

HARYANA ELECTRICITY REGULATORY COMMISSION
BAYS NO. 33-36, SECTOR - 4, PANCHKULA - 134112, HARYANA

Case No. HERC/PRO-41 of 2018

Quorum:

Shri R.K. Pachnanda, Chairman
Shri Naresh Sardana, Member

Date of Hearing: 16.10.2020, 19.10.2020 & 09.09.2021

Date of order: 23.02.2022

In the matter of

Determination / Approval of tariff u/s 62 of the Electricity Act, 2003 of Chuzachen HEP 110 MW (2 x 55 MW) located on Rangpo & Rongli rivers in the East district of Sikkim for sale of power to the Haryana Power Purchase Centre (HPPC).

And

In the matter of

Gati Infrastructure Pvt. Ltd
1-7-293, M.G. Road, Secunderabad,
Telengana -500003

....Petitioner

Vs.

Haryana Power Purchase Centre (HPPC)
through the Chief Engineer,
Shakti Bhawan, Sector - 6, Panchkula -
Haryana

.... Respondent

Present (Virtual Court)

Sh. Sanjay Sen
Sh. Tabrez Malawat
Sh. Sameer Mallik
Sh. A.K. Rampal

Sr. Advocate for the Petitioner
Advocate for the Petitioner
Advocate for the Respondent
Intervener

ORDER

1. This present petition has been filed by M/s Gati Infrastructure Private Ltd. (hereinafter referred to as 'GATI' or the 'Petitioner'), for approval of generation tariff of Chuzachen HEP 110 MW (2 x 55 MW) hereinafter referred to as 'the generating station', under the enabling provisions of Section 62 of the Electricity Act, 2003. The petitioner herein has set up a hydro power generating plant located on Rangpo & Rongli rivers in the East district of Sikkim. The Respondent herein i.e. HPPC is a nodal agency for procurement of power on behalf of the two distribution licensees in Haryana i.e. Uttar Haryana Bijli Vitran Nigam (UHBVN) and Dakshin Haryana Bijli Vitran Nigam (DHBVN).

Brief Background

2. The generating station is located in the east Sikkim District on the rivers Rangpo & Rongli as a run-of-river project with pondage. It has been submitted that the Chuzachen HEP is a surface hydro generating stations with static excitation system. The project is a peaking power plant comprising of two intakes each. Further, it has a storage reservoir and headrace tunnel, common headrace tunnel, underground surge shaft, surface penstock, open air powerhouse units and outdoor switchyard.

3. The capacity of the generating station is 110 MW, with 10% continuous overloading, comprising of 2 units of 55 MW each. The scheduled and actual date of commercial operation (COD) of Unit - I and Unit II of the HEP are as under: -

| Units | SCOD | COD |
|-----------|-----------|------------|
| Unit- I | June 2009 | 18.05.2013 |
| Unit - II | June 2009 | 18.05.2013 |

It has been submitted that construction of the said HEP started in October 2006 with Scheduled Date of Commercial Operation (SCOD) in June 2009. The commissioning of the project got delayed due to various force majeure events which were beyond the reasonable control of the petitioner such as geological surprise in Rangpo dam right bank abutment, change in design, earthquake, flood and geological surprise encountered in Head Race Tunnel (HRT).

3. That the respondent i.e. HPPC had proposed to enter into Power Purchase Agreement (PPA) with the petitioner herein i.e. Gati HEP for purchase of entire

quantum of energy generated from the project throughout the year. The Commission, vide Order dated 19.09.2020 in Case No. HERC / PRO - 40 of 2020, approved the PPA. The operative part of the said order is reproduced below: -

“The matter has now been finally decided by the Hon’ble APTEL vide order dated 29/07/2020 in Appeal No. 363 of 2019 & IA NO. 1817 of 2019 and Appeal No. 364 of 2019 & IA NO. 1818 of 2019 of the Hon’ble APTEL whereby the order of the Commission, in the case of similarly placed HEP projects of M/s Dans and M/s Shiga was set aside and directions have been passed to include the “exit clause “as mutually agreed between the parties. Hence, the Commission, now approves the draft PPA, in the present case which already included the ‘exit clause’, filed in the Commission vide Memo. No. Ch-94/CE/HPPC/ SE/C&R -I / PPA-151 dated 30.05.2019 referring to its earlier communication i.e. CH-37/CE/HPPC/SE/C&R-I/PPA-151 dated 04.05.2018. The PPA signed by both the parties be submitted in the Commission at the earliest but not later than 4 (four) weeks of this order”.

4. The petitioner has submitted that the initial DPR for 99 MW capacity of the HEP was originally approved by the Sikkim Government (GoS) on 30.11.2004 at a cost of Rs. 448.76 Crore.

4.1 That based on actual conditions obtained at the site the project capacity was enhanced to 110 MW. The same was approved by the GoS on 21.05.2015. Hence, the first revised cost approved by GoS was on 21.05.2015. The Central Electricity Authority (CEA) approved the enhanced capacity of Chuzachen HEP from 99 MW to 110 MW vide its letter dated 4.12.2017.

4.2 That the construction of the project started in October 2006 with a total estimated cost of Rs. 651.50 Crore and SCOD as June 2009. In June 2009 the project cost was revised to Rs. 796.44 Crore. However, due to poor geological conditions in right abutment of Rangpo Dam and adverse geological conditions in HRT, design changes and location of headquarter to suit the project requirement, additional land acquisition for Rangpo Dam abutment, impact of earthquake & completion of transmission system for evacuation of power, the cost was further revised to Rs. 1044.52 Crore with revised SCOD as August 2012. The project achieved CoD in 2013 with completed cost of project as Rs. 1188.57 Crore and the increase in cost was approved by the GoS vide letter dated 7.06.2017 with increase in project cost of Rs. 537.07 Crore vis-à-vis original appraised cost of Rs. 651.50 Crore.

4.3 The petitioner has submitted that they had approached the respondent, inter-alia, vide its letter dated 28.10.2016 for sale of Hydro Power from operating 110 MW (2×55) for a duration of 35 years from May to September every year at levelized tariff not exceeding @ Rs. 4.79/unit. The Net Saleable power from the Project was represented to be about 95 MW i.e., ex-bus, after deduction of auxiliary consumption including transformation losses, free share of GoS, and Wheeling charges of 132kV double circuit transmission line (Developed and owned by Government of Sikkim) from generation switchyard to Rangpo pooling station of CTU.

That the Power Purchase Agreement (PPA) was signed between HPPC and the Generator M/s Gati Infrastructure Pvt. Limited (Chuzachen HEP) on 24th October, 2020.

4.4 It has been submitted that the project of the petitioner has certain features beneficial for Haryana as under: -

I. Haryana has seasonal peak, which occurs in the paddy season i.e. during May to September. The generation, unlike northern region based Hydroelectric Power Projects, peak from May onwards and continue up to October, providing near full capacity to Haryana for meeting its seasonal peak power requirement.

II. The project has a pondage of 3 hours of peak power capacity. This provides significant flexibility to the Haryana in scheduling power during the day as per requirement. Further, the project provides for all associated benefits such as mitigation from fuel uncertainty risk, Carbon Footprint Reduction, Inflation-free generation cost reducing over time, long economic life compared to thermal power plants, quick ramp-up & ramp-down in less than one minute for full load.

III. Levelized tariff of the project is very competitive and estimated to be Rs.4.79 per unit at bus-bar of the petitioner.

iv. That the proposal of the petitioner for sale of power to HPPC, was considered in 39th meeting of the Steering Committee of Power Planning held on 11.11.2016 under the Chairmanship of Principal Secretary (Power), Government of Haryana, and the following was decided: *“the committee accepted the proposal for onward submission to HERC with levelized tariff not exceeding @ Rs. 4.79/unit for the duration of said offer from May to September for 35 years”*.

5. Proceedings in the case: -

6. The Commission, after hearing the parties on 19.08.2020, passed an interim order dated 20.08.2020 directing the petitioner as under: -

“In order to take a reasoned view on various components of tariff, the petitioner herein, is directed to provide to the Commission, the following information with supporting documents on Affidavit: -

i. A copy of DPR including schedule of construction and head wise deviations thereto till the time of declaring CoD.

ii. Details of approvals of the revised cost estimates including reports / recommendations of Lender Engineer.

iii. Revenue realised from sale of energy till the time power supply to HPPC commenced.

iv. Details of infirm power till the CoD of the project (2X55 MW).

v. Details of actual Equity deployed and Loans at the time of CoD along with supporting details of actual institution wise loan draws, interest and repayments year wise. Any expected benefits of reduction in interest cost of loan re-structuring that may be under consideration.

vi. Amount of depreciation already claimed post CoD of the project.

vii. Actual Gross generation year wise and month wise, separately provide for actual auxiliary consumption and free power to the home state. Reasons for lower generation, if any, vis-à-vis design energy. Details of secondary energy over and above the design energy especially in the monsoon season.

viii. Details of actual Gross Head, head loss and net head vis-à-vis envisaged in the DPR. Reasons for deviations, if any.

ix. *Head wise / sub-head wise details of project cost as envisaged in the DPR and actual as on CoD including the reason for deviations.*

x. *Details of un-discharged liabilities vis-à-vis the above. This may also include costs attributed to the costs other than on construction of dams / reservoirs / powerhouse and associated activities. This may include expenses on de-silting, damaged roads, plantations, pre-operative -preliminary expense etc.*

xi. *Detailed calculation of IDC claimed in line with the construction schedule.*

xii. *Year wise break-up of actual O&M expenses incurred.*

xiii. *Justification for head wise project cost escalation due to inflation / time - overrun claimed.*

xiv. *Details of annual average design discharge and actual discharge available at the turbine. Reasons for deviations, if any.*

xv. *Provisions for continuous over-loading.*

xvi. *Project Cost of HEP of comparable projects commissioned between 2012-2014 and admitted by CERC / SERCs for the purpose of tariff determination.*

xvii. *As per the manufacturer, kindly provide in (%): Turbine Efficiency, Drive Efficiency and Generator Efficiency and overall efficiency thereto at maximum discharge, minimum discharge and weighted average.*

xviii. *A copy of the audited balance sheet.*

7. The petitioner, in terms of the Commission's Order dated 20.08.2020, filed an affidavit dated 31st July, 2020, providing additional information to nine issues raised by the Commission and sought further eight weeks' time to submit the remaining information sought by the Commission vide its ibid Order. The remaining information was subsequently provided by the petitioner.

8. The case was again called for hearing on 29.09.2020. The Commission, after hearing the parties passed the following Order of even date: -

“The petitioner informed that the public notice, as per requirement under Section 64(2) of Electricity Act 2003, has been issued on 26.09.2020. The counsel for the Petitioner requested for two weeks’ time to file rejoinder. The Commission, acceding to his request grants two weeks’ time. A copy of the rejoinder may also be provided to HPPC.4. Matter to come up on 14.10.2020”.

9. The respondent herein i.e. HPPC, through its Chief Engineer, filed reply dated 29.09.2020, the said reply is briefly set out below: -

i) That the petitioner has not specified the reasons for increase in cost from Rs. 448.76 Crore to Rs. 651.50 Crore.

ii) That the completed cost of project as on 18.05.2013 was Rs. 1188.57 Crore. There is delay of almost four years which has led to enormous increase in cost amounting to Rs. 537.07 Crore. The petitioner has not provided break-up of cost overrun. Hence, the increase in cost beyond the SCOD ought to be foregone as in the case of similarly placed HEPs i.e. M/s Dans and M/s Shiga.

iii) Referring to the Commission’s Order dated 13.11.2017 (Case No. HERC / PRO - 24 of 2017), the Respondent has submitted as under: -

That the Commission had considered the issue of time and cost overrun and observed that they mostly related to increase in IDC & pre-operative expenses due to delay in achieving CoD.

That in the hearing, it has been submitted that the generator shall forego the cost attributable to the delay in commissioning the project. Accordingly, while inviting the IPP for signing the PPA, HPPC shall ensure that the IPP shall voluntarily forego any such claims.

That as per Clause 9.1.4 the initialled draft PPA, “the company agrees that any increase in IDC, pre-operative expenses or other such expenses included in the capital cost incurred by the company shall not be considered by the Commission while determining the capital cost on CoD for tariff determination”.

The reasons for delay submitted by the petitioner and HPPC's response thereto is as under: -

i. Delay in acquisition of land, achieving forest clearance which allegedly was outside the reasonable control of petitioner - On this HPPC has submitted that due to poor survey carried out by the petitioner, there arose a need for changing the design of the project, realignment of penstock and consequently the requirement for acquiring additional land. This acquisition of additional land as well as achieving forest clearance for that additional land led to delay in the project by 13 months. It is submitted that this delay could have been avoided by the petitioner had they conducted a proper survey of the area in advance. Hence, the petitioner is solely responsible for this delay.

ii. Delay due to change in design of the project because of adverse geological conditions and surprises during construction of Projects which were again allegedly uncontrollable events. In reply HPPC has submitted that due to poor DPR of the project, a lot of design changes were made while carrying out the construction of the project which not only add up to the capital cost but also lead to unnecessary delay that could have been avoided by the petitioner.

iii. Delay due to adverse geological surprises like collapsing of Head Race Tunnel (HRT) - In reply, HPPC has submitted that a prolonged delay of 27 months occurred due to collapsing of HRT. The petitioner, in its present petition, has merely mentioned "the other geological surprises", the petitioner has not disclosed the specific reasons due to which the HRT collapsed. There may be various other factors which could lead to collapsing of HRT like substandard quality of material used, poor vigilance or supervision, poor design, etc for which the petitioner is solely responsible and hence the cost as well as delay occurred due to collapsing of HRT should not be considered while determining the tariff.

iv. Delay due to force majeure event - earth quake and the consequential cost overrun on account of reconstruction of approach road and remobilization of labour - In its reply HPPC has submitted that the petitioner has mentioned that the approach road was blocked due to earthquake and a panic emerged among the labour resulting into running of labour away from the project site. HPPC has averred that natural calamity like earthquake is not new in the hilly regions and confidence should be build up by the management in the labour to work. Contrary to this, no dedicated

efforts were made by the petitioner to restart the work. Thus, it reflects that there was clear lack of supervision on the part of petitioner. It may not be out of place to state that in normally the road-block can be cleared within a week. Hence the delay of 2 months as claimed by the petitioner in this respect is not at all justified and should be borne by the petitioner alone. Without prejudice to the forgoing, it is imperative to note that petitioner vide affidavit dated 27.06.2017 has only waived cost of Rs. 10.65 Crores pertaining to cost increase/ escalation damage caused due to earthquake as stated in para 44 of the Petition. However, the detail of increase of cost due to earthquake had not been mentioned in tariff petition.

v. Delay in implementation of transmission line which is attributable to GoS and is a force majeure event (4 months). HPPC, on this issue, has contended that although the project was dry commissioned in December 2012, however, the project was further delayed by 4 months due to non-availability of the transmission line. The petitioner contends that the construction of transmission line was delayed due to right of way issues along with other issues like land acquisition and imposition of section 144 of Civil Procedure Code, 1973. It is submitted that the delay on the account of right of way issues in the construction of transmission line is not at all justified as the same could have been avoided had the petitioner worked diligently in this regard. The petitioner has not mentioned the increase in cost due to said reason. It is pertinent to note that the same issue arose in the other similar project, Tashiding HEP of M/s Shiga Energy Pvt Ltd and the said firm has forgone increase in cost of Rs. 75.73 Cr. due to delay in completion of transmission line under the scope of Govt of Sikkim/PGCIL.

In view of the above-mentioned facts and circumstances, it is submitted that the delays as alleged by the petitioner could have been avoided by taking reasonable care and with proper due diligence. Therefore, the cost overrun due to the said delays are attributable to the petitioner and it should not be considered while determining the capital cost as on CoD for the purpose of tariff determination.

