Bank of India and Rural Electrification Corporation loans. This has also led to a significant reduction in the interest and finance charges. After restructuring and advance payments, HPGCL is expected to incur interest and finance charges amounting to Rs 141.49 Cr. in FY 2019-20. Normal interest and finance charges as per the approved Capex. schedule and rate of interest, pre restructuring for FY 2019-20 are Rs 261.17 Cr.
- 8.3.2 There is a saving of Rs 119.67Cr (261.17-141.49 Cr.) in the interest and finance charges due to due diligence and efficient financial management of HPGCL.
- 8.3.3 According to Clause 21.1 (v) of the HERC MYT Regulations 2012, HPGCL is eligible for incentive on the net savings resulting from restructuring of loan. Accordingly, HPGCL has requested the Commission to approve interest expenses of Rs 197.66 Cr. including incentive (50% of savings from restructuring) for FY 2019-20.
- 8.3.4 HPGCL has further submitted that allowance of incentive by the Commission on account of financial prudence further encourages HPGCL to work more efficiently. The Commission has already recognize the efforts of HPGCL and has allowed the same in its previous orders.

8.3.5 Interest and finance charges as proposed by HPGCL for the FY 2019-20 including incentive for the savings amounting to Rs. 201.33 cr, is as under:-

Unit	Interest Expense post restructuring	Interest Expense pre restructuring	Savings due to restructuring	Incentive (50% of savings)	Total interest expense
PTPS- 5	-	-	-	-	-
PTPS -6	1.33	1.38	0.06	0.03	1.36
PTPS 7-8	4.99	5.03	0.04	0.02	5.01
DCRTPP	27.95	81.74	53.79	26.90	54.85
RGTPP	104.25	170.03	65.78	32.89	137.14
WYC Hydel	2.97	2.98	0.01	0.00	2.97
Total	141.49	261.17	119.67	59.87	201.33

8.4 Return on Equity

HPGCL submitted that the Commission in its Order dated 31.10.2018 has approved the RoE at 10%. However, 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. Accordingly, HPGCL has considered Return on Equity at 14%, in line with the MYT Regulations, 2012. Further, HPGCL has considered 20% of the capitalization planned for FY 2018-19 and FY 2019-20 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 2019-20, proposed by HPGCL is as under:-

Details of Equity Employed in FY 2019-20 (Rs Cr.)

S. N	Unit#	Opening	Additions	Closing	Proposed RoE@ 14%
1	PTPS – 5	5.08	-	5.08	0.71
2	PTPS – 6	156.87	0.74	157.61	22.01
3	PTPS 7-8	436.13	9.23	445.36	61.70
4	DCRTPP	495.39	17.34	512.72	70.56
5	RGTPP	983.39	21.52	1,004.90	139.18
6	WYC Hydel	18.87	3.50	22.37	2.89
	Total	2,095.73	52.32	2148.05	297.07

8.5 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 31.10.2018 has considered appropriate a margin of 1.25% over the applicable base rate of SBI. SBI base rate applicable as on 01.04.2018 was 8.70% p.a. Accordingly, HPGCL has estimated the working capital requirements and the interest on working capital @ 9.95% (8.70%+1.25%).

HPGCL has assessed the normative working capital requirement in present Petition considering actual weighted average rate of coal and oil for April-September of FY 2018-19 for calculation of fuel cost for the FY 2019-20 without any escalation, as under:-.

Unit #	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		9.95 %
PTPS – 5	82.71	1.31	6.74	8.09	50.05	148.90	14.82
PTPS – 6	82.71	1.31	6.56	7.88	51.91	150.37	14.95
PTPS 7-8	198.90	3.21	13.90	16.68	128.73	361.41	35.96
DCRTPP	228.07	4.03	13.43	24.17	152.53	422.22	42.01
RGTPP	486.24	7.92	16.64	29.95	311.06	851.81	84.76
WYC Hydel	-	-	3.17	2.85	5.30	11.32	1.13
Total	1078.62	17.78	60.44	89.62	699.58	1946.04	193.63

8.6 Cost of Oil

HPGCL submitted that the normative gross Generation from the thermal projects of HPGCL, normative oil consumption as approved by the Commission, rate of oil and the total Cost of Oil for FY 2019-20 is given as under:-

S.N	Unit#	Gross Gen. (MU)	Sp. Oil Cons. (MI/kwh)	Total oil cons. (KI)	Rate of oil (Rs. per KI)	Total Cost of Oil
1	PTPS 5-6	3043	1	3043	51627	15.71
2	PTPS 7-8	3733	1	3733	51627	19.27
3	DCRTPP	4479	1	4479	53915	24.16
4	RGTPP	8959	1	8959	53066	47.55
	Total	20214	1	20214		106.69

8.7 Total Fixed Cost

HPGCL summarized the total fixed cost of HPGCL Plants proposed for FY 2019-20 is as under:-

S.N	Unit #	O&M	Depreciation	Interest & Finance Charges	Return on Equity	W/C Interest	Cost of Oil	Total Fixed Cost
1	PTPS 5-6	159.68	1.82	1.36	22.72	29.77	15.71	231.08
2	PTPS 7-8	166.78	62.64	5.01	61.7	35.96	19.27	351.36
3	DCRTPP	161.14	109.18	54.85	70.56	42.01	24.15	461.89
4	RGTPP	199.67	206.99	137.14	139.18	84.76	47.55	815.28
5	WYC Hydel	38.04	18.53	2.97	2.89	1.13	-	63.36
	Total	725.31	399.15	201.33	297.07	193.63	106.69	1923.17

8.8 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.

8.9 Additional submissions:-

8.9.1 NEW environmental norms

HPGCL submitted that the Ministry of Environment, Forest and Climate Change (MoEF&CC), Government of India, notified the Environment (Protection) Amendment Rules, 2015 (Amendment Rules, 2015) on 7.12.2015, amending/introducing the standards for emission of environmental pollutants to be followed by the Thermal Power Plants. The same were to be complied with in 2 Years of notification i.e. up to December 2017. The following are the amendments made to the existing allowable level of emission:-

Pollutants (mg/Nm3)	COD before 2003		COD after 2003	
	< 500 MW	> 500 MW	< 500 MW	> 500 MW
Particulate Matter (PM)	100		50	
SOx	600	200	600	200
NOx	600		300	
Hg	0.03		0.03	
Sp. Water Cons.(M ³ /MWh)	3.5			

A special Technical Coordinate Committee meeting of the Northern Region Power Committee (NRPC) was held on 14.09.2017 at NRPC, New Delhi to prepare phasing plan for implementation of the new environmental Norms for thermal plants in the Northern Region. As an outcome of the discussions in the meeting, NRPC issued a plan for installation of FGD in a phased manner for the implementation of New Norms in respect of HPGCL Plants as tabulated below:-

Name of Plant	Unit	Time Schedule
PTPS	Unit -6	March- April 2021
	Unit -7	Jan-Feb 2021
	Unit -8	Nov- Dec 2020
DCRTPP	Unit -1	Nov- Dec 2021
	Unit -2	Sept- Oct 2021
RGTPP	Unit -1	March- April 2022
	Unit -2	Jan-Feb 2022

Central Pollution Control Board (CPCB) is maintaining their direction for installation of pollution control equipment by 31.12.2019 to achieve the environment norms in respect of SPM, SO_x and NO_x as were issued vide their letter dated 11.12.2017. All the power plants of the HPGCL are under the NCR jurisdiction as such compliances of the new environmental norms in a time bound manner are more rigid for it. All the HPGCL plants need installation of additional pollution control equipments to meet the new environment norms. The following actions are required to be taken for compliance of new norms:-

- i. **SO_x**: Flue Gas Desulphurisation (FGD) is required to be installed to control SO_x levels,
- ii. **NO_x**: Following are the technologies for control of NO_x levels:-
 - (a) Combustion modifications i.e. installation of low NO_x burners and Separated over Fire Air (SOFA) Damper.
 - (b) Installation of Selective Catalytic Reduction (SCR) / Selective Non-Catalytic Reduction (SNCR).
- iii. **SPM**: ESP rectification/up-gradation needs to be carried out to control SPM levels.

HPGCL is exploring all out possibilities including installation of Dry Sorbent Injection system (DSI), considering its techno commercial feasibility to meet with the dead line and will carry out modifications in the existing systems accordingly by putting additional pollution control equipment to comply with the new norms. The installation of FGD and other pollution control equipment is a statutory requirement due to change of law and is a pass through expenditure under HERC Regulation 18.5.2(d). Installation of FGD and other pollution control equipment shall also require shut down of the generating station.

Unit 5&6, PTPS Panipat are the old units of HPGCL and are having low PLF on account non-scheduling due to high cost of generation. Unit-5 has already completed its useful life of 25 Years in 2014 & no FGD is proposed in this unit. Unit-6 shall also complete its useful life of 25 years by 2026. Matter has been taken up with MoEF&CC/CPCB regarding difficulties and challenges being faced by HGPCL to comply with new environment norms and to exempt PTPS unit 5 & 6 from compliance of new environment norms. However, installation of FGD plant for PTPS Unit-6 has been proposed with Financial Implication of Rs. 190.00 Cr.

Status of installation of Flue Gas De-Sulphurisation (FGD) Plant and other pollution control equipments:

HPGCL submitted that it has taken the following actions for the compliance of New Environment Norms:-

i. Specific Water Consumption:-

Specific Water consumption of all HPGCL plants is within limits. Efforts were made for the control of specific water consumption. Water balance studies were conducted in the past followed by plugging of the points of leakage of water & steam. Moreover, improvements in the O&M practices in the power stations resulted in gradual decrease of the specific water consumption.

ii. SPM:-

- (a) **Unit-6, PTPS:** - The Defective fields of ESP have been rectified during the annual overhauling of unit held in Feb, 2018 and now, all the ESP fields are in working order.
- (b) **Unit-7&8, PTPS:** - The overhauling of ESP fields has already been carried out and all the ESP fields are in working order.

- (c) Further, the installation of Ammonia Flue Gas Conditioning (AFGC) System is under progress in PTPS units. The SPM levels are expected to be reduced by 50% after installation of AFGC system. The installation of FGD system will further reduce the SPM level.
- (d) **Unit-1&2, DCRTTP:** - The work for revival of ESP fields of Unit-1&2 has been awarded to M/s GE Power India Ltd. The firm was asked for a guarantee of 50 mg/Nm³ as SPM values after revival of fields. The work of unit-1 has already been completed & SPM values are within the prescribed limits. The overhauling work of ESP of unit-2 shall be carried out during forthcoming annual overhauling of unit during April-May; 2019. The installation of FGD system will further reduce the SPM level.
- (e) **Unit-1&2, RGTPP:** - The overhauling of ESP of Unit-2 has already been carried out and all the ESP fields are in working order. Work Order for the rectification of 02 nos. fields of Unit-1 has been issued to M/s SEC, China on 02.08.2018 and the work shall be executed during forthcoming annual overhauling of unit during Sep-Oct, 2019. The installation of FGD system will further reduce the SPM level.

iii) SO_x:

- (a) HPGCL has engaged NTPC as consultant for preparation of DPR, tender specification and post award activities including monitoring and supervision activities etc. for installation of FGD at HPGCL Thermal Power Stations at PTPS, Panipat (Unit-7&8), DCRTTP, Yamunanagar and RGTPP, Hisar.
- (b) The draft Detailed Project Reports (DPRs) in respect of PTPS # 7-8, DCRTTP and RGTPP have been received from NTPC and the same are under consideration. The financial implications are as under :

Name of plant & units	Estimated expenditure
Unit-6 PTPS, Panipat	190.00 Crores *
Unit-7&8, PTPS, Panipat	418.39 Crores
Unit-1&2, DCRTTP, Yamuna Nagar	502.58 Crores
Unit-1&2, RGTPP, Hisar	629.81 Crores

* 1 PTPS Unit-6 estimation is taken in line with estimation of PTPS -7&8.

Rest is as per DPR

- (c) Additional raw material (lime stone) will be required in the FGD i.e. around 0.2 MT/MW/day. FGD will also consume the additional power. As such Installation of FGD will also increase the O&M Expenses and Aux. Cons.

- (d) Per unit cost of generation (Capacity Charges as well as Energy Charge Rate) shall be increased significantly. Expected increase in auxiliary consumption on account of installation of FGD plant of is around 1%. Impact on the increase in cost of generation shall be submitted in the due course of time after placing the work order.

iv) NO_x

- (a) Initially, HPGCL has planned to install Low NO_x burners and Secondary over Fire Air (SOFA) Compartments to control NO_x levels. The budgetary offers have been received from respective OEMs and are under consideration.
- (b) The estimated capital expenditure is presented below:

Unit	Total Estimated Expenditure (In Crores)	CAPEX during FY-2019-20 (in Crores)
Unit-7 &8, PTPS	38	38
Unit 1&2, DCRTTP	47	47
Unit 1&2, RGTTP	56	56
Total		141

- (c) It is expected that NO_x level will come down after installation of Low NO_x burners and Secondary Over Fire Air (SOFA) Compartments, However if further any action is required to meet out the NO_x norms, then HPGCL will approach the Commission accordingly.

v) Mercury (Hg):-

Emission of Mercury (Hg) can be restricted as co-benefit through other pollution control equipment like ESP, FGD etc.

Other Initiatives:

Hon'ble Power Minister in the conference held on 3rd July, 2018 has directed that to encourage the disposal of the biomass in an environment friendly manner, the bio-mass should be converted into small briquettes and the same should be used in boilers of thermal power plants. HPGCL is also putting all out efforts in this regard and exploring the feasibility to use bio mass as fuel in its thermal plants.

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

- i) to make appropriate provision in the tariff order for the FY 2019-20 and accord in principle approval for allowing the pass through of the expenditure incurred or to be incurred on installation of additional

pollution control equipment in the respective year under Regulation 18.5.2 (d), and

- ii) that the shutdown period required for installation of the FGD and other pollution control equipment be considered for the purpose of deemed generation to avoid loss of fixed cost, being beyond control of HPGCL and require to comply with the new environmental norms under change of law.

