Appendix-I

Comments of Damodar Valley Corporation on 'Draft Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2024 for the tariff period from 1.4.2024 to 31.3.2029' as notified by Central Electricity Regulatory Commission

Based on the careful study of the 'Draft CERC (Terms and Conditions of Tariff) Regulations, 2024', meticulously drafted by the Hon'ble CERC for the upcoming tariff period of 2024-29, DVC would like to hereby humbly submit its comments on the draft regulations with the request to the Hon'ble Commission to kindly consider these inputs during finalization of the regulations. The comments are divided into two key sections for ease of reference - (1) Key Suggestions/ Comments on provisions having significant impact on the performance of DVC and (2) Other Suggestions/ Comments

A. KEY SUGGESTIONS/ COMMENTS

1.1. Definition of O&M expenses

Draft Regulation:

'Operation and Maintenance Expenses' or 'O&M expenses' means the expenditure incurred for operation and maintenance of the project, or part thereof, and includes the expenditure on manpower, maintenance, repairs and maintenance spares, other spares of capital nature valuing less than Rs. 20 lakhs, additional capital expenditure of an individual asset costing up to Rs. 20 lakhs, consumables, insurance and overheads and fuel other than used for generation of electricity:

Comments of DVC:

Following additional components have been added to the definition of O&M expenses:

- Other spares of capital nature valuing less than INR 20 lakhs;
- Additional capital expenditure of an individual asset costing up to INR 20 lakhs

It is understood that the spares whose cost is less than INR 20 lakhs, shall be part of the normative O&M cost. However, it is submitted that the Commission has not adequately increased the norms to provide for the inclusion of spares cost less than INR 20 lakhs. In this context, we are submitting the cost of total capital spares claimed by DVC vis-a-vis allowed by CERC during the 2014-19 period and further comparison with respect to the normative O&M cost allowed in the following table:

Sr. No.	Particulars (Figures in INR Lakhs)	2014-15	2015-16	2016-17	2017-18	2018-19
1	Total Capital Spares Amount Claimed by DVC for all generating stations	1205.01	1005.08	1020.84	1606.06	4395.58
2	Total Capital Spares Amount Allowed to DVC for all generating stations	281.81	114.17	308.55	979.7	2813.44

Sr. No.	Particulars (Figures in INR Lakhs)	2014-15	2015-16	2016-17	2017-18	2018-19
3	Normative O&M cost allowed by CERC for all DVC plants (combined)	94513.95	102202.26	129091.38	145883.33	155079.94
4	**Percentage of cost of capital spares claimed wr.t Normative O&M cost**	**1.275%**	**0.983%**	**0.791%**	**1.101%**	**2.834%**
5	Percentage of cost of capital spares approved wr.t Normative O&M cost	0.298%	0.112%	0.239%	0.672%	1.814%

It can be observed that the total actual cost of capital spares claimed during FY 2014-19 period is around 1.4% of the normative O&M cost. As such, it may be inferred that the **O&M norms needs to be increased additionally by around 1.4% in consideration with 'capital spares' only**, if the capital spares (less than INR 20 lakhs) is included as part of normative O&M cost.

Moreover, the inclusion of spares also should be assessed based on the Guidance Note on accounting for fixed assets- regarding issued by Government Accounting Standards Advisory Board in the office of Comptroller & Auditor General of India on 19th July 2018. This guidance note clearly provides booking of spares as part of fixed assets if the nature of spares is of capital nature. Further, items of fixed assets costing less than INR 5,000/- and/or having useful life of less than 12 months, should be recognized as revenue expenditure.

Further, CERC in past also, has kept a much lower limit of INR 1 lakhs for the claim of capital spares separately within the provision of norm (Hon'ble Commission has considered threshold value as Rs. 1 Lakh against Capital spares while issuing True-up order for 2014-19). As such, it is suggested that the proposed limit for 'Capital Spares'/'additional capital expenditure' of an individual asset may be reduced from 20 lakhs to around the existing norms of INR 1 lakh.

Submission:

DVC therefore humbly submits that proviso clause under Regulation-36 may be modified to the extent below:

> ***"36. Operation and Maintenance Expenses:***
> ***…***
> ***(6) The Water Charges, Security Expenses and Capital Spares for thermal generating stations shall be allowed separately after prudence check:***
>
> ***…***
>
> > ***Provided also that the generating station shall submit the details of year-wise actual capital spares consumed individually costing above Rs. 1 Lakh at the time of truing up with appropriate justification for incurring the same and substantiating that the same is not funded through compensatory allowance as per Regulation 17 of Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2014 or Special Allowance or claimed as a part of additional capitalisation or consumption of stores and spares and renovation and modernization."***

1.2. Inclusion of pension contribution of DVC as part of O&M costs

Comments of DVC:

The normative O&M expenses have been provided in the CERC Regulations based on the actual O&M data of the different generating companies and transmission licensees falling under the ambit of CERC. It is observed that only one thermal generating station of DVC has been selected among the 10 generating stations in India for fixation of norms and earlier no generating project of DVC were being selected in developing the norms.

However, most of the Generation and Transmission Utilities under the jurisdiction of Hon'ble CERC has no CCS (Central Civil Service) pension liability as applicable in the case of DVC which increases the O&M expenses significantly. This increases the terminal liabilities of DVC much more than those applicable for most of the other generating companies or transmission licensees. Apart from the New Pension Scheme applicable for employees who have joined after 01.01.2004, DVC has another pension scheme as per the GOI rules for employees who have joined before 01.01.2004 (**Presently 15,300 pensioners as against 5370 employees**). Presently average age of DVC employees is more than 47 years which suggests that most of the employees have joined before 01.01.2004. Moreover, there was an embargo on recruitment from 2014 to 2020 resulting in no fresh recruitment in DVC during the period. The existing pension scheme is funded by the Corporation and managed by a separate trust (GPF - General Pension Fund) and the liability is recognized on the basis of actuarial valuation.

In case of CPF (Contributory Provident Fund), Liability for contribution ceases with the superannuation of the employees covered under **CPF** applicable for almost all the Utilities under Hon'ble CERC. On the contrary, liability for pension for employees covered under GPF continues after the superannuation till the death of the employees and even thereafter towards payment of family pension. Therefore, Pension burden on DVC is much more compared to other utilities.

The P&G contribution of DVC as a percentage of Actual total O&M expenses for the last four years is shown as follow:

Particulars	FY 2019-20	FY 2020-21	FY 2021-22	FY 2022-23
P&G Contribution (in Rs. Cr.)	514.25	412.99	735.20	512.30
Total Actual O&M Expenses (in Rs. Cr.)	1,939.80	1,856.74	2,969.60	2,248.35
P&G Contribution as % of total O&M expenses	26.51%	22.24%	24.76%	22.79%

On an average, around 24% of O&M expenses are on account of P&G contribution.

Normative O&M Expenses considered by the Hon'ble Commission is based on the liability for Provident Fund (CPF) only as most of the other Central Government companies under the jurisdiction of Hon'ble Commission do not have defined benefit obligation under the pension scheme (GPF). **The terminal liabilities of employees are considered as uncontrollable factor as the same is governed by statutory provisions or acts issued by appropriate Governments in discussion with the stakeholders like employee unions.** It is pertinent here to mention that Hon'ble Commission as well as Appellate Tribunal gave due recognition to this fact in relation to the tariff determination of DVC for the period 2006-09 wherein contribution to P

& G Fund created to meet the liability of the employees under pension scheme was allowed to DVC as a special case. Even Supreme court in its judgement dated 23.07.2018 upheld the judgement of Appellate Tribunal in totality wherein payment of P & G contribution to DVC was one of the issues.

Further, the P&G contribution/employee for DVC and NTPC is analyzed as follows:

Pension and Gratuity / Employee (in Rs. Lakhs/ employee/year)	2019-20	2020-21	2021-22	2022-23
DVC	7.4	6.4	12.2	9.1
NTPC	4.3	4.1	5.3	4.5

It can be observed that P&G contribution/employee for DVC is almost twice as that of NTPC.

Submission:

DVC therefore humbly submits that 'contribution towards Pension benefit' may be allowed to DVC separately over and above normative O&M which is mainly framed considering the CPF Scheme in general and not the Pension Scheme which is in existence in few organizations like DVC. A suitable provision may be included in the regulations to allow DVC to claim the pension contribution or Regulation 36 (8) may be modified to the extent below:

"(8) In the case of a generating company owned by the Central or State Government, the impact on account of implementation of wage or pay revision <u>and on account of 'CCS Pension liability'</u> shall be allowed at the time of truing up of tariff."

1.3. O&M expenses – Generating stations

Comments of DVC:

a) For Thermal Generating Stations

It is observed that the Hon'ble Commission has not increased the O&M norms for the 2024-29 control period even by the inflation rate. The O&M norms determined by the Commission have been escalated from the 2019-24 tariff period to the 2024-29 tariff period as follows:

FY 24-25 escalation over FY 23-24:

- 200 MW Series – 5.60%
- 300 MW Series – 3.93%
- **500 MW Series – 1.47%**
- 600 MW Series – 6.66%
- 800 MW Series – 6.69%

The escalation rates considered are grossly insufficient **especially for 500 MW units (increment of meagre 1.47%)** since all Add-Cap items and Capital Spare items up to Rs. 20 Lakh being considered part of O&M Expenses only. It is pertinent to note that DVC is already suffering from non-recovery of actual O&M costs in the past and further tightening of the norms would disable DVC further in achieving the norms. Moreover, Thermal Generation capacity of 3500 MW (54%) out of DVC's total 6540 MW capacity belongs to unit size of 500 MW , leading to adversely impacting recovery of O&M expenditure incurred by DVC in the operation of its 500 MW units.