In addition to the above facts, HPPC has contended that it is noteworthy that the DPR of the project was approved by Government of Sikkim in November 2004 and the environmental clearance was given in September 2005. However, the construction of the project started only in October 2006. The petitioner has not provided any reason for the delay in commencing the construction work. Therefore, the cost overrun due to delay in approvals/clearances from Government of Sikkim and delay in commencing

work is solely attributable to the petitioner and the same shall not be passed on to HPPC.

Applicability of the CERC Tariff Regulations. On this issue, HPPC has submitted that the petitioner has filed the tariff petition in accordance to the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2014 (“**CERC Tariff Regulation 2014**”) and not with the extant HERC Tariff Regulation despite the fact that the entire power, excluding free power, to home state is supplied to Haryana post determination of tariff by this Hon’ble Commission.

On the submissions of the petitioner that at the relevant time no Tariff Regulations of this Hon’ble Commission existed for generation norms and parameters for tariff determination and therefore the CERC Tariff regulations 2014 have been relied on for filing the instant Petition. In this regard, HPPC has submitted that this Hon’ble Commission, vide gazette notification dated 5.12.2012, notified the Multi Year Tariff (MYT) Regulations, 2012 (“**HERC MYT Regulations 2012**”). The first Control Period, under the said Regulation was from 1.04.2014 to 31.03.2017. Subsequently, the Hon’ble Commission, vide 1st Amendment to the ibid MYT Regulations (dated 17.11.2016) extended the Control Period up to 31st March, 2018. The Control Period, vide 2nd Amendment dated 31.10.2018, was further extended up to 31.03.2020. Therefore, the petitioner ought to have filed the instant tariff petition in accordance with the HERC Tariff Regulations.

It is further submitted that the petitioner has filed the instant Petition seeking determination of tariff for a period of FY 2018-19 to FY 2022-23 whereas the same should have been filed for the balance life of the Project. As per the Annexure P-19 “Levelized Tariff and ARR Summary” of the tariff petition, the petitioner has calculated the levelized tariff as Rs. 4.56 per unit for 30 years.

On components calculated and claimed by the petitioner, on the basis of CERC Tariff Regulation 2014, HPPC has submitted that the petitioner is claiming Return on Equity (ROE) at the rate of 16.50% as per regulation 24 of the CERC Tariff Regulation whereas the same should be 14% in line with the extant HERC Tariff Regulations which are applicable in the instant case.

Further, the petitioner has calculated rate of interest on working capital as “Base rate of SBI + 3.5%” i.e. 13.50% based on CERC Tariff Regulations 2014. However, the rate of

interest should have been calculated in terms of the HERC MYT Regulation 2012 which provides as follows:

“22.2 Rate of Interest

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

It is pertinent to mention that as per HERC MYT 2019, appropriate margin is 150 basis points.

The petitioner has considered the rate of interest of 13.09% while determination of tariff, which seems to be on higher side in comparison of interest rates on loans available in today's scenario. Therefore, in the commercial interest, the petitioner may be directed to refinance its loans with current interest rates and consequently pass on the benefits to HPPC.

It is submitted that the maintenance spares as per HERC MYT Regulation 2012 is 7.5% of O&M expenses, however the petitioner has considered the same as 15% of the O&M expenses based on CERC Tariff Regulations 2014. Hence, the same should not be allowed.

That the escalation of O&M expenses as per the HERC MYT Regulation 2012 is 4% per annum though the Petitioner has taken the same as 6.64% based on CERC Tariff Regulation. Hence, the same should not be allowed.

The depreciation rates and the useful life of the assets shall also be considered in line with HERC MYT Regulation 2012 and not on the basis of CERC Tariff Regulations.

That the petitioner, while calculation of interest on working capital, has considered receivables equivalent to 2 months of Fixed Cost. However, the receivables ought to have been considered as equivalent to fixed cost of 1 month since the payment cycle of the petitioner is 30 days as per Clause 9.3.2 of the draft PPA agreed by both the parties. In this regard, further reliance is placed on Regulation 22.1 of HERC MYT

Regulation 2012 allows calculation of interest on working capital considering receivables equivalent of 1 month of Fixed Cost.

“22.1 Components of working capital:

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

....

III. Hydro power plants:

- a) Normative operation and maintenance expenses for 1 (one) month
- b) Maintenance spares @ 7.5% of normative operation and maintenance expenses;
- c) Receivables equivalent to fixed cost for 1 (one) month”

On the issue of revenue realized by the petitioner from the project prior to offering power to HPPC, the respondent HPPC has submitted that since the project attained CoD on 2013, the petitioner was selling power in the power exchange prior to offering power to HPPC. HPPC has been off-taking power from the petitioner’s project as an interim arrangement from 14.05.2018. Thus, the revenue realized by the petitioner, prior to selling power to HPPC, shall be duly considered by this Hon’ble Commission while determining the tariff.

Recovery of tariff beyond the ceiling tariff, as approved by this Hon’ble Commission, vide Order dated 13.11.2017 should not be allowed. HPPC has submitted that the petitioner has prayed to this Hon’ble Commission to allow the recovery of ceiling tariff of Rs. 4.69/kWh in those years where the annual tariff is more than the ceiling tariff and consequently, further be allowed to park the unrecovered tariff for recovery at a later period. It is submitted that the said prayer of the petitioner is not maintainable as this Hon’ble Commission vide Order dated 13.11.2017 passed in PRO 24 of 2017 had explicitly approved the source with Rs. 4.69/kWh being the ceiling tariff for 35 years. The relevant portion of Order dated 13.11.2017 is reproduced below:

“13. Taking all these discussions into consideration, the Commission approves procurement of power from the Chuzachen Hydro Power Project, throughout the year, at the tariff to be determined by the Commission on separate petition to be

filed by the generator with Rs. 4.69/kWh being the ceiling tariff for first 35 years of the PPA.”.

In view of the forgoing, it has been submitted that recovery of tariff beyond the ceiling tariff as approved by this Hon’ble Commission will lead to violation of the order dated 13.11.2017. Therefore, the recovery of tariff over & above 4.69/kWh as sought to be claimed by the petitioner should not be considered in any manner.

That in the interest of justice, the Hon’ble Commission is requested to depute or appoint an impartial neutral third agency for scrutinizing the additional capital expenditure as claimed to be incurred on the project by the petitioner.

The Hon’ble Commission is also requested to determine the tariff for the remaining life of the Project i.e. 30 years. In this regard, it is pertinent to state that this issue of balance years of the Project was discussed and addressed by this Hon’ble Commission in the Order dated 08.03.2019 passed in the matter of approval of draft PPA with two other Sikkim based Hydro Power Generators in PRO 25 and 26 of 2017. The Hon’ble Commission in the said Order held that **“However, while determining tariff the Commission shall take into account the period elapsed between CoD of the project and the date on which power started flowing to HPPC/Haryana.”**

That with effect from 27.07.2020, HPPC has discontinued the power supply being sourced from the petitioner as an interim arrangement pursuant to Order dated 13.11.2017. The petitioner has challenged the said discontinuation of supply in PRO - 40 of 2020 which is pending adjudication before this Hon’ble Commission. However, in similar matters of sourcing power from other Sikkim based generators i.e. in PRO 25 and 26 of 2017, this Hon’ble Commission vide Order dated 11.09.2020, has upheld the right of HPPC to discontinue the power which was being sourced from these generators merely as an interim arrangement and at the discretion of HPPC.

Accordingly, in the given facts and circumstances, it is submitted that no liability whatsoever should be passed on to HPPC for the period of discontinuance of supply which was being sourced from the Petitioner as a mere interim arrangement.

PARA WISE REPLY FILED BY HPPC

The contents of para 1 to 7 are perfunctory and a matter of record which deserves no reply.

The contents of para 8 (a) to (f) are a matter of record which deserves no reply.

The contents of para 8 (g) and (h) are denied except for what is a matter of record. It is submitted that there is delay of 4 years in achieving COD which led to an increase in cost of Rs. 537 Crores approx. The reasons mentioned by the petitioner for delay in completion of the Project are unjustified and could have been avoided which is explained in the preliminary submissions.

The contents of para 8 (i) are a matter of record. So far as the claim of pondage is concerned, it is clarified that while HPPC was off-taking power supply from the petitioner as an interim arrangement till July 2020, it was observed that the petitioner was unable to supply peak power for 3 hours at a stretch for most of the lean season.

The contents of para 8 (j) to (l) are a matter of record.

The contents of para 8 (m) are denied to the extent mentioned herein. It is submitted that the review petition (RA-1 of 2018) filed by the Petitioner against the Order dated 13.11.2017 in PRO-24 of 2017 was rejected by the Hon'ble Commission vide Order dated 16.04.2019. The Hon'ble Commission held that while determining tariff the Commission shall decide the project cost de novo. The relevant portion of the Order dated 16.04.2019 is reiterated below:

“However, the Commission has already decided in the impugned Order dated 13.11.2017 that “the Commission shall, however, while determining tariff shall look at the entire project cost de. novo and after due diligence / prudence check arrive at a reasonable and justifiable project cost including capital structure that could be considered for the purpose of tariff determination in the present case.” Thus, the Commission shall determine the entire project cost de. novo and while doing so take into account the affidavit dated 27.06.2017 given by the Generator Further, re-adjudication of the case under the grab of review is not permissible.

The Petitioner has failed to show any latent error of fact or law. Hence, even for the said reason, the petition deserves to be dismissed for the relief claimed above.”

The contents of para 9 and 10 are a matter of record.

The contents of para 11 to 33 are denied. It is submitted that the reasons mentioned by the petitioner for delay in completion of the Project are unjustified and could have been avoided. Reliance is placed on the preliminary submissions which are not repeated herein for the sake of brevity.

The contents of para 34 and 35 are denied as the applicable regulations are the HERC MYT Regulation 2012. Reliance is placed on the preliminary submissions which are not repeated herein for the sake of brevity.

The contents of para 36 to 41 are a matter of record.

The contents of para 42 to 45 are denied except for what is a matter of record. It is submitted that there is delay of 4 years in achieving COD which led to an increase in cost of Rs. 537 Crores approx. The reasons mentioned by the petitioner for delay in completion of the Project are unjustified and could have been avoided which is explained in the preliminary submissions.

The contents of para 46 to 83 are denied. It is submitted that the applicable regulations in the present case are the HERC MYT Regulation 2012 and therefore the all such calculations/ cost inter alia the annual fixed cost and the capital expenditure of the petitioner's Plant should be considered in line with the applicable regulations and not the CERC Tariff Regulations. It is further submitted that recovery of tariff beyond the ceiling tariff approved by this Hon'ble Commission will lead to violation of the Order dated 13.11.2017. Therefore, the said claim of the petitioner ought to be rejected. Reliance is placed on the preliminary submissions which are not repeated herein for the sake of brevity.

The contents of para 84 are denied except for what is admitted herein. It is submitted that with effect from 27.07.2020, HPPC has discontinued the power supply being sourced from the Petitioner as an interim arrangement pursuant to Order dated 13.11.2017. As a matter of record, in accordance with the Order dated 13.11.2017,
Page | 15

HPPC was paying APPC rate which is around 85% of the ceiling levelized tariff at 84.43% for the purchase of this power being sourced from the petitioner as an interim arrangement.

The petitioner has challenged the discontinuation of supply by HPPC in PRO 40 of 2020 which is pending adjudication before this Hon'ble Commission. However, in similar matters of sourcing power from other Sikkim based generators i.e in PRO 25 and 26 of 2017, this Hon'ble Commission vide Order dated 11.09.2020 has upheld the right of HPPC to discontinue the power which was being sourced from these generators merely as an interim arrangement and at the discretion of HPPC. In the given facts and circumstances, it is submitted that HPPC is not obligated to purchase power from the petitioner in the interim as there is no binding PPA as on date. Accordingly, no liability whatsoever should be passed on to HPPC for the period of discontinuance of supply which was being sourced from the petitioner as a mere interim arrangement.

The contents of para 85 and 86 are denied in as much as the payment of taxes maybe in accordance with Clause 4.5 of the draft PPA which has been agreed between the parties.

The contents of para 87 to 89 are perfunctory and need no reply.

The contents of para 90 are denied to the extent of the submissions made in the preceding paragraphs which are not repeated herein for the sake of brevity.

10. The petitioner filed an affidavit dated 25.09.2020, in terms of the Order dated 20.08.2020 read with Order dated 02.09.2020 passed by this Commission. The submissions made by GATI is set out below: -

That in order to comply with aforesaid directions, petitioner started process of collating information, data and documents. However, on account of prevailing pandemic situation, the petitioner could not complete collation of information, data and documents and therefore could submit following information vide the Affidavit dated 31.08.2020:

- i. Details of infirm power till the CoD of the project (2X55 MW).

- ii. Details of amount of depreciation already claimed post CoD of the project.
- iii. Details of actual Gross Head, head loss and net head vis-à-vis envisaged in the DPR.
- iv. Details of year wise break-up of actual O&M expenses incurred.
- v. Details of annual average design discharge and actual discharge available at the turbine. Reasons for deviations, if any.
- vi. Details of provisions for continuous over-loading.
- vii. Details of Turbine Efficiency, Drive Efficiency and Generator Efficiency and overall efficiency thereto at maximum discharge, minimum discharge and weighted average as per the manufacturer in percentage (%).
- viii. A copy of the audited balance sheet.
- ix. A copy of DPR.

The contents and averments of the Affidavit dated 31.08.2020 may be read as part and parcel of the present Affidavit. The contents of the same and other details are not reproduced herein for the sake of brevity.

That the matter was thereafter listed for hearing on 02.09.2020, wherein this Hon'ble Commission granted three weeks' time to the petitioner to file remaining documents. However, on account of worsening of circumstances relating to COVID-19, the petitioner could not complete the compilation of information and documents. Further, it is noteworthy that in view of the mobility restraint and health risk posed by COVID-19, the employees of the petitioner who are working at Corporate office of the petitioner located in Delhi, could not access/ avail and examine, some of the information, data and documents lying at the Project Site, East District of Sikkim. In light of the said prevailing situation which is beyond the control of the petitioner, the petitioner despite undertaking best efforts, could manage to collate following

additional information and documents apart from the information and documents submitted to Hon'ble Commission vide affidavit dated 31.08.2020:

- i. Details of approvals of the revised cost estimates of the project (2X55 MW). The same is annexed herewith and marked as **Annexure-2.**
- ii. Revenue realised from sale of energy till the time power supply to HPPC commenced. The same is annexed herewith and marked as **Annexure-3.**
- iii. Actual Gross generation year wise and month wise, separately provide for actual auxiliary consumption and free power to the home state. Reasons for lower generation, if any, vis-à-vis design energy. Details of secondary energy over and above the design energy especially in the monsoon season. The same is annexed herewith and marked as **Annexure-4.**
- iv. Head wise / sub-head wise details of project cost as envisaged in the DPR and actual as on CoD including the reason for deviations. The same is annexed herewith and marked as **Annexure-5.**
- v. Details of un-discharged liabilities vis-à-vis the above. This may also include costs attributed to the costs other than on construction of dams / reservoirs / powerhouse and associated activities. This may include expenses on de-silting, damaged roads, plantations, pre-operative - preliminary expense etc. The same is annexed herewith and marked as **Annexure-6.**
- vi. Project Cost of HEP of comparable projects commissioned between 2012-2014 and admitted by CERC / SERCs for the purpose of tariff determination. The same is annexed herewith and marked as **Annexure-7**

That in view of the prevailing pandemic and nature of voluminous information/data, petitioner needs further time of four weeks to collate and provide complete information as sought by this Hon'ble Commission vide its order dated 20.08.2020. Accordingly, petitioner, requests this Hon'ble Commission to kindly grant further extension of four weeks to the petitioner to comply with directions of the Hon'ble Commission contained in the said order.

There is no case currently pending in any court of law with regard to the present matter relating to Tariff Determination referred to the Hon'ble Commission. The Annexures filed herein are true copies of the respective documents.