8.9.2 Operational constraints of HPGCL

HPGCL has submitted that there has been a significant amount of backing down since FY 2013-14, as detailed under:-

Unit #	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19
PTPS – 1-4	3263.35	3193.45	2686	-	-	-
PTPS – 5-6	1806	2413.74	3084.65	3266.83	2585.99	1414.97
PTPS – 7-8	779.75	1368.23	2671.46	2468.22	1794.27	647.01
DCRTPP	602.55	585.38	1081.53	1373.34	1064.52	562.03
RGTPP	1995.17	2304.47	4184.4	6011.54	5170.54	2641.8
Overall %	30.20%	35.20%	49.26%	55.06%	44.55%	44.08%

HPGCL further submitted that increase in number of backing down leads to increase in number of start and stop operation, as shown by the below numbers of start & stop operations due to Backing down:-

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	38	9	16	63
2018-19 (up to Sept)	27	9	15	51

HPGCL submitted that increase in number of start and stop operation increases the oil consumption abnormally. It is submitted that such significant backing down has adversely impacted HPGCL in the following ways:-

- 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) As HPGCL plants are dedicated to supply in Haryana, so it is requested to Commission 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.
- vi) 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 vicious circle with backing down.

Remedial measures proposed to address the operational constraints: -

HPGCL has submitted that CERC vide its notification dated 6th April, 2016, has allowed compensation for the technical norm during the backing down, immediately after observing the marginal fall in the PLF of the central generating station from 73.96% in FY 2013-14 to 72.52% in FY 2015-16. Central Electricity Regulatory Commission (CERC) has amended its IEGC Regulation, 2010 vide notification dated 06.04.2016. The amendments have enabled Inter-State Generators to claim compensation in technical parameters (like SHR, Auxiliary Consumption, SFC) in case of backing down on instructions of beneficiaries. HPGCL in Haryana is facing such problem since FY2012-13 that too with wide variation. Average annual PLF remains as low as below 50% against the targeted norms of more than 75%.

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 provision for recovering consequential damages due to abnormally high auxiliary consumption, Specific oil consumption, SHR and loss of equipment. Also, there is no such provision in the HERC, HGC Regulation, 2009. As Per Regulation 7.3 (c) of HGC Regulation, 2009, the Commission shall continue to review the HGC Regulation to make it compatible with the IEGC. In the event of any inconsistencies; the provisions of IEGC shall prevail. However, till now no review has taken place. Appropriate similar provision is also required to be provided in the HERC HGC Regulation, 2009 for compensating the norms of auxiliary consumption, Specific oil consumption and SHR during the backing down on instruction of beneficiary. Appropriate provisions are also required to be incorporated in MYT Regulations for considering the relaxed norms in the respective period as per HGC Regulation, 2009 so amended. A difficulty petition (HERC/PRO-29 of 2016 dated 14.09.2016) has also been separately filed by the HPGCL with the Commission for allowing the compensation in the technical parameters on the pattern of CERC notification till the time HGC Regulation is appropriately amended. HPGCL has prayed for consideration of the said petition.

HPGCL further submitted that although there is no regulation for providing a priority treatment to any generator, however, as per Department of Industries & Commerce, Government of Haryana Order no. G.O. No.2/2/2010-4 dated 19th December 2011, firms belong to state of Haryana are given relaxation up to 10% of lowest quoted rates in tenders even if they are private manufacturers, if the firm agrees to match lowest quoted rates. HPGCL is a state government undertaking and mandated to supply all of its power to Discoms of Haryana only. Hence HPGCL should also be given an opportunity to match variable cost of next cheaper generating station and if it agrees to do so, Discoms should off take power from HPGCL only.

Hence HPGCL wishes to submit that being a state generator it should be given relaxation/ priority in Merit Order dispatch subject to condition that there should not be an increase in power purchase cost of Discoms.

In view of the above, HPGCL has requested to consider the compensatory norms while determining the tariff for F.Y. 2019-20.

8.9.3 Incentive on deemed generation

HPGCL submitted that its generating stations faced the massive and frequent backing down during past years. During FY 2017-18 also the level of annual backing down was as high as 44% of its installed capacity. Whereas the generating plants of HPGCL remains available up to 89.49%. Year wise Deemed PLF of the HPGCL plants remained as under: -

Unit #	2014-15	2015-16	2016-17	2017-18	2018-19 (up to Sept)
PTPS 5-6	97.94	92.63	99.36	84.27	98.41
PTPS 7-8	93.71	91.82	97.84	88.11	98.76
DCRTPP	78.02	97.49	91.28	85.86	86.56
RGTPP	76.34	83.91	93.39	93.72	89.24
HPGCL	84.70	90.72	94.66	89.49	91.81

As per Regulation 30 (c) of the HERC MYT Regulation, 2012, the recovery of the fixed cost is linked with the Plant Availability Factor (PAF) as under: -

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

The Commission, vide its order dt. 18.08.2015, has capped the recovery of fixed cost up to the normative PLF level.

As per Regulation 12, incentive and penalty mechanism is applicable for PAF however no criteria thereof have been defined therein. HPGCL in its petition dated 29.11.2016 has submitted to the Commission for allowing the incentive @50% of the approved fixed cost for the deemed availability beyond the normative PLF. However, the Commission has not allowed the same in its order dated 26.04.2017 stating that the proposal of the HPGCL does not hold much merit.

Recently, the Maharashtra Electricity Regulatory Commission (MERC) in its Order dated 12.09. 2018 in the Case No. 65 of 2018 in the matter of Mid Term Review of Tata Power Limited’s (TPL) generation business has approved incentive based on the similar method. MERC MYT Regulation also defines the rate at which incentives should be payable. The relevant extract from the MERC MYT Regulation is as below:

“.. 48.7 Incentive shall be payable at a flat rate of **25.0 paise/kWh** for actual energy generation in excess of ex-bus energy corresponding to target Plant Load Factor. Provided that the actual generation shall also consider the generation loss on account of any backing down instruction from the Maharashtra State Load Despatch Centre.”

Accordingly, HPGCL has requested the Commission to adopt the methodology for calculation of incentive on deemed generation over and above normative availability as per the methodology used by the MERC.

8.9.4 Rebate and surcharge mechanism

HPGCL submitted that Regulation 42 of the HERC Regulations 2012 defines the schedule for rebate on early payment of bills of energy and capacity charges. Rate of surcharge on the delayed payments as per HERC, MYT Regulation 2012 is as under:

“....a late payment surcharge at the rate of 0.04% per day shall be levied by the generating company and shall be payable by the beneficiaries”

Rebate for the timely payment is as under:-

“In case of early payment of bills of capacity and energy charges the following schedule of rebate shall be followed: -

Days from the date of receipt of bills of capacity charges, energy charges etc.	Rebate %
0-7	2.0
8-14	1.0
15-21	0.5
22-30	0.25

HPGCL further submitted that true up for the previous year is being approved by the Commission in the following year with holding cost upto the date of order. HPGCL is claiming the true up from the Discoms through a separate bill raised for the purpose. Discoms are claiming rebate on the true-up bills as well and making its payment net of rebate. As holding cost on the true up for the previous year is allowed till the date of the order only thus the true up bill is due for payment immediately on its claim. True-up bill is the differential claim allowed by the Commission after applying the prudence check for the variation in the allowed cost and the actual cost for the respective year. It is not a bill for capacity or energy charge for any month. As such no rebate should be allowed on the same. Regulation is silent regarding allowing of rebate on such claims, as such Commission is requested to clarify and issue appropriate direction that monthly bills other than capacity or energy charge are payable immediately on its claim and no rebate is allowable on such claim.

HPGCL further submitted that after taking the debt of the Discoms by the Govt. of Haryana under the UDAY schemes, the financial position of the Discoms has improved and now they are availing the rebate @2% p.m. Rebate of Rs. 70.46 Crores during FY 2017-18 and Rs. 46.25 Crores during FY 2018-19 (upto October, 2018) has been claimed by the Discoms and the payments have been made to the HPGCL net of rebate. Keeping in view the wide gap in the rate of surcharge and of rebate, HPGCL has also submitted its suggestions to the Commission for keeping the rate for the rebate and surcharge in parity while issuing the Regulation for the next control period. In past also the Commission vide its order dated 03.09.2015 has reviewed the surcharge rate on the FPA bills and restricted the accumulated surcharge @12.75 % pa instead of @ 14.60% pa.

Accordingly, HPGCL has requested the Commission to review the rate of Rebate and issue appropriate direction for keeping the rate of rebate and surcharge at par for enforcing payment discipline judiciously.

8.9.5 Non-tariff income

HPGCL submitted that the Commission in its order dated 31.10.2018 has disallowed a sum of Rs 48.13 Cr. which had been booked by HPGCL under non-operating income in its books by considering it as non-tariff income.

HPGCL further submitted that there is specific provision of non-tariff income for transmission and distribution businesses only in the HERC, MYT Regulations 2012 but there is no provision for generation company in the HERC, MYT Regulations 2012 or the treatment of non-tariff income/non-operating income. However, the regulations do provide for treatment of income from other business (Regulation -26). The relevant extract is as follows;

26. "The generation company and the licensees may engage in any other business for optimum utilization of their assets with prior intimation to the Commission. Such instances and transactions shall be governed in accordance with the Treatment of Income of Other Businesses of Transmission Licensee(s) and Distribution Licensee(s), Regulations, 2007 notified by the Commission, as amended from time to time

.....

49. (a) *“The total annual transmission charges of a transmission licensee shall be equal to total annual expenses and return on equity as allowed as per these regulations less non-tariff income and 50% of the revenue generated from other business in line with HERC Regulations, 2007 for other income as amended from time to time”.*

HPGCL accordingly submitted that since the HERC Regulations 2012 do not provide any express regulations for non-tariff income/non-operating income for generation company, the same should not be deducted by the Commission for true-up. Even if the Commission treats the non-operating income as income from other businesses, HPGCL should be allowed to retain 50% of the income and only 50% should be passed on to the beneficiaries.

HPGCL requested the Commission to re-examine the treatment of non-tariff income and appropriately true-up of non-operating income for the FY 2017-18. HPGCL further requested the Commission to also review the true-up of non-operating income of FY 2016-17 in its order dated 31.10.2018.

8.9.6 Running of PTS Unit-5

HPGCL submitted that 210 MW Unit 5 PTPS, Panipat was commissioned during March, 1989 and have completed its useful life. Since the 210 MW Unit 5 PTPS has completed 28 years of service without major Renovation & Modernization (R&M). Due to old technology and not carrying out the R&M the unit is not able to meet its Design heat rate. Accordingly, the Commission has considered and approved a relax norm of SHR i.e. 2550 Kcal for this unit. The variable cost of generation of the unit has increased, due to relatively higher SHR. However, the unit is capable to generate at its rated installed capacity. Annual Fixed Cost of this unit is lowest among all the units and projected for FY 2019-20 at Rs.0.76 per Kwh only, at the normative PLF of 82.5%. The major part of the Annual fixed cost is employees cost which will continue to be incurred irrespective of the continuation of the unit. There will be no Depreciation and interest & finance charges of the unit in FY 2019-20. As such practically running of PTPS unit-5 will attract incremental fixed cost only on account of O&M cost (R&M and A&G) and rest of the fixed cost will have to incur by the beneficiary irrespective of running of the unit.

During 18th April to 02nd May 2018, Unit 5 achieved actual PLF of about 86% and again 87.79% during 9th to 28th May 2018 to meet peak summer demand, without any forced outage when M/s Adani Power Ltd. (Mundra/Gujrat) stopped supplying power to the State of Haryana.

In view of the above, HPGCL requested that in the interest of the State and in order to meet the peak demand of the State to allow continuation of PTPS unit-5 as well as a reserve source by paying marginal amount on account of R&M and A&G.

9 HPGCL's Prayer

- a) Admit this Petition.
- b) Consider the operational constraints and other concerns of the HPGCL as submitted in the Petition and pass appropriate order for remedial measures.
- c) Approve revised schedule of capital expenditure plan for FY 2018-19 to FY 2021-22 as submitted in the Petition.
- d) Approve True-up of FY 2017-18 at Rs 289.85 Cr. with appropriate holding cost according to audited financial statements.
- e) Consider and allow the incentive on the savings as submitted in the true up. 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 2017-18 as submitted in the true up.
- f) Amend the HGC Regulations in line with IEGC Regulations, 2010. Also decide the difficulty petition already filed by HPGCL for amendment in HGC Regulation, 2009.
- g) Till HERC amend its HGC Regulation, Consider and provide suitably compensation, for deterioration in the technical parameters viz auxiliary consumption, SHR and SFC due to massive and frequent backing down in view of the CERC, IEGC Regulation, 2010 fourth amendment, 2016, in its order.
- h) Consider and approve the compensation in norms for SHR of RGTPP in line with CERC notification dated 6.04.2016 till the time HGC regulations are notified.
- i) Grant in-principle approval of the capital schemes for the statutory requirement of installation of FGD plant and Low-cost NOx burners to meet the emission standards as per the new environmental norms.

- j) To allow shutdown period required for installation of the FGD and other pollution control equipment for the purpose of deemed generation as requested in the Petition.
- k) Continue relaxed norms for FY 2019-20 as approved by the Commission in Generation Tariff for FY 2015-16, FY 2016-17, FY 2017-18 and FY 2018-19.
- l) Determine and approve the Generation Tariff for 2019-20 as proposed.
- m) 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.
- n) Provide appropriate provision for considering the relaxation or relief granted by any appellate authority on the appeals of the petitioner.
- o) 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.
- p) Treat the filing as complete in view of substantial compliance as also the specific requests for waivers with justification placed on record.

10 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 21.02.2019 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 21.02.2019. 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.

11 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 25.02.2019 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, Shri Vineet Garg, MD, HPGCL stated that the bench marking currently is as per the HERC Regulations in vogue. However, they can respond in case the Commission desires to have the view on any specific financial / operating norms including those of the CERC. The Chairman, HERC, stated that the Commission is preparing MYT Regulations for the next control period and the same will be hosted on the website for seeking comments. The MD stated that in the present ARR / Tariff petition of HPGCL the norms should be as per the previous bench marking and the MYT Regulations in vogue.

12 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 21.02.2019.

At the onset, the Commission reiterates that the present order is confined to the true up of FY 2017-18 as well as determination of generation tariff for the FY 2019-20 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 2018-19 shall be considered by the Commission while undertaking similar exercise in the FY 2020-21 in line with the HERC MYT Regulations, 2012.