Further, not factoring DVC's P&G Contribution, which is a major part of DVC's O&M expenses, will worsen the recovery situation for DVC.

It is observed that the normative O&M expenses have been provided in the CERC Regulations based on the actual O&M data of only NTPC generating plants and O&M expenditure incurred by DVC plants have not been covered adequately.

Further, considering the methodology adopted by the Hon'ble Commission and considering the employee, Repair & Maintenance and P&G contribution, we have derived the norms for the 500MW series as below:

The O&M expenses for FY 2020-21 and FY2021-22 have been recomputed by escalating normalized O&M expenses of FY 2019-20 by a 5-year CAGR of O&M expenses for thermal power station i.e. 10.49% instead of 2.94% as considered by the Hon'ble Commission.

Particulars	**2018-19**	**2019-20**	**2020-21**	**2021-22**	**2022-23**	**5-year CAGR**
Figures in INR	**(Actual)**		**(Derived)**		**(Actual)**	
Total O&M Expenses of 500 MW unit plants of DVC	608.35	731.15	807.86	892.62	906.72	10.49%

Accordingly, the O&M expenses (in Rs. Cr.) for 500 MW Series Thermal Generating Stations are as follows:

Generating Stations	**Actual O&M for FY 2018-19 (a)**	**Actual O&M for FY 2019-20 (b)**	**Derived* O&M for FY 2020-21 (c) = (b)*(1+10.49%)**	**Derived* O&M for FY 2021-22 (d)= (c)*(1+10.49%)**	**Actual O&M for FY 2022-23 (e)**	**Five Year Average**	**FY 2023-24 (Derived)**
BTPS A	31.96	39.11	43.21	47.74	42.17	40.84	45.12
KTPS	13.76	16.69	18.44	20.37	20.37	17.92	19.81
DSTPP	14.67	17.59	19.44	21.48	23.09	19.25	21.27
MTPS 7-8	16.43	19.28	21.31	23.54	26.12	21.34	23.58

**The O&M expenses for FY 2020-21 and FY2021-22 have been derived (as those were Covid period, actual O&M was not considered by CERC in their calculation methodology) by escalating normalized O&M expenses of FY 2019-20 by a 5-year CAGR of O&M expenses for DVC TPS i.e. 10.49%.*

O&M expenses, thus computed for FY 2023-24, have been escalated further considering an escalation rate of 5.89% per annum (As per CERC methodology) to arrive at the O&M expenses for FY 2024-25 to FY 2028- 29 as follows:

Generating Stations	**2024-25**	**2025-26**	**2026-27**	**2027-28**	**2028-29**
BTPS A	47.78	50.59	53.57	56.73	60.07
KTPS	20.97	22.21	23.52	24.90	26.37
DSTPP	22.53	23.85	25.26	26.75	28.32
MTPS 7-8	24.96	26.44	27.99	29.64	31.39
Average	**29.06**	**30.77**	**32.58**	**34.50**	**36.54**

Norms proposed by CERC	**26.22**	**27.77**	**29.41**	**31.14**	**32.97**

This shows that the Hon'ble Commission has proposed O&M norms which are already ~10.8% lower than required as the Hon'ble Commission has only considered the NTPC plants wherein the pension liability is way lower than DVC's. Accordingly, we request the Commission to kindly revisit the calculations for determining the O&M norms.

Submission:

It is to submit that the normative O&M costs for 500 MW units may kindly be adjusted upwards to Rs. 29.06 Lakh/MW for FY 24-25 with YoY Escalation of 5.89% as computed above in line with CERC adopted methodology under Regulation-36 (1)(1).

b) For Hydro generating stations:

Draft Regulations:

The following operations and maintenance expense norms shall be applicable for hydro generating stations which have been operational for three or more years as on 01.04.2024:

(in lakhs)

DVC Hydel Stations	FY 2024-25	FY 2025-26	FY 2026-27	FY 2027-28	FY 2028-29
Maithon HS	2,526.20	2,674.24	2,830.95	2,996.85	3,172.46
Panchet HS	2,795.57	2,959.39	3,132.81	3,316.39	3,510.74
Tilaiya HS	651.37	689.54	729.95	772.73	818.01

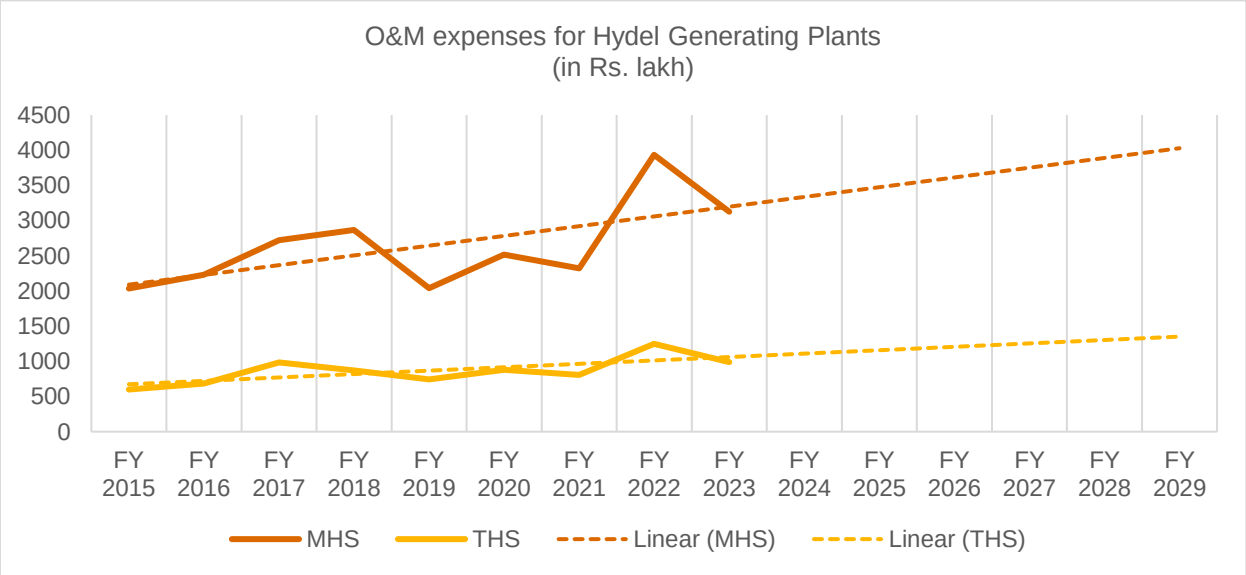
Comments of DVC:

The normative O&M cost for MHS & THS has been reduced by 28% & 40 % respectively from the previous norm applicable for FY 2023-24. This is not justified as these hydro projects are very old (both MHS and THS are more than 60 years old) and the O&M cost is not expected to reduce in the next control period. In this context, it is submitted that the employee cost contributes a major portion of the O&M cost (more than 70%) which is only expected to increase in the future based on increase in salaries. Further, the R&M of these projects is also expected to be completed in between the next control period (expected by FY 25-26) which would not impact the O&M costs during the initial half of the control period.

O&M Cost for hydel plant (INR lakhs)	Norms for FY 2023-24 (in Rs. Lakhs)	Proposed Norms for FY 2024-25 (in Rs. Lakhs)	% Change	Actual O&M cost (Rs. In Lakh)	
				FY 21-22	FY 22-23
Maithon HS	3484.6	2526.2	**-28%**	3935	**3124**
Panchet HS	2640.0	2795.6	+6%	4347	**3931**

O&M Cost for hydel plant (INR lakhs)	Norms for FY 2023-24 (in Rs. Lakhs)	Proposed Norms for FY 2024-25 (in Rs. Lakhs)	% Change	Actual O&M cost (Rs. In Lakh)	
				FY 21-22	FY 22-23
Tilaiya HS	1084.5	651.4	**-40%**	1248	**989**

The last few years actual O&M data of these projects are provided below along with the forecasted for FY 24-25 is shown below.



The projected norm for FY 24-25 (first year of the new control period) is calculated using the excel forecast method based on the trend of the last few years. It is observed that the O&M data is on an increasing trend and this trend is expected to continue based on the reasons provided above. The norms for subsequent years may be kept a normative escalation rate of 5.86% (as provided under section 36 (2) c).

O&M cost of hydro stations in INR Lakhs	FY 15 (A)	FY 16 (A)	FY 17 (A)	FY 18 (A)	FY 19 (A)	FY 20 (A)	FY 21 (A)	FY 22 (A)	Projected Norm for FY 24-25 as per Excel Trend Forecast
MHS	2035	**2231**	2722	**2868**	2039	**2516**	2320	**3935**	**3501**
THS	599	**682**	985	**872**	744	**879**	805	**1248**	**1164**

<u>Submission:</u>

It is to submit that the allowed O&M costs for MHS and THS should be adjusted upwards, reflecting the actual costs incurred in FY 2019-24 and aligning with the costs at other hydro stations in India of the same age.

We, therefore, propose normative O&M cost for Maithon Hydel Station as Rs. 3501 lakh and for Tilaiya Hydel Station as Rs. 1164 lakh for FY 2024-25 and further year-on-year escalation @5.86% under Regulation-36(2)(a).