11. Interveners

i) Shri Anoop Kumar Rampal (anuprampal@gmail.com), vide his email dated 3.10.2020 filed suggestions / comments on the tariff petition under consideration of the Commission. The intervener has submitted that the tariff has been proposed by the petitioner based on design energy of 537 MUs. However, the actual energy generated that is available in the public domain i.e. website of the Central Electricity Authority (CEA) has been consistently less than the design energy in its seven years of operation since CoD, presumably on account of hydrological factors. This essentially means that the tariff based on which approval has been granted by HERC for procurement of power will in actual terms will be significantly higher for Haryana Consumers.

That to have a fair idea of the actual tariff to be borne by the consumers, it is imperative that the Design Energy needs to be revised downwards by the petitioner from CEA in terms of proviso to sub - regulation 31(6) (a) of the CERC Tariff Regulations, 2014 i.e. *“Provided that in case of actual generation from a hydro generating station is less than the design energy for a continuous period of 4 years on account of hydrological factor, the generating station shall approach CEA with relevant hydrological data for revision of design energy of the station”*. It has been further submitted that for approaching CEA time is not the essence and the petitioner has liberty to get the design energy down - graded after the expiry of the 'period of exit clause' as provided in the PPA.

That CEA, based on actual generation and on request from the petitioner, shall revise the design energy downwards to 435 MUs (-19%) and thus tariff shall get increased by 23% - the petitioner being entitled to arrears for the past supply. Further, it has been

submitted that assuming interest rate of 9.5% instead of 13.05% taken by the petitioner; O&M escalation of 4% instead of 6.64% as per the petition; secondary energy as 18% of the design energy which has not been considered by the petitioner, debt repayment period of 20 years (MoP March 2019 notification) - the first-year ex-bus tariff works out to Rs. 5.65 / kWh and ex-bus levelled tariff works out to Rs. 5.33 / kWh (calculation sheet has been attached). It has also been suggested (vide email dated 5.10.2020) that the petition is incomplete as it does not have i) DPR, ii) summary of hydrology iii) Lender's Appraisal Report(s) iv) draft PPA v) PERT Chart for construction activities etc. Further, since the Tariff Petition, under many paragraphs, has referred to the provisions of CERC Tariff Regulations, therefore, the information may also be based on the proformas specified by the CERC Tariff Regulations for a meaningful analysis of the Tariff Petition filed by M/s Gati.

That in view of the above stated facts and in the best interest of the electricity consumers of Haryana, it is imperative that the Hon'ble Commission may consider seeking advice of CEA under sub-section 73 (n) of the Act about hydrology of this project and CEA views on downward revision of the Design Energy, which is a technical matter.

Further, Shri Rampal, through series of emails filed his comments / objections / suggestions. The same are set out hereunder: -

Email dated 12.10.2020 at 06.06 PM

1. Kindly refer to the Interim Order 3 passed on 29.09.2020 in the matter of M/s Shiga Energy (2x48.5 MW) Tashiding HEP, which is reproduced below:

"3. The Commission directs the petitioner to publish the notice at the earliest. Matter to come up on 20.10.2020"

2. In the meantime, the undersigned has downloaded from HERC website the Tariff Petition No. HERC/ PRO-31 of 2018, filed by M/s Shiga Energy Ltd. in respect of Tashiding HEP (2x 48.5 MW). This Tariff Petition is incomplete as explained in the following paragraphs.
3. In Para 32 of the Petition, it is stated "The Petitioner is enclosing the following documents with the present petition."

However, there is no enclosure available on the HERC website.

4. M/s Gati Infra in their petition filed “Formats prescribed by the CERC Tariff Regulations, 2014” but did not fill up stating “Not Applicable” or other such remarks on the Formats.

The same may not get repeated in the Public Notice for this Petition.

5. M/s Gati Infra in their petition filed a check-list of documents accompanying the Tariff Petition, but the undersigned could not locate the project documents that were mentioned in the check-list as “accompanying the Petition” like the ‘Detailed Project Report’. Power Purchase Agreement, Hydrology, Loan Agreements with Lenders, etc.

The same may not get repeated in the Public Notice for this Petition.

6. The Annual Reviews of Performance of Hydro Power Stations published by Central Electricity Authority for the Financial Years 2016–17, 2017–18 and 2018–19 (copy of concerned page attached) show this Project as “R” implying that this is a pure “Run-of-River” with no pondage. There is no mention of pondage/ storage in the Petition also. The Hon’ble Commission in its Order dated 30.11.2017, has approved the procurement from this project considering some storage. Without storage, this project may not be useful to Haryana, as this project may not provide peaking capacity during the winter (i.e off-season), rather this project shall supply ‘round the clock’ aggravating the issue of excess capacity during (winter) off-season.

Email Dated. 12.10.2020

1. In the meantime, the undersigned has attempted to access the annual tariff payable for the life (35 years) based on the norms and parameters of CERC Tariff Regulations, 2014. Taking cost of capital (or discount factor) as 11.29% p.a – same as taken in HERC Renewable Energy Tariff Order, the levelized tariff of Tashiding HEP works out to Rs. 5.18/ kWh (Ex-Injection Point of ISTS) after allowing 2% (in kind) charges for intrastate system of Sikkim.

Break-up of the Tariff is attached for ready reference.

2. The 11.29% p.a discount factor is on lower side keeping in view the interest rate of 12.67% p.a. and 16.5% p.a. rate of return on equity (post tax). Even if the debt: equity ratio is 80:20, and debt being only for 14 years or so, the weighted average cost of capital may be of the order of 17% p.a., which shall hike the levelized tariff from R. 5.18/ kWh to Rs. 5.32/ kWh (Ex-Injection Point of the ISTS). The landed price of this power at Haryana Periphery shall be of the order of Rs. 6.60/ kWh – unaffordable for Haryana from a hydro project that has no pondage and delivers round the clock power in winter season.

Email dated 12.10.2020 at 06.00 PM

1. In the meantime, the undersigned has downloaded from HERC website the Tariff Petition No. HERC/ PRO-41 of 2018, filed by M/s DANS Energy Ltd. in respect of Jorthang HEP (2x 48 MW). This Tariff Petition is incomplete as explained in the following paragraphs.

2. In Para 18 i of the Petition, it is stated “The Petitioner is enclosing the following documents with the present petition.”

However, there is no enclosure available on the HERC website.

3. M/s Gati Infra in their petition filed “Formats prescribed by the CERC Tariff Regulations, 2014” but did not fill up stating “Not Applicable” or other such remarks on the Formats.

The same may not get repeated in the Public Notice for this Petition.

4. M/s Gati Infra in their petition filed a check-list of documents accompanying the Tariff Petition, but the undersigned could not locate the project documents that were mentioned in the check-list as “accompanying the Petition” like the ‘Detailed Project Report’. Power Purchase Agreement, Hydrology, Loan Agreements with Lenders, etc.

The same may not get repeated in the Public Notice for this Petition.

5. The Annual Reviews of Performance of Hydro Power Stations published by Central Electricity Authority for the Financial Years 2016–17, 2017–18 and 2018–19 (copy of concerned page attached) show this Project as “R” implying that this is a pure “Run-of-River” with no pondage. There is no mention of pondage/ storage in the Petition also. The Hon’ble Commission in its Order dated 13.11.2017, has approved the procurement from this project considering some storage. Without storage, this project may not be useful to Haryana, as this project may not provide peaking capacity during the winter (i.e off-seson), rather this project shall supply ‘round the clock’ aggravating the issue of excess capacity during off-season.

Email Dated. 12.10.2020

1. In the meantime, the undersigned has downloaded from HERC website the Tariff Petition No. HERC/ PRO-41 of 2018, filed by M/s DANS Energy Ltd. in respect of Jorthang HEP (2x 48 MW) and also downloaded from CEA website the actual generation reported to CEA by Jorthang HEP for the five years period since the date of commercial operation. In these five years, Jorthang has never achieved its design energy of 459.02 million units, and hence qualifies DANS Energy to approach CEA and get the design energy revised in terms of Proviso to sub-Regulation 31 (6) (a) of CERC Tariff Regulations, 2014 which is reproduced hereunder:

“Provided that in case actual generation form a hydro generating station is less than the design energy for a continuous period of 4 years on account of hydrology factor, the generating station shall approach CEA with relevant hydrology data for revision of design energy of the station.”

2. Attached is a file providing a note on ‘Design Energy’ giving the concerned regulation of the CERC Tariff Regulations, Monthly Generation reported by M/s DANS Energy to CEA and the likely ‘Design Energy that shall be revised by CEA. In order to have a fair idea of the actual tariff to be borne by the consumers, it is imperative that the Design Energy shall be got revised down-wards by the petitioner from the CEA.

The revised design energy is likely to be 409.16 million units corresponding to annual PLF of 48.7%, which is about 10.9% less than present design energy of 459.02 million Units.

3. DANS Energy can approach CEA any time (for which Time is not the essence) and get the design energy downgraded retrospectively i.e from the 'Commercial Operation Date' (September 2015). Thus, the petitioner has liberty to get the design energy down-graded even after the expiry of the 'period of exit clause' as provided in the approved PPA, and claim arrears for the past Supply.
4. So far, the Tariff is likely to have been projected with design energy of 459.02 million units, and revising the tariff based on downgraded design energy of 409.16 million Units has potential to raise the Tariff by 12.2%, and lawfully, the bar of 'Ceiling Tariff' shall also get raised from Rs. 4.71/ kWh to Rs. 5.28/ kWh because the 'hydrology factor' is beyond the control of M/s DANS Energy.

Whether HPPC can allege manipulation in the DPR is a matter of concern for all stakeholders, but lawfully, the DPR is ought to have been a part of the 'Draft PPA' submitted to the Hon'ble Commission and expected to have been got perused from the experts/ consultants of HPPC/ HERC.

5. This HEP has a 10 Km long 220 kV dedicated line from HEP upto ISTS which is likely to give an effect of 10 Paise/ kWh on transmission charges. This ten paise together with about 3.5% transmission losses and Interstate transmission charges is likely to change Rs. 5.28/kWh Ceiling Tariff Ex-HEP to Rs. 7.00/ kWh ex-Periphery of Haryana – an unaffordable Tariff for Haryana Consumers.
6. In view of the above stated facts and in the best interests of the consumers of Haryana, it is imperative that the Hon'ble Commission may consider seeking the advice of CEA under the sub-section 73 (n) of the Act about (i) hydrology of this project and (ii) downward revision of the Design Energy – both of them being the technical matter.

Email dated 09.10.2020

1. In the meantime, the undersigned has downloaded from HERC website the Tariff Petition No. HERC/ PRO-41 of 2018, filed by M/s DANS Energy Ltd. in respect of Jorthang HEP (2x48 MW). The important features of the Petition are:
 - (a) It is submitted in Para 24 that for the purpose of this tariff petition, the Debt-Equity ratio is 79%: 21% based on the actual Debt obtained by the Project.
 - (b) It is submitted in Para 24 that the total debt of the project is Rs. 1184.92 Crore with the weighted average interest rate of 13.03 %.
 - (c) It is submitted in Para 24 that ----- tariff forms have been filled up ----- as per actual capital cost ----- of Rs.1507.52 crores as per the regulations, the Petitioner has agreed to ceiling capital cost of Rs.1000.67 crores for the purpose of tariff determination and ceiling tariff of Rs.4.71 per kwh as the levellised tariff of the project.
2. Based on above, the audited capital cost and admitted capital cost (assuming that ceiling capital cost is admitted) can be shown as under:

(all figures in Rs. Crores)

| Description | Audited Cost | Admitted Cost | Remarks |
|---------------------|--------------------|--------------------|-------------------------------------|
| Capital Cost | 1507.52 | 1000.67 | Volunteered to reduce 506.85 |
| Debt | 1184.92 (78.6%) | 678.07 (67.76%) | |
| Equity | 322.60 (21.4%) | 300.20 (30.00%) | |
| Excess Equity | 0 | 22.40 (2.24%) | Notional Debt |

3. Interest (13.03% per annum) on Disallowed Debt of Rs. 506.85 Crores has to be serviced by (i) return on equity (RoE – 16.5% per annum) on Rs. 300.2 Crores and (ii) Interest (13.03% per annum) on Rs. 22.4 Crores.

Thus, **RoE** (16.5%) on Rs. 300.2 Crores i.e **Rs. 49.53 Crores** has **to service the interest** (13.05% p.a) on Rs. 484.45 Crores i.e **Rs. 63.22 Crores**.

The **Depreciation of Rs. 900.6 Crores** (90% of Rs. 1,000.67 Cr.) **is not sufficient to repay** the principal **debt of Rs. 1184.92 Crores**.

Thus, cash flow is grossly mismatched – neither annual interest gets paid in full nor the principal amount of debt gets repaid over the life cycle, and there is no reserve generation to fall back upon.

4. The failure of the HEP to achieve the annual design energy for the last five years i.e since the commencement of commercial operation, means that this HEP is likely to have nil revenue from secondary energy sale. This will further impact the cash-flow crunch.
5. The Hon’ble Commission may consider whether HPPC should be allowed to procure power from a generating company that is expected to seek extra tariff in future on the compassionate grounds – for which the petitioner may have legal right on the grounds known to HPPC from the beginning.

Email dated 11.010.2020 at 12:35 PM

1. In the meantime, undersigned has forwarded the comments on the following aspects:
- (a) The copy of the Petition uploaded on website is illegible from page 105 to page 216;
- (b) The Petition is incomplete – does not include Detailed Project Report, Copy of the PPA, Annexures as specified by the etc.
- (c) The Project is eligible to approach CEA and get its design energy down-graded from 537 million units to 435 million units increasing the tariff;
- (d) The petition has under-stated the Tariff

2. The Applicant expects the Hon'ble Commission to:
 - (i) Get extended the date as the Petition was illegible/ incomplete;
 - (ii) Consider the comments, even if they are late received;
3. The sub-section 61 (d) of the Electricity Act is reproduced here-under:

“Section 61. (Tariff regulations):

The Appropriate Commission shall, subject to the provisions of this Act, **specify the terms and conditions for the determination of tariff, and in doing so, shall be guided by the following**, namely:-

- (d) **safeguarding of consumers' interest** and at the same time, recovery of the cost of electricity in a reasonable manner;”

The Hon'ble Commission while determining the tariff under this impugned petition shall safeguard the interest of the Haryana Consumers.

4. The questions raised are important from consumers' interest as these have significant bearing on the tariff. The questions are repeated again as under:
 - (a) As per Proviso to Regulation 31 (6) (a) of CERC Tariff Regulations, the design energy can be got revised by the petitioner, if the design energy is not achieved for four continuous years in first ten years from COD. Based on actual generation data the revised design energy is expected to be 435 million units – down by 17% increasing the tariff by 23%.

The actual generation referred to in (a) above, is the data available at CEA website is based on information provided by the generating company under section 10 of the Electricity Act, and published by Central Electricity Authority for information/ benefit of all.
 - (b) The Project was implemented with debt: equity ratio of 65:35 and therefore, interest during construction (IDC) appears to be actual interest paid for 65% debt actually drawn during the construction period. The interest on notional debt during construction is omitted. The petitioner may claim increment in tariff at a later date citing 'an arithmetic error'. The IDC is under-stated by atleast about (5/65 of IDC) 7.7% of IDC claimed in the Petition.
 - (c) The Incentive for actual availability higher than normative Availability (85%) is omitted in the spread-sheet calculations;
 - (d) The saleable energy is shown as 468.27 million units omitting 2% wheeling charges payable to Government of Sikkim for intra state transmission system use; (To check with Draft PPA) to arrive at ex-Injection Point of Interstate Transmission System, in compliance with the Para 1 (b) of the HERC Order dated 13.11.2017 reproduced below:

“1 (b) That the net saleable energy from the said project is approximately 94 MW i.e ex-bus after deduction of auxiliary energy consumption including

transformation losses, free share of Government of Sikkim and wheeling charges of 132 kV double circuit transmission line (Developed and owned by Government of Sikkim) from generation Switchyard to Rangpo pooling station of CTU”

The auxiliary consumption is 1%, GoS Wheeling Charges is 2% and free power to GoS is 12% at interconnection point with interstate Transmission System, and the Saleable energy shall come down to about 460 MUs even if revised design energy is not considered.