13 FY 2017-18 True-Up

In line with the Regulations in vogue, the Commission, while reckoning with the true-up petition of HPGCL for the FY 2017-18, has considered the actual expenditure as per the audited accounts of the FY 2017-18 vis-à-vis the expenses as approved by the Commission vide its Order for the FY 2017-18. 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.

14 True-up of O&M Expenses for the FY 2017-18

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 2017-18, true-up petition of HPGCL submitted vide memo no.

HPGC/FIN/Reg-487/1644 dated 13.12.2018 and additional information submitted by HPGCL vide its letter no. 1677/HPGC/FIN/REG-487 dated 04.02.2019. It is observed that HPGCL has sought true-up amounting to Rs. 304.50 Crore on account of Employee Cost including terminal benefits, net of saving of other O&M expenses.

The Commission, in its Order dated 26.04.2017, had reduced the PLF for PTPS (units 5-6) from the normative 82.5% to 35% and accordingly R&M and A&G expenses of PTPS (units 5-6), for the FY 2017-18 were restricted to 50% of the normative expenses. Further, continuing with the objective of reducing the employees cost, the Commission has reduced the same by 10% from the norms to further spur the efforts of HPGCL to vigorously pursue re-deployment of the employees so as to reduce the said cost in the cost of generation of PTPS (5&6), subject to true-up on actual basis after prudence check and the relevant Regulations occupying the field.

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 I Sambasiva Rao, the terminal liabilities of HPGCL for the FY 2017-18 is Rs. 485 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 actual employee cost including terminal liability as per audited accounts for FY 2017-18 were Rs. 745.94 Cr., against the approved Employee cost of Rs. 404.47 Cr. Thus, there is an increase of Rs. 341.47 Crore in the actual Employee cost over the approved cost.

The other O&M expenses i.e. R&M and A&G expenses approved by the Commission for FY 2017-18 were Rs. 229.46 cr. The actual R&M and A&G expense for the year remained at Rs. 192.88 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 to defer certain work following conservative approach.

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. 304.50 Crore on account of employee cost & terminal liabilities, as sought in the Petition.**

15 True-up of Depreciation

The Commission has carefully examined the submissions of HPGCL i.e. the actual depreciation in the FY 2017-18 was 412.29 Crores (net of solar business –Rs. 409.21 Crores) as against the approved depreciation of Rs. 377.60 crore. HPGCL further submitted that depreciation on account of capitalization of spares and Decommissioning Cost is Rs.10.04 Cr. and Rs. 3.01 Cr. respectively and net allowable depreciation for FY 2017-18 exclusive of Solar business and depreciation on spares and Decommissioning Cost in accordance to the Ind AS is Rs. 396.15 Cr (412.29-3.08-10.04-3.01). HPGCL submitted that the amount of Rs. 396.15 Crore includes remaining depreciation of Rs 16.00 Cr. & Rs. 9 Crore, in respect of PTPS Unit-5 & batteries of RGTPP, which has already reached its useful life. Accordingly, HPGCL claimed Rs 18.56 Cr. as true-up of depreciation for FY 2017-18.

The Commission observed that in the memorandum account of capitalisation of spares, dismantling etc. (done otherwise than in accordance with HERC MYT Regulations) submitted by HPGCL on the directions of the Commission in the Order dated 31.10.2018, value of such spares, dismantling cost etc. capitalized in difference years has not been accumulated in the gross block. Further, the Commission in its Order dated 31.03.2016, had observed on the basis of auditor’s observation at para 4 (vii) of

Note 1, forming part of the financial statement for the FY 2014-15 that HPGCL has capitalized spares amounting to Rs. 154.60 crore (Rs. 75.52 crore in case of RGTS, Rs. 27.29 crore in the case of DCRTS and Rs. 51.79 crore in case of PTPS). However, the memorandum account submitted by HPGCL shows capitalized spares upto 01.04.2015 amounting to Rs. 144.97 crore only (Rs. 30.29 crore in case of RGTS, Rs. 7.73 crore in the case of DCRTS and Rs. 106.94 crore in case of PTPS). In this regard, HPGCL was also directed to provide a correct memorandum account showing the cumulative breakup of gross block of fixed assets into allowed capitalization, spares & decommissioning cost capitalized, depreciation and net block of fixed assets.

In response, HPGCL has submitted that it had capitalized spares amounting to Rs.154.60 crores in FY 2014-15 in accordance with erstwhile Accounting Standard -10. However, HPGCL has prepared & presented its financial statements as per Ind AS for first time in FY 2016-17 and the comparative figures of FY 2015-16 were also restated. HPGCL has capitalized the spares of Rs.144.97 crore in FY 2016-17 only. Hence HPGCL has correctly stated the capitalization of spares as per provisions of Ind AS and as per the directives of the Commission.

The Commission examined the above reply of HPGCL vis-à-vis Memorandum Account submitted along with the Petition and observed the aberrations in the submission of HPGCL. The Commission in its Order dated 26.04.2017, had recorded that unclaimed depreciation of PTPS (Units 1-5) on account of capitalization of spares is Rs. 42.76 Crore. The Commission has not allowed unclaimed depreciation for PTPS (Units 1-5). However, in the Memorandum account now submitted, HPGCL has claimed that it has not capitalized spares in PTPS (Units 1-5). Further, HPGCL has not furnished fixed assets Register for the FY 2016-17 & 2017-18. Further, the details of gross fixed assets shown by HPGCL in the Memorandum account is not in conformity with Note 2 & 17 of the Financial Statements as on 31.03.2018. However, the net block of fixed assets as per Memorandum Account and Financial Statements reconciles. The shift in capitalization of spares from PTPS (1-5) to other Plants/Units of PTPS, has resulted in the change of depreciation disallowed by the Commission in its earlier Orders.

In Order to examine the depreciation which is to be disallowed due to capitalization of dismantling of assets and spares, the depreciation shown by

HPGCL in its Memorandum Account for the FY 2014-15, FY 2015-16 & FY 2016-17 was clubbed with comes to Rs. 127.28 Crore (Rs. 77.24 Crore + Rs. 17.65 Crore + Rs. 19.34 Crore + Rs. 13.05 Crore). As against this, the Commission had disallowed depreciation on such capitalization in its Orders dated 31.03.2016, 26.04.2017 & 31.10.2018, aggregating to Rs. 73.51 Crore only (Rs. 8.08 Crore + Rs. 42.76 Crore + Rs. 22.67 Crore). Accordingly, the shortfall in the disallowance of depreciation on account of capitalization of cost of dismantling and spares Rs. 53.77 Crore (Rs. 127.28 Crore minus Rs. 73.51 Crore) is disallowed, as against Rs. 13.05 Crore (Rs. 10.04 Cr. + Rs. 3.01 Cr.), proposed by HPGCL. Thus, incremental disallowance on account of depreciation on capitalization of cost of dismantling and spares comes to Rs. 40.72 Crore (Rs. 53.77 Crore minus Rs. 13.05 Crore), which is now true-up.

Further, the submission of HPGCL regarding allowance of remaining depreciation of Rs 16.00 Cr. pertaining to PTPS-Unit 5, the Commission observes that the issue has already been settled in the Order dated 26.04.2017 (HERC/PRO-38 of 2016) and HPGCL is not allowed to advance its arguments on the same issue twice over. Accordingly, the balance unclaimed depreciation amounting to Rs. 12.86 Crore claimed by HPGCL in respect of PTPS-5 & 6, over & above the depreciation already allowed in its Order dated 26.04.2017, is not approved for true-up.

The Commission is of the view that as per the submissions of the Petitioner in the present petition PTPS (unit 5 & 6) is capable of operating at the normative levels but for the backing down instructions of the Discoms. Hence, all the plants, machinery and equipments of PTPS (unit 5 & 6) are in running condition. Resultantly, the residual value of PTPS Unit-5 & 6 is expected to be more than the normative salvage value of 10%. At the same time, the Commission observes the dismal PLF of PTPS (units 5 & 6) for the FY 2017-18 which remained at 13.98%, which is evident of the fact that the investment in PTPS (Units 5 & 6) is not yielding the desired results. Thus, HPGCL may get valuation of the same done at the earliest along with valuation of the land of PTPS (unit 5 & 6) and submit a report to the Commission so that a view may be taken regarding the adjustments of the balance depreciation amount and un-paid loans, if any. The Commission is further constrained to note that HPGCL is not furnishing the desired information e.g. the

HPGCL was directed to provide unit-wise PLF, however, HPGCL submitted PLF for PTPS-Units 5 & 6 clubbed, Units 7 & 8 clubbed, DCRTTP Unit 1 & 2 clubbed, RGTPP Unit 1 & 2 clubbed. HPGCL was directed to recast the Memorandum Account in the desired format, however, it was submitted that the Memorandum Account already submitted is correct. During the hearing, HPGCL informed the Commission that it has already submitted fixed assets register, however, the same was not submitted even after the hearing. HPGCL was directed to furnish unit-wise profitability, however, HPGCL replied that unit-wise revenue has already been supplied along with petition and expenditure is now being supplied. Therefore, HPGCL left it for the Commission to determine the unit-wise profitability. HPGCL was directed to submit exception report wherein full availability for any unit was not declared. However, the same was not provided. In this regard, HPGCL is directed to strictly comply with the directions of the Commission in future and appropriate action may be taken against the delinquent officers.

Therefore, the actual allowable depreciation for the FY 2017-18 comes to Rs. 342.57 Crore (i.e. Rs. 396.15 Crore minus Rs. 40.72 Crore minus Rs. 12.86 Crore), against the approved depreciation of Rs. 377.60 Crore. Therefore, the depreciation approved in excess amounting to Rs. 35.03 Crore (Rs. 377.60 Crore minus Rs. 342.57 Crore) is now trued up.

16 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 2017-18 was Rs. 209.89 Crore (net of Solar Business –Rs. 206.87 Crore) as per the audited accounts for the year, as against the approved interest and finance charges on loan of Rs 295.41 Crore. The Petitioner submitted that net saving of Rs. 88.54 Crore (Rs. 295.41 Crore minus Rs. 209.89 Crore), has arisen, on account of swapping of higher cost PFC & REC loan with cheaper loans from Indian Overseas Bank, State Bank of India & Punjab National Bank. Further, HPGCL has prepaid the loans amounting to Rs. 601.67 Crore, entailing reduction in interest cost.

Interest and Finance charges for FY 2017-18 as per pre-restructuring Loan

portfolio excluding solar business is given below: -

Particulars	ROI	Opening Bal	Additions during the year	Repayments during the year	Closing Balance	Interest during the year	Remarks
PFC Loan (PTPS 5-6)	7.00%	0.38	-	0.38	-	0.03	
PFC Loan (PTPS 7-8)	13.00%	57.56	-	57.56	-	1.18	
GPF Bonds	7.90%	61.04	-	6.78	54.26	4.22	
PFC Loan (DCRTPP)	12.50%	874.59	-	120.66	753.93	101.78	Takeover by IOB - State Bank of India
REC (RGTPP)	12.25%	926.83	-	103.32	823.51	107.21	Partial (Rs. 200 crore) takeover by Punjab National Bank
PFC Loan (RGTPP)	11.45%	844.86	-	101.65	743.21	90.92	Takeover by State Bank of India
APDP Loan	12.50%	3.55	-	0.15	3.40	0.44	
LIC Loan	8.50%	12.07	-	12.07	-	0.51	
Andhra Bank (Misc. Capex)	8.65%	81.16	-	20.11	61.05	6.15	Taken over by PNB
Andhra Bank (RGTPP)	8.65%	171.65	-	38.24	133.40	13.19	Taken over by PNB
Total		3,033.68	-	460.92	2,572.76	325.64	

HPGCL further submitted that as per MYT Regulations, the Commission may allow to retain 60% of the savings however, in its earlier orders has considered to pass on 50% of the net savings to the beneficiaries, accordingly, HPGCL is proposing to pass on 50% of the savings on interest and finance charges to the beneficiaries and consider the true up of interest and finance charges as given in the below table:

Particular	Approved interest & Finance Charges	Actual & interest & Finance Charges	Pre-restructuring & interest & Finance Charges	Allowable interest & Finance Charges	True-up
1	2	3	4	5=3+50%(4-3)	6=5-2
Interest and Finance Charges	295.41	206.87	325.64	266.26	(29.15)

HPGCL therefore, requested to allow Rs 29.15 Cr. as pass through of Interest & Finance charges.

In this regard, the Commission sought additional details from HPGCL showing The Commission had in its Order dated 26.04.2017, had allowed the interest & finance charges amounting to Rs. 295.41 Crore as claimed by HPGCL, on the basis of restructuring. Therefore, the savings due to restructuring were already factored in while allowing interest & finance charges of Rs. 295.41 Crore. As against this, actual interest & finance charges are Rs. 206.87 crore. HPGCL need to explain the saving in the interest cost amounting to Rs. 88.54 Crore due to reduction in rate of interest and due to average method applied while allowing interest in the ARR Order dated 26.04.2017.

HPGCL submitted the requisite details as under:-

Particulars (FY 2017-18)	Amount (Rs. crore)
Actual opening Balance of outstanding Loan	2,921.05
Actual closing Balance of outstanding Loan	1,948.56
Total	4,869.61
Average Loan (A)	2,434.81
Actual Interest (B)	206.87
Actual Average rate of Interest (C)	8.50%
Advance Payments made as on 31.03.2017	112.67
Advance Payments made as on 31.03.2018	601.67
Total	714.34
Average Advance Payments (D)	357.17
Allowed opening Balance of outstanding Loan	3,135.07
Allowed closing Balance of outstanding Loan	2,877.25
Total	6,012.32
Average Loan (F)	3,006.16
Interest allowed	295.43
Allowed Average rate of Interest (G)	9.83%
Interest as per actual average rate (H= FxC)	255.41
Reduction in Average Rate of Interest (I= G-C)	1.33%
Savings due to reduction in average rate of interest (J=IxF)	40.02
Savings due to Advance payments made (K=DxC)	30.35
Savings due to average method applied (L=H-B-K)	18.20
Total Savings	88.56

The Commission observes that HPGCL has saved an amount of Rs. 70.37 Crore (Rs. 40.02 Crore + Rs. 30.35 Crore) on account of reduction in average rate of interest & prepayment of loan. Accordingly, saving of interest subject to incentive and penalty framework as mentioned in the regulation 12.4, has been worked out as under:-

(Rs. in Crore)						
Particular	Approved interest & Finance Charges	Actual & interest & Finance Charges	Pre-restructuring & interest & Finance Charges	Saving in Interest due to averaging	Allowable interest & Finance Charges	True-up
1	2	3	4	5	6=3+50%(4-3-5)	7=6-2
Interest and Finance Charges	295.41	206.87	325.64	18.20	257.16	(38.26)

Accordingly, saving of Rs. 38.26 Crore shall be pass through.

