



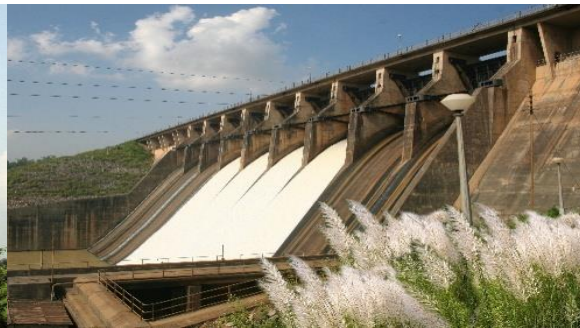
Damodar Valley Corporation

presentation regarding

Comments

on

Draft CERC (Terms and Conditions of Tariff) Regulation 2024



Normative O & M Expenses – Transmission System

- Reduction in norms for FY 24-25 over FY 23-24 for sub-station area:
Bays: -19.25%; Transformers: - 6.5%; Lines: +38.4% [[Chart-1](#)]
- Proposed norms for Bays and Transformers are grossly insufficient for the DVC T&D System. This will further decrease the normative O&M for the overall DVC T&D System in contrary with actual O&M for T&D considering inflationary and other factors.
- The proposed norms may be sufficient for one Transmission utility but not sufficient for another having a different fleet [i.e no. of Bay, Transformer capacity and Transmission Line length].
- It seems that reduction of O&M rate on account of bays, is tried to be compensated through increase in the O&M rate 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.
- Unlike others, DVC is operating in confined area and operating in a much lower voltage level that too it is supplying power to its high voltage firm consumers from dedicated lines. Due to this basic difference in the network/operation structure, the proportion of the bays, no of transformer, line length are not in similar footing with the other transmission licensee and therefore is not comparable with the largest transmission licensee of the country.
- From our analysis, we found that the O&M rate set in the draft regulation is grossly insufficient to cover the actual O&M expenditure of DVC.

Normative O & M Expenses – Transmission System... Contd.

A comparison of Normative V/s Actual O&M expenses for T&D System of DVC of the last four years depicts huge under-recovery owing to higher actuals over the norms [[Chart-2](#)] even after achieving NTAF.

- Norms for Transformers to be based on no. of transformers rather than capacity (unjustified for T&D assets like DVC). O&M for a single 500 MVA Transformer is not the same for 10 nos. of 50 MVA transformer. Moreover, DVC caters Distribution System for which O&M tends higher and for which separate O&M for distribution function is not allowed by State Electricity Regulatory Commissions (i.e. WBERC and JSERC)
- O&M norms for T&D activities reduced rapidly over last three control periods [[Chart-3](#)] even though the actual O&M expenses have been increasing at least at the rate of inflation.

Submission:

DVC's limited prayer to the Hon'ble Commission to reconsider the O&M rate while formulating normative O&M for 2024-29 period so as to –

- (1) Considering number of transformers** in place of capacity of Transformer (i.e. Rs in lakh/ MVA) and
- (2) For Bay portion, O&M norms of 2014-19 period or at least present 2019-24 norms be kept unchanged.**

Or

- (1) Additional O&M factor of 2 times** to normative transmission O&M towards catering **risky, resource intensive (both human and repair maintenance) 'Distribution'** business.

Computation of Annual Fixed Cost: O&M Expenses for Thermal Generating Station

CERC Tariff Regulations 2019

35 (1) Normative O&M expenses

(in Rs Lakh/MW)

Year	200/210/ 250 MW Series	300/330/ 350 MW Series	500 MW Series	600 MW Series	800 MW Series and above
FY 2019-20	32.96	27.74	22.51	20.26	18.23
FY 2020-21	34.12	28.71	23.30	20.97	18.87
FY 2021-22	35.31	29.72	24.12	21.71	19.54
FY 2022-23	36.56	30.76	24.97	22.47	20.22
FY 2023-24	37.84	31.84	25.84	23.26	20.93

Draft CERC Tariff Regulations 2024

36 (1) Normative O&M expenses (Proposed)

(in Rs Lakh/MW)

Year	200/210/ 250 MW Series	300/330/ 350 MW Series	500 MW Series	600 MW Series	800 MW Series and above
FY 2024-25	39.96	33.09	26.22	24.81	22.33
FY 2025-26	42.32	35.04	27.77	26.27	23.64
FY 2026-27	44.81	37.11	29.41	27.82	25.04
FY 2027-28	47.45	39.29	31.14	29.46	26.51
FY 2028-29	50.25	41.61	32.97	31.20	28.08

FY 24-25 escalation over FY 23-24 : 200 MW – 5.6%, 300 MW– 3.9%, **500 MW – 1.5%**, 600 MW – 6.7%, 800 MW – 6.7%