- (e) Treatment of under-recovery of revenue during the period prior to start of the Supply to HPPC is not covered in the petition. This under-recovery has potential to increase the tariff of Supply to HPPC. (To check with Draft PPA)
- (f) Annual O&M shown in spread-sheet at Page 216 of the Tariff Petition needs to be verified for escalation (2009-14 Control Period – 5.72% p.a, 2014-19 Control Period – 6.64% p.a, 2019-24 Control Period – 4.77% p.a, and for balance period it should be weighted average.
- (g) The stream of discount factors is erratic. In view of 13.05% per annum rate of interest and 16.5% p.a (post tax return on income) the weighted average cost of capital should be 15% or more for the life of the HEP. Any rate less than that is likely to understate the levelized Tariff.

CERC Tariff Regulation, 2014 or 2019 has not specified any discount factor, and therefore, there is no basis for the indices shown in the spread sheet at Page 216 of Tariff Petition. The interest rate is shown as 13.09% in Table 7 of the Tariff Petition and return on equity is 16.5% (post Tax). **The Applicant has shown the net cash flow in the excel sheet (attached again) and computed cost of capital for this HEP, which works out to 18.2% p.a.**

All of above are only question of laws, figures derived from the data of the Tariff Petition and no new fact is placed.

- 5. In view of the above stated facts under 5 (a) and in the best interests of the consumers of Haryana, it is imperative that the Hon’ble Commission may consider seeking the advice of CEA under the sub-section 73 (n) of the Act about hydrology of this project and CEA views on downward revision of the Design Energy, which truly is a technical matter.

Email dated 25.09.2020 at 08 AM

- 1. Central Electricity Authority publishes monthly progress report of ‘Associated Transmission System’ (ATS) of respective generating stations of the country. Based on their Report of July 2020, which is available on the website of CEA, six HEPs have been perused and a statement is annexed.
- 2. From the Annexure, following is the observation:
 - (a) ISTS begins from respective switchyards of Kishanganga and Teesta III;

- (b) For Chanju, a dedicated line from Chanju HEP to Chanju (132 kV) S/S of intra-state transmission system i.e involves dedicated line and intrastate transmission system of H.P.;
 - (c) For Chuzachen, a 24 Km 132 kV dedicated line from HEP to Rangpo PS (ISTS) which was commissioned in March 2017; Before that interim arrangement i.e LILO was commissioned in March 2013. This LILO is redundant now.
 - (d) For Jorthang, a 10 Km dedicated line upto New Melli S/S (ISTS) was commissioned in Nov' 2016;
 - (e) Tashiding is connected to Legship S/S (ISTS) through 8.5 Km 220 kV dedicated line and to intrastate transmission system (Sikkim) through LILO;
3. For Kishanganga and Teesta III, only ISTS Charges/ Losses are leviable;
4. For other projects, in addition to ISTS Charges/ Losses, the involvement of dedicated line(s) is likely to incur charges and losses to the HPPC while involvement of intrastate transmission system of home State of the HEP will require payment of the transmission charges/ losses. Even if HPPC restricts charges/ losses and reduces HPPC burden, the difference will affect the viability of HEP and make a case for compensatory tariff on the grounds that are known to the HPPC from day-one;

Email dated 03.10.2020 at 01:35 PM

1. The Hon'ble Commission has since approved 'Draft Power Purchase Agreement' (PPA) and decided to go-ahead with determine the Tariff of Chuzachen HEP under section 62 of the Act. During the proceedings of approval of PPA, Other Stake-holders were not consulted. Therefore Public may be permitted to give suggestions/ views on the PPA also so that the determination of tariff can be done by addressing the concerns if any.
2. The copy of the Tariff Petition is available on the website of the petitioner. But, the copy of the draft PPA is not shown on HERC website. Therefore, **kindly consider getting sent** a soft copy (in word/ pdf) of the Draft PPA of Chuzachen HEP (as approved by the Hon'ble Commission) at the following email address:

Email dated 29.09.2020 at 04:45 PM

1. The Hon'ble Commission has never passed an order that CERC Tariff Regulations 2014 or 2019 shall be adopted for tariff determination of these three HEPs. But each petition is based on CERC Tariff Regulations, **when HERC MYT Regulation is sufficient to determine the Hydro Tariff.**

This may be deviation, but while approval of the PPAs, no deviation was sought by any Party – HPPC or generator.

2. Chuzachen HEP in Para 66 of the Petition has assumed **O&M Escalation Rate of 6.64%** for the entire life which is very high when compared with CERC Tariff Regulations 2014 or 2019. Similar may be the case for other Petitions;

3. Chuzachen HEP in Para 69 of the Petition has assumed **interest rate on working capital as 13.5% per annum** for the entire life which is very high when compared with SBI bench mark; Similar may be the case for other Petitions;
4. In case petitioner is allowed to get tariff determined on the basis of CERC Tariff Regulations, then seek petitioner to **adopt (i) Procedure and (ii) the formats of CERC Tariff Regulations for filing the Petition.**

Email dated 29.09.2020 at 08:38 AM

1. The Hon'ble Commission may kindly consider that the Applicant, as representative of Central Electricity Authority (CEA) was a member of the Team constituted by the Government of India to negotiate Tariff for Tala HEP with the counterpart Team constituted by the then Royal Government of Bhutan, He does not require to prove that he is well versed with hydro-stations, technology, HEP Tariff computations, CERC Tariff Regulations' history with regard to hydro norms. The applicant was also associated as a representative of CEA with drafting of Standard Bid Documents (SBDs) and notification by the Central Government.
2. The Applicant has worked with 'Financial & Commercial Appraisal Division' of CEA and associated with concurrence accorded by CEA and approval of deviations taken in PPAs prior to coming into existence of the Commissions.

Email dated 29.09.2020 at 07:26 AM

1. As per website of CEA, two projects namely Chuzachen HEP (2 x 45 MW) and Jortheng HEP (2x48 MW) in their six and four years of operation for full Financial Years (preceding FY 2020-21) could never touch their annual PLF of design energy.

A Table (based on information available at CEA website – monthly generation reports) showing actual generation performance of six HEPs considered by the HPPC is attached for kind perusal of the Hon'ble Commission;

2. The Hon'ble Commission may kindly consider overlooking procedural deficiency. As a custodian of 'Consumer Interest' the Hon'ble Commission is lawfully bound to take on record the information available in 'Public Domain' and not driven by the affidavits filed by the Parties.

Email dated 29.09.2020 at 06:48 AM

1. The Hon'ble Commission has not consulted consumers through Public Notice for the approval of PPAs, Therefore PPAs together with separate list of deviations be got placed before Public soliciting their views.

2. As per website of CEA, two projects namely Jortheng HEP (2x48 MW) and Tashiding HEP (2x48.5 MW) are pure 'run-of-river' Plants. The Chuzachen HEP data could not be found on the 'Google Search'.
3. The CEA website (CEA > Wings > Hydro > HP & I >Annual Hydro Performance Review) "REVIEW OF PERFORMANCE OF HYDRO POWER STATIONS 2018-19" AUGUST, 2019, **Page 36 (copy annexed) – Serial Numbers 178 and 179 may be referred;**

| | | | | | | | |
|--------------------|---|---|-----------|-------|--------|---|------|
| 178 Tashiding | 1 | 2 | (2*48.50) | 97.00 | 425.05 | R | 2017 |
| 179 Jorethang Loop | 1 | 2 | (2*48) | 96.00 | 459.02 | R | 2015 |

ii) Shri Sharad Duggal (sharad_1605@yahoo.co.in) vide his email dated 15.10.2020 (9.25 PM) filed his objections / comments in terms of the Public Notice dated 26.09. 2020. The relevant part of the objections / comments are as under: -

As per section 79(1) (b) of the Electricity Act, 2003, CERC has the power to determine tariff of a Generating Company, in case such Company has a composite scheme to supply power in more than one State. In para 8 of the tariff petition it is clearly mentioned that 12% of power from Gati is being supplied to Sikkim and the remaining power has been offered to HPPC net of auxiliary consumption. Given the fact that the power is being supplied to more than one State i.e. Haryana & Sikkim, the jurisdiction to determine tariff would rightly vest in the CERC. In support of his contention, relevant paragraphs i.e. 24, 25 and 26 from the judgement of the APEX court in the Energy Watchdog v. CERC, (2017) 14 SCC 80 has been cited. The said paragraphs, for the sake of brevity is not being re-produced here.

In view of the above, the Intervener has submitted that this Commission may consider the issue of jurisdiction as the stage of issuance of the tariff order or at any stage deemed appropriate by the Hon'ble HERC.

12. The Commission has taken on record the submissions of the parties including the annexures (taken on record but not reproduced here) as well as the comments / suggestions of the interveners mentioned in the preceding paragraphs. The objections/ information / comments / suggestions etc. provided shall will dealt with by the Commission at the relevant paragraphs of the present Order.

13. The case was listed for further hearing on 14.10.2020. The matter was heard by the Commission at length and passed an Interim Order dated 14.10.2020. The operating part of the said Order is reproduced below: -

“4. Upon hearing the rival contention and the facts placed before the Commission, it is observed that the case was scheduled for final hearing today. Accordingly, the petitioner should have come prepared to argue the case on all aspects. The information, so far, not provided by the petitioner is not material to defer the hearing as such. Hence, the matter is posted for final hearing on 16.10.2020”.

14. Accordingly, the case was taken up for further hearing again on 16.10.2020 (part heard) and continued on 19.10.2020.

15. The arguments of the parties including the Interveners are briefly set out below: -

16. Shri. Buddy Ranganathan along with Shri Tabrez Malawat Ld. Advocates appeared for the petitioner and Shri Samir Mallik, Ld. Advocate, put in appearance for the respondent i.e. HPPC. Shri A.K. Rampal, the intervener, was also present in the virtual court.

17. The Ld. Advocate appearing for the petitioner herein, vehemently argued at length that CERC Tariff norms ought to be adopted by this Commission and not the HERC norms. In support of his contention, the Ld. Advocate argued that the present Tariff Petition was filed on 28th October, 2018. At that point of time the HERC Tariff Regulations did not exist. As such, the said HERC Regulations, 2012 was valid for the Control Period 1.4.2012 to 31.03.2017. Further, vide 1st Amendment to the said Regulation the Control Period was extended to 31.03.2018. He further pointed out that this Commission, vide 2nd Amendment notified on 31st October, 2018 further extended the Control Period which became effective from the date of the notification in the Official Gazette of Haryana. As a corollary, at the time of filing the present tariff petition no Tariff Regulations of HERC were in force. The Ld. Advocate dwelt at length on the scope and applicability of the Act and the fact that the Electricity Act, 2003 does not empower the Commission for making any Regulation with retrospective effect. The Ld. Advocate cited case laws in support of the fact that in case a Regulation is framed by the Commission which runs contrary to the Act, such Regulations, to the extent exceeding the provisions of the Act, need to be ignored.

18. Per contra the learned Counsel for the petitioner, further argued that in case HERC Regulations existed this Commission is bound by its own Regulations which is not the case. Hence, in the absence of HERC Regulations occupying the field, this

Commission is bound by the CERC Regulations which was in place at the time of filing the present petition.

19. It has been additionally argued by the Counsel for the petitioner without admitting, that even if HERC MYT Regulations, 2012 were to apply the various provisions specified therein may not to be applicable to the HEP of the petitioner. As such those provisions are specific for micro-hydro projects i.e. WYC Kakroi and Budhkalan.

20. On the issue of admissibility of Capital Cost, the Ld. Advocate argued that the cost over run due to delays beyond the control of the petitioner has to be allowed. He cited the judgement of Hon'ble APTEL (MSPG V. MERC) to this effect. It has been further submitted that the respondent i.e. HPPC has simply stated that such cost over run ought not to be allowed without denying the underlying facts of the delays under each head claimed by the petitioner.

21. The learned Counsel Shri Samir Mallick, appearing for the respondent HPPC, in his rebuttal, argued that the date to reckon with is not the date of filing the petition but the date of CoD of the project which was very well within the Control Period of the HERC Regulations, 2012. Hence, the issue of given retrospective effect to the said Regulations, as argued by the petitioner, does not arise.

22. The intervener present Shri Rampal, reiterated his written submissions already filed by him through series of emails that have . The same has already been reproduced in the present Order. Hence, for the sake of brevity they are not being reproduced here.

23. In line with the directives of the Commission passed in the hearing on 19.10.2020, the Respondent (HPPC) filed written submissions dated 21.10.2020. On the issue of applicability of CERC Regulations it has been submitted that the word used in Section 61 of Act is “**shall be guided**”, hence the same is not mandatory and its character would depend on case to case basis. Thus, the said provision is merely directory in nature and not mandatory. Further, time of commissioning of the project is covered in the HERC MYT Regulations, 2012. The said Regulations were further made applicable for the period between 01.04.2018 and 31.10.2018 by way of 2nd Amendment to the Regulations dated 31.10.2018. The arguments of the petitioner that HERC MYT Regulations 2012 does not have norms for determination of a hydro project specially in

the light of the fact that it provides for single part tariff for the two hydro projects as per Regulation 5.4, 5.5 and 15.5 is also erroneous. It has been submitted that the Regulations 5.4, 5.5, 15.5 and 34.5 makes provisions only for WYC HEP, Bhudhkalan and Kakroi HEPs. These Regulations, as such, are not applicable for all HEPs. Rather a specific exception has been carved out in these regulations for the ibid HEPs. Further, Regulation 15.3 makes provisions for fixed cost of generating plant both thermal and HEPs. Thus, it is incorrect to state that the HERC MYT Regulations 2012 cannot be applied for determination of tariff in the present case.

On the issue of admissibility of increase in Capital Cost, due to delay in achieving CoD, it has been submitted by the respondent that, the petitioner had voluntarily foregone the cost attributable to the delay in commissioning of the Project during the hearing before this Hon'ble Commission in PRO 24 of 2017 and this factum is captured in order dated 13.11.2017. The said undertaking as recorded in the Order dated 13.11.2017 was challenged by the petitioner by way of a Review Petition. However, this Hon'ble Commission had vide its Order dated 16.04.2019 dismissed the Review Petition and held as under: -

“The Commission observes that the Generator is aggrieved by the abovementioned provisions in the impugned order to the extent that the direction has been given to HPPC to negotiate with the IPP regarding any future contingency and HPPC to ensure that the IPP shall voluntarily forego any such claim.

The Commission is of the considered view that such directions were given to address the objections of the interveners, regarding selection of projects otherwise than through competitive bidding and forms an integral part of the Order of the Commission to ensure that the power procurement source selected by the HPPC is cheapest.

....

Since, the approval to procure power from the present source was given based upon the ceiling tariff negotiated between the generator & HPPC, the Commission considered it appropriate to direct HPPC to ensure that the negotiated price is reasonable and that they would not be able to source power at below rates than the project selected by them. By doing so, HPPC is duty bound to ensure that the ceiling tariff offered by the generator is competitive.

... Further, re-adjudication of the case under the garb of review is not permissible. The Petitioner has failed to show any latent error of fact or law. Hence, even for the said reason, the petition deserves to be dismissed for the relief claimed above.”

Pursuant to the above Order dated 13.11.2017, the said undertaking of the petitioner was also incorporated in Clause 9.1.4 of the draft PPA initialled by the petitioner on 04.05.2018. Thus, the petitioner is estopped from claiming this increase in capital cost.