17 True-up of Return on Equity (ROE)

HPGCL has submitted that the Commission had approved RoE of 10% Pre-tax amounting to Rs. 206.49 crore, for the FY 2017-18. Further, Govt. of Haryana has contributed an amount of Rs. 10.75 cr. as equity contribution during the FY 2017-18. However, an amount of Rs. 27.08 Crore of equity contribution was disallowed by the Commission in its Tariff Order dated 31.10.2018. Accordingly the revised equity employed for FY 2017-18 excluding PTPS unit 1 to 4 as per audited accounts is tabulated below:-

Rs. Crore

Unit #	Opening as per audited accounts	Disallowed vide order dt. 30.10.2016	Opening considered for true-up	Additions	Closing	RoE @ 10%
PTPS 5-6	159.03		159.03	2.82	161.85	16.04
PTPS 7-8	439.08	9.06	430.02	5.78	435.78	43.29
DCRTP	494.20	4.82	489.38	0.15	489.53	48.95
RGTPP	990.70	13.20	997.50	1.31	978.81	97.82
Hydel	14.58		14.58	0.69	15.27	1.49
Total	2,097.57	27.08	2,070.49	10.75	2,081.24	207.59

Approved RoE	Actual RoE	True-up of RoE Cost
206.49	207.59	1.10

Hence, HPGCL has prayed that additional RoE for the FY 2017-18 amounting to Rs. 1.10 crore may be considered for trueing – up.

The Commission directed HPGCL to submit details of equity contribution of Rs. 10.75 crore received during the FY 2017-18, 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. 10.75 Crore, received during the FY 2017-18, as under: -

SN	Particulars	Equity Received (Rs. Crore)	Capex approved by the Commission
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1	Installation of CCTV camaras system in Plant area DCRTTPP	0.20	Yes
2	Replacement of CTs and CVTs in 220 KV Switchyard Unit#5&6 PTPS	0.53	No
3	Up-Gradation of DCS System in Unit#7&8 PTPS Panipat	5.20	Yes
4	Replacement of PVC fills of PTPS Unit#7 & 8 Cooling Tower	2.55	No
5	Purchase of Fire Tender for PTPS	0.15	Yes
6	Rectification / repair work of ESP of PTPS Unit# 7 & 8, PTPS, Panipat	1.51	Yes
7	Installation of On-Line Stator End Winding Vibration Monitoring System in Unit# 7&8 PTPS	0.25	No
8	Township for DCRTTPP, Yamunanagar	0.36	Yes
	TOTAL	10.75	

The Commission examined the above details submitted by HPGCL and observed that the same is in conformity with the relevant provisions of MYT Regulations, 2012 occupying the space.

Therefore, the true-up amount of return on equity @ 10% works out to Rs. 1.10 Crore (Rs. 207.59 Crore minus Rs. 206.49 Crore). Hence, the Commission allows the same.

18 True-up of recovery of cost of Oil

HPGCL submitted that in the FY 2017-18, it had incurred oil expense amounting to Rs. 31.17 Crore, which was considerably lower than the approved amount of Rs. 76.24 Crore i.e. by an amount of Rs. 45.07 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 0.43 during the FY 2017-18, for all the HPGCL plants as a whole. Total saving in Oil cost amounting to Rs. 45.07 Crore has been bifurcated by HPGCL into saving due to low oil price (Rs. 1.50 Crore), due to SFC (Rs. 41.57 Crore) and due to low generation (Rs. 2.00 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. 20.78 Crore (i.e. 50% of saving due to low SFC i.e. Rs 41.57 Crore) as an incentive and pass-through remaining Rs 24.29 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. 45.07 Crore only Rs. 41.57 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. 20.78 Crore (50% of Rs. 41.57 Crore) and the balance saving in Oil cost i.e. Rs. 24.29 Crore (Rs. 45.07 Crore minus Rs. 20.78 Crore), shall be passed on to the beneficiary.

19 True-up of interest on working capital

HPGCL submitted that the Commission in its Order dated 26.04.2017 regarding generation tariff for FY 2017-18 had projected average coal and oil prices at prevailing market prices. However, there has been variation in prices of coal and oil during the FY 2017-18. Therefore, while computing the true-up of working capital FY 2017-18, actual rate of coal and oil prevailing in FY 2017-18 has been considered.

Due to variation in the Fuel prices the normative working capital requirement for FY 2017-18, as per the approved norms of the HERC, has increased to Rs. 1845.80 Cr against the approved working capital requirement of Rs. 1654.50 cr.

HERC has approved the Interest on Working Capital @ 10.55% (9.30%+1.25%). SBI Base Rate as on 01.04.2017 was 9.10%, accordingly for computing the Interest on Working Capital for the true up of FY 2017-18 has been considered @ 10.35% (9.10%+1.25%).

The below table summarizes True-up of interest on working capital for FY 2017-18.

	Approved IWC (Rs. Cr) @ 10.55%	Actual IWC (Rs. Cr) @ 10.35%	True-up of IWC(Rs. Cr)
Total	174.55	191.04	16.49

HPGCL has requested to allow the difference of Rs 16.49 Cr. as true-up of interest on working capital for FY 2017-18.

The Commission has considered the above submissions and observes that the actual interest on working capital including timely payment rebate allowed to DISCOMs, as per the audited accounts is Rs. 96.83 Crore, as against the approved figure of Rs. 174.55 Crore. Thus, there is substantial difference in between the interest on working capital allowed by the Commission and actual interest on working capital incurred by HPGCL. The Commission further observes that several generating units

of HPGCL remained backed down for considerable time, hence, HPGCL's revenue decreased from the normative level of Rs. 7215.24 Crore to Rs. 5277.48 Crore. Further, the actual generation was also lower in the FY 2017-18 at 10083 MU as against the normative level of 17252 MU.

The Commission observes that there is substantial reduction in PLF of all the generating units which is primarily attributable to backing down by the Discoms, is the main reason of lower working capital requirement. However, the Commission is constrained to allow the normative working capital requirement determined by it based on various operational and financial parameters as per HERC MYT Regulation, 2012 irrespective of the actual working capital requirement of HPGCL increased or decreased on the basis of increase in the price of coal/oil or saving in oil cost

Further, the Commission has allowed rate of interest on working capital @ 10.55% p.a. (9.30%+1.25%). As per Regulation 22.2 of MYT Regulation 2012, the rate of interest on working capital shall be equal to the base rate of SBI as applicable on 1st April of relevant financial year plus an appropriate margin that realistically reflects the rate at which the generating company can raise debt from the market. SBI Base Rate as on 01.04.2017 was 9.10%, accordingly for computing the Interest on Working Capital for the true up of FY 2017-18 has been considered @ 10.35% (9.10%+1.25%).

Accordingly, true-up of interest on working capital for the FY 2017-18, has been done at Rs. -3.31 Crore, as under:-

	Working Capital Approved	Approved IWC @ 10.55%	Revised IWC @ 10.35%	True-up of IWC
Amount (Rs. Crore)	1654.5	174.55	171.24	3.31

20 True-up of Auxiliary Energy Consumption

HPGCL has submitted that in FY 2017-18, 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 31.10.2018 has allowed for the refund of variable cost paid by HPGCL to the Discoms in FY 2016-17 on account of auxiliary consumption for the months the units were boxed-up.

Accordingly, during 2017-18 also, HPGCL has incurred variable cost to the tune of Rs. 2.64 cr. during boxing up of the units, as detailed under:-

Plant	PTPS Unit-5	PTPS Unit-6	PTPS Unit-7	PTPS Unit-8	Total
Auxiliary Consumption when Boxed-up (MU)	4.62	1.54	0.76	1.08	8.00
Variable Cost (Rs/kWh)	3.33	3.33	3.22	3.22	
Variable Cost paid to Discoms (RsCr.)	1.54	0.51	0.24	0.35	2.64

HPGCL has requested to allow the recovery of the energy charges amounting to Rs. 2.64 Cr. so credited to Discom during boxing up of the units.

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 0% (PTPS – 5 & 6) to 81.63% (PTPS – 7 & 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. 2.64 Crore as prayed for.

21 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. 32.30 Crore in the FY 2017-18.

HPGCL submitted that since the HERC Regulations 2012 do not provide any express regulations for non-tariff income/non-operating income for generation company, the same should not be deducted by the Commission for true-up. Even if the Commission treats the non-operating income as income from other businesses, HPGCL should be allowed to retain 50% of the income and only 50% should be passed on to the beneficiaries.

HPGCL requested the Commission to re-examine the treatment of non-tariff income and appropriately true-up of non-operating income for the FY 2017-18. HPGCL further requested the Commission to also review the true-up of non-operating income of FY 2016-17 in its order dated 31.10.2018.

The Commission examined the submissions of HPGCL and observes that the issue raised by HPGCL has been already addressed by the Commission in its Order dated 31.03.2016 (HERC/PRO-30 of 2015). The relevant part of the Order of the Commission dated 31.03.2016 is reproduced as under:-

“HPGCL has been allowed Annual fixed charges and variable charges (Fuel Cost) and there is no specific provision in the MYT Regulation, 2012 regarding adjustment of Non-tariff income. Generally, the generating companies should not have any non-tariff income. The non-operating income of generating company can be on account of sale of scrap, ash etc. The same should be reduced from the coal cost/O&M expenses. Since, HPGCL has already recovered excess fixed cost and offered the excess part of fixed cost recovered for write off, non-operating income needs to be reduced from true-up amount approved by the Commission.”

In terms of the Commission’s Order dated 31.03.2016, 26.04.2017 & 31.10.2018, non-operating income needs to be reduced from true-up amount approved by the Commission. Accordingly, Rs. 32.30 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 2017-18 as under: -

	(Rs. Crore)	
	HPGCL (Proposed)	HERC (Allowed)
O&M Expenses	304.50	304.50
Depreciation cost	18.56	-35.03
Interest Cost	-29.15	-38.26
ROE	1.10	1.10
Interest on working capital	16.49	-3.31
Oil Cost	-24.29	-24.29
Auxiliary Energy Consumption (due to backing down)	2.64	2.64
Non-Tariff Income	-	-32.30
Total True-up	289.85	175.05
Add: Holding Cost @ 9.95% from 01.04.2018 to 31.03.2019 (12 months)		17.42
Total True-up including holding cost		192.47

HPGCL shall recover the aforesaid amount of Rs. 192.47 Crore from the Discoms i.e. UHBVNL and DHBVNL. The same shall become immediately payable upon the submission of bill and late payment charges shall be accordingly applicable in accordance with Regulation Clause 43 of the MYT Regulations, 2012. 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.

22 Capital Investment Plan (CIP)

HPGCL has submitted that the Commission in its Order dated 31st Oct., 2018 has approved the capital expenditure for the first control period up to FY 2020-21 of the various Capital Expenditure Works as presented in below, as per the submission of HPGCL in its Petition dated 28.11.2017 in Case no. HERC/PRO- 81 of 2017 regarding True-up for FY 2016-17, Mid-Year Performance Review for FY 2018-19 and Determination of Generation Tariff for the FY 2018-19: -

Sr. No.	Capital Expenditure work	As per Order dated 31.10.2018 (Rs. Cr.)			
		2017-18	2018-19	2019-20	2020-21
1	Capital Overhauling at WYC	4.20	31.8	-	
2	ERP System and allied works	-	23	12	
3	Procurement of one no. heat exchanger for Boiler Circulation Pump for RGTPP, Hisar	-	2	2	
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	-	1.4	-	
6	Procurement of 2 No. Air Driers for Transport Compressors for RGTPP Hisar	-	-	0.4	0.35
7	Trunion Bearing Housing and adopter sleeves support and guide side of APH for RGTPP Hisar	-	-	2	
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	-	0.8	3.7	
10	Construction of 2 no. Barracks for CISF for RGTPP Hisar	-	0.28	1	
11	Installation of CCTV surveillance System in RGTPP Hisar	-	2	-	
12	Construction of DAV school in power plant colony for RGTPS Hisar	-	3	3.87	
13	Rectification/repair work of ESP of PTPS -7&8 PTPS Panipat	5.0			
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		0.6		
16	Replacement of PTPS Unit-6 AD Line in Ash Handling & repair D2 of ESP Field	1.30	0.9		
17	Replacement of damaged floor and Construction of Roads in PTPS Colony, Panipat as per new norms of Government of Haryana	0.55	1		
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	0.4	0.4		
21	Up-gradation of PTPS Unit-6 HMI System of pro-control supplied by		1.5		

Sr. No.	Capital Expenditure work	As per Order dated 31.10.2018 (Rs. Cr.)			
	M/s BHEL				
22	Energy Management System PTPS Unit- 7-8		0.7		
23	Replacement of PTPS Unit-7&8 Fire Fighting, Hydrant and Spray pipelines		3		
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	22		
28	Providing of 2 No. VFD on Unit-1 DCRTTP , 6.6KV Motor of CEP		2.3		
29	Township for DCRTTP, Yamunanagar		2.35		
30	Civil Works for WYC Hydel Project		7.5		
31	Revival of 02 Nos of ESP fields of RGTPP Unit I		8		
32	Supply, Erection, Testing and Commissioning of Energy Management System at 2x600 MW RGTPP, Khedar, Hisar		0.55		
33	Modernization of Boiler Lift for PTPS Unit 8		0.7		
34	Replacement of DAVR in DCRTTP Units 1 &2		1.5		
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	8	
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	3	
40	Mobile Coal Sampling System		0.66		
Total		64.78	153.83	33.97	0.35