1.4. O&M expenses – Transmission and Distribution System of DVC

Comments of DVC:

Particulars	DVC T&D System as on 31.03.2019	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29
Bays (Rs Lakh per bay)							
400 KV	8	36.91	25.91	27.44	29.06	30.77	32.58
220 KV	131	25.84	18.14	19.21	20.34	21.54	22.81
132 kV and below	1386	18.46	12.96	13.72	14.53	15.38	16.29
Transformers							
(Rs Lakh/MVA)	1061	0.282	0.229	0.242	0.257	0.272	0.288
Transmission Lines in Rs. Lakh/Km							
Single Circuit (Single Conductor)	1698.29	0.289	0.348	0.369	0.391	0.414	0.438
Double Circuit (Single Conductor)	2824.74	0.433	0.523	0.554	0.586	0.621	0.657
Double Circuit (Bundled Conductor with four or more sub-conductors)	148.2	1.517	1.83	1.938	2.052	2.173	2.301

From the above table it is evident that the Commission has proposed to further reduce the O&M norms for DVC's T&D system. The reduction in norms for FY 24-25 over FY 23-24 is as follows:

- Bays: -19.25%
- Lines: +38.4%
- Transformers: -6.5%

- The proposed norms for Bays and Transformers are grossly insufficient for the DVC T&D System. The norms have not been increased even to the extent of inflation and hence this will further increased the gap between the normative O&M allowed by the Hon'ble Commission for the overall DVC T&D System vis-à-vis the actual O&M that shall be incurred for T&D.

- The proposed norms may be sufficient for one Transmission utility but are not sufficient for another having a different network structure [i.e no. of Bay, Transformer capacity and Transmission Line length].

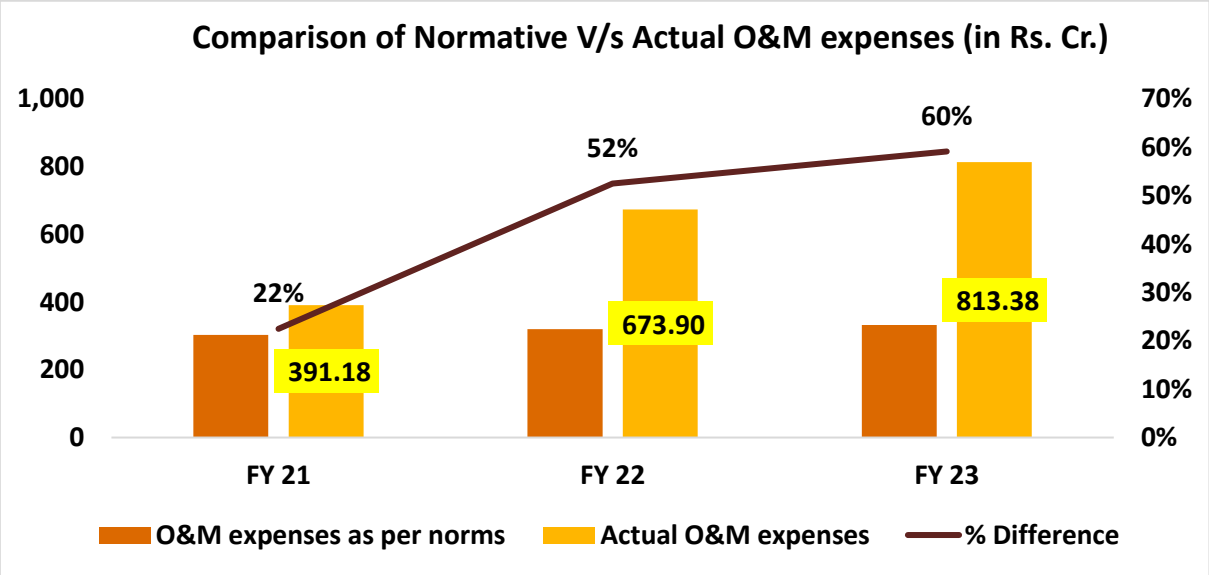
- It seems that reduction of O&M norms on account of bays is tried to be compensated through increase in the O&M norms in respect of lines. This approach of the commission may be found sufficient for some big transmission utility of the country, having a wide line length spanning across the country and operating at a very high voltage level.

DVC operates in confined areas and operates in a much lower voltage level unlike other transmission companies. Due to this basic difference in the network/operation structure, the proportion of the bays, no of transformer, line lengths are not in similar/equal footing with the other transmission licensee and therefore is not comparable with the largest transmission licensee of the country.

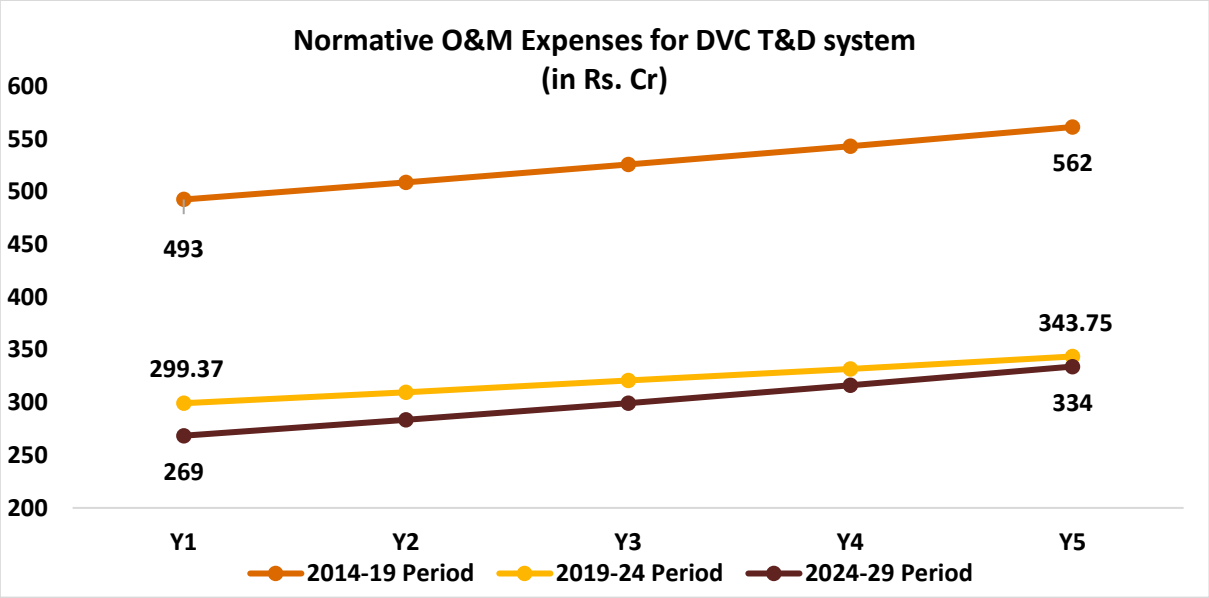
- Further, the norms for transformer at different voltage levels have been combined into one norm for all voltages. This will further decrease the normative O&M for overall DVC T&D System which is already much lower than the actual O&M costs of DVC system. It is observed that the norms have been developed only based on the data of one transmission company and the actual data of DVC has not been considered during setting up of norms.

  Norms for Transformers to be based on no. of transformers rather than capacity is not justified for T&D assets like DVC. O&M for a single 500 MVA Transformer is not the same for 10 nos. of 50 MVA transformers.

- Also, a comparison of Normative V/s Actual O&M expenses for T&D System of DVC of the last three years depicts huge under-recovery owing to higher actuals over the norms even after achieving NATAF.



- Further, O&M norms for T&D activities reduced rapidly over last three control periods even though the actual O&M expenses have been increasing at least at the rate of inflation.



- In order to address the above gap, it is requested that the Commission either may provide separate norms for the distribution business of DVC over and above the proposed norms for transmission in 2024-29 period or revise the Transmission norms appropriately to cover the actual O&M costs of T&D system of DVC as shown above.
- Considering all the above contentions of DVC, we have derived the O&M norms for T&D system that should help lower the gap in actual v/s normative O&M expenses. The same is detailed as follows:
    - The actual no. of transformers used in T&D activities of DVC are as follows:

Transformer Voltage level (kV)	Installed Qty (in Nos.)	MVA Capacity			
		315 MVA	150 / 160 MVA	50/55/80/100 MVA	BELOW 50 MVA
400/220	2	2	0	0	0
220/132	29	0	28	1	0
220/33	28	0	0	27	1
132/33	77	0	0	62	15
132/25	17	0	0	0	17
132/11	2	0	0	0	2
33/11	6	0	0	0	6
33/6.6	2	0	0	0	2
33/0.415	94	0	0	0	94
25/0.230	4	0	0	0	4
11/0.415	4	0	0	0	4
6.6/0.415	2	0	0	0	2
Total	**267**	**2**	**28**	**90**	**147**

    - We propose clubbing these into 3 categories for ease of determining norms and **in order to factor number of small transformers in operation**. These are (i) 150 MVA to 500 MVA; (ii) 50 MVA to less than 150 MVA; and (iii) Below 50 MVA.