The second argument which is discussed in detail in para 8 to 10 of the reply filed by the Respondent is that the Petitioner is not entitled to claim increase in capital cost under the garb that the said delays were not attributable to the Petitioner and that the same occurred due to reasons beyond its control. The contents of para 8 to 10 of the Respondent's reply are reiterated and the same are not repeated herein for the sake of brevity and to avoid prolixity.

It is submitted that cost escalation in such projects is required to be justified on the basis of ground realities and the steps taken to mitigate the cost. However, the Petitioner has failed to furnish detailed justification/ breakup of the cost overrun. The delays as claimed by the Petitioner could have been avoided by the Petitioner with reasonable care and proper due diligence, had they conducted a proper survey of the area in advance. Hence, the Petitioner is solely responsible for this delay. Pertinently, similarly placed hydro generators like (M/s Dans Energy Private Limited and Shiga Energy Private Limited) have foregone such cost attributable to most of the delays as claimed by the petitioner.

Further, on the issue of revenue realized by the petitioner from the Project prior to offering power to HPPC ought to be considered by the Hon'ble Commission while determining tariff. The following has been submitted: -

The petitioner has been generating revenue post commissioning of the Project by selling power in the interim period. It is submitted that this revenue deserves to be considered by this Hon'ble Commission to the benefit of the Respondent, while determining tariff of the Project. Otherwise the same would lead to a very anomalous situation. On one hand, the entire capital cost (subject to the contents raised herein) shall be passed on to the Respondent through tariff.

However, on the other hand the entire benefit of the revenue generated after such investment of capital cost upto execution of the PPA shall accrue only to the Petitioner (and not to the Respondent).

Thus, it is imperative that the revenue so generated by the Petitioner deserves to be considered towards offsetting the tariff that may be determined by this Hon'ble Commission. In addition to the above, the repayment of the long-term loan made by the petitioner upto the date of approval of tariff by this Hon'ble Commission as per normative schedule may also kindly be offset while determining the tariff.

On the issue of maintainability of ceiling tariff as determined by the Hon'ble Commission by way of Order dated 13.11.2017. The following submission have been made: -

This Hon'ble Commission vide Order dated 13.11.2017 passed in PRO 24 of 2017 had approved the source, with Rs. 4.69/kWh as ceiling tariff for 35 years from the COD. Therefore, the claim of the Petitioner for recovering of tariff beyond the approved ceiling tariff by method as suggested in its petition is illegal and ought to be rejected. It is submitted that loading of the differential tariff (i.e. difference between ceiling tariff and tariff that may be fixed by this Hon'ble Commission) towards the end of the PPA term shall be contrary to the very purpose for which ceiling tariff was fixed by this Hon'ble Commission.

Thus, it is submitted that yearly tariff may kindly be determined by the HERC based on the approved capital cost and HERC regulations. The tariff determined from the COD upto the date of power scheduled by Haryana shall be ignored as far as the PPA with HPPC is concerned. The ceiling tariff should be applied on yearly tariff determined by this Hon'ble Commission for the PPA period i.e. for the year the determined tariff is higher than the ceiling, the same shall be capped at ceiling tariff and when the determined tariff is lower than the ceiling, the same shall be taken for the purpose of computing levelled tariff. Thus, tariff in any of the year of the tenure of the PPA shall not exceed the ceiling tariff as mentioned by this hon'ble Commission vide order dated 13.11.2017 and levelized tariff be computed for the tenure starting from date of scheduling of power by Haryana till expiry period of PPA.

Other Arguments / Submissions of the Respondent:

That the Petitioner has not furnished details of the loan repayment schedule for the Project in the Petition. In the absence of such information, it is requested that the liabilities, if any, of any balance loan repayment for the Project may kindly not be made a part of the Tariff.

That the Petitioner has filed the instant Petition seeking determination of tariff for a period of FY 2018-19 to FY 2022-23 (kindly refer to prayer made in para 90 (b)), whereas the same should have been filed for the balance life of the Project. In contradiction to this prayer, the Petitioner itself has calculated the levelized tariff as Rs. 4.56 per unit for balance life of the project (kindly refer to Annexure P-19 “Levelized Tariff and ARR Summary” of the tariff petition).

That the PPA has an exit clause which allows either party to exit the PPA within 30 days of initial determination, if tariff determined by the Hon’ble Commission is not agreeable to it. One of the objects of the said exit clause is to avoid any litigation on tariff issue, if any of the party is not satisfied with the tariff which is also acknowledged by the Hon’ble Appellate Tribunal vide its Judgment dated 29.07.2020 in the matter of Exit clause of Dans & Shiga in Appeal no. 363 of 2019 & 364 of 2019 respectively. Therefore, once the parties accept the tariff so determined by the Hon’ble Commission, the same shall not be challenged by way of an appeal or petition. Further, it is incumbent on both of the parties to exhaust this option within 30 days of determination of tariff by this Hon'ble Commission. Accordingly, it is requested that a direction may kindly be issued to both of the parties, to file an undertaking before this Hon'ble Commission within the stipulated time as to whether it exercises the option to continue with the PPA at the tariff determined by this Hon'ble Commission or to exit the PPA.

24. The Commission after hearing the parties on 16.10.2020 & 19.10.2020 at length reserved its order in the Petition and also directed the parties to file their written submission, if any, by the next day.

25. Based on the submissions of the parties and the documents / presentations available on record, the Commission proceeds to determine the tariff of the generating station as stated in the subsequent paragraphs.

26. Before proceeding in the matter further, the Commission has considered it appropriate to address the issues raised by the Intervener Shri Duggal including the issue of jurisdiction.

27. The Commission has carefully perused the contention of the Intervener Shri Duggal on the issue of jurisdiction including the Case law of Hon'ble Supreme Court relied upon by him in support of his contention.

The basic issue raised by the Intervener is that the petitioner herein is selling power to more than one State i.e. Haryana and Sikkim. Hence, as per Section 79(1)(b) of the Electricity Act, 2003, the appropriate Commission for tariff determination is the CERC. After due deliberations, the Commission is of the considered view that 12% free power to home State i.e. Sikkim is in the nature of royalty for utilisation of State resources which is a standard practice in hydro projects and the same is ensured vide Implementation Agreement between the State Government and the power project developer. Hence, in the considered view of the Commission, such royalty in the shape of free power ought not to be construed as composite scheme of sale as envisaged under the ibid section of the Act. Resultantly, the Commission, in the present case, shall determine tariff in terms of Section 62 of the Act i.e. for supply of electricity by a generating company to the Haryana distribution licensee on the tariff application filed by the petitioner herein. Additionally, the petitioner, by filing the present petition for tariff determination, has submitted to the jurisdiction of this Commission and the same has not been contested by the beneficiary / respondent i.e. HPPC / Discoms. Consequently, there is no dispute, as such, on the issue of jurisdiction between the generator / petitioner and the answering respondent.

Additionally, it is also noted that as per clause 1.2.31 of Implementation Agreement dated 14.11.2003 signed between M/s Gati and Government of Sikkim it has been agreed upon that, ***“Net saleable energy means the electrical energy in kWh delivered by the Company at the Interconnection point less the Government Supply”***. Further, Clause 4.2 of the said Agreement defines Government Supply as, ***“The royalty in the shape of 12% of the deliverable energy (net generation measured at the interconnection point)”***.

Another pertinent issue raised by the petitioner as well as the Intervener is whether the Commission should proceed to determine tariff as per the CERC Norms or HERC Norms. The Commission has considered the arguments of the parties on this issue and

Page | 36

is of the considered view that all the relevant parameters including Capital Cost as well as additional Capitalisation, financial structure and cost of financing, depreciation, qualifying equity for RoE and O&M expenses as well as reckoning with sale of infirm power etc. that goes into determination of tariff is with reference to the CoD. In the present case the CoD of the project admittedly is 18.05.2013. This is well within the Control Period specified in the HERC MYT Regulations, 2012. Further, as far as CERC Regulations are concerned as per Section 61(a) they, at the most, could be the one of the guiding norms hence not mandatory. While notifying HERC Regulations the norms of CERC / other SERCs as well as all other factors including comments / objections / suggestions received from the stakeholders are kept in mind. Hence, the date of filing petition, as such, is immaterial. Accordingly, the Commission shall proceed with the provisions HERC MYT 2012 for determination of Generation Tariff and the methodology of recovery of the same in the present case. This dispensation in the present case will also be inline with the tariff determined by the Commission in similarly placed two Sikkim based HEPs.

28. In the present matter the petitioner has prayed for determination of generation tariff based on the following parameters: -

Capital Cost (Rs. Crore) as on CoD supported by Auditor Certificate

| S.No. | Particulars | Capital Cost as on 18.05.2013 (CoD) |
|-----------|---|-------------------------------------|
| 1 | Land - leasehold | 10.87 |
| 2 | Road and Infrastructure | 42.77 |
| 3 | Civil Works | 314.06 |
| 4 | Hydro Mechanical Works | 37.83 |
| 5 | Steel & Cement | 104.72 |
| 6 | Electro – Mechanical | 197.79 |
| 7 | Total Hard Cost | 708.04 |
| 8 | Preliminary & Pre-Operative Cost | 115.30 |
| 9 | Interest During Construction (IDC) | 384.11 |
| 10 | Gross Project Cost | 1207.45 |
| 11 | Less Duty Draw Back | 14.34 |
| 12 | Less Revenue from Sale of Infirm Power | 4.54 |
| 13 | Total Capital Cost | 1188.57 |

29. It has been submitted by the petitioner that despite delays due to factors beyond their control, the project was commissioned at a cost of Rs. 1188.57 Crore, which is as per prevalent industry norm of Rs. 11 Crore / MW. Further, the petitioner, vide its affidavit dated 27.06.2017, had waived of cost of Rs. 10.65 Crore pertaining to cost increase / escalation / damage caused due to earthquake. Accordingly, the revised Capital Cost, for the purpose of tariff determination, after foregoing Rs. 10.65 Crore is as under: -

Revised Capital Cost (Rs. Crore)

| S.No | Particulars | Capital Cost (CoD) | Cost Foregone | Revised Capital Cost |
|------|--|--------------------|---------------|----------------------|
| 1 | Land - leasehold | 9.73 | 0.09 | 9.64 |
| 2 | Building & Civil Works | 144.48 | 1.29 | 143.18 |
| 3 | Plant & Machinery | 1002.54 | 8.98 | 993.53 |
| 4 | Communication System | 29.44 | 0.26 | 29.17 |
| 5 | Office Equipment (inc. furniture and fixtures) | 0.51 | 0.005 | 0.50 |
| 6 | Vehicles | 1.04 | 0.01 | 1.03 |
| 7 | I.T. Equipment (software / Computer) | 0.09 | 0.001 | 0.12 |
| 8 | Lab Equipment (Others) | 0.75 | 0.01 | 0.74 |
| 9 | Total | 1188.57 | 10.65 | 1177.92 |

30. In view of the above, the petitioner has submitted that Capital Cost of Rs. 1177.92 Crore may be approved for the purpose of tariff determination as the same is reasonable considering the prevailing Capital Cost of similarly placed hydro projects.

31. It has been further submitted the cost of project is also lower than several hydro projects already commissioned or which are yet to be commissioned.

32. The petitioner herein has claimed various costs as per the provisions of relevant Regulation of the CERC Tariff Regulations 2014. A snapshot of the same is presented below: -

Rs. Crore

| | 2018-19 | 2019-20 | 2020-21 | 2021-22 | 2022-23 |
|-----------------------------|---------------|---------------|---------------|---------------|---------------|
| Return on Equity | 74.79 | 75.09 | 75.34 | 75.42 | 75.42 |
| Interest on Loan | 67.44 | 59.98 | 52.39 | 44.57 | 36.62 |
| Depreciation | 60.10 | 60.55 | 60.72 | 60.72 | 60.72 |
| Interest on Working Capital | 6.46 | 6.42 | 6.39 | 6.35 | 6.32 |
| O & M Expenses | 32.58 | 34.84 | 37.21 | 39.68 | 42.32 |
| Total | 241.39 | 236.75 | 232.10 | 226.79 | 221.44 |

33. Additional Capitalisation for the FY 2018-19 to FY 2022-23 has been claimed by the petitioner as per regulation 14 (3) of the CERC Tariff Regulation 2014. The same is briefly set out as under: -

(Rs. Crore)

| | FY 2018-19 | FY 2019-20 | FY 2020-21 |
|--------------------------|-------------|-------------|-------------|
| Building and Civil Works | 1.35 | - | - |
| Plant and Machinery | - | 4.66 | 0.75 |
| Communication System | 2.0 | - | - |
| Vehicles | 1.00 | - | - |
| I.T. equipment | 0.25 | 0.25 | 2.00 |
| Total | 4.60 | 4.91 | 2.75 |

34. Recovery of Annual Fixed Charges (AFC) through capacity charge and energy charge proposed by the Petitioner in accordance with CERC Tariff Regulations, 2014, is presented below: -

| | 2018-19 | 2019-20 | 2020-21 | 2021-22 | 2022-23 |
|---|---------|---------|---------|---------|---------|
| AFC -1 (Rs. Crore) | 241.39 | 236.75 | 232.10 | 226.79 | 221.44 |
| Capacity Charges (50% of AFC) 2 (rs. Crore) | 120.70 | 118.38 | 116.05 | 113.40 | 110.72 |
| Energy Charges (50% of AFC) 3 (Rs. Crore) | 120.70 | 118.38 | 116.05 | 113.40 | 110.72 |
| Saleable Design Energy (MU) 4 | 468.27 | 468.27 | 468.27 | 468.27 | 468.27 |
| Energy Rate (Rs / kWh) 3/4 | 2.58 | 2.53 | 2.48 | 2.42 | 2.36 |

35. The petitioner has submitted that they have adopted Normative Annual Plant Availability Factor (NAPAF) of 85% in line with regulation 37 (1) (c) of CERC Tariff Regulations. Additionally, it has been submitted that an allowance of 5% may be allowed for difficulties in North East Region in terms of Regulation 37(3) of the CERC Tariff Regulations, 2014.

That Further relaxation in NAPAF as per Regulation 37(2) may be claimed in future under special circumstances (if required) based on actual operating experience of the petitioner.

It has been submitted that the Hon'ble Commission, in its Order dated 13.11.2017 in Case No. HERC/ PRO-24 of 2017 (Page 28), had passed following directions:

“13. Taking all these discussions into consideration, the Commission approves procurement of power from the Chuzachen Hydro Power Project, throughout the year, at the tariff to be determined by the Commission on separate petition to be filed by the generator with Rs. 4.69/kWh being the ceiling tariff for first 35 years of the PPA.”

It is noteworthy that the Electricity Act, 2003 as well as the National Tariff Policy, 2016, framed and notified by the Central Government thereunder entrust the responsibility in the Hon'ble Commission to balance the interest of the consumers with the interest of the project developers while regulating the tariff of the generating companies. Section 61 of Electricity Act provides as under:-

“The Appropriate Commission shall, subject to the provisions of this Act, specify the terms and conditions for the determination of tariff, and in doing so, shall be guided by the following, namely: -

....

(d) safe guarding of consumers' interest and at the same time, recovery of the cost of electricity in a reasonable manner”

In light of the same, it is submitted that financial viability of the generating stations is an important consideration to enable them to continue to supply power to the consumers. Further, consumer interest also includes availing reliable, clean and competitive power. It also important to highlight that lack of cost reflective tariffs have far reaching consequences on the economy as a whole as it leads to higher defaults by the project developers on their debt

obligations thereby increasing a system risk in the Banking sector consequently impacting the economic growth.