HPGCL further submitted that completed Capex. Scheme for FY 2017-18 has been dropped in the revised capex. plan for FY 2018-2021. Scheme of Replacement of PTPS Unit-7&8 Fire Fighting, Hydrant and Spray pipelines (Sr. No. 23 of above Table), has been dropped considering financial prudence. There are certain variations in the actual capex. incurred vis-a-viz approved expenditure tabulated above due to revision in the overhauling schedule. In view of the above, the revised schedule of the approved capital works is presented in below for consideration and approval: -

S. No.	Ref. of above	Capital Expenditure Work	(Rs. Cr.)		
		Year	2018-19	2019-20	2020-21
1	1	Capital Overhauling at WYC	18	10	-
2	2	ERP System and allied works	10	25	-
3	3	Procurement of one no. heat exchanger for Boiler Circulation Pump for RGTPP, Hisar	2	-	-
4	4	Balance Payment to R-Infra against EPC contract for RGTPP, Hisar	6.7	2.73	-
5	5	Procurement of PA fan blades for RGTPP Hisar	0.6	1.1	-
6	6	Procurement of 2 No. Air Driers for Transport Compressors for RGTPP Hisar	-	-	0.75
7	7	Trunion Bearing Housing and adopter sleeves support and guide side of APH for RGTPP Hisar	-	-	2
8	8	Additional oxygen probes at APH inlet and outlet of Unit- I & II for RGTPP Hisar	0.45	0.8	-
9	9	Arrangement of Dust Suppression system at ash dyke for RGTPP Hisar	1	2	1.5
10	10	Construction of 2 no. Barracks for CISF for RGTPP Hisar	0.28	1	-
11	11	Installation of CCTV surveillance System in RGTPP Hisar	-	2	-
12	12	Construction of DAV school in power plant colony for RGTPS Hisar	0.2	3	3.67
13	15	Revival of Fire Fighting System of Unit-6,PTPS,Panipat	-	-	0.6
14	16	Replacement of PTPS Unit-6 AD Line in Ash Handling & repair D2 of ESP Field	1	1.2	-
15	17	Replacement of damaged floor and Construction of Roads in PTPS Colony, Panipat as per new norms of Government of Haryana	1.55	-	-
16	21	Up-gradation of PTPS Unit-6 HMI System of pro-control supplied by M/s BHEL	-	1.5	-
17	22	Energy Management System PTPS Unit- 7-8	-	0.7	-
18	25	Up gradation of existing DCS system for DCRTTP 1 & 2	4.25	-	-
19	27	Revival of 20 no ESP fields and repairing of balance 36 no. ESP fields of Unit-1& 2 DCRTTP Yamunanagar	22	23	-
20	28	Providing of 2 No. VFD on Unit-1 DCRTTP , 6.6KV Motor of CEP	2.3	-	-
21	29	Township for DCRTTP, Yamunanagar	-	2.4	-
22	30	Civil Works for WYC Hydel Project	-	7.5	-
23	31	Revival of 02 Nos of ESP fields of RGTPP Unit I	5	3	-
24	32	Supply, Erection, Testing and Commissioning of Energy Management System at 2x600 MW RGTPP, Khedar, Hisar	0.55	-	-
25	33	Modernization of Boiler Lift for PTPS Unit 8	0.7	-	-
26	34	Replacement of DAVR in DCRTTP Units 1 & 2	0.75	0.75	-
27	35	Providing of 2 No. VFD on Unit-II DCRTTP ,6.6KV Motor of CEP	-	2.36	-
28	36	Improvement work of Cooling Towers of RGTPP Unit I & II	8	8	-
29	37	Installation of Variable Frequency Drive in Condensate Extraction Pump (CEP) of RGTPP Unit I & II	-	5.21	-
30	38	Replacement of 2 Nos. Stator of BCP of RGTPP Unit I & II	5.21	-	-
31	39	Upgradation of C&I system for RGTPP Hisar	-	3	3
32	40	Mobile Coal Sampling System	-	0.66	-
		Total	90.54	106.91	11.52

HPGCL further submitted that it has to incur significant capital expenditure to meet with the new environmental norms. Accordingly, it has submitted its new capital investment plan in respect of RGTPP, DCRTTP and PTPS. Primarily this shall include installation of FGD plants and low NOx burners & Secondary Over Fire Air (SOFA) Dampers. To meet with the new environmental norms, if required, Capex. Plan for installation of NOx SCR/SNCR or installation of any other pollution control equipment will be submitted separately to the Commission for approval.

Additionally, HPGCL submitted that it has planned the following new Capital investment Schemes:

- Up-gradation of existing PLC & SCADA system of CHP, AHP, DM Plant & Mill Reject Handling System at DCRTTP, Yamuna Nagar
- Procurement of ID Fan Blades, RGTPP
- Data Center, Data Recovery centre etc. for ERP Solution

The Scheme wise overview of the new Capital investment Works is as under;

Up-gradation of existing PLC & SCADA system of CHP, AHP, DM Plant & Mill Reject Handling System at DCRTTP, Yamuna Nagar

Estimated capital cost: - Rs 2.25 Cr.

Claim under HERC MYT Regulation, 2012: The additional capitalization has been claimed under 18.5.2(e) read with Regulation 9.2 which relates to additional works / services including replacement of assets which have become necessary for efficient and successful operation of the project, but not included in the original project cost.

Purpose of investment: The PLC & SCADA system installed in CHP, AHP, DM Plant & Mill Reject Handling System is of M/s Rockwell Automation make (with 1756-L63 controller) which was supplied & commissioned by M/s R-infra under respective package for 2x300 MW DCRTTP. Presently, the Operating station & Engineering station of the CHP, AHP, DM Plant & MRHS at DCRTTP are running on Microsoft Windows XP Professional operating system. The Microsoft Windows XP Professional is no longer being supported by Microsoft Incorporation in view of the fast pace of change of technology. The software and hardware of the existing installed systems have also been obsolete. To up-grade Hardware & Software system supporting latest versions of Microsoft Windows, as earlier supported version of Windows XP has been discontinued by Microsoft Incorporation, USA.

Capital Structure: The additional capitalization will be funded by 100% Debt.

Capitalization Schedule: The PLC & SCADA system will be revived in FY 2019-20 at expense of Rs 2.25 Crore and will be capitalised in the same year.

Financing Plan including identified sources of investment: HPGCL is in deliberation with various banks/FIs for funding the capital expenditure.

Details of physical parameters / targets: PLC & SCADA system has been installed for Auto controlled operation of CHP, AHP, DM Plant & MRHS. The installed system is of Rockwell Automation India Pvt Ltd (A division of Rockwell USA). Presently, installed systems are based on Windows XP which has been discontinued by Microsoft Incorporation, USA, so, the software and some of the hardware parts need to be up-graded to make compatible with the latest version of Microsoft Windows. Some of the

hardware has also been discontinued by Rockwell Automation.

Presently running system has no backup support from Rockwell Automation due to discontinuing of Microsoft Windows XP.

As per Appendix-II of the HERC MYT Regulation, 2012 the useful life of the IT equipment is 6 years only. In view of the above up-gradation of the system is essential and inevitable.

Cost-benefit analysis and payback period: Up- gradation is required for trouble free operation of CHP, AHP, DM Plant & Mill Reject Handling System.

Envisaged reduction in O&M cost/losses: N.A

Procurement of blades for Induced Draft (ID) fan for RGTPP Hisar for Rs. 1.4 Crore

Claim under HERC MYT Regulation, 2012: The additional capitalization has been claimed under 18.5.2(e) which relates to any additional works / services which have become necessary for efficient and successful operation of the project, but not included in the original project cost.

Purpose of investment

Both the units of 2 X 600 MW RGTPP are equipped with 4 no. ID fans and there is no standby ID fan in both the units. In case of outage of ID fan the plant has to be run on partial load with oil support. As on date no set of ID fan blade is available at site. Keeping in view the long delivery period and to avoid long outage on account of ID fan , it is proposed to procure the blades as insurance spares .

Capital Structure

The additional capitalization will be funded by 100% Debt.

Capitalization Schedule

The ID Fan Blade will be procured in FY 2019-20 at cost of Rs 1.40 Crores and would be capitalized in the same year.

Financing Plan including identified sources of investment

HPGCL is in deliberation with various banks/FIs for funding the capital expenditure

Details of physical parameters / targets: N.A

Cost-benefit analysis and payback period: NA

Envisaged reduction in O&M cost/losses: The capital expenditure will cut down time in case any blade of ID fan is damaged. In case of non-availability of the spares, the Unit may have to run on partial load with oil support.

Data Center , Data Recovery centre etc. for ERP Solution

Claim under HERC MYT Regulation, 2012: The additional capitalization has been claimed under 18.5.2(e) which relates to any additional works / services which have become necessary for efficient and successful operation of the project, but not included in the original project cost.

Purpose of investment

HPGCL has engaged M/s L&T Infotech Ltd. as an Implementation Partner for implementation of ERP. The work of ERP in HPGCL was resumed by M/s L&T Infotech and presently the work is under process. In order to implement the ERP Software, the additional associated IT Hardware such as Data Centre, Data Recovery Centre etc. will also requires.

Data Center and Data Recovery Center:- It is required for hosting the ERP Solution database and for designing, implementing & maintenance of ERP in primary data center (DC) and secondary data center (DR) site for hosting SAP ERP applications as per the SAP landscape. In view of providing continuous availability of the SAP applications along with complete managed services and disaster recovery services (in case of disaster at primary site) the DR infrastructure is envisaged to enable HPGCL to deliver services quickly ,while improving productivity and enhancing performance even in case of disaster.

LAN (Local Area Network):-LAN is required for interconnections between sites and corporate office for efficient communication, software and resource sharing and centralization of data for successful implementation of ERP.

Capital Structure

The additional capitalization will be funded by 100% Debt.

Capitalization Schedule

The Data Center, Data Recovery centre etc. for ERP 56+Solution will be procured as per requirement till FY 2021-22 at cost of Rs 20.00 Crores and would be capitalized as per the HERC MYT Regulation,2012.

Financing Plan including identified sources of investment

HPGCL is in deliberation with various banks/FIs for funding the capital expenditure

Details of physical parameters / targets: N.A

Cost-benefit analysis and payback period: NA

Envisaged reduction in O&M cost/losses: The capital expenditure will improve the efficiency of the system and better monitoring, analysis of the data in respect of plants.

The gist of proposed New Capital works is tabulated below: -

SN	Scheme	Investment			
		2018-19	2019-20	2020-21	2021-22
1	Installation of FGD RGTPP	-	-	314.9	314.9
2	Installation of FGD DCRTTP	-	-	251.3	251.3
3	Installation of FGD PTPS 6	-	-	95	95
4	Installation of FGD PTPS 7-8	-	-	209.2	209.2
5	Installation of Low NOx Burner & SOFA RGTPP	-	55.4	-	-
6	Installation of Low NOx Burner & SOFA DCRTTP	-	46.8	-	-
7	Installation of Low NOx Burner & SOFA PTPS 7-8	-	37.85	-	-
8	Up-gradation of existing PLC & SCADA at DCRTTP	-	2.25	-	-
9	Procurement of ID fan blades, RGTPP	-	1.4	-	-
10	Data Center , Data Recovery centre etc. for ERP Solution	-	10	5	5
	TOTAL	-	153.7	875.4	875.4

The summary of capital expenditure proposed (approved and new scheme) for the second control period is as under: -

Particulars	FY 2018-19	FY 2019-20	FY 2020-21	FY 2021-22	Total
Approved Capital schemes	90.54	106.91	11.52	0.00	208.97
New proposed Capital schemes	0.00	153.70	875.40	875.40	1904.50
Total	90.54	260.61	886.92	875.40	2113.47

The Commission vide its Memo No. 4774/HERC/Tariff dated 17/01/2019 had sought replies on certain observations. Accordingly, HPGCL vide its Memo No. 1677/HPGC/FIN/Reg-487 dated 04/02/2019 has submitted its replies as under: -

Observation 1:

HPGCL has claimed capex amounting to Rs. 140.05 Crore for the FY 2019-20, Rs. 870.40 Crore for the FY 2020-21 & Rs. 870.40 Crore for the FY 2021-22, for compliance of SO_x and NO_x norms. In this regard, HPGCL was intimated to refer to the Order dated 20.03.2017 passed by the CERC in Petition No. 72/MP/2016 (Maithon Power Limited v. Damodar valley Corporation and Ors.) and Order dated 27.04.2017 passed by UPERC in Petition No. 1132/2016 (Rosa Power Supply Company Ltd.), wherein it was decided as follows:

“the petitioner is directed to approach the Central Electricity Authority to decide specific optimum technology, associated cost and major issues to be faced in installation of different system like SCR, etc. The petitioner is also directed to take up the matter with the Ministry of Environment and Forest for phasing of the implementation of the different environmental measures. Accordingly, the petitioner is granted liberty to file appropriate petition at an appropriate stage based on approval of CEA and direction of MoEF which shall be dealt with in accordance with law”.

Reply:

DPR for installation of FGD in RGTTP has already been sent to CEA on 16/11/2018 for vetting. The matter is being pursued with CEA for early vetting. Moreover, NTPC has already commissioned FGD/DSI in some of its power plants and for others plants are planned. To utilize the expertise of NTPC in this field, HPGCL has engaged NTPC as consultant. The DPRs has been received by HPGCL and are under finalization stage.

In view of above, HPGCL has prayed before the Commission to grant in-principle approval of the capital schemes for the statutory requirement of installation of FGD plant and Low-cost NO_x burners to meet the emission standards as per the new environmental norms.

Observation 2:

HPGCL while filing the ARR for FY-2017-18 had submitted that DCRTTP, Yamunanagar complies with the new Environment Norms on SO_x & NO_x and as such no action is envisaged to control SO_x & NO_x. On contrary, while submitting the reply to the directive issued by the Commission, HPGCL has submitted that the DCRTTP Unit 1 & 2 do not comply with New Norms for NO_x and SO_x.

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 report on the assessment /measurement of SOx & NOx levels in respect of DCRTTP, HPGCL was again requested to expedite the submission of requisite information.