- For Category (i) 150 MVA to 500 MVA, the O&M norm as proposed by the Commission in Draft regulations for Transformers of Rs. 0.229 per MVA is considered as is for calculating the normative O&M expenses
- For Category (ii) 50 MVA to less than 150 MVA, we have considered a 150% increase in the norm considered for category (i) above i.e. 0.3435 lakh/MVA
- For Category (iii) Below 50 MVA, we have considered a 200% increase in the norm considered for category (i) above i.e. 0.458 lakh/MVA

Accordingly, the total O&M expenses based on these norms shall be as follows:

Sl. No.	Categories	Proposed O&M Norm (₹ Cr/ Transformer) (A)	No. of Transformers (B)	O&M expenses for FY 2024-25 (in ₹ Cr) (C)=(A)x(B)
(i)	150 MVA to 500 MVA	(500x0.229/100)= **1.1450**	30	34.35
(ii)	50 MVA to less than 150 MVA	(150x0.3435/100)= **0.5153**	90	46.37
(iii)	Below 50 MVA	(50x0.458/100)= **0.2290**	147	33.66
	Total			**114.39**

- Further, we propose an increase in the O&M norms per bay based on the normative O&M allowed by the Hon'ble Commission. For 220kV bays, the O&M norm for FY 2023-24 was ₹ 0.2584 Cr per bay and we propose the same for FY 2024-25. For 132kV and below, the O&M norm for FY 2023-24 was ₹ 0.1846 Cr per bay and we propose an increment of 5.89% on the same for deriving the O&M norm for FY 2024-25 i.e. ₹ 0.1955 Cr per bay. Accordingly, the total O&M expenses for FY 2024-25 shall be as follows:

Voltage Level	No. of Bays	O&M Norm rate proposed (₹ Cr/Bay)	Normative O&M expenses for 2024-25 (in ₹ Cr)
220 kV	131	0.2584	33.85
132 kV and below	1386	0.1955	270.93
Total			**304.78**

- Thus, the total O&M expenses for Transmission for FY 2024-25 shall be 409.16 Cr (114.39 + 304.78) as against the 269 Cr proposed by the Hon'ble Commission in the draft regulations.
- Subsequently, in case the Commission provides separate norms for distribution business, DVC is proposing the norms based on analysis of O&M cost allowed for similar power distribution companies in the region based on units supplied to consumers. The O&M cost in power distribution business primarily depends on the quantum of energy which is being supplied to the end consumers. As such, the O&M cost per unit energy supplied to

consumers has been calculated for last 5 years of similar distribution companies in the region as provided below:

Particulars	WBSEDCL	CESC	JBVNL	Tata Steel Ltd	Bihar	Assam	Average
Total O&M cost allowed for 5 years (INR crores)	8298	6184	2672	415	7183	4883	4939
Total Energy supplied to consumers in last 5 years (MUs)	155416	48799	47683	13774	111497	37017	69031
Per Unit O&M cost for distribution and retail supply business (INR per unit)	0.534	1.267	0.560	0.301	0.644	1.319	**0.771**

- It may be observed that the O&M cost for operating and maintaining the distribution business (from 33 kV and below) and retail supply to consumers, ranges from INR 0.3 per unit to INR 1.27 per unit in different discoms. **DVC is proposing an average norm of INR 0.77 per unit of energy** supplied in distribution business as additional norm (over and above the transmission business).

- Alternatively, if a separate norm for DVC distribution business is not considered, then the proposed norms would have to be adjusted/increased so that the same reflects the actual cost incurred by DVC considering the integrated nature of business of DVC. It is observed that an escalation factor of 0.5 has been allowed in the case of transmission projects in the North East region. As such, a similar escalation factor of 1.55 may be allowed in the context of T&D systems of DVC given that it is an integrated T&D system supplying power to retail consumers and operating in a confined area with lower capacity of transformers.

- Moreover, separate O&M for distribution function is not allowed by State Electricity Regulatory Commissions (i.e. WBERC and JSERC) as the distribution business of DVC does not have any separate capital base. The entire cost (including manpower cost) is serviced through the Tariff as approved by CERC in respect of its generators and unified interstate Transmission (T&D) network.

Submission:

DVC's limited prayer to the Hon'ble Commission is to reconsider the O&M norms while formulating normative O&M for transmission system during 2024-29 period under Regulation-36(3)(a) so as to

(i) Consider transformers in categories of graded capacity instead of only one capacity of Transformer (i.e. Rs in lakh/ MVA)

(ii) For 132 kV and below Bays, O&M norms of either FY 2018-19 [2014-19 period] or at least the O&M norm for FY 2023-24 to be considered with an escalation factor of 5.89%.

(iii) Allowing additional norms of INR 0.77 per unit of energy supplied in distribution business over and above the transmission norms

Or

Additional O&M factor of 1.55 times to normative transmission O&M towards catering risky, resource intensive (both human and repair maintenance) 'Distribution' business by incorporation of provision under Regulation-36(3)(a) as below:

> **"*Provided further that the O&M expenses for Transmission Licensees having Distribution License as well shall be worked out <u>by multiplying 1.55 to the normative O&M expenses prescribed above</u>, if separate O&M is not allowed for Distribution System*".**

1.5. Performance Norms for Gross Station Heat Rate

Draft Regulations:

The draft regulations (under clause 49 (c)) have proposed revision of performance norms for Gross Station Heat Rate (GSHR) and made it more stringent. The proposed GSHR is shown below:

Existing Thermal Generating Station with CoD before 01.04.2009:-

200/ 210/ 250 MW:- 2400 kCal/ kWh ***(reduction of 30 kCal/kWh)***

500 MW - 2375 kCal/ kWh ***(reduction of 55 kCal/kWh)***

Thermal Generating Station with CoD on or after 01.04.2009:- *For coal and lignite:*

200/ 210/ 250 MW:- 1.05 X Design Heat Rate (kCal/ kWh)

500 MW:- 1.04 X Design Heat Rate (kCal/ kWh) (new clause reducing GSHR by 1%)

Comments of DVC:

- The Hon'ble Commission has been gradually reducing the GSHR norms for thermal generating plants and making them more stringent. In the present draft regulations as well, the Commission has further reduced the norms both for old thermal generating stations (with CoD before 01.04.2009) and new thermal generating plants higher capacity units (>500MW). This would have a significant impact on the financial performance of DVC generating stations which are already struggling to achieve the present norms laid down by the Commission.

Units	2014-19 HR Norms	2019-24 HR Norms	2024-29 HR Norms	Remarks/Submission
CoD before 01.04.2009				
210/250 MW (MTPS) in kCal/ kWh	2450	2430	2400	Considering the age factor (age of 210 MW DVC units nearing 25 years), at least prevalent norm (for 2019-24) may kindly continue.
CoD after 01.04.2009				

500 MW (DSTPS) in kCal/ kWh	2441	2374	2351	• Actual Design HR of the unit is 2336. As per Draft Regulation 2024-29, Allowable Design HR is restricted to 2261 (lowest boiler efficiency allowed in 86% whereas design boiler eff. of DSTPS unit is 82%) over which 4% margin is allowed. • Therefore, available Margin over Actual Design HR is only 0.6%. • Design HR may kindly be not restricted for already commissioned units/existing units. Considering Actual Design HR, normal margin of 4% may kindly be considered for existing units.

- It is to submit that the revised norms are not realistic and the same does not reflect the actual performance of the generating stations in the past control period. The norms also do not reflect the actual condition of plants operating at lower loads (due to limitations in availability) and lower quality of coal stock, limitations in R&M due to limitations in overall fund availability etc.

  Actual and normative SHR of DVC plants is provided below to substantiate the above-mentioned point.

Name of the plant (Cap. In MW)	Actual Station Heat Rate (2023-24) (kCal/kWh)	Heat Rate as per norms proposed for CERC 2024-29 Regulations (kCal/kWh)
Bokaro TPS A (500)	2381.8	2351.5
Chandrapura 7&8 (2x250)	2383.8	2369.2
Durgapur Steel TPS (2x500)	2400.0	2351.5
Mejia 7 & 8 (2x500)	2380.7	2351.5
Mejia 5 & 6 (2x 250)	2426.7	2400.0
Mejia 1 & 3 (3 x 210)	2427.3	2400.0
Mejia 4 (210)	2427.3	2400.0
Koderma TP (2x500)	2413.0	2351.5
Raghunathpur TPS (2x600)	2358.8	2328.6

- From the explanatory memorandum, it seems that the norms have been revised looking at selected plants of NTPC which are able to achieve the performance norms and a comprehensive analysis has not been done for all plants.
- This is against the principles of National Tariff Policy which clearly provides that the performance norms should be realistic and relatable to the actual past performance. The relevant clause of National Tariff Policy 2016 is provided below:

- *"The norms should be efficient, **relatable to past performance**, **capable of achievement** and progressively reflecting increased efficiencies.....In cases where operations have been much below the norms for many previous years, the SERCs **may fix relaxed norms suitably and draw a transition path over the time** for achieving the norms notified by the Central Commission, or phase them out in accordance with the norms specified by the Authority in this regard."*
- For improvement of SHR, there are inherent limitations due to their design and technology. These plants may not be capable of achieving the normative efficiency levels proposed in the plants without significant investments in upgrades and modernization.
- Furthermore, operational practices, such as load following, part-load operation, and cycling to accommodate renewable generation, can adversely affect the heat rate. These practices are essential for grid stability but can lead to inefficiencies in thermal power generation.

Submission:

DVC's limited prayer to the Hon'ble Commission is to continue with the existing SHR norms for all the DVC generating plants based on the above justification.

B. OTHER SUGGESTIONS/ COMMENTS

1.6. Cut-off date (Regulation 3, Clause 17)

Draft Regulation:

'Cut-off Date" shall be the last day of the financial year closing after thirty-six months from the date of commercial operation of the project, except in case of integrated mine(s);

Comments of DVC

The Hon'ble Commission has proposed to change the definition of cut-off date to the last day of the financial year closing after thirty-six months from the date of commercial operation (CoD) of the project, except in case of integrated mine(s). This would give some additional time (from one month up to eleven months), depending upon the month of CoD in that Financial Year, for the Assets covered under the original scope of work, to close contracts and discharge liabilities.

However, the proposed cut-off date for a period of 36 months (extended upto the end of the financial year) is also not sufficient as can be observed for a number of generating plants where the original scope of work against the capital cost gets spilled over much beyond 3 years due to the reasons beyond the control of the generating company. These reasons include delays in getting statutory approvals for some work from competent authorities, dependency on execution of work with external agencies/Government departments or other deferred works which are not controllable on part of the generating company. Due to the above stated reasons attributable to delays, the current LD, capped at only 5% of the project cost, is grossly insufficient to cover the delays incurred and losses thereof. The allowance for such justified additional capital expenditure beyond the cut-off date gets limited in several circumstances. The table below shows the additional capital expenditure claimed by several generating stations much beyond the present cut-off date where the additional capitalization is quite significant even beyond 3 years of CoD.