It has been submitted that a project specific tariff determined under the provisions of Section 61 and 62 of the Act shall result in a levelized tariff spread over the term of the PPA. In a levelized tariff regime, the yearly tariff trajectory typically follows a 'S' curve, in which the tariff, in the initial years of plant operation is higher than the levelized tariff. Subsequently, as the debt gets repaid coupled with decrease in depreciation costs, the yearly tariff shows a decreasing trend and the annual tariffs are lower than the levelized tariff. However, after entire debt gets repaid (typically in 12-13 years), the tariff typically shows an increasing trend due to increase in O&M expenses. Owing to this 'S'-curve trajectory of the annual tariffs, the tariff for each financial year may go above, or go down, vis-à-vis the levelized tariff, but the financial impact upon the generator as well as the procurer remains the same as the levelized tariff over the life of the plant or the term of the PPA.

In view of the above, the petitioner has humbly submitted that this Hon'ble Commission may kindly allow full recovery of the costs of the Petitioner and consider either of following: -

(i) Allow recovery of annual costs and tariffs through capacity and energy charges as per Table 17 of the Petition. The petitioner requests the Hon'ble Commission to allow recovery of annual charges derived as per regulations.

Or

(ii) Allow recovery of levelized tariff derived as per regulations for the remaining life of the project. The details of levelized tariff are given in Annexure 20.

Or

(iii) Allow recovery of ceiling tariff of Rs. 4.69/ kWh in those years where the annual tariff is above the ceiling tariff and consequently allow the unrecovered tariff (i.e. the year wise differential between the annual tariff and ceiling tariff) to be parked for recovery at a later period.

Since the yearly tariff trajectory typically follows a 'S' curve, the liquidation of such tariffs parked should be allowed to be recovered in those years (along with carrying costs) wherein the annual tariffs are below the ceiling tariff.

This recovery mechanism is essential to ensure recovery of costs of the Petitioner in accordance with cost plus regime envisaged in Section 62 of the Act and to ensure long term economic and financial viability of the plant and sector as a whole.

The petitioner has submitted that he is facing severe cash flow constraints on account of non-recovery of its cost. As tariff determination is a long exercise including public proceedings and detailed hearings. Further, it is also noteworthy that the Project has already attained COD and has been also supplying power to the utilities of Haryana. Therefore, in light of the same, as an interim measure, this Hon'ble Commission may kindly allow the Petitioner to charge 85% of the tariff proposed in this Petition for FY 2018-19 for the energy procured by the Utilities from the Petitioner's plant ex-bus bar during pendency of the determination of tariff.

The above tariff proposal is exclusive of any statutory taxes, levies, duties, cess, charges or any other kind of imposition(s) whatsoever imposed/charged/by any Government (Central/State) and/or any other local bodies/authorities/regulatory authorities in relation to generation of electricity including auxiliary consumption or any other types of consumption including water, transmission of power, environment protection, sale or on supply of power/energy and/or in respect of any of its installations associated with Generating Stations and/or on transmission system.

The amount of such taxes/duties/cess/levies/charges, etc. payable by the Petitioner to the authorities concerned in any month on account of the said taxes/duties/cess/levies/charges, etc. as referred to above shall be borne and additionally paid by the Respondent to the Petitioner.

The present petition is bonafide and is in accordance with law, and the same may be allowed.

The Petitioner has submitted a copy of this Petition to the Respondent, HPPC.

The Petitioner reserves its right to supplement, add to and alter its tariff proposal before the tariff is finally determined by this Hon'ble Commission. The Petitioner reserves its right to file any additional information / submissions as may be necessary for the purposes of determination of tariff in the present petition including information/submissions providing reasons and justifications on delay in commissioning of the Project. The submissions set out in this Petition supersede any submissions made previously.

PRAYER

The Petitioner in the aforesaid facts and circumstances most humbly prays that this Hon'ble Commission may be pleased to:

- a. Admit the present petition and determine the tariff for supply of power;
- b. Pass suitable orders towards approving the proposed Annual Fixed Charges and determine tariff for the Chuzachen Hydro Generation Project for FY 2018-19 to FY 2022-23;
- c. Allow the Petitioner to charge 85% of the tariff proposed in this Petition for FY 2018-19 as interim relief for the energy procured by the Utilities from the Petitioner's plant ex-bus bar pending determination of tariff;
- d. Allow the recovery of the filing fees, publication expenses, charges of State Load Dispatch Centre and legal fees on actual basis as and when incurred by the Petitioner;
- e. Allow pass through at actual any cess, duty, tax, government levy, royalty etc applicable to the Petitioner for supply of power to Respondent;
- f. Declare that the free power to Government of Sikkim from Chuzachen Hydroelectric Power Project shall be as per the obligation of the Petitioner under the Implementation Agreement dated 14.11.2003 with Government of Sikkim;
- g. Condone any inadvertent omissions/errors/shortcomings and allow any addition, change, modification, alteration of the present petition, if required, at a later stage; and
- h. To pass such order(s) as the Hon'ble Commission may deem fit in the circumstances and facts of the present petition.

36. In compliance with the directions of the Commission, the Petitioner has filed additional information with copy to the Respondents. The same shall be dealt with at the relevant paragraphs of the present Order. It is also noted that the Petitioner even at the time of filing Affidavit dated 31.08.2020 was able to provide part of the requisite data / information and in the subsequent hearing sought another four weeks' time while the Commission granted three weeks' time for doing so. In the next hearing thereafter another four weeks' time was sought by the Petitioner for providing complete set of data / information thereby delaying the proceedings further.

37. **Commission's Order**

At the onset the Commission observes that intervener Er. Rampal has raised the issue of incompleteness tariff petition as well as regarding actual energy generation being consistently lower than design energy due to which effective tariff will work higher

side. Despite the fact that the petitioner has questioned the locus - standi of the intervener w.r.t conflict of interest et.al. the Commission has considered it appropriate to deal with the issues on merit.

It needs to be noted that subsequent to the initial scrutiny of the petition, this Commission had sought additional information / data including a copy of DPR that was considered necessary for proceeding further in the matter. Further, as the HERC MYT Regulations 2012 provides for tariff determination parameters the same shall be relied upon in the present case in line with the spirit of Section 61(a) of the Electricity Act, 2003. Additionally, as also submitted by the Intervener Er. Rampal, the HERC MYT Regulations, 2012, is sufficient for the purpose of tariff determination in the present case and this Commission has not passed any order that the norms as per CERC Regulations shall be made applicable. Moreover, this issue has been settled by the Commission while determining tariff for two similarly placed Sikkim based HEPs.

The submissions of the respondent that a neutral third-party agency may be appointed in the present case has been considered. The Commission observes that the CERC, for their assistance, may have identified certain Independent Agencies while HERC, so far, has not done so. Nonetheless, the statutory powers of the Commission cannot be delegated as such. Thus, the inputs received from the DIAs, can at the most, be another set of broad guiding point and cannot be treated as mandatory and ultimately the Commission will have to apply its mind on all aspects of tariff determination. Additionally, the Commission has taken note of the contention of the petitioner, based on Case Laws cited, that regulations that runs contrary to the Act, to that extent needs to be ignored. Regarding this the Commission observes that Regulations are framed and notified by the Commission within the four corners of the Electricity Act, 2003. Hence, it is an admitted fact that Regulations ought not to travel beyond the Act and the policies framed thereunder.

In addition to the above, it is observed that the Clause 9.1.2 of the PPA dated 24.10.2020 entered into between the parties reads as follows, “ ***The Purchaser shall pay to the Company for the energy supplied at a tariff as determined by the Commission from time to time as per the provisions of HERC Tariff Regulations subject to the ceiling tariff approved by the HERC in its Order dated 13.11.2017 in petition no. HERC / PRO - 24 of 2017 i.e. Rs. 4.69 / kWh for the entire term of the Agreement***”.

38. Capital Cost

Clause 18.1 of the HERC Regulations, 2012 provides that the capital cost as determined by the Commission after prudence check in accordance with this regulation shall form the basis of determination of tariff for existing and new projects the capital cost shall include the following: -

(a) The expenditure incurred or projected to be incurred on original scope of work, including the interest during construction, financing charges and any gain or loss on account of foreign exchange rate variation on the loan during construction up to the date of commercial operation of the project, shall form the basis for determination of Tariff;

(b) Capitalised initial spares, for Hydro Generation Plants, subject to following ceiling norms as a percentage of the original project cost as on the cut-off date:

| | |
|----------------------------|-------|
| 3. Hydro Generation Plants | 1.50% |
|----------------------------|-------|

24.1 Additional Capital Expenditure

Clause 18.5.1 of the HERC Regulations, 2012 provides that the Commission may consider allowing, subject to prudence check, any additional capital expenditure incurred or projected to be incurred, after the commercial operation date of a project and up to the cut-off date, on the following provided the same was part of the original scope of work of the project: -

(a) Deferred liabilities without any carrying cost;

(b) Works deferred for execution without any escalation;

(c) Procurement of initial capital spares in the original scope of work without any escalation, subject to ceiling specified above;

(d) Foreign exchange rate variation

(e) Liabilities to meet award of arbitration provided that it is not on account of any fault of the generation company or the licensee, as the case may be;

(f) Liabilities on account of compliance of the order or decree of a court;

(g) Liabilities on account of change in law:

Provided that details of the works included in the original scope of work along with estimates of expenditure, un-discharged liabilities and works deferred for execution shall be submitted along with the application for determination of tariff after the date of commercial operation of the project;

In the backdrop of the HERC Regulations occupying the field, the Commission observes that the Respondent (HPPC) has vehemently argued that the completed cost of project as on 18.05.2013 has been claimed to be Rs. 1188.57 Crore. Further, there is delay of almost four years which has led to enormous increase in project cost amounting to Rs. 537.07 Crore. The petitioner has not provided break-up of cost overrun. Hence, the increase in cost beyond the SCOD ought to be foregone as in the case of similarly placed HEPs i.e. M/s Dans and M/s Shiga. Further, in the additional written submissions dated 21.10.2020 it has been argued that the petitioner is estopped from claiming increase in Capital Cost as the petitioner has voluntarily foregone the cost attributable to the delay in commissioning of the project and the same is reflected in the Commission's Order dated 13.11.2017 (PRO 24 / 2017). A review petition filed by the petitioner was also dismissed by the Commission vide Order dated 16.04.2019 as reproduced earlier in the present Order. Further, the Petitioner has failed to furnish detailed justification / break-up of the cost over-run including steps taken to mitigate the same. The relevant part of Commission's order dated 13.11.2017 referred to by the respondent is reproduced below: -

“The Commission has considered the issue of time and cost overrun of the present project and observes that the cost overrun mostly relates to increase in IDC & pre-operative expenses due to delay in achieving CoD. Additionally, in the hearing, it has been submitted that the Generator shall forego the cost attributable to the delay in commissioning of the project. Accordingly, HPPC shall ensure, while inviting the IPP, for signing the PPA that the IPP shall voluntarily forego any such claim. An undertaking to this effect shall be sought from the IPP. The Commission shall, however, while determining tariff shall look at the entire project cost de. novo and after due diligence / prudence check arrive at a reasonable and justifiable project cost including capital structure that could be considered for the purpose of tariff determination in the present case”.

A plain reading of the Order (Supra.) establishes the fact that the major reason for cost overrun leading to delay in CoD was noted by the Commission including the fact that IPP shall forego the cost attributable to such delays. However, in Order to have

Page | 45

the benefit of detailed cost structure including delays and to be fair to all the stakeholders this Commission, having observed as above, decided to leave the issue open so that the same can be looked into while determining generation tariff for the project.

The Commission has considered the submissions of HPPC and is of the considered view that almost all HEPs, especially in hilly regions, are fraught with geological surprises including flash flood, earthquake etc. hence the delays including improvising project design and cost implications thereto. Resultantly, for determining the admitted capital cost for the purpose of tariff determination, the starting point has to necessarily be the capital cost claimed by the petitioner and certified by CA subject to prudence check.

It is noted that viability of the project also needs to be kept in mind so that the tariff determined has a reasonable co-relation with the cash flows and debt servicing obligations of the Generator without any windfall gains other than the allowed return on equity. The contention of the respondent that no cost break-up and reasons for delays has been provided by the petitioner is unfounded as the same has been provided vide the additional data / information sought by the Commission including written submissions dated 20.10.2020 emailed to the Commission.

The Commission has taken note of the fact that the completed cost of the project as on CoD claimed by the petitioner, is net of revenue realised from sale of infirm power, and the amount foregone voluntarily. The intimation of the PCE Cum Secretary Government of Sikkim (Power and Energy Department) dated 7.06.2017 has also been perused. The same reads as under: -

“Sub: Final completion of 110 MW Chuzachen HEP with reference to your letter No. GIPL / HEP / ca / 562 / 2017 dated 13.04.2017, on the above subject, concurrence of Rs. 1188.57 Crore only is accorded (emphasis added) towards the final project cost towards the development of the 110 MW Chujachen HEP based on the certification and documentation of the Lead Lenders, IDFC and their Engineers M/s Lahmeyer International India Pvt. Ltd. as submitted by you”.

The Commission has proceeded to list out, item wise, capital cost claimed and that admitted by the Commission as under: -

| S.N | Particulars | Amount as per DPR 2004 Price Level (Rs. Crore) | Amount Claimed (Rs. Crore) | Reason for the claim | HPPC Objections | HERC Admitted (Rs. Crore) | Remarks |
|-----|-----------------------------|---|----------------------------------|---|---|---------------------------------|--|
| 1 | Land | 4.28 | 10.87 | In terms of IA, land was to be acquired by Govt.. Hence, was not an obligation of GATI. The need for additional land arose because of geographical surprises resulting in change in design and position of headworks as well as to suit re-alignment of Penstock. | Delay attributed to Gati not to be allowed as proper survey could have avoided the situation. | 10.87 | Allowed as per actual as acquiring land etc. commensurate with the needs while actually implementing the project is un-avoidable as the same also depends on the State Authorities as required for Rangpo Dam abutment |
| 2 | Road and Infrastructure | Cost Break up under this sub-head provided vide filing dated 13.10.2020 (Affidavit dated 1 st September 2020 | 42.77 | Increase attributable to re-construction due to landslide and maintenance as well as enhancing the approach road to Rangpo Dam, valve house and surge shaft. | May not be allowed – lack of proper survey | 40.70 | Allowed as per Lead Lender's and their Engineer's appraisal i.e. IDFC & Lahmeyer. |
| 3 | Civil Works | Cost Break up under this sub-head provided vide filing dated 13.10.2020 (Affidavit dated 1 st September 2020 | 314.05 | Cost increase due to adverse geological conditions | May not be allowed – lack of proper survey | 314.05 | No value has been attributed separately in the DPR. However, the Commission tends to agree with the reasons now given. Therefore, cost allowed as per actual details made available. |
| 4 | Material | Cost Break up under this sub-head provided vide filing dated 13.10.2020 (Affidavit dated 1 st September 2020 | 104.72 | As above | May not be allowed | 104.72 | Allowed a per completion cost. |
| 5 | Hydro Mechanical & Penstock | Cost Break up under this sub-head provided vide filing dated 13.10.2020 (Affidavit dated 1 st September 2020 | 37.83 | No reason for the cost increase provided | May not be allowed – poor DPR | 37.25 | Amount allowed as per lender's appraisal i.e. IDFC |
| 6 | Electro-mechanical Works | 122.45 | 197.79 | Increase due to preservation, escalation payable to contractors | May not be allowed – poor DPR | 163.87 | Partly allowed as the DPR cost was at 2004 price levels and such projects have long gestation period. Hence, after considering the DPR cost the same has been |

| | | | | | | | |
|----|--------------------------------|--------|---------|---|---|---------|--|
| | | | | | | | escalated by the average rate of WPI Inflation during the period FY 2004 to 2013 to cushion the inflationary impact |
| 7 | Pre-operative expenses | 33.18 | 115.30 | Due to time over-run | - | 104.65 | Allowed as per Lead Lender Appraisal and concurred to by the Sikkim Govt. letter dated 7.06.2017 and reduced by the amount voluntarily foregone. |
| 8 | Financing Cost | 43.27 | 384.11 | Increase in cost due to time over-run i.e. additional land acquisition and adverse geological factors | - | 384.11 | Allowed as per actual details submitted with delays due to uncontrollable events will certainly increase such costs. |
| 9 | Contingencies | 0 | 0 | Deviation of -35.2 vis-à-vis FC | - | - | No claims under this head |
| 10 | SPDC Road | 0 | 3.68 | - | - | 3.68 | Allowed as per completed cost being lower than the amount considered at FC |
| 11 | SPDC Road (Recovery) | 0 | -3.68 | - | - | 0 | |
| 12 | Less Duty Draw Back | 0 | -14.34 | - | - | -14.34 | As per completion cost |
| 13 | Less Revenue from Infirm Power | - | -4.54 | - | - | -4.54 | As per actual details submitted by the Petitioner |
| 14 | Total Project Cost | 448.76 | 1188.57 | - | - | 1145.02 | Rs. 10.41 / MW |

39. The Commission, after due deliberations of the capital cost claimed under each head, admits Rs. 1145 Crore (rounded off), net of proceeds from infirm power and duty draw back, as the capital cost for the purpose of tariff determination as against the claims of Rs.1188.57 Crore revised to Rs. 1177.92 Crore net of amount foregone of Rs. 10.646 Crore (Rs. 10.65 Crore rounded off) i.e. the approved per MW cost works out to Rs. 10.41 Crore / MW. As the admitted cost of capital is lower than the capital cost claimed net of amount foregone, the amount foregone by the petitioner is not being reduced from the capital cost again.