Reply:

HPGCL has submitted that the desired clarification has already been submitted vide this office memo no. 1397/HPGCL/FIN/REG-472 Vol-II Dated: 01/9/2017 in reference to Commission office memo 1793/HERC/Tech. dated 21.08.2017.

Observation 3:

An expenditure of Rs. 4.20 Cr., Rs. 31.5 Cr. was planned and got approved for WYC works FY2017-18 and FY 2018-19 respectively. However, an expenditure of Rs. 18 Cr. and Rs. 10 Crore has been proposed for FY 2018-19 and FY 2019-20 respectively in the revised capital expenditure plan. The reasons for not incurring the expenditure as per schedule was to be explained by HPGCL.

Reply:

HPGCL has submitted that in order to reduce the financial burden of the capital overhauling of the remaining machines of WYC Hydro project, MNRE has granted the financial assistance amounting to Rs. 10.0 Crore for the Capital Overhauling/ R&M of machine C-1& C-2 in FY 2017-18. Further HPGCL is also planning the Capital Overhauling/ R&M of Machine A-1 in future with the financial assistance from the MNRE as per the scheme of Govt. of India. Hence HPGCL could not incur the approved expenditure and an expenditure of Rs. 18 Cr. and Rs. 10 Crore has been proposed for FY 2018-19 and FY 2019-20 respectively in the revised capital expenditure plan.

Observation 4:

Capital investment of Rs. 23.00 Cr. and Rs. 22.00 Cr. was approved for FY 2017-18 and FY 2018-19 respectively for revival of 20 nos. ESP fields and repairing of balance 36 nos. ESP fields of Unit 1 & 2 DCRTTP Yamuna Nagar. However, as per the revised proposed expenditure, an amount of Rs. 23 Cr. has been shifted to FY 2019-20, the reason for slippage in execution of these major works be explained. 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. HPGCL was intimated to explain the actions taken to recover the loss.

Reply:

Capital investment of Rs. 23.00 Cr. and Rs. 22.00 Cr. was proposed for FY 2017-18 and FY 2018-19 respectively keeping in view the overhauling schedule of Unit-1&2 and the same was also approved by the Hon'ble Commission. However, the overhauling of Unit-1 was started in FY 2017-18 and completed in FY 2018-19, slippage in execution of the Capex amounting of Rs. 23.0 Cr. is due to the non-availability of the schedule for overhauling of Unit-2 in FY 2018-19. Now the overhauling of Unit-2 has been planned in FY 2019-20. As such Rs. 22.0 Cr & Rs. 23.0 has been proposed in FY 2018-19 & FY 2019-20 respectively for the revival of 20 nos. ESP fields and repairing of balance 36 nos. ESP fields of Unit 1 & 2 DCRTTP Yamuna Nagar.

The ESP fields were damaged after the expiry of guarantee/warrantee 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.

Commission's Analysis

In view of the observations raised by the Commission and replies furnished by HPGCL, the Commission approves the Capital Investment Plan in following paragraphs.

The Commission in its Tariff Order dated 31/10/2018 in Case No. HERC/PRO-81 of 2017 has approved Rs. 64.78 Cr., Rs. 153.83 Cr. & Rs. 33.97 Cr. for FY 2017-18, FY 2018-19 & FY 2019-20 respectively.

HPGCL has submitted that the overhauling of ESP fields of Unit 1 & 2 DCRTTP Yamuna Nagar was started in FY 2017-18 and completed in FY 2018-19 and there was slippage in execution of the Capex amounting of Rs. 23.0 Cr. Amount of Rs. 22.0 Cr & Rs. 23.0 has been proposed in FY 2018-19 & FY 2019-20 respectively for the revival of 20 nos. ESP fields Unit 1 & 2 DCRTTP Yamuna Nagar. Accordingly, the Commission has deducted Rs. 23.00 Cr. from the approved Capital Expenditure in the Tariff Order dtd. 31/10/2018 for FY 2017-18 and Trues up the Capital Expenditure of Rs. 41.78 Cr. for FY 2017-18.

HPGCL has not proposed any new Capital Expenditure for FY 2018-19 and has reduced the Capital Expenditure from Rs. 153.83 Cr. (approved in the Tariff Order dtd. 31/10/2018) to Rs. 90.54 Cr. after considering slippages in various schemes. The Commission has considered the reduction in Capital Expenditure and approves the same for FY 2018-19.

For FY 2019-20, the Commission has considered the revised Capital Expenditure (except New Capital Works) considering various approved schemes for FY 2017-18 & FY 2018-19 in Tariff Order dtd. 31/10/2018 which will be spill over in FY 2019-20.

With regards to New Capital Works for FY 2019-20, the Commission observes that the Petitioner has claimed Rs. 140.05 Cr. as statutory requirements in order to meet the environmental norms. Such claim will burden the end consumer. Further, the Commission observes from the Tariff Order dtd. 14/12/2017 of Maharashtra Electricity Regulatory Commission (MERC) in Case No. 59/2017 that MERC has guided Maharashtra State Power Generation Co. Ltd. (MSPGCL) to explore its funding through grants or capital subsidies for installation of equipment in order to meet the environmental norms. The relevant extract of the said Order is as follows:

“2.4 COMPLIANCE WITH ENVIRONMENTAL NORMS

..

MSPGCL's Reply

2.4.3 The estimated cost of FGD system for Koradi Unit 10, Chandrapur Units 8 & 9, and Parli Unit 8 is Rs. 400.50 crore, Rs. 726.91 crore, and Rs. 78.81 crore, respectively. The FGD cost is not claimed in this Petition. MSPGCL shall approach the Commission for approval of the FGD cost along with annual O &

M expenses and additional Auxiliary Consumption after commissioning. The FGD for Koradi Unit 10 is being procured through open tender.

Commission's View

2.4.4 MSPGCL has not claimed any cost towards the installation of FGD at these Units in this Petition. Considering the significant cost implications of FGD, MSPGCL should explore its funding through grants or capital subsidies that may be available in order to minimise the tariff impact.”

The Commission, considering statutory requirements to meet the environmental norms, accords in-principle approval for the schemes subject to its vetting by CEA and also exploration of options by HPGCL for funding such schemes through grants or capital subsidies in order to avoid Tariff impact to the end consumer.

Further, the Commission accords in-principle approval for schemes related to upgradation of existing PL at DCRTTP, Procurement of ID Fans-RGTPP and Data Center for ERP Solution totaling Rs. 13.65 Cr. However, HPGCL is directed to submit the details of the Scheme including transparent Bidding process followed, Request for Quotation, Request for Proposal, Negotiations, if any, with the bidder, Road Map including PERT Charts and Purchase Orders to the Commission for considering the same during True-up of FY 2019-20.

Accordingly, the Commission approves the following Capital Expenditure for FY 2017-18, FY 2018-19 & FY 2019-20

Particulars	FY 2017-18	FY 2018-19	FY 2019-20
Approved in Tariff Order dtd. 31/10/2018	64.78	153.83	33.97
HPGCL Submissions	41.78	90.54	260.61
			120.56
Now approved by the Commission	41.78	90.54	140.05*

* environmental norms' schemes subject to conditions indicated above.

REVIEW OF TECHNICAL PARAMETERS

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.

Mid-Year Performance Review for FY 2018-19 and Generation Tariff for FY 2019-20

PANT LOAD FACTOR (PLF %)

HPGCL has provided the actual performance of the generating stations for the past years including first six months of FY 2018-19 as follows: -

PLF for past 6 years (%)

Unit #	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19 (up to Sept)
PTPS 5-6	36.33	32.34	9.02	10.57	13.98	21.70
PTPS 7-8	79.35	62.48	31.00	41.49	47.15	69.30
DCRTPP	66.06	66.89	76.97	65.15	65.60	65.23
RGTPP	41.69	54.42	44.21	36.20	44.53	39.11
HPGCL Thermal	47.04	49.15	39.18	39.60	44.94	47.74
Hydel	52.87	32.58	43.38	37.83	32.33	41.20

Note: Since December 2015, 447.8 MW capacity of the HPGCL i.e. PTPS unit 1 to 4 is phase out.

HPGCL has 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 indicated in the following table: -

Historical Backing down (MU)

Unit #	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19*
PTPS – 1-4	3263.35	3193.45	2686	-	-	-
PTPS – 5-6	1806	2413.74	3084.65	3266.83	2585.99	1414.97
PTPS – 7-8	779.75	1368.23	2671.46	2468.22	1794.27	647.01
DCRTPP	602.55	585.38	1081.53	1373.34	1064.52	562.03
RGTPP	1995.17	2304.47	4184.4	6011.54	5170.54	2641.80
Overall %	30.20%	35.20%	49.26%	55.06%	44.55%	44.08%

* Sept. '18

HPGCL has submitted that increase in number of backing down leads to increase in number of start and stop operation. Increase in number of start and stop operation increases the oil consumption abnormally.

Significant backing down has adversely impacted HPGCL in the following ways:

- 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) As HPGCL plants are dedicated to supply in Haryana, so it is requested to Commission 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.
- vi) 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 vicious circle with backing down.

HPGCL has proposed the following remedial measures to address the operational constraints: -

I. CERC has come with a notification dt. 6th April, 2016, for allowing compensation for the technical norm during the backing down, immediately after observing the marginal fall in the PLF of the central generating station from 73.96% in FY 2013-14 to 72.52% in FY 2015-16. CERC has amended its IEGC Regulation, 2010 vide notification dated 06.04.2016. The amendments have enabled Inter-State Generators to claim compensation in technical parameters (like SHR, Auxiliary Consumption, SFC) in case of backing down on instructions of beneficiaries.

II. HPGCL in Haryana is facing such problem since FY 2012-13. Average annual PLF remains as low as below 50% against the targeted norms of more than 75%.

III. 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 provision for recovering consequential damages due to abnormally high auxiliary consumption, Specific oil consumption, SHR and loss of equipment. Also there is no such provision in the HERC, HGC Regulation, 2009.

IV. As Per Regulation 7.3 (c) of HGC Regulation, 2009 Hon'ble Commission shall continue to review the HGC Regulation to make it compatible with the IEGC. In the event of any inconsistencies; the provisions of IEGC shall prevail. However, till now no review has taken place.

V. Appropriate similar provision is also required to be provided in the HERC, HGC Regulation, 2009 for compensating the norms of auxiliary consumption, Specific oil consumption and SHR during the backing down on instruction of beneficiary. Appropriate provisions are also required to be incorporated in MYT Regulations for considering the relaxed norms in the respective period as per HGC Regulation, 2009 so amended.

VI. Though there is no regulation for providing a priority treatment to any generator, however, as per Department of Industries & Commerce, Government of Haryana G.O. No.2/2/2010-4 dated 19th December 2011 firms belong to state of Haryana are given relaxation up to 10% of lowest quoted rates in tenders even if they are private manufacturers, if the firm agrees to match lowest quoted rates. HPGCL is a state government undertaking and mandated to supply all of its power to Discoms of Haryana only. Hence HPGCL should also be given an opportunity to match variable cost of next cheaper generating station and if it agrees to do so, DISCOMs should off take power from HPGCL only.

VII. Hence HPGCL has requested the Commission that being a state generator it should be given relaxation/ priority in Merit Order dispatch subject to condition that there should not be an increase in power purchase cost of Discoms and to consider the compensatory norms while determining the tariff for F.Y. 2019-20.

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 2017-18 & FY 2018-19 (Upto Jan 19) and period of non-working of plants

Particulars	FY 2017-18				FY 2018-19 *			
	No. of forced outages	Forced Outages hrs	No. of Shutdown due to backing down	Backing down hrs	No. of forced outages	Forced Outages hrs	No. of Shutdown due to backing down	Backing down hrs
DCRTPP	16	498	9	2097	10	2019	12	2002
RGTPP	17	1507	19	5821	13	1584	17	4966
Unit-5 PTPS	3	1225	4	6781	0	0	8	6371
Unit-6 PTPS	6	608	8	5368	1	52	12	5651
Unit-7 PTPS	11	161	12	2759	9	107	13	2233
Unit-8 PTPS	2	328	14	3714	4	41	8	1310

* Jan 2019

HPGCL has submitted that they have 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.

Accordingly, HPGCL has proposed PLF of its plants for FY 2018-19 and FY 2019-20 as follows:-

PLF as proposed by HPGCL for FY 2018-19 and FY 2019-20

S.N	Unit #	Approved		Proposed	
		FY 18-19	FY 19-20	FY 18-19	FY 19-20
1	PTPS 5-6	82.50%	N.A	82.50%	82.50%
2	PTPS 7-8	85.00%	N.A	85.00%	85.00%

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%	43.50%

In view of HPGCL submission regarding the incentive in form of over recovery of fixed cost based on Deemed PAF, the Commission in its Order dated 26.04.2017 stated as follows:

“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.”

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 accordingly for incentive in the form of over recovery of fixed cost. The Commission may consider the same at the time of preparation of new Tariff Regulations. The Commission has observed the following unit wise Plant load Factor of the HPGCL Plants.

Unit Wise PLF (%) Of HPGCL Plants For Last 6 Years

PLF (in %)	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19*
PTPS – 5	25.75	28.29	8.84	9.20	7.67	11.73
PTPS – 6	46.90	36.39	8.33	11.93	20.31	22.08
PTPS – 7	79.46	60.68	23.6	51.46	58.34	63.67
PTPS – 8	79.24	64.27	37.15	31.52	35.95	73.39
DCRTPS-1	83.05	75.34	75.89	70.07	54.85	42.28
DCRTPS-2	49.08	58.44	77.96	60.23	76.36	70.58
RGTPS-1	52.87	67.02	43.76	37.83	44.93	39.79
RGTPS-2	30.50	41.85	45.20	34.57	44.13	50.67
HPGCL	47.04		34.45	39.60		
Hydel	37.37%	32.85	34.45			41.20#

* Dec. '18.