S. No	Plant Name	COD	Cut-off Date	Capital Cost as on COD (Rs. In Lakh)			Total ACE claimed in last 5 years (beyond Cut - off Date) (Rs. In Lakh)	Total ACE approved in last 5 years (Rs. In Lakh)	Total ACE disallowed in last 5 years (Rs. In Lakh)
				Claimed	Allowed	Disallowed			
1	NTPC Vindhyachanchal SPTP	i)01.03.13 ii)27.03.14	27.03.17	633982	631346	2636	25031	21448	3583
2	NTPC Rihand STP	i) 19.11.12 ii) 27.03.14	27.03.17	554745	551385	3360	21828	12452	9376
3	NTPC Talcher STP	i) 01.8.03 ii) 01.3.04 iii)01.11.04 iv) 01.8.05	31.03.08	558157	555664	2493	103155	21237	81918
4	NTPC Unchahar STP Stage-3	01.01.07	31.03.09	88729	88681	48	387	0.00	387
6	NTPC Unchahar STP Stage-4	30.09.17	30.09.20	247437	247434	2.4	36825	35702	1123

Also, the disallowances in such cases could have been recovered if there was an extended CoD to allow the recovery of justified capital cost included in original scope of work but the works getting spilled over due to uncontrollable reasons.

The above table provides substantial evidence of the challenges faced by the generating plants. It illustrates significant difference between the capital cost at the time of commercial operation (CoD) and the total Additional Capital Expenditure (ACE) claimed and approved in the preceding five years beyond the cut-off date. This disparity highlights the practical difficulties in adhering to the current cut-off timeline, emphasizing the need for an extension. The data also showcase instances of substantial ACE disallowance, further underscoring the insufficiency of the current provision. By examining specific cases of plants like NTPC Vindhyachal, NTPC Rihand, NTPC Talcher, and others, we can clearly observe the impact of uncontrollable delays on project costs and the limitations imposed by the existing cut-off date provision. The same provides a compelling case for re-evaluating and extending the cut-off date in order to ensure that generating companies are reasonably accommodated for delays beyond their control.

Submission:

It is to request that the cut-off date may be extended up to five years to allow the generating companies reasonable time to complete the planned works within the original scope of work which gets delayed due to uncontrollable reasons.

1.7. Capital Cost and Additional Capitalization beyond original scope- (Regulation 19 and 26)

Draft Regulations

The draft Regulations propose that the capital cost of an existing generation project would also include capital expenditure necessary for enabling flexible operations of the generating station at a lower load as well as towards expenditure towards biomass handling equipment and facilities for co-firing.

Comments of DVC

This is a welcome step considering the policy environment existing in the country, wherein various initiatives towards decarbonization of the electricity sources entail adequate support from the existing thermal generating stations, without compromising on the grid security aspects.

The Draft Regulations have rightly addressed the concern of the generating companies, by allowing the equipment and facilities to enable – (i) flexible operation and (ii) handling and storage of pellets within the plant, under additional capital expenditure beyond the original scope and thereby as part of the capital cost, and therefore may please be incorporated in the final Regulations.

However, the following provision may also require to be included as part of the capital cost -

(i) Enterprise Resource Planning - to provide data as per Regulatory compliance, to redress consumer's requirement efficiently, seamless integration of RLDC data towards online billing module, various other compliance, etc.

(ii) Special software like Document Management System - required for timely evaluation and tracking of drawing approval to execute the project within the timeline;

(iii) Buying bogie open bottom rapid discharge hopper wagon (BOBR) rake - In order to ensure coal availability and to maintain coal stock for peak periods

(iv) Civil works of substantial value i.e. to the tune of above 5Cr in order to cover the expenses such as approach road to the switchyard or Plant Access Road, damaged fire-water line, etc

(v) Use of technologically advanced systems such as Microprocessor based metal detector in Coal handling Plant (CHP), Continuous Ambient Air Quality Monitoring System (CAAQMS), Generator end winding vibration measurement system, Variable Frequency Drive (VFD) for different Motor, etc

Submission:

DVC therefore humbly submits that proviso clause under Regulation-19 may be modified to the extent below:

"19. Capital Cost:
…
(2) The Capital Cost of a new project shall include the following:
…
(q) Expenditure required to enable Enterprise Resource Planning;
(r) Expenditure required to set up Special software like Document Management System;
(s) Expenditure for buying bogie open bottom rapid discharge hopper wagon (BOBR) rake;
(t) Civil works of substantial value i.e. to the tune of above 5Cr in order to cover the expenses such as approach road to the switchyard or Plant Access Road, damaged fire-water line, etc.;
(u) Use of technologically advanced systems such as Microprocessor based metal detector in Coal handling Plant (CHP), Continuous Ambient Air Quality Monitoring System (CAAQMS), Generator end winding vibration measurement system, Variable Frequency Drive (VFD) for different Motor, etc."

1.8. Application for determination of tariff

Draft Regulation:

The generating company or the transmission licensee may make an application for determination of tariff for a new generating station or unit thereof or transmission system or element thereof in accordance with these Regulations within 90 days from the actual date of commercial operation:

Provided that where the transmission system comprises of various elements, the transmission licensee shall file an application for determination of tariff for a group of elements on incurring of expenditure of not less than Rs. 100 Crore or 100% of the cost envisaged in the Investment Approval, whichever is lower, as on the actual date of commercial operation:

Provided further that transmission licensees shall combine all the elements of the transmission system in the Investment Approval, which are attaining commissioning during a particular month and declare a single COD for the combined Asset, which shall be the date of the COD of the last

element commissioned in that month and such Asset shall be treated as single Asset for tariff purposes.

Comments of DVC:

The Commission has proposed to change the criteria for filing of application for determination of tariff for transmission system from 'incurring of expenditure of not less than 70% of the cost envisaged in the Investment Approval or Rs. 200 Crore, whichever is lower' to 'on incurring of expenditure of not less than Rs. 100 Crore or 100% of the cost envisaged in the Investment Approval, whichever is lower, as on the actual date of commercial operation'. This means that for small transmission projects (like in DVC) having an investment approval amounting less that Rs. 100 Crore, tariff petition cannot be filed until the 100% of the cost envisaged in the Investment Approval is incurred.

Submission:

We request the Commission to please reinstate the previous clause for ease of filing of petition and to ensure incurring of less working capital from actual CoD till the start of recovery of the project.

1.9. Interim Tariff

Draft Regulation:

If the information furnished in the petition is in accordance with these regulations, the Commission may consider granting interim tariff of up to ninety per cent (90%) of the tariff claimed in case of new generating station or unit thereof or transmission system or element thereof during the first hearing of the application; Provided that in case the final tariff determined by the Commission is lower than the interim tariff by more than 10%, the generating company or transmission licensee shall return the excess amount recovered from the beneficiaries or long term customers, as the case may be with simple interest at 1.20 times of the rate worked out on the basis of 1 year SBI MCLR plus 100 basis points prevailing as on 1st April of the financial year in which such excess recovery was made.

Comments of DVC:

The Commission has added a proviso to allow seeking interim tariff which the Commission shall consider during the first hearing of the application. The Commission has further mentioned that the Commission may consider granting interim tariff of up to ninety per cent (90%) of the tariff claimed.

Further, the existing provision states that the petitioner can request an interim tariff for a new generation or transmission system during the initial hearing, with the possibility that the Commission might grant this interim tariff. However, this approach could lead to working capital challenges since the Commission might take at least six months to approve the final tariff.

Further, in case of DVC, a Petition can be filed only after cost allocation of common expenses has been done. As there is no provision of quarterly accounting as per CAG, this can only be done after the Financial Year is over and the audited accounts are ready.

Further, Filing of Petition for 5-year Multi Year True up (2019-24) may be allowed in case of DVC to be submitted by January 2025 considering the fact that DVC's Accounts is audited by CAG and

from our previous experience it is generally seen that Final Audit Certificate in respect of Annual Accounts is issued by CAG by end September for previous Financial Year. Moreover, most of the Generating companies and Transmission licensees could file True up petition in the month of January 2020 only for determination of True up for last MYT (2014-2019).

Submission:

To address the problem stated above, DVC proposes to reinstate the original provision (Regulation 8(1)(ii)) of CERC Tariff Regulations, 2019 that allows for the filing of a petition for the determination of tariff for new projects two months prior to the anticipated Commissioning Date (COD) and relaxation in filing True up petition for MYT 2019-24. This change aims to streamline the process and mitigate potential financial issues caused by delays in tariff approval.

1.10. Capping of Condonation of delay

Draft Regulation:

Provided that in case of activities like obtaining forest clearance, NHAI Clearance, approval of Railways, and acquisition of government land, where delay is on account of delay in approval of concerned authority, in such cases maximum condonation shall be allowed up to 90% of the delay associated with obtaining such approvals or clearances.

Comments of DVC:

DVC humbly submits that if it is proven that delays are due to approval or clearance processes, then 100% of such delays should be condoned subject to prudence check, without any capping at 90%.

In the categories of activities causing delays, the followings also may be considered:

Delays in getting clearances from Airforce, Airport Authority etc. & PTCC are mandatorily required wherever applicable for Transmission Line Projects. It is proposed to include Delays due to RoW & RoL under the category of uncontrollable Factor including issues of Airforce, Airport Authority, Highway Authority, PTCC etc.