40. Having determined the capital cost as above, the Commission has proceeded to deal with the additional capital expenditure claimed by the petitioner herein. At the outset, it is pertinent to note that for any expenditure to be recovered through tariff as per the relevant regulations, the pre-condition is that the same should have been capitalized and paid up in cash, subject to prudence check.

41. The additional capital expenditure claimed by the petitioner for the period from the FY 2018-19 to the FY 2020-21 is Rs. 12.26 Crore. The Commission observes that the additional capital expenditure amounting to Rs. 12.26 Crore since the FY 2019 i.e. after the CoD as submitted by the petitioner has been incurred on building and civil works, plant and machinery, IT equipment etc. In the absence of convincing justification and evidence of actual expenditure, as part of original scope, the additional capital expenditure after CoD has not been considered.

42. Comparative approved cost of hydro project as provided by the petitioner is tabulated below: -

| Project | Company | State | Capacity (MW) | CoD | Approved Capital Cost (Rs. Crore) | Rs Crore / MW | Commission |
|--------------------|---------|-------------|-----------------|---------|-----------------------------------|---------------|------------|
| Pare | NNEPCO | AP | 110 | 2018 | 1656.74 | 15.06 | CERC |
| Tuirial | NEEPCO | Mizoram | 60 | 2017-18 | 817.27 | 13.62 | CERC |
| Teesta Low Dam III | NHPC | WB | 132 | 2013 | 1870.73 | 14.17 | CERC |
| Nimoo Bazgo | NHPC | J&K | 45 | 2013 | 981.02 | 21.80 | CERC |
| Chutak | NHPC | J&K | 44 | 2012-13 | 797.02 | 18.11 | CERC |
| Myntdu | MECPL | Meghalaya | 126 | 2013 | 1286.63 | 10.21 | MERC |
| Srinagar Hydro | GVK | Uttarakhand | 330 | 2013 | 4061.96 | 12.31 | UPSERC |
| Tashiding HEP | Shiga | Sikkim | 106.7 (inc 10%) | 2017 | 991.37 | 9.29 | HERC |
| Jorethang Loop HEP | Dans | Sikkim | 105.6 (inc 10%) | 2015 | 1000.67 | 9.48 | HERC |

It is evident, from the table above, that the projects commissioned in the year 2013, whose Capital Cost was approved by the appropriate Commission, ranges from Rs. 10.21 Crore / MW to Rs. 21.80 Crore / MW. However, given the distinct location of the projects including different hydrology and terrain, the same are not strictly comparable i.e. HEPs in J&K, Meghalaya, Uttarakhand and Sikkim (present case) cannot be compared. Nonetheless, the approved capital cost of Rs. 10.41 Crore / MW is close to the lower range for 126 MW HEP as evident from the table above.

43. Financial Parameters

28.1 Debt-Equity Ratio - The debt-equity ratio of 70:30 has been considered in terms of Regulation 19.2 of the HERC Tariff Regulations 2012 for the purpose of tariff. The relevant regulation is reproduced below: -

“19. DEBT EQUITY RATIO

19.1 Existing projects - In case of the existing projects declared under commercial operation prior to 1st April 2012, debt-equity ratio as allowed by the Commission for determination of tariff for the period ending 31st March 2013 shall be considered.

19.2 New projects - For new projects commissioned or whose capacity is expanded on or after 1st April 2012:

(a) A Normative debt-equity ratio of 70:30 shall be considered for the purpose of determination of Tariff;

(b) In case the actual equity employed is in excess of 30%, the amount of equity for the purpose of tariff determination shall be limited to 30%, and the balance amount shall be considered as normative loan;

(c) In case the actual equity employed is less than 30%, then the actual debt-equity ratio, subject to lower limit as per company law, shall be considered;

(d) The premium, if any, raised by the generating company or the licensee while issuing share capital and investment of internal accruals created out of free reserve, shall also be reckoned as paid up capital for the purpose of computing return on equity subject to the normative debt equity ratio of 70:30, provided such premium amount and internal accruals are actually utilized for meeting capital expenditure and form part of the approved financial package. For the purposes of computation of return, the portion of free reserves utilized for meeting the capital expenditure shall be considered from the date the asset created is productively deployed in the business”.

In the present case the term loan, at the time of CoD, was about 68% of the capital cost, hence, as a corollary, the funding of assets by way of equity will work out to 32% i.e. more than the norm of 30% as per the relevant regulations. The petitioner, vide affidavit dated 1st September, 2020, has submitted the D/E Ratio as 59.86:40.14.

The Commission has considered the submissions of the intervener Er. Rampal that the D/E ratio of the HEP is 79:21. As the Commission has admitted lower capital cost vis a vis that proposed by the petitioner, hence, in line with Regulation 19 (b), the Commission has considered the normative Debt: Equity Ratio of 70:30. Equity in excess of the threshold limit has been considered as notional debt in line with the HERC MYT Regulations, 2012.

44. **Return on Equity (RoE)** - RoE shall be considered, on eligible equity, in line with Regulation 20 as reproduced below: -

“20. RETURN ON EQUITY

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

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

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

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

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

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

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

In view of the above, the Equity eligible for RoE has been restricted to 30% of the admitted capital Cost and RoE at 14%. This shall allay the fear of the Respondent as

well as the Intervener that significantly higher RoE claimed by the Petitioner at 16.50% ought not to be allowed.

45. Operation & Maintenance Expenses (O&M) - O&M expenses have been defined at regulation 3.35 of the HERC Tariff Regulation 2012 as expenditure incurred on operation and maintenance of the generating plant or transmission system or distribution system, as the case may be, including part thereof, and includes the following expenditure:

46. a. Employee cost (EC)

47. b. Repair and Maintenance (R & M) expenses;

48. c. Administration and General (A & G) expenses;

Further, regulation 34.5 (b) of the ibid regulations provides that *“For determining O&M expenses, the audited O&M expenses for the financial year 2011-12, subject to prudence check, shall be escalated at the escalation factor of 4% to arrive at the O & M expenses for the base year. The O&M expenses for the subsequent years shall be determined by escalating the O & M expenses of the base year at the escalation factor of 4% per annum to arrive at permissible O & M expenses for each year of the Control Period”*. Hence, in order to arrive at allowable O&M expenses the audited accounts of the generator shall be relied on with annual escalation of 4%.

In the present case, the project was commissioned in the FY 2013-14, hence, the Audited Accounts for the base year i.e. FY 2011-12 will not exist. Consequently, O&M expenses, for the base year, has been considered as 2% of the admitted capital cost with 4% annual escalation going forward. This also addresses the concerns of the respondent as well as the intervener that the petitioner has proposed higher O&M escalation by placing reliance on the CERC Regulations.

49. Interest on Loan Capital - The relevant regulation occupying the field is reproduced below:

“21. INTEREST ON LOAN CAPITAL

21.1 Existing loans

(i) Interest on loan capital shall be computed loan-wise for existing loans arrived in a manner specified in Regulation 19 and shall be as per the rates approved by the Commission.

(ii) The loan outstanding as on 1st April of each financial year, shall be worked out as the gross loan in accordance with regulation 19 by deducting the cumulative repayment as admitted by the Commission up to 31st March of previous financial year from the gross normative loan;

(iii) The rate of interest shall be the weighted average rate of interest on institutional loans calculated on the basis of the actual loan portfolio at the beginning of each year applicable to the project. In case the weighted average rate is not available, the interest rate approved by the Commission in its earlier tariff order shall be allowed.

Provided that if there is no actual loan for a particular year but normative loan is still outstanding, the last available weighted average rate of interest shall be considered; Provided further that if the generating plant/project does not have actual loan, then the weighted average rate of interest of the generating company/licensee as a whole shall be considered.

(iv) The interest on loan shall be calculated on the normative average loan of the year by applying the weighted average rate of interest;

(v) The generating company and the licensee shall from time to time review their capital structure i.e. debt and equity and make every effort to restructure the loan portfolio as long as it results in net savings on interest. The costs associated with such re-financing shall be borne by the beneficiaries and the net savings (after deducting the cost of re-financing) shall be subjected to incentive / penalty framework as mentioned in the regulation 12 which shall be dealt with at the time of mid-year performance review/true-up.

(vi) The changes to the loan terms and conditions shall be reflected from the date of such re-financing and benefit passed on to the beneficiaries;

(vii) In case of any dispute relating to re-financing of loan, any of the parties may approach the Commission with proper application along with all the relevant details.

During the pendency of any dispute, the beneficiaries shall not withhold any payment on account of orders issued by the Commission.

(viii) In case any moratorium period on repayment of loan is availed of by the generating company or the licensee, depreciation provided for in the tariff during the years of moratorium shall be treated as repayment during those years and interest on loan capital shall be calculated accordingly.

21.2 New loans (on or after 1st April 2013)

(i) Rate of interest on new loans 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 generating company or the licensee can raise loans from the market. They shall however, be required to submit due justification to the Commission for the terms and conditions of the loans raised by them.

Provided that interest and finance charges on works in progress shall be excluded and shall be considered as part of the capital cost;

Provided further that neither penal interest nor overdue interest shall be allowed for computation of Tariff.

(ii) Any variation above or below the allowed interest rate shall be subject to the incentive and penalty framework specified in regulation 12.

(iii) The amount of loan shall be arrived in the manner as specified in regulation 19 and shall be based on the approved capital investment plan.

(iv) In case any moratorium period on repayment of loan is availed of by the generating company or the licensee, depreciation provided for in the tariff during the years of moratorium shall be treated as repayment during those years and interest on loan capital shall be calculated accordingly.

21.3 The interest computation shall exclude interest on loan amount, normative or otherwise, to the extent of capital cost funded by Consumer Contributions, Grants or Deposit Works carried out by Transmission Licensee or Distribution Licensee or Generating Company, as the case may be.

21.4 Interest shall be allowed on the amount held as security deposit held in cash from Transmission System Users, Distribution System Users and Retail consumers, at the Bank Rate as on 1st April of the financial year in which the petition is filed provided it is payable by the transmission/distribution licensee”.

The Commission shall compute interest on eligible loan(s) restricted to normative loan net of actual equity percentage of the admitted capital cost in the present Order. Further, it is observed that the benchmark prime lending rate in the year 2013 was about 14.45% i.e. significantly higher than the rate of interest for the loans drawn by the petitioner from various lending agencies ranging from 12.30% to 14.40%. Consequently, the Commission, for the purpose of tariff determination, has considered the rate of interest on term loan at the weighted average rate of 13.90% as estimated from the loan details placed on record by the petitioner.

50. Computation of Working Capital and Interest thereto - As per the provisions of regulation 22.1 (III) for hydro power plants working capital computation shall be:

- a) Normative O&M expenses for one month,
- b) Maintenance spares @ 7.5% of normative O&M expenses and
- c) receivables equivalent to fixed cost for one month.

Further, the rate of interest on working capital so computed shall be as per regulation 22.2 i.e. “Rate of interest on working capital shall be equal to the base rate of SBI as applicable on 1st April of the relevant financial year plus an appropriate margin that realistically reflects the rate at which the generating company/licensees can raise debt from the market”. Consequently, interest on eligible working capital shall be accordingly computed. The interest rate on eligible working capital has been restricted to 13.50%.

In view of the above statute, the normative working capital and interest thereto has been accordingly calculated for the purpose of tariff determination in the present case.

51. Depreciation - Regulation 23 of the HERC Tariff Regulations, 2012 provides that the depreciation shall be calculated as under:

“23. DEPRECIATION

For the purpose of tariff determination, the depreciation, in line with the relevant regulations, shall be calculated in the following manner: -

(a) The value base of asset shall be the historical capital cost of the asset as admitted by the Commission. The historical capital cost shall include additional capitalization including foreign exchange rate variation, if any already allowed by the Commission up to 31st March of the relevant year.

(b) The residual value of the asset shall be considered as 10% and depreciation shall be allowed up to maximum of 90% of historical capital cost of the asset;

(c) Depreciation shall be calculated annually over the useful life of the asset at the rates specified in Appendix II up to 31st March of the 12th year from the date of commercial operation of the asset. 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.

The depreciation rates given in Appendix-II will be applicable w.e.f. 1.04.2013 only. The depreciation, in case of existing assets, up to 31.03.2013 shall be considered as already allowed and shall not be re - visited. The depreciation rates as per Appendix-II for such assets shall be applicable w.e.f 1.04.2013 up to 12th year from the date of COD.

(d) Land shall not be considered as a depreciable asset and cost shall be excluded from the capital cost while computing depreciable value of asset.

(e) Depreciation shall be chargeable from the first year of commercial operation. In case of commercial operation of the asset for part of the financial year, then the depreciation shall be charged on pro rata basis;

(f) Depreciation shall not be allowed on assets (or part of assets) funded by consumer contribution (i.e., any receipts from consumers that are not treated as revenue) and capital subsidies / grants. Provision for replacement of such assets shall be made in the capital investment plan”.

In the present case depreciation has been considered for the entire admitted capital cost, as the project in the present case on Build Own Operate and Transfer (BOOT). Hence, the promoter (petitioner) will not get the benefit of salvage value and the power project will have to be transferred to the Sikkim Government after completion of its useful life. This dispensation is also in line with the principle adopted by the Commission while determining generation tariff for two similarly placed HEPs in Sikkim.

52. Computation of Tariff - The relevant regulation is reproduced below: -

“34.5 Computation of tariff

(a) The tariff shall be single part comprising only of an energy rate in terms of Rs. /kWh of energy generated on an annual basis. The annual expenses will consist of: -

- (i) Interest and financing charges on loan capital,
- (ii) Depreciation
- (iii) Return on Equity,
- (iv) Operation and maintenance expenses, and
- (v) Interest on working capital.
- (vi) Foreign exchange rate variation
- (vii) All statutory levies and taxes, if any, excluding taxes on income

The energy rate in terms of Rs/kWh will be determined by dividing the amount (in Rs) arrived at as above by energy sent out net of auxiliary energy consumption and free power to the home State (in kWh) in the financial year. The same has been calculated based on the design energy net of auxiliary energy consumption approved by the Commission and free power to the home State.

(e) The payment of charges shall be on a monthly basis. The energy charges shall be payable by the beneficiary for the total energy supplied during the month on ex-power plant basis at the computed rate (Rs./kWh).

The payment of charges shall be on a monthly basis. The energy charges shall be payable by the beneficiary for the total energy supplied during the month on ex-power plant basis at the computed levelized rate (Rs./ kWh).