Sept.'18

Further, the petitioner has provided the unit wise Deemed Plant Load Factor of its plants as follows:

Deemed PLF (%) in Last 6 Years

Plants	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19*
PTPS – 5	72.68	97.86	87	99.51	85.64	98.94
PTPS – 6	98.13	98.02	79.8	99.21	82.89	
PTPS – 7	93.99	94.98	80.4	97.30	94.81	99.02
PTPS – 8	100.32	92.44	96.4	98.38	81.41	
DCRTPS-1	95.49	85.53	94.80	96.48	76.49	78.20
DCRTPS-2	59.57	70.51	97.46	86.07	95.22	
RGTPS-1	78.23	90.55	76.17	100.32	97.49	90.44
RGTPS-2	43.10	62.13	88.71	86.46	89.94	
HPGCL	77.48	84.70	34.4	94.66		

* Dec.'18

The Commission observes that in FY 2017-18 & FY 2018-19 (till Dec'18) the deemed PLF in case of DCRTPS and RGTPS are below the normative value. HPGCL needs to take appropriate action to achieve the targets fixed by the Commission. The PLF approved by the Commission in its Order dated 30th April, 2017 on the ARR of HPGCL for MYT control period is in order.

The Commission in its Orders dated 31.03.2016 & 26.04.2017 had allowed PLF of 35% in respect of PTPS (Units 5 & 6). However, the PLF for the same was allowed @ 82.50% in the Order dated 31.10.2018, on the basis of submission of HPGCL that it will have negligible impact on the incremental fixed cost of R&M and A&G expenses only. The Commission has considered the submissions of HPGCL that PTPS Unit -5 may be allowed to run as a reserve source by paying marginal amount on account of R&M & A&G. The Commission further observes that Discoms schedule power from PTPS (Units 5 and 6) only during the peak demand season of about four months during the year & actual PLF of PTPS (Units 5 & 6) during FY 2018-19 upto Dec., 2018 remained at 16.90% only. The Commission observes that DISCOMs shall have to shell out additional Rs. 43.42 Crore, in case PTPS (Units 5 & 6) are approved to run @ 82.50% PLF. Therefore, in order to reduce the fixed cost burden on the Discoms, the Commission for working out the fuel cost and fixed cost of PTPS (Units 5-6), has considered PLF at 35%. In case, PTPS (Units 5 -6) is able to generated above 35%, incentive shall be payable at a flat rate of 25.0 paise/kWh for actual energy generation in excess of ex-

bus energy corresponding to target Plant Load Factor.

Further, in view of the position explained by the petitioner in his Annual Performance Review Petition for FY 2018-19, the PLF for HPGCL Plants for the year FY 2018-19 & FY 2019-20 has been considered as proposed by the Petitioner tabulated as follows:

PLF as approved for FY 2018-19 and FY 2019-20

S.N	Unit #	Proposed		Approved	
		FY 18-19	FY 19-20	FY 18-19	FY 19-20
1	PTPS 5-6	82.50%	82.50%	82.50%	35.00%
2	PTPS 7-8	85.00%	85.00%	85.00%	85.00%
3	DCRTPP	85.00%	85.00%	85.00%	85.00%
4	RGTPP	85.00%	85.00%	85.00%	85.00%
5	WYC Hydel	37.00%	43.50%	37.00%	43.50%

AUXILIARY ENERGY CONSUMPTION (%)

The table given below provides the unit wise Auxiliary Consumption (%) for last 6 years of various plants of HPGCL: -

Unit wise Auxiliary Consumption for last 6 years

Unit #	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19 (up to sept.)
PTPS 5-6	11.53%	11.93%	14.34%	14.24%	13.36%	11.73%
PTPS 7-8	9.55%	9.88%	10.09%	9.60%	9.23%	8.58%
DCRTPP	9.05%	8.83%	8.56%	8.82%	8.47%	8.73%
RGTPP	5.83%	5.95%	5.82%	6.01%	5.91%	6.09%

HPGCL has submitted that that despite its best efforts, auxiliary consumption is historically above the normative levels approved by the Commission especially for PTPS Units 5-8. Even in case of DCRTPP also generally it remains more than the norms. This is 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. In case of partial backing down also auxiliary consumption is not reduced directly proportionate to reduction in power generation.

HPGCL has further submitted that there is no provision in the HERC MYT Regulations, 2012 to compensate the increase in the Aux. Cons. due to lower loading of the generating plants on account of backing down. HGC Regulation is yet to be amended in accordance to the CERC IGC Regulation, 2010 as amended vide notification dtd. 6th April, 2016.

The Commission agrees 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

Plants	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19*
PTPS -5	12.28	12.67	14.33	15.95	16.12	14.40
PTPS -6	10.78	11.24	14.34	12.52	10.61	10.31
PTPS -7	9.56	10.10	10.84	9.20	8.97	8.64
PTPS -8	9.53	9.67	9.34	10.00	9.48	8.33
DCRTPS-1	8.70	8.66	8.45	8.67	8.62	9.16
DCRTPS-2	9.65	8.97	8.66	8.90	8.36	8.47
RGTPS-1	5.67	5.99	5.88	6.03	5.92	6.28
RGTPS-2	6.12	5.65	5.75	6.12	5.89	5.80

* Dec.'18

HPGCL has proposed auxiliary consumption in present petition for FY 2018-19 and FY 2019-20 as under.

Auxiliary Consumption (%) as proposed by HPGCL for FY 18 and FY 19

S.N	Unit #	Approved	Proposed
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		FY 2018-19	FY 2019- 20	FY 2018-19	FY 2019- 20
1	PTPS 5-6	10.00%	NA	10.00%	10.00%
2	PTPS 7-8	9.00%	NA	9.00%	9.00%
3	DCRTPP	8.50%	NA	8.50%	8.50%
4	RGTPP	6.00%	NA	6.00%	6.00%
5	WYC Hydel	1.00%	NA	1.00%	1.00%

The Commission is of the considered opinion that HPGCL must continue to put its sincere efforts to bring down the auxiliary energy consumption of its generating units. Further, the petitioner has to keep strict watch over the auxiliary consumption.

The Commission observes from the data submitted by HPGCL that actual auxiliary consumption for PTPS-7&8 for FY 2018-19 (till Dec.'18) is 8.64% & 8.33% respectively i.e., Unit-8 is operating efficiently below the norms of 8.50% as approved in MYT Regulations, 2012 and Unit-7 is operating near to the norms of 8.50%. The Commission taking cognizance of this fact approves the auxiliary consumption for PTPS-7&8 for FY 2018-19 & FY 2019-20 as 8.50% which is in line with MYT Regulations, 2012.

Further, for PTPS- 5&6, DCRTPP, RGTPP and WYC & Kakroi Hydel Plants Hydel the Commission considers & approves the auxiliary consumption as approved in earlier Tariff Orders as 10.00%, 8.50%, 6.00% and 1.00% (inclusive of transformation loss) respectively for FY 2018-19 & FY 2019-20.

SECONDARY FUEL OIL CONSUMPTION

The Unit-wise specific oil consumption of HPGCL plants for past 6 years is as under: -

Unit wise Specific Oil Consumption (ml/kWh)

Units	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19*
PTPS - 5	2.09	1.60	1.95	2.22	4.04	2.82
PTPS - 6	1.26	1.63	3.91	2.11	2.60	1.84
PTPS - 7	0.54	0.72	1.39	0.78	0.61	0.59
PTPS - 8	0.54	0.61	0.91	1.02	1.26	0.41
DCRTPS-1	0.54	0.51	0.50	0.59	0.54	1.34
DCRTPS-2	1.28	1.05	0.48	0.86	0.47	0.35
RGTPS-1	0.54	0.28	0.66	0.48	0.49	0.75
RGTPS-2	0.72	0.56	0.69	0.62	0.74	0.51

Units	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19*
HPGCL	0.85					

* Dec. '18

HPGCL has submitted that the specific oil consumption 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 as follows:

SFC (ml/kWh) as proposed by HPGCL for FY 2018-19 and FY 2019-20

Units	Approved		Proposed	
	FY 2018-19	FY 2019- 20	FY 2018-19	FY 2019- 20
PTPS – 5-6	1.0	N.A.	1.0	1.0
PTPS –7-8	1.0	N.A.	1.0	1.0
DCRTPP-1-2	1.0	N.A.	1.0	1.0
RGTPP-1-2	1.0	N.A.	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, in case of PTPS 5-6 & DCRTPS-1 the specific oil consumption is higher than the norms which needs to be improved upon.

The Commission approves the specific oil consumption of the HPGCL plants for FY 2019-20 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 HPGCL plants for the past 6 years is as follows: -

Unit wise Station Heat Rate (in Kcal/kwh) for last 5 years

Units	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19*
PTPS-5	2577	2537	2548	2499	2721	2568
PTPS-6	2579	2546	2514	2519	2653	2542
PTPS-7	2494	2482	2495	2478	2562	2474
PTPS-8	2497	2464	2491	2465	2551	2469
DCRTPS-1	2383	2337	2331	2315	2321	2330
DCRTPS-2	2392	2341	2328	2317	2317	2319
RGTPS-1	2375	2387	2384	2589	2523	2464
RGTPS-2	2369	2395	2392	2573	2505	2423

Units	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19*
HPGCL	2447					

* Dec.'18

HPGCL has submitted that they have implemented various standard O&M practices including the regular monitoring and review by the expert groups & also at various levels of the management. Resultantly it is able to meet with regulatory norms of SHR despite adverse conditions of high backing down. However, despite above in case of RGTPP it remains beyond the regulatory norms due to the reasons beyond control of the HPGCL.

HPGCL further submitted that RGTPP's loading as a percentage of plant capacity was around 76.55% during the FY 2017-18 which is significantly low. There is no provision in the HERC MYT Regulations, 2012 to compensate the increase in the SHR due to lower loading of the generating plants on account of backing down. 2X600 MW RGTPP, Hisar had to face significant backing down and boxing up of the units on the instructions of the beneficiary. The annual PLF of RGTPP, Hisar for FY 2017-18 was 44.53% only. Even after excluding the period of boxing up of the units on the instructions of the beneficiary the average loading of the RGTPP, Hisar for FY 2017-18 was significantly low at 76.55%.

HGC Regulation is yet to be amended in accordance to the CERC IGC Regulation, 2010 as amended vide notification dt. 6th April, 2016. Compensation in SHR due to operation at lower MCR, in the range of 75%- 85%, as per CERC IEGC Regulation is 2.25%. If the similar norm is applied for the RGTPP regarding SHR then the required SHR works out to 2441 kcal/kWh.

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.

Therefore, HPGCL has requested the Commission to relax the SHR

norms for RGTPP and SHR for the other units has been proposed as per norms approved by the Hon'ble Commission. The SHR proposed by HPGCL for FY 2018-19 and FY 2019-20 is as follows:

SHR (kCal/kWh) as proposed by HPGCL for FY 2018-19 and FY 2019-20:-

S.N	Units	Approved		Proposed	
		FY 2018-19	FY 2019-20	FY 2018-19	FY 2019-20
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	2441

The Commission observed that HPGCL has been able to achieve the station heat rate for its plants during FY 2017-18 except for RGTPP units, where in the SHR was 2514 kCal/kWh against approved SHR of 2387 kCal/kWh. Further, during FY 2018-19 up to Dec.'18 the Station Heat Rate for its plants has been indicated in the table above which is on the higher side.

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 2019-20 has been projected as 2441 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 approve 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 FY 2018-19 and FY 2019-20 as per the actual weighted calorific value of coal for PTPS, DCRTPS and RGTPS during April to Sept. of FY 2018-19 as follows:

GCV of Coal (kcal/Kg) for FY 2018-19 and FY 2019-20

Particulars	PTPS	DCRTPP	RGTPP
Gross Calorific Value of Coal	3855	3605	3641

The petitioner has further submitted that the GCV of secondary fuel (oil) has also

been proposed for FY 2018-19 and FY 2019-20 as per the actual weighted calorific value of oil for PTPS, DCRTTPS and RGTPS during April to Sept. of FY 2018-19 as follows:

GCV of Oil (kcal/kl) for FY 2018-19 and FY 2019-20

Particulars	PTPS	DCRTTP	RGTPP
Gross Calorific Value of Oil	10482	10458	10757

HPGCL has further submitted that the weighted average cost of coal and oil for FY 2019-20 have also been proposed based on actual weighted average cost of coal on receipt basis of the respective power plant in April to Sept. of FY 2018-19 without any escalation. The Hon'ble Supreme Court in its Order dated 24.10.2017 in WP (c) 13029/1985 in the matter of M.C. Mehta Vs. Union of India directed to place a ban on use of furnace oil and pet coke in the states of U.P, Haryana and Rajasthan w.e.f. 01.11.2017. Accordingly, in exercise to power delegated under Section 5 of the Environment (Protection) Act, 1986 and in view of the Hon'ble Supreme Court's Order, Central Pollution Control Board (CPCB) vide notification dated 15.11.2017 directed the concerned states for prohibition on use of pet coke and furnace oil by any industry, operation or processes with immediate effect until further orders. Accordingly, in compliance to the direction of Hon'ble Apex court HPGCL has started use of light diesel oil (LDO) instead of furnace oil. As, LDO is more expensive than furnace oil, the weighted average cost of oil for FY 2018-19 and FY 2019-20 significantly higher than that of FY 2017-18.

The Petitioner has submitted the following weighted average price of coal and oil for FY 2018-19 and FY 2019-20.

Average Landed Cost of Coal (Rs/MT) for FY 2018-19 and FY 2019-20

Particulars	PTPS	DCRTTP	RGTPP
FY 2018-19	4950	4719	4879
FY 2019-20	4950	4719	4879

Average Landed Cost of Oil (Rs/KL) for FY 2018-19 and FY 2019-20

Particulars	PTPS	DCRTTP	RGTPP
FY 2018-19	51627	46757	53066
FY 2019-20	51627	53915	53066

HPGCL, on the basis of technical parameters as proposed and fuel price and GCV considered for FY 2019-20, has proposed fuel cost as summarized in the following table:

Computation of Coal Cost for FY 2019-20

Unit	Generation (Ex-bus)	Total Cost of Coal	Per Unit Variable Cost
	MU	Rs. Cr.	Rs/ Unit
PTPS 5-6	2739	992	3.62
PTPS 7-8	3397	1193	3.51
DCRTPP	4099	1368	3.34
RGTPP	8422	2917	3.46
Total	18658	6470	3.47

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 2019-20.