Submission:

DVC humbly submits that if it is proved that the delay is on account of delay in approval or clearances, then 100% of such delay should be condoned and there should not be any capping at 90%.

1.11. Reference rate of Interest and Rate of interest on Working Capital

Draft Regulation:

Reference Rate of Interest' means the one year marginal cost of funds based lending rate (MCLR) of the State Bank of India (SBI) issued from time to time plus 325 basis points;

Comments of DVC:

The introduction of reference rate of interest has direct impact on Rate of Interest on Working Capital (IoWC) as the current draft provides for the IoWC to be on normative basis and shall be considered at reference rate of interest.

A reduction of 25 basis points from the previously established standard of the State Bank of India's Marginal Cost of Funds based Lending Rate (SBI MCLR) plus 350 basis points calls for a critical reassessment. The former IoWC rate, aligned with the SBI MCLR+350 bps, provided a consistent and widely acknowledged benchmark, ensuring predictability and uniformity in the financial strategies of entities governed by these regulations. This established rate represented a carefully balanced approach, harmonizing the cost of capital for borrowers and ensuring a reasonable return for lenders. A departure from this established benchmark, especially through a downward adjustment, could potentially disrupt this balance, affecting the economic stability that these entities have relied upon. Moreover, organizations have developed their financial plans based on the existing IoWC rate; a sudden shift in this rate, particularly without sufficient transitional measures, could adversely impact their financial stability and operational planning.

Submission:

It is to submit that the IoWC rate be retained at its previous level of SBI MCLR+350 basis points, to maintain continuity with established financial norms and to foster a stable economic environment for all the stakeholders involved.

1.12. Return on Equity (Regulation 30, Clause (3))

Draft Regulation:

Return on Equity (RoE) for new project achieving COD on or after 01.04.2024 shall be computed at the base rate of 15.00% for the transmission system, including the communication system, at the base rate of 15.50% for Thermal Generating Station and run-of-river hydro generating station and at the base rate of 17.00% for storage type hydro generating stations, pumped storage hydro generating stations and run-of-river generating station with pondage;

Comments of DVC:

The discussion around reducing the RoE for transmission projects from 15.5% to 15% as suggested by the Hon’ble CERC encompasses several critical aspects. Firstly, the RoE is a key driver in attracting investments into the power transmission sector, and its reduction could potentially dissuade investors, impacting the development of necessary infrastructure. Secondly, the change in RoE needs to be evaluated against the backdrop of regulatory stability and market certainty, as frequent shifts in financial metrics can affect long-term planning and investment decisions. Lastly, it is essential to balance the lower RoE's potential benefits to consumers through reduced transmission charges against the need for continued and robust investment to meet future growth and expansion requirements in the energy sector. These considerations are crucial in ensuring a sustainable and reliable power transmission infrastructure while aligning with investor and consumer interests.

Submission:

To restore RoE for transmission projects from 15% to existing value of 15.5%.

1.13. Input Price (Regulation 50)

Draft Regulation:

Recovery of Input Charges – *The input Changes of coal or lignite shall be recovered as under*

Input Charges = [Input Price X Quantity of coal or lignite supplied] + Statutory Charges, as applicable

Provided that where the energy charge rate based on the input price of coal from integrated mine(s) exceeds 20% of the energy charge rate based on the notified price of Coal India Limited for the commensurate grade of coal in a month, prior consent of the beneficiary(ies) shall be required to be obtained by the generating company.

Comments of DVC:

DVC urges Hon'ble CERC to revisit the above mentioned clause and de-link the Input Price with the notified price of Coal India Limited due to the below reasons:

a. Notified Price of Coal India Limited are administered price considering number of mines with varied characteristics and economics.
b. Below is the comparison of change in notified price of Coal India Limited vis-à-vis National Coal Index and CERC Index

A. Notified Price of Coal India Limited (in Rs.)			
Grade of coal	Effective Date from		
	09.01.2018	01.12.2020	31.05.2023
G-10	1024	1034	1120
G-11	955	965	965
G-12	886	896	896
G-13	827	827	827

B. National Coal Index (in Rs.)					
Grade of coal	Month				
	April-20	March-20	March-22	March-23	December-23
G-10	1828	1925	3403	2862	2606
G-11	1480	1576	2452	2164	1968
G-12	1293	1413	2589	2137	1755
G-13	1268	1350	2151	1855	1773

C. CERC Index for "Inflation to be applied to the indexed energy charge component in cases of Captive Fuel Source"		
Index Period	CERC Index	Cumulative CERC Index Variation
01.04.2019 to 30.09.2019	8.13	8.13
01.10.2019 to 31.03.2020	0.98	9.11
01.04.2020 to 30.09.2020	3.14	12.25
01.10.2020 to 31.03.2021	-3.2	9.05
01.04.2021 to 30.09.2021	0.96	10.01
01.10.2021 to 31.03.2022	16.35	26.36
01.04.2022 to 30.09.2022	19	45.36
01.10.2022 to 31.03.2023	23.27	68.63

C. CERC Index for "Inflation to be applied to the indexed energy charge component in cases of Captive Fuel Source"		
Index Period	**CERC Index**	**Cumulative CERC Index Variation**
01.04.2023 to 30.09.2023	12.94	81.57
01.10.2023 to 31.03.2024	-6.67	74.9

c. As such, it may be noticed that there is no substantial change in the notified price of Coal India Limited as compared to other acceptable indices which reflect the actual market trend.
d. Each mine has its own characteristics, economics & scale. Therefore, it is humbly requested to not compare the input price with administered notified price of Coal India Limited for number of mines taken together.

Submission:

To de-link the Input Price with the notified price of Coal India Limited.

1.14. Additional Capitalization on account of Renovation and Modernization (Regulation 27)

Draft Regulation:

(1) The generating company intending to undertake renovation and modernization (R&M) of the generating station or unit thereof for the purpose of extension of life beyond the originally recognised useful life for the purpose of tariff, shall file a petition before the Commission for approval of the proposal with a Detailed Project Report giving complete scope, justification, cost-benefit analysis, estimated life extension from a reference date, financial package, phasing of expenditure, schedule of completion, reference price level, estimated completion cost including foreign exchange component, if any, and any other information considered to be relevant by the generating company or the transmission licensee: Provided that the generating company making the applications for renovation and modernization (R&M) shall not be eligible for Special Allowance under Regulation 28 of these regulations;

(2) (4) After completion of the Renovation and Modernisation (R&M), the generating company, as the case may be, shall file a petition for determination of tariff. Expenditure incurred or projected to be incurred and admitted by the Commission after prudence check and after deducting the accumulated depreciation already recovered from the admitted project cost shall form the basis for the determination of tariff.

Comments of DVC:

The current draft tariff regulations include a singular provision (regulation 27) concerning additional capitalization attributable to R&M activities undertaken by the generating companies only. Clarification is required on whether the CERC's tariff regulations permit Additional Capitalization specifically for activities related to R&M activities undertaken by transmission licensees. This clarification is essential to ensure comprehensive understanding and compliance with the regulatory framework.

Submission:

To consider R&M activities undertaken by transmission licensees under the ambit of Additional Capitalization.

1.15. Special Allowance in lieu of Renovation and Modernization (Regulation 28)

Draft Regulation:

"28. Special Allowance for Coal-based/Lignite fired Thermal Generating station

…

(2) The Special Allowance admissible to a generating station shall be @ Rs 10.75 lakh per MW per year for the control period. "

Comments of DVC:

The amount of special allowance in lieu of R&M requires to be increased to the tune of Rs 25 Lakh/MW per year with provision for year-wise escalation. The reason behind claim of increase are as follows:

As per CEA Guideline R&M / life extension works of Coal based Thermal Power Station shall not exceed 50% of the EPC cost of New Generating Units. In case of R&M, Life extension of the unit is normally 15 years. As such, considering Rs. 25 Lakh/MW for R&M activities per year, the total R&M amount for 15 years will come to nearly 50 % of EPC cost of new generating station of higher capacity.

Submission:

To consider special Allowance admissible to a generating station @ Rs 25 lakh per MW per year for the control period.

1.16. Recovery of Ash Evacuation Expenditure

Comments of DVC

Hon'ble CERC has allowed Ash Transportation expenses from January 2016 onwards as a 'Change in Law' event considering MoEF & CC notification. The proposed draft Regulation is silent on this aspect.

Submission:

DVC proposes to include ash transportation charges in tariff regulation under clause 36(1)(6) in addition to normative O&M as provided below:

"*The Water Charges, Security Expenses, <u>Ash transportation expenses</u> and Capital Spares for thermal generating stations shall be allowed separately after prudence check"*

1.17. Recovery of expenses incurred due to disposal of Gypsum (Regulation 36, Clause (9))

Draft Regulation:

Provided that income generated from the sale of gypsum or other by-products shall be reduced from the operation and maintenance expenses.

Comments of DVC

Currently, there is no specific regulation or directives from the Hon'ble Commission concerning the reimbursement of costs incurred in disposing of Gypsum, a by-product of various Flue Gas Desulfurization (FGD) processes. At present, Gypsum is being stored in ponds or stacks, which are nearing capacity. It is necessary to relocate the Gypsum from these storage areas to locations where it can be used effectively. Gypsum has potential applications in the production of wallboards, the cement industry, agriculture, etc. However, due to the distance of potential markets from the power plant, its disposal involves extensive transportation arrangements, leading to significant expenses and making it less competitive in the market.

Submission:

To incorporate suitable provision to facilitate the recovery of costs to be incurred in respect of gypsum storage/disposal.