In line with the above, the tariff recoverable by the generator shall be the levelized tariff of Rs. 3.56 / kWh as worked out after discounting the year to year tariff / rate in terms of Rs/kWh as per Annexure 'A' attached with the present Order. Such dispensation will even out the HEP tariff which generally takes a 'U' curve shape i.e. at higher level during the initial years and seeks low levels in the interim before creeping up towards the end of the useful life of the project.

In case the actual gross generation exceeds the design energy considered by the Commission in the present Order, on an annual basis, tariff for such secondary energy such be governed by the terms of PPA signed between the parties.

53. Design Energy - The Commission observes that the HEP capacity is 110 MW (2X55) as against 90 MW (2X45 MW) pointed out by the Intervener Er. Rampal. Further, as per the additional information dated 31.08.2020 filed by the petitioner, based on actual, the following emerges: -

| | | |
|---|--|--------|
| 1 | Maximum Head (Meters) | 300 |
| 2 | Head Loss (Meters) | 17 |
| 3 | Rated Net Head (Meters) | 283 |
| 4 | Turbine Efficiency (weighted average %) | 95.031 |
| 5 | Generator Efficiency (weighted average %) | 98.585 |
| 6 | Drive Efficiency | NA |
| 7 | Overall Efficiency (weighted average %) | 93.69 |
| 8 | Water discharge under rated turbine output (M ³ /S) for 2X55 MW | 42.66 |

Based on the above inputs filed on affidavit dated 31st July 2020, the indicative design energy can be calculated as under: -

| | |
|-----------------------|--|
| $P = M * G * H * \mu$ | |
| P | Power Generation |
| M | Flow Rate (discharge) |
| G | Gravitational Constant 9.8 m / S |
| H net | Net Head (measured physically adjusted for any head loss). |

| μ | Efficiency of Turbine & Generator |
|---|--|
| (μ) | |
| Turbine Efficiency (95.031%) | 0.95031 |
| Generator Efficiency (98.585%) | 0.98585 |
| Overall Efficiency (93.39%) | 0.93690 |
| | |
| (H net) | |
| | |
| H gross (Meters) | 300 |
| Head Loss (Meters) | 17 |
| H net (Net) Meters | 283 |
| | |
| Litres / Second | 42.66 |
| | |
| Note | 1 litre of water weighs 1 Kg so M remains the same |
| | |
| G | 9.8 |
| Estimated Generation (Million Unit) at 100% | 971 |
| Indicative Generation (MU) at 55% | 534.05 |

The Commission observes that the actual gross generation (before 1% auxiliary consumption and 12% free power to home State), so far, since CoD, reported by the petitioner averages around 471.73 MUs as against Design Energy of 537.50 MUs. Hence, as also observed by the Intervener, actual gross generation has been lower on a sustained basis. This could be because of a combination of factors including lower water availability. The Commission agrees with the Intervener that the project and costs thereto was designed for design energy of 537.50 MUs. Hence, the lower generation, if considered, shall impose avoidable burden on the electricity consumers of Haryana. However, the Commission does not agree with the intervener that the Generator should approach Central Electricity Authority (CEA) to get the design energy revised downward to 435 MUs thereby leading to an increase in tariff by 23% as the project is operational for quite sometimes now.

Resultantly, to avoid any additional loading of tariff, the Commission has considered it appropriate to estimate tariff at the design energy adjusted for 1% Auxiliary Consumption and 12% free power to the home State as per the Implementation Agreement signed by the IPP with the Sikkim Government. The details are as under: -

| Particulars | 35 Years going Forward | | | |
|---|------------------------|---------|---------|---------|
| | | | | |
| Design Energy (MU) | 537.50 | 537.50 | 537.50 | 537.50 |
| Less: Auxiliary Energy Consumption (1%) | 5.375 | 5.375 | 5.375 | 5.375 |
| Net Design Energy after auxiliary consumption (MU) | 532.125 | 532.125 | 532.125 | 532.125 |
| Less: Free Power to Govtt. of Sikkim (12%) (MU) | 63.855 | 63.855 | 63.855 | 63.855 |
| Net Energy after free power available for Sale (MU) | 468.27 | 468.27 | 468.27 | 468.27 |

| Month | 10 Daily | 90% Dependable Year (2013-14) | | |
|-------|----------|-------------------------------|------|-------------|
| | | Discharge (Cumecs) | | Energy (MU) |
| Jun | 10 | I | 69.5 | 25.1 |
| | 10 | II | 69.3 | 25.1 |
| | 10 | III | 67.3 | 25.1 |
| Jul | 10 | I | 70.8 | 25.1 |
| | | | | |
| | 10 | II | 69.8 | 25.1 |
| Aug | 11 | III | 64.6 | 27.6 |
| | 10 | I | 59.6 | 25.1 |
| | 10 | II | 57.0 | 24.9 |
| Sep | 11 | III | 53.0 | 24.6 |
| | 10 | I | 54.0 | 23.0 |
| | 10 | II | 56.0 | 24.3 |
| Oct | 10 | III | 55.0 | 23.6 |
| | 10 | I | 40.0 | 22.9 |
| | 10 | II | 35.9 | 20.1 |
| Nov | 11 | III | 33.0 | 19.9 |
| | 10 | I | 25.9 | 13.3 |
| | 10 | II | 22.6 | 11.0 |
| Dec | 10 | III | 21.0 | 9.9 |
| | 10 | I | 23.0 | 14.2 |
| | 10 | II | 25.0 | 15.5 |
| Jan | 11 | III | 20.9 | 14.0 |
| | 10 | I | 8.3 | 4.1 |
| | 10 | II | 7.7 | 3.7 |
| | 11 | III | 7.3 | 3.8 |

| | | | | |
|-------------------|----|-----|------|---------------|
| Feb | 10 | I | 6.8 | 3.1 |
| | 10 | II | 7.0 | 3.2 |
| | 8 | III | 7.0 | 2.6 |
| Mar | 10 | I | 6.9 | 3.1 |
| | 10 | II | 7.7 | 3.7 |
| | 11 | III | 9.1 | 5.1 |
| Apr | 10 | I | 11.6 | 3.5 |
| | 10 | II | 15.4 | 6.1 |
| | 10 | III | 15.3 | 6.1 |
| May | 10 | I | 24.2 | 12.1 |
| | 10 | II | 32.4 | 17.7 |
| | 11 | III | 33.3 | 20.2 |
| Total (MU) | | | | 537.50 |

In accordance with the above, the Commission has considered the saleable energy as 468.27 MUs after taking into consideration design energy of 537.50 reduced by auxiliary energy consumption and free power to home State. This is notwithstanding the submissions of the petitioner that due to evacuation constraints, flash flood, maintenance work and NOC issues, the actual generation has been lower than the design energy. The Commission has taken note of the submissions of the petitioner in the hearings held in the matter that due to non - availability of transmission system to be constructed by PGCIL to evacuate power, reduction in NOC from NRLDC since CoD ranging from 55 MW to 110 MW actual generation was on the lower side vis-à-vis design energy. It has been further submitted that the issues have started getting resolved and the design energy status and actual generation has improved, thus the gap between the two has narrowed down.

54. The Commission has considered the objections of the intervener including HPPC on the issue of RoE, rate of interest, O&M escalation etc. claimed on the basis of CERC Regulations. It needs to be noted that this Commission is bound by its own Regulations. Hence, the same shall prevail. Further, the proceeds from infirm power, prior to CoD and duty drawback has been reduced for arriving at the admitted capital cost.

55. Additionally, it is observed that the project attained CoD in the year 2013 and the PPA for 35 years has been signed in 2020. Thus, the project has been in operation for almost eight years now. Given this fact, the options available to the Commission is to take into account loan(s) already paid, depreciation already claimed and adjust the year to year tariff proportionally. Alternatively, the year to year tariff can be worked out for the entire life of the project and the effective tariff payable shall be the levelled ceiling tariff for the balance useful life of the project. This would even out

the initial higher payable tariff and the subsequent lower tariff creeping up towards the end of the useful life of the project. The Commission, after due deliberations, is of the considered view that the second option will be more transparent and fairer to both the parties. Hence, year to year tariff has been worked out for the entire life of the project. However, the effective year to year tariff has been considered w.e.f. FY 2017, the financial year in which flow of power to Haryana began from the HEP of the petitioner despite the fact that a formal Power Purchase Agreement (PPA) was executed between the parties only in October 2020 in accordance with the judgement passed by the Hon'ble APTEL in the matter. **Consequently, levelized tariff using the discounting factor (WACC) has also been computed from FY 2017 to FY 2048.**

56. The Commission notes that the actual gross generation has been lower than the design energy on a sustained basis. Hence, the petitioner, as also ordered in the Sikkim based two HEPs, is entitled for revision in the design energy after following the due procedure. In such circumstances the ceiling tariff / capital cost agreed upon by the parties will be of no significance. **The parties, in line with the terms of PPA, may take a call on the 'exit option' within 30 days under intimation to the Commission. In case the exit option is not exercised by either party, the differential amount between the APPC (being paid to the petitioner) and the levelized tariff now determined shall be payable to either party as the case may be. The interest rate on the said amount will be the simple interest rate, equivalent to the interest rate allowed by the Commission on working capital borrowings of the Discoms in the ARR / Tariff order(s) for the relevant year(s).**

57. The statutory levies and taxes, if any, excluding taxes on income shall be claimed by the Generator on actual paid basis quarterly as the tariff determined by the Commission does not include the same (Regulation 34.5 of the HERC MYT Regulations, 2012).

The present case is accordingly disposed of.

Date: 23.02.2022
Place: Panchkula

Naresh Sardana
(Member)

R.K. Pachnanda
(Chairman)

ANNEXURE - A

| YEAR | DEPRECIATION | LOAN INTEREST | RoE | IoWC | O&M | Tot Charges | Tariff | Discount Rate | Discounted Trf |
|-------|---|---------------|-----------|-----------|-----------|-------------|------------------|---------------|----------------|
| | Rs. Crore | Rs. Crore | Rs. Crore | Rs. Crore | Rs. Crore | Rs. Crore | Rs / kWh | 13.36% | Rs /kWh |
| FY 17 | 57.8 | 93.0 | 32.49 | 2.94 | 25.8 | 211.99 | 4.53 | 1.0000 | 4.53 |
| FY18 | 57.8 | 85.5 | 32.49 | 2.88 | 26.8 | 205.41 | 4.39 | 0.8821 | 3.87 |
| FY 19 | 57.8 | 77.9 | 32.49 | 2.83 | 27.9 | 198.86 | 4.25 | 0.7782 | 3.30 |
| FY 20 | 57.8 | 70.3 | 32.49 | 2.78 | 29.0 | 192.36 | 4.11 | 0.6865 | 2.82 |
| FY 21 | 57.8 | 62.8 | 32.49 | 2.74 | 30.1 | 185.91 | 3.97 | 0.6056 | 2.40 |
| FY 22 | 57.8 | 55.2 | 32.49 | 2.69 | 31.3 | 179.51 | 3.83 | 0.5342 | 2.05 |
| FY 23 | 57.8 | 47.6 | 32.49 | 2.64 | 32.6 | 173.15 | 3.70 | 0.4712 | 1.74 |
| FY 24 | 57.8 | 40.1 | 32.49 | 2.60 | 33.9 | 166.85 | 3.56 | 0.4157 | 1.48 |
| FY 25 | 57.8 | 32.5 | 32.49 | 2.56 | 35.3 | 160.60 | 3.43 | 0.3667 | 1.26 |
| FY 26 | 19.6 | 25.0 | 32.49 | 2.09 | 36.7 | 115.76 | 2.47 | 0.3235 | 0.80 |
| FY 27 | 19.6 | 19.9 | 32.49 | 2.08 | 38.1 | 112.15 | 2.40 | 0.2854 | 0.68 |
| FY 28 | 19.6 | 17.3 | 32.49 | 2.10 | 39.7 | 111.14 | 2.37 | 0.2517 | 0.60 |
| FY 29 | 19.6 | 14.8 | 32.49 | 2.12 | 41.2 | 110.19 | 2.35 | 0.2221 | 0.52 |
| FY 30 | 19.6 | 12.2 | 32.49 | 2.15 | 42.9 | 109.30 | 2.33 | 0.1959 | 0.46 |
| FY 31 | 19.6 | 9.7 | 32.49 | 2.17 | 44.6 | 108.49 | 2.32 | 0.1728 | 0.40 |
| FY 32 | 19.6 | 7.1 | 32.49 | 2.20 | 46.4 | 107.74 | 2.30 | 0.1524 | 0.35 |
| FY 33 | 19.6 | 4.5 | 32.49 | 2.24 | 48.2 | 107.07 | 2.29 | 0.1345 | 0.31 |
| FY 34 | 19.6 | 2.0 | 32.49 | 2.27 | 50.2 | 106.47 | 2.27 | 0.1186 | 0.27 |
| FY 35 | 19.6 | 0.3 | 32.49 | 2.32 | 52.2 | 106.90 | 2.28 | 0.1046 | 0.24 |
| FY 36 | 19.6 | | 32.49 | 2.38 | 54.3 | 108.70 | 2.32 | 0.0923 | 0.21 |
| FY 37 | 19.6 | | 32.49 | 2.46 | 56.4 | 110.95 | 2.37 | 0.0814 | 0.19 |
| FY 38 | 19.6 | | 32.49 | 2.53 | 58.7 | 113.28 | 2.42 | 0.0718 | 0.17 |
| FY 39 | 19.6 | | 32.49 | 2.61 | 61.0 | 115.70 | 2.47 | 0.0634 | 0.16 |
| FY 40 | 19.6 | | 32.49 | 2.69 | 63.5 | 118.23 | 2.52 | 0.0559 | 0.14 |
| FY 41 | 19.6 | | 32.49 | 2.77 | 66.0 | 120.85 | 2.58 | 0.0493 | 0.13 |
| FY 42 | 19.6 | | 32.49 | 2.86 | 68.7 | 123.58 | 2.64 | 0.0435 | 0.11 |
| FY 43 | 19.6 | | 32.49 | 2.95 | 71.4 | 126.42 | 2.70 | 0.0384 | 0.10 |
| FY 44 | 19.6 | | 32.49 | 3.04 | 74.3 | 129.37 | 2.76 | 0.0339 | 0.09 |
| FY 45 | 19.6 | | 32.49 | 3.14 | 77.2 | 132.44 | 2.83 | 0.0299 | 0.08 |
| FY 46 | 19.6 | | 32.49 | 3.24 | 80.3 | 135.63 | 2.90 | 0.0263 | 0.08 |
| FY 47 | 19.6 | | 32.49 | 3.35 | 83.5 | 138.95 | 2.97 | 0.0232 | 0.07 |
| FY 48 | 19.6 | | 32.49 | 3.46 | 86.9 | 142.40 | 3.04 | 0.0205 | 0.06 |
| TOTAL | 969.90 | 677.73 | 1,039.68 | 83.87 | 1,615.15 | 4,386.34 | | 8.33 | 29.69 |
| Notes | | | | | | | Levelling Tariff | | 3.56 |
| 1 | Interest on normative term loan @ 13.09% (weightage average rate) | | | | | | | | |
| 2 | Repayment of term loan considered equal to depreciation. | | | | | | | | |
| 3 | Return on Equity is restricted to actual being less than 30% @ 14%, balance of admitted capital cost considered as normative loan | | | | | | | | |
| 4 | Debentures / NCD considered as part of normative loan. | | | | | | | | |
| 5 | Tariff and Levelling Tariff considered from FY 2017 i.e. from the date power was scheduled to Haryana and not CoD i.e. FY 2014 | | | | | | | | |
| 6 | Discounting factor considered at 13.36% i.e. 30% of RoE of 14% and 70% of Interest Cost on term loan of 13.09% | | | | | | | | |