23 Determination Generation Tariff for FY 2019-20

While determining the generation tariff for the FY 2019-20, the Commission has considered the followings: -

- i) PLF for WYC (hydro) has been pegged 43.50% (given non-availability of one machines). While PLF of all other power stations have been pegged at 85% (PTPS 5-6 at 35%) line with the HERC MYT Regulations in vogue. Further, in case, PTPS (Units 5 -6) is able to generated above 35%, incentive shall be payable at a flat rate of 25.0 paise/kWh for actual energy generation in excess of ex-bus energy corresponding to target Plant Load Factor.
- ii) Auxiliary Energy Consumption for PTPS (Units 5-6) has been relaxed from 9% to 10%, 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. Further, HPGCL was directed to make efforts for optimum utilization of its Human Resources and explore the following business options available in Renewable Energy Sector, in line with the current scenario where the shift is from thermal generation to Renewable Energy:-
 - 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.

No concrete action plan has been received from HPGCL. In this regard, HPGCL is directed to prepare detailed road map for installation of minimum 40 MW Solar, Biomass, Biogas, Waste to Energy & Small Hydro Plants till FY 2020-21. Out of which 25 MW is to be installed by the end of FY 2019-20. All such Renewable Projects should be allotted through Global e-tendering system.

HPGCL may further explore the possibility of utilising the power generated from renewable energy sources to meet its Auxiliary consumption requirements.

- 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, 2018 to September, 2018.
- 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 2019-20 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. In the case of PTPS (Units 5&6), R&M expenses have been restricted to 50% of the normative expenses while employee cost and A&G expenses have been considered as per the norms. The R&M expenses shall be considered for true-up subject to prudence check.
- 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 2019-20 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. The Commission observes that the amount of such capitalisation has increased to Rs. 224.92 Crore as on 31.03.2018. 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. As directed earlier, HPGCL is required to maintain a memorandum account of such capitalisation done since 01.04.2014 and submit the same along with petitions for generation tariff for next year, duly reconciled with fixed asset registers. HPGCL is directed not to claim Depreciation & Interest cost on such capitalization, which is not in conformity with the HERC MYT Regulations, 2012. HPGCL was further directed to utilize the Dry Fly Ash fund amounting to Rs. 346.78 Crore (as on 31.03.2018) on the proposed capital expenditure in the implementation of MoEFCC norms, as proceeds from sale of ash/ash products are not being treated as non-tariff income & the utilisation of this fund is minimal. HPGCL in its compliance report has stated that the same has been noted. However, the Commission observes that capital expenditure proposed to be incurred on compliance of environment norms in the FY 2019-20 has been included in the CAPEX plan & proposed increase in term loan. Although, the Commission has allowed the same as per the proposal of HPGCL, but, HPGCL is again directed to incur such expenditure out of Dry Fly Ash Fund and offer the excess depreciation allowed in the true-up. HPGCL is further directed to examine various other options for funding viz. Grants, Capital Subsidies etc and take appropriate action accordingly.

- vii) Interest and Finance charges, have been allowed after considering the 50% of the savings due to restructuring under Regulation 12.4, as proposed by HPGCL. However, HPGCL is directed to submit all the details regarding interest & finance charges pertaining to pre-restructuring period while filing true-up petition for the FY 2019-20. HPGCL has shown additions to fixed assets during the FY 2019-20 at Rs. 260.61 Crore, which has been shown to be funded by term loans amounting to Rs. 281.75 Crore. Therefore, interest @ 10% on excess funding amounting to Rs. 21.14 Crore (Rs. 281.75 Crore minus Rs. 260.61 Crore) is disallowed. Further, as per discussion in the above para, interest cost @ 10% p.a. on expenditure amounting to Rs. 140.05 Crore directed to be incurred out of Dry Flash Ash fund is disallowed. Accordingly, interest on term loan claimed by HPGCL has been reduced by Rs. 3.78 Crore for PTPS 7 & 8, Rs. 6.79 Crore for

DCRTPP & Rs. 5.54 Crore for RGTPP.

- 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%). HPGCL is allowed interest on working capital which includes coal stock of 2 months coal consumption. Accordingly, as per norms, HPGCL has been allowed coal & oil stock of Rs. 986 Crore while determining Generation Tariff for the FY 2019-20. As against this, HPGCL has coal & oil stock amounting to Rs. 290 Crore reflected in its Financial Statements as on 31.03.2018. Average annual PLF of HPGCL for the FY 2017-18 has remained at 13.98%, 47.15%, 65.60% & 44.53% for PTPS 5 & 6, PTPS 7 & 8, DCRTPP & RGTPP, respectively.

Due to less generation, HPGCL is not required to keep coal & oil stock of 2 months of normative generation. Further, in the Generation Tariff Order of HPGCL issued on 31.10.2018, HPGCL was directed to furnish month-wise detail of number of days maintenance stock kept by it and to hosted on the website of HPGCL the details of inventory kept by it, so that users of other plants can easily access the same and if need arises, utilise the same. However, the implementation of the same is not yet reported by HPGCL. In this regard, HPGCL is again directed to comply the same and furnish its comments on reduction of coal & oil stock from 2 months to 1 month.

- ix) HPGCL has shown additions to fixed assets during the FY 2019-20 at Rs. 260.61 Crore, which has been shown to be funded by term loans amounting to Rs. 281.75 Crore. Therefore, the Commission has allowed Return on Equity (RoI) equivalent to the amount allowed for the FY 2018-19, which shall be subject to true-up upon the furnishing of relevant details by HPGCL & prudence check of the Commission.
- x) The Commission observes that HPGCL has paid compensation to coal company (BCCL) for short lifting of coal, pertaining to the FY 2016-17, amounting to Rs. 58.069 Crore in the FY 2018-19. In this regard, HPGCL is directed to submit its action plan to eliminate such instances in future. HPGCL is further directed to consider such cost in the Cost-benefit analysis to be submitted on blending of Imported Coal.

- xi) HPGCL plants at Panipat (Units 5 & 6) are mostly backed down/boxed up, due to higher variable cost. Whereas, the plants are in normal working condition has performed even at 52.89% PLF in March, 2018, having 99% deemed PLF for most part of the year. In this regard, HPGCL is directed to submit a detailed Road map for closure of these plants/ optimum utilization of the assets & manpower deployed in such Power Plants.
- xii) HPGCL is directed to submit a detailed Road map for creation of Pooled Generation Cost of all its generating station which may be considered for merit order despatch by the DISCOMs & selling of surplus power to 3rd parties including power exchange. The preferential treatment as sought in the Tariff Petition along with views of STU, SLDC & DISCOMs on the same, should be made part of the ibid Road Map.
- xiii) HPGCL has repeatedly sought compensation in the technical parameters for frequent backing down of its generating stations & not allowing to reach technical minimum. In this regard, HPGCL is directed to examine the impact of granting relaxed technical parameters on its variable cost and resultant impact of the merit order. Further, HPGCL may also examine the impact of such relaxed parameters on its generation i.e. whether it will be able to generate more after relaxed technical parameters. Further, HPGCL is also directed to examine and report, the difficulty faced by it in the recovery of allowed fixed cost as well as difficulty faced by it in its operations within allowed fixed cost, as compensation has been sought by HPGCL on account of backing down by DISCOMs.
- xiv) During the meeting of State Advisory Committee held on 25.02.2019, MD/HPGCL, desired to be provided the specific financial/ operating norms which are to be Benchmarked. In this regard, HPGCL may benchmark its variable and fixed cost with that of NTPC power stations (non pit head), which in turn will lead to benchmarking of coal cost & its GCV, SHR, Auxiliary consumption & O&M expenses.
- xv) The SLDC charges determined by the Commission for the FY 2019-20 shall be billed separately by HPGCL to the beneficiaries.
- xvi) 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 2019-20. The computational details are provided in the tables that follows:-

ENERGY/VARIABLE CHARGES FOR PTPS AND RGTPS (FY 2019-20)

Parameters	Unit	Derivation					RG TPS		DCR TPS		WYC	Total HPGCI
			Unit 5	Unit 6	Unit 7	Unit 8	Unit 1	Unit 2	Unit 1	Unit 2		
Installed Capacity (MW)			210	210	250	250	600	600	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	237.78	18651.30
PLF (%)			35.00	35.00	85.00	85.00	85.00	85.00	85.00	85.00	43.5	
Auxiliary Energy Consumption	%		10.00%	10.00%	8.50%	8.50%	6.00%	6.00%	8.50%	8.50%	1.00%	7.31%
Generation (Ex-bus)	MU	A1	579.47	579.47	1703.27	1703.27	4199.54	4199.54	2043.93	2043.93	235.40	17287.84
Station Heat Rate (SHR)	Kcal/kwh	B	2550	2550	2500	2500	2387	2387	2344	2344		
Specific Oil Consumption	ml/kwh	C	1	1	1	1	1	1	1	1		
Gross Calorific Value of Oil	Kcal/litre	D	10482	10482	10482	10482	10757	10757	10458	10458		
Gross Calorific Value of Coal	K.cal/Kg	E	3855	3855	3855	3855	3641	3641	3605	3605	NA	
Overall Heat	G.cal	F=(A*B)	1641843	1641843	4653750	4653750	10664161	10664161	5236027	5236027	NA	
Heat from Oil	G.cal	G=(A*C*D)/1000	6749	6749	19512	19512	48058	48058	23361	23361	NA	
Heat from Coal	G.cal	H= (F-G)	1635094	1635094	4634238	4634238	10616103	10616103	5212666	5212666	NA	
Oil Consumption	KL	I=G*1000/D=A*C	644	644	1862	1862	4468	4468	2234	2234	NA	
Coal Consumption	MT	J=(H*1000/E)	424149	424149	1202137	1202137	2915711	2915711	1445955	1445955	NA	
Cost of Oil per KL	Rs/KL	K	51627	51627	51627	51627	53066	53066	53915	53915	NA	
Cost of Coal	Rs/MT	L	4950	4950	4950	4950	4879	4879	4719	4719	NA	
Total Cost of Oil #	Rs .Mln	M=(K*I)/10^6	33.24	33.24	96.10	96.10	237.08	237.08	120.44	120.44		
Total Cost of Coal	Rs.Mln	N=(J*L)/10^6	2099.54	2099.54	5950.58	5950.58	14225.75	14225.75	6823.46	6823.46	NA	58198.66
Total Fuel Cost	Rs.Mln	O=M+N	2099.54	2099.54	5950.58	5950.58	14225.75	14225.75	6823.46	6823.46	NA	58198.66
Fuel Cost/Kwh	Rs.	P=O/A1	3.62	3.62	3.49	3.49	3.39	3.39	3.34	3.34	NA	3.37

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 2019-20 (RS. MILLION)

HERC COMPUTATION OF WORKING CAPITAL AND INTEREST									
RS. MILLION FY 2019-20									
ITEMS	DERIVATION	PTPS				RGTPS	DCR TPS		
		Units 5	Unit 6	Unit 7	Unit 8	Unit 1 & 2	(Unit 1 & 2)	WYC	TOTAL
Coal Stock	2 months	349.92	349.92	991.76	991.76	4741.92	2274.49	0	9699.78
Oil Stock	2 months	5.54	5.54	16.02	16.02	79.026	40.15	0	162.29
O&M Expenses	1 months	55.60	54.018	74.87	64.11	166.39	134.28	31.70	580.97
Maint. Spares	10%/7.5% of O&M	66.72	64.82	89.84	76.94	299.51	241.70	28.53	868.06
Receivables	1 month	239.70	253.36	638.27	628.25	3010.35	1498.90	52.13	6320.96
W/C Requirement		717.48	727.66	1810.76	1777.08	8297.19	4189.52	112.36	17632.05
Int (@ 9.95%)		71.39	72.40	180.17	176.82	825.57	416.86	11.18	1754.39

FIXED COST FOR FY 2019-20 (RS. MILLION)

	HERC FIXED COST COMPUTATION FY 2019-20 (Rs Million)									
EXPENSES	PTPS -5	PTPS -6	PTPS -7	PTPS - 8	RGTPS 1	RGTPS 2	DCR TPS 1	DCR TPS 2	WYC	HPGCL
Operation & Maintenance (O&M)										
a) R&M Expenses	142.08	139.39	397.40	318.20	353.71	353.71	267.25	267.25	34.86	2273.85
b) A&G Expenses	13.69	15.44	22.93	19.54	35.62	35.62	36.50	36.50	6.79	222.62
c) Employees Cost	317.27	299.25	302.29	255.85	373.71	373.71	307.97	307.97	207.88	2745.89
d) Employee Cost of PTPS 1-4, as per HPGCL	194.14	194.14	175.77	175.77	235.32	235.32	193.96	193.96	130.91	1729.28
Total O&M (a+b+c+d):	667.17	648.22	898.39	769.36	998.36	998.36	805.68	805.68	380.44	7253.10
Depreciation	0.00	18.20	307.10	319.20	1035.60	1034.20	546.00	545.80	185.30	3991.40
Interest & Finance	0.00	13.60	6.15	6.15	658.00	658.00	240.30	240.30	29.70	1852.20
W/C Interest	71.39	72.40	180.17	176.82	412.79	412.79	208.43	208.43	11.18	1754.39
ROE @ 10%	5.10	155.10	220.80	220.80	495.20	495.20	249.20	249.20	18.90	2109.50
Fixed Cost	743.66	907.52	1612.61	1492.33	3599.94	3598.54	2049.61	2049.41	625.52	16679.14
Cost of Oil	33.24	33.24	96.10	96.10	237.08	237.08	120.44	120.44	0.00	973.71
Total Fixed Cost	776.90	940.76	1708.72	1588.43	3837.02	3835.62	2170.05	2169.85	625.52	17652.86
Generation (ex-bus) MU	579.47	579.47	1703.27	1703.27	4199.54	4199.54	2043.93	2043.93	235.40	17287.84

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	3.62	3.62	3.49	3.49	3.39	3.39	3.34	3.34	NA	3.37
Fixed Cost Rs. million)	776.90	940.76	1612.61	1492.23	3599.94	3598.54	2049.61	2049.41	625.52	16679.14

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 2019-20 shall be implemented w.e.f. 01.04.2019.

This Order is signed, dated and issued by the Haryana Electricity Regulatory Commission on 07th March, 2019.

Date: 07.03.2019
Place: Panchkula

(Pravindra Singh Chauhan)
Member

(Jagjeet Singh)
Chairman