1.18. Gross Calorific Value of Primary Fuel (Regulation 60)

Draft Regulation:

In the absence of any third party sampling through an agency certified by the Ministry of Coal, the GCV shall be considered on the basis of 'as billed' by the Supplier less

i. Actual loss in calorific value of coal between as billed by the supplier and as received at the generating station, subject to maximum loss in calorific value of 300 kCal/kg for Pit-head based generating stations or generating stations with Integrated mine and 600 kCal/kg for Non-Pit Head based generating stations.

Comments of DVC

It is to submit that the Fuel Supply Agreements mandates that the GENCOs shall have third party sampling done at the billing end and the receiving end through an agency certified by the Ministry of Coal and ensure recovery of compensation as per Fuel Supply Agreement(s) and pass on the benefits of the same to the beneficiaries of the generating station. Accordingly, in a condition of no third-party sampling, clarification is desired on complying the provision of signed Fuel Supply Agreements as mentioned above.

Further, for non-pit head multimodal transportation, the actual loss in calorific value of coal between "as billed" by the supplier and "as received" at the generating station should be considered, in case, the coal is stacked at stacking yard more than certain period say 03-04 months for reasons not attributable to GENCOs. i.e., un-availability of rakes from Railways to transport coal in timely manner.

1.19. Landed cost of Reagent (Regulation 61)

Draft Regulation:

The landed cost of such reagents shall be determined based on the normative consumption and the purchase price of the reagent through competitive bidding, applicable statutory charges and transportation cost.

Submission:

The Hon'ble Commission is requested to factor in storage and handling cost while calculating the Landed cost of Reagent.

1.20. Secondary fuel oil consumption (Regulation 70, (D))

Draft Regulations

(D) Secondary Fuel Oil Consumption:

(a) For Coal-based generating stations: 0.50 ml/kWh
(b) For Coal-based generating stations with front fired boilers: 1.00 ml/kWh
(c) For Lignite-fired generating stations (Pulverised and CFBC): 1.0 ml/kWh
(d) For Coal-based generating stations of DVC:
Mejia TPS (Unit 1 to 3) 1.00 ml/kWh
Mejia TPS (Unit 4) 1.00 ml/kWh

Comments of DVC

Mejia Thermal Power Station (MTPS) units #1-3, which became operational on December 1, 1997, March 15, 1999, and September 28, 1999, respectively, are identified as older units within DVC. These units experience operational challenges due to inherent design limitations. Efforts are underway to address these issues through Renovation and Modernization activities. NTPC is preparing a Detailed Project Report for the R&M of these units, completion target of which has been set as mid-2024.

Over the past three years, average SOC for these units was observed to be 1.5 ml/kWh. This elevated consumption rate is attributed to the type of mills used, specifically Ball and Tube Mills, which struggle to support low-load operations in a split mill configuration without additional oil support. This operational challenge is a significant factor contributing to the higher SOC.

Submission:

It is proposed that the normative SOC for MTPS Units #1-3 be revised to 1.5 ml/kWh, until the R&M activities are completed.

1.21. Normative Annual Plant Availability Factor (NAPAF) (Regulations 70, Clause (A))

Draft Regulations

Normative Annual Plant Availability Factor (NAPAF)

a) *85% for all thermal generating stations, except those covered under clauses (c), (c), (d) & (d)*
b) *80% for coal and lignite based generating stations completing 30 years from COD as on 31.03.2024 "*

Comments of DVC

In Regulation 3, clause 88, the useful life for Coal/Lignite-based thermal generating stations is defined as 25 years. DVC suggests that stations exceeding their designated 25-year lifespan should have NAPAF target set at 80%. This recommendation is supported by the following analysis on the Mejia TPS units: CODs for Unit#1, 2 & 3 of Mejia TPS of DVC are 01.12.1997, 15.03.1999 and 28.09.1999 respectively. Considering the age of the units (mostly more than 25 years) as on 01.04.24, the NAPAF specially for those old units of Mejia TPS may please be considered as 80% in place of 85% till the completion of R&M activities. Moreover, in those old units, because of relatively less dependence on automation at this stage in various areas like CHP, AHP, Coal Mills, BOPs including DM Plant, WTP etc., manpower involvement is relatively much more compared to other higher capacity units resulting in higher O&M cost. Hence, to keep the actual O&M cost within the allowed value, the benchmark for normative PAF may be considered relatively at lower side compared to other higher capacity units.

Submission:

- **Given that one MTPS unit has already crossed normative useful life period and other two are approaching their useful lives, it is requested to consider that the NAPAF for these specific units of Mejia TPS be set at 80% instead of 85%, until the completion of their R&M activities. This adjustment acknowledges the operational challenges and financial considerations of maintaining older thermal power stations.**
- **Additionally, BTPS–A station has a single unit of 500 MW. PAF Loss due to outage of unit for a single day becomes 0.27%. Further, if BTPS-A undergoes a Capital Overhaul of 35 days, the loss of PAF is 9.6 %, which makes it difficult for BTPS to achieve the target of 85% in that year.**
  It is requested therefore, to provide target of NAPAF as 80% for the station comprising of single unit.
- **Provision may be allowed for declaring Availability (DC) of units up to 105 % (barring MTPS #1,2,&3) considering 5% Spinning Reserve. 105% DC declaration will encourage the power utility to see the asset utilization to the maximum extent and thereby will help considerably in attaining country's peak demand at the need of the hour.**

1.22. Auxiliary Energy Consumption (Regulation 70, Clause (E))

Draft Regulations

(E) Auxiliary Energy Consumption:

(a) For Coal-based generating stations except at (b) below:

S. No.	***Generating Station***	***With Natural Draft cooling tower or without cooling tower***
(i)	*200/210/250 MW series*	*8.50%*
(ii)	*300/ 330/ 350/ 500 MW and above*	
	Steam driven boiler feed pumps	*5.25%*
	Electrically driven boiler feed pumps	*8.00%*
(iii)	*600 MW and above*	
	Steam driven boiler feed pumps	*5.25%*
	Electrically driven boiler feed pumps	*8.00%*

Provided that for thermal generating stations with induced draft cooling towers and where tube-type coal mill is used, the norms shall be further increased by 0.5% and 0.8%, respectively:

(b) For other Coal-based generating stations:

(i)	*Tanda Thermal Power Station*	*12.00%*
(ii)	*Chandrapura TPS (2x250 MW) (DVC)*	*9.50%*

Comments of DVC

- **Norm for Thermal Generating Stations of 500 MW with steam driven boiler feed pump -**

In tariff Regulation 2019-24, for 500 MW sets & above, the normative APC was considered as 5.75% considering partial load operation of units to facilitate integration with RE power in the grid. The DVC units of 500 MW / 600 MW were maintaining APC% within the set norms of CERC (AEC of DVC 500 MW units was 5.6 % in FY 2022-23). While FGDs started commissioning in DVC (500 MW units) since 2023 onwards, APC% started increasing proportionately keeping the actual value within allowable limit i.e. within next 1% over & above 5.75%. But, in regulation 2024-29, the normative APC without FGD has been proposed as 5.25% in place of 5.75% i.e. 0.5% reduction. Without any CAPEX input other than FGD, this much reduction in APC (i.e. from 6.75% to 6.25%) may be difficult to achieve. The target may not be possible to meet up by 500 MW / 600 MW sub-critical units, where there is requirement of further reduction to 40% of rated capacity to facilitate integration of thermal power with more quantity of RE power in the days to come.

In this context, it is to add that DVC has already placed W.O. on M/s BHEL for the trial operation of one of its 500 MW unit (Unit#8, MTPS) for flexibilization upto 40% of rated capacity and for the case of flexibilization of 250 MW unit, CTPS, M/s L&T under the association of CEA, GOI, will do one pilot study very shortly. Hence, in this scenario, while so many 500MW/250MW thermal units are in process of more flexibilization to integrate with country's aggressive plan of RE networking, the reduction of normative APC by 0.5% in thermal units may not be suitable with the present mandate of the MOP. Moreover, the flexibilization upto 40% of rated capacity is at very preliminary stage and OEMs are also not very certain to achieve that, hence optimal utilization of resource can be possible only after attaining 40% rated capacity comfortably. Hence, CERC may kindly look into all those aspects very carefully and may kindly propose the benchmark accordingly but definitely not so low i.e. by 5.25% in one go from its earlier 5.75%.

- **Norm for Bokaro TPS A (Single unit station of 500 MW)**

Moreover, for single unit of Bokaro TPS 'A' (500 MW), AEC may please be allowed exclusively 0.5 % higher than this norm i.e. Normative Auxiliary Energy Consumption for Bokaro TPS 'A' may be allowed as 5.75 +0.5 % as the station's common facilities partially is integrated with the age old system of old & retired units of BTPS (B) and common facilities are running for one unit only.

- **Norm for Chandrapura TPS (2x250 MW)**

Auxiliary Energy Consumption for Chandrapura TPS (2x250 MW) (DVC) may please be allowed to 9.80 % because of the same reason as of BTPS (A), where the station is integrated with age old system of old and retired units of CTPS.

Moreover, AEC for all 250 MW units comprising of Induced Draft Cooling Tower and Tube type Coal mills in the draft Regulation has been considered as 9.8% whereas for CTPS, which is of

the same configuration, normative AEC proposed is 9.5% only. Actual AEC of CTPS units was 9.85 % in FY 2022-23.

- **Norm for Ragunathpur TPS (2x600 MW)**

Similarly, Raghunathpur TPS (2 x 600 MW) has two (2 nos) TDBFPs along with one (1 no) MDBFP for each unit as supplied by its OEM M/s SEC (Shanghai Electric Corporation), China. Unlike other BHELs make plant where TDBFP and its booster pump are in single shaft and driven by steam only, here at RTPS, TDBFP and its booster pump are at different floor /elevations. The TDBFP's main pump is steam driven but its booster pump is motor driven, causing extra power consumption and consequently contributing on higher APC.

Supporting data is hereby tabulated below:

	Generation (in MU)			APC (in MU)			APC (in %)			TDBFPs Booster pump power Consumption (in MU)			
Month	**U#1**	**U#2**	**U#1&2**	**U#1**	**U#2**	**U#1&2**	**U#1**	**U#2**	**U#1&2**	**Booster Pump #1A**	**Booster Pump #1B**	**Booster Pump #2A**	**Booster Pump #2B**
Apr-2023	329.2	321.0	650.1	19.3	18.0	37.3	5.86	5.62	5.74	0.35	0.37	0.41	0.40
May-2023	288.0	319.8	598.7	17.8	19.4	37.2	6.17	6.07	6.21	0.30	0.32	0.43	0.42
Jun-2023	325.8	284.9	610.7	19.5	17.7	37.1	5.97	6.20	6.08	0.36	0.39	0.32	0.32
Jul-2023	323.2	323.5	656.5	19.0	18.6	37.6	5.89	5.74	5.73	0.36	0.39	0.36	0.35
Aug-2023	330.8	261.5	592.3	18.5	15.7	34.3	5.60	6.01	5.78	0.38	0.41	0.32	0.27
Sep-2023	336.3	253.3	590.6	18.5	15.3	33.8	5.50	6.04	5.72	0.37	0.40	0.37	0.40
Oct-2023	217.2	292.4	509.6	14.5	17.7	32.2	6.70	6.05	6.33	0.28	0.29	0.34	0.35
Nov-2023	252.5	293.1	545.6	15.2	17.8	33.0	6.03	6.06	6.05	0.30	0.30	0.34	0.34
Dec-2023	331.5	252.5	584.0	18.9	15.7	34.6	5.70	6.23	5.93	0.36	0.38	0.28	0.27
Jan-2024	356.0	309.1	665.1	19.2	17.3	36.5	5.38	5.60	5.48	0.38	0.40	0.34	0.37

	APC (in MU) without TDBFP Booster pump consumption			APC (in %) without Booster pump consumption			Increase in APC (%) due to TDBFP Booster pump consumption		
Month	**U#1**	**U#2**	**U#1&2**	**U#1**	**U#2**	**U#1&2**	**U#1**	**U#2**	**U#1&2**
Apr-23	18.6	17.2	35.8	5.6	5.4	5.5	**0.22**	**0.25**	**0.24**
May-23	17.2	18.6	35.7	6.0	5.8	6.0	**0.22**	**0.27**	**0.25**
Jun-23	18.7	17.0	35.7	5.7	6.0	5.9	**0.23**	**0.23**	**0.23**
Jul-23	18.3	17.9	36.1	5.7	5.5	5.5	**0.23**	**0.22**	**0.22**
Aug-23	17.8	15.1	32.9	5.4	5.8	5.6	**0.24**	**0.22**	**0.23**
Sep-23	17.7	14.5	32.2	5.3	5.7	5.5	**0.23**	**0.31**	**0.26**
Oct-23	14.0	17.0	31.0	6.4	5.8	6.1	**0.26**	**0.24**	**0.25**
Nov-23	14.6	17.1	31.7	5.8	5.8	5.8	**0.24**	**0.23**	**0.24**
Dec-23	18.2	15.2	33.3	5.5	6.0	5.7	**0.23**	**0.22**	**0.22**
Jan-24	18.4	16.6	35.0	5.2	5.4	5.3	**0.22**	**0.23**	**0.22**

Based on the above, a relaxation of around 0.25% is proposed for RTPS in the CERC tariff Regulations for FY2024-29. The existing norm applicable for RTPS in CERC regulations 2019-24 is 5.75%. As such, the proposed norm is 6% (5.75 + 0.25%) after taking into account the project specific design as mentioned above.

- **Norm for Mejia Units 1-4**

MTPS U#1-4 in last 7 years has been unable to achieve its AEC % within 9.8 %. The standard norm for 9.8% cannot be applied to Mejia Units 1-4 due to the inherent design of the project. The actual AEC of last five years is shown below:

Auxiliary Energy Consumption (%)	FY 19-20	FY 20-21	FY 21-22	FY 22-23	FY 23-24(Jan'24)
MTPS U#1	11.13	10.83	11.22	11.42	11.42
MTPS U#2	11.75	10.77	11.19	11.36	11.58
MTPS U#3	10.67	10.68	10.84	11.30	11.53
MTPS U#4	11.01	10.86	10.88	10.98	10.96

In order to illustrate this, we have compared the design of project to similar NTPC Uchahar power plant U#3(Ball & Tube mill) it has been observed that there is difference in design of ID/FD/PA Fan and Air Preheater and there is also difference in design rated motor power of high drives illustrated below:

Name of Equipment	Installed at MTPS Unit#1 to 4	Installed at Unchahar Unit#3 of NTPC	Remarks
ID Fan	Radial Fan with Hydraulic Coupling	Having Variable Frequency Drive	Power Consumption is less in Variable Frequency Drive Motor at Uchahar due to design.
FD fan	Radial Fan	Axial fan	Axial Fan is hiving high efficiency in comparison to radial Fan
PA Fan	Radial Fan	Axial fan	
Air Pre Heater	Bi-Sector	Tri Sector	In Bi-sector Air Preheater FD fan handles both Primary air & secondary Air, whereas in tri sector Air pre heater FD fan handles only Secondary Air. Hence power consumption for FD Fan shall be more at MTPS unit#1to 4 in comparison to NTPC Uchahar Unit#3

Particulars	NTPC Unchahar U#3	MTPS U#1-3
	Design	Design
Equipment Name	Drive Motor	Drive Motor
ID FAN	1450	1500
PA FAN	650	800
FD FAN	1250	1000
COAL MILL POWER	1496	2250
BOILER FEED PUMP	3033	3500
CONDESATE EXTRACTION PUMP	495	500
COOLING WATER PUMP	925	1200
Total Power (KW)	9299	10750

- As per the design power rating of drive motors, AEC of MTPS U#1-4 stands 16% higher as compared to AEC of NTPC Uchhahar U#3.
- During normal running at similar load conditions, AEC of MTPS U#1-4 exceeds AEC of NTPC Uchahar U#3 by 11% due to comparatively higher power consumption by Fans, BFPs and Coal mills in MTPSU# 1-4 due to their design difference.

Submission:
Based on the justification provided above, DVC requests to relax the AEC norms for the following stations

- **Thermal Generating Stations of 500 MW with steam driven boiler feed pump – 5.75%**
- **Bokaro TPS A (500 MW unit single unit station) – 6.25%**
- **Chandrapura TPS (2x250 MW) – 9.85%**
- **RTPS (2x600 MW) – 6.00%**
- **Mejia Units 1-4 – 10.5%**

1.23. High Demand Season and Low Demand Season

In the previous regulation, there were separate accounting done for High Demand Season and Low Demand Season and the recovery of Annual Fixed Charges (AFC) was dependent on actual availability of the generating stations separately accounted for high demand season and low demand season. The gap in availability resulting in loss of AFC during high demand season was not allowed to be adjusted during the lean season. In the present regulation, the concept of high demand and low demand season has been removed.

Comments of DVC

It is understood that the concept of high demand and low demand season was introduced only during the 2019-24 regulations as a new concept for promoting availability during the high demand season. However, it seems that after observing actual power scenario, the provision has now

been removed. In few plants of DVC, because of separate accounting of availability during high season, a portion of approved annual fixed charges was left unrecovered as the gap in availability during high demand season was not adjusted with higher availability during lean season.

Submission:

Since the concept has now been removed, it is proposed that the generating companies should be allowed to recover at least the unrecovered depreciation because of segregated accounting of availability during high demand season. There are precedents in the past where Hon'ble Commission has allowed unrecovered depreciation on account of achieving lower availability with respect to NAPAF till 2014. The proposed methodology is in alignment with the principles of recovery of uncontrollable, efficient, and justified actual cost.

1.24. Claim of Pay Revision Impact

Regulation 36 (1) 8, 36 (2) f, 36 (3) f

In the case of a generating company owned by the Central or State Government, the impact on account of implementation of wage or pay revision shall be allowed at the time of truing up of tariff.

Comments of DVC

Regarding the pay revision impact, the Commission in its past orders had considered the impact of pay revision based on the consolidated impact at the generating company level and had not considered the pay revision impact at the individual project level.

Submission:

It is requested that the above pay revision impact provision may be amended as per followings, to allow pay revision impact based on the actual impact at the generating project level and not at the overall company level:

"In the case of a generating company owned by the Central or State Government, the impact on account of implementation of wage or pay revision shall be allowed at the time of truing up of tariff *against each individual station* "

1.25. Sharing of gains

Draft Regulations

According to Regulation 81 and 82, gains on account of improved performance pertaining to normative station heat rate, auxiliary consumption, specific oil rate and towards interest saved through restructuring/ refinancing of existing loans have been proposed to be shared in the ratio of 1:1 with the beneficiaries.

Comments of DVC

Given that the normative parameters are already stipulated by the Hon'ble Commission, the licensee or the company undertakes stringent methods leading to such gains. These are solely on account of enhanced efforts by the generator, while the beneficiary has no active participation in realizing the same. Therefore, the proposed 1:1 gain sharing may please be aligned to be more

reflective of the efforts of the generator and hence be modified to a ratio 2:1 in favour of the generator.

Submission:

It is requested that gain sharing be modified to a ratio 2:1 in favour of the generator.