- 500 MW Units is predominant in DVC : 3500 MW of 500 MW Units out of 6540 MW of total capacity **(54%)**
- Grossly insufficient considering escalation rates and additional components of all Add-Cap items and Cap. Spare items up to Rs. 20 Lakh being considered part of O&M Expenses only. YoY Escalation rate in the Control Period is considered at **5.9%**

Submission:

- From EM, it is evident while framing normative O&M expenses for 500 units during FY 2024-29 Tariff period, 10 NTPC plants have been considered whose employees are not covered under CCS (Central Civil Service) pension rule.
- **Normative O&M for 500 MW units is proposed to be increased by at least 6% in line with 600/800 MW O&M cost.**
- **Provision for recovery of Ash/unsold Gypsum transportation expenses is proposed to be included separately in Tariff Regulation apart from normative O&M.**

Operational parameters : GSHR, AEC, SFOC

Units	2014-19 HR Norms	2019-24 HR Norms	2024-29 HR Norms	Remarks/Submission
210/250 MW (MTPS)	2450	2430	2400	Considering age factor (age of 210 MW DVC units nearing 25 years), at least prevalent norm (for 2019-24) may kindly continue.
500 MW (DSTPS)	2441	2374	2351	<ul style="list-style-type: none"> • Actual Design HR of the unit is 2336. As per Draft Regulation 2024-29, Allowable Design HR is restricted to 2261 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.

- The Hon'ble Commission gradually reducing the Gross SHR norms for thermal generating plants.
- Likely to have significant impact on the financial performance of the generating stations which are already struggling to achieve the present norms laid down by the Hon'ble Commission.
- Revised norms does not reflect the actual performance of the generating stations in the past control period. 
- From explanatory memorandum, it is evident that the norms have been revised looking at selected plants of NTPC and a comprehensive analysis has not been done for all plants. However, National Tariff Policy clearly says that the performance norms should be realistic and relatable to the actual past performance.
- For improvement of SHR, there are inherent limitations due to their design and technology.

Operational parameters : GSHR, AEC, SFOC

CERC Tariff Regulations 2019	CERC Tariff Regulations 2024	Remarks
Auxiliary Energy Consumption		
<ul style="list-style-type: none"> • 210/250 MW: 9.8%, CTPS#7&8: 9.8% • For 500/600 MW: 5.75% 	<ul style="list-style-type: none"> • 210/250 MW: 9.8%, CTPS#7&8: 9.5% • For 500/600 MW: 5.25% 	<ul style="list-style-type: none"> • More stringent for 500/600 MW. (Actual: 5.6% in FY 22-23) • Change for CTPS (Actual: 9.85% in FY 22-23) • As BTPS#A is single unit, 0.25% margin over and above normative APC may kindly be considered.
Secondary Fuel Oil Consumption		
<ul style="list-style-type: none"> • Proposed norms under draft regulation for Mejia TPS Unit #1 to 3 is 1.00 ml/kWh. • Over the past 3 years, the av. SFOC for these units was 1.5 ml/kWh. • High SFOC is attributable to the type of mills used, specifically Ball & Tube Mills, which struggle to support low-load operations in a split mill configuration without oil support. 		<ul style="list-style-type: none"> • 1.5 ml/kwh of SFOC is proposed for MTPS U#1to 3

O & M Norms for Hydro Generating Stations

➤ Below are the prescribed operating norms for DVC plants

O&M Cost for hydel plant (INR lakhs)	FY 2023-24	FY 2024-25 (New Regulation)	% Change	Actual O&M cost (Rs. In Lakh) for DVC hydel plants	
				FY 21-22	FY 22-23
Maithon HS	3484.6	2526.2	-28%	3935	3124
Panchet HS	2640.0	2795.6	+6%	4347	3931
Tilaiya HS	1084.5	651.4	-40%	1248	989
Total	7209	5973	-17%	9530	8044

- Despite high age and the ongoing phase-wise R&M work on the Hydel Units of DVC, which will be completed in FY 2025-26, the normative O&M cost for MHS & THS reduced by 28% & 40 % respectively.
- Additionally, DVC makes a significant contribution to the Provident and Gratuity fund for its employees as per CCS pension rules.
- 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.

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

- Most of the Generating and Transmission Utilities under the jurisdiction of Hon'ble CERC has no CCS pension liability as applicable in the case of DVC which increases the O&M expenses significantly.
- Apart from the New Pension Scheme applicable for employees who have joined after 01.01.2004, DVC has another pension scheme (GPF) as per the GOI rules (CCS pension) for employees who have joined before 01.01.2004 (Presently 15,300 pensioners as against 5370 employees).
- 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 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.


Pension and Gratuity/ Employee (INR crores/employee)	2019-20	2020-21	2021-22	2022-23
DVC	0.074	0.064	0.122	0.091
NTPC	0.043	0.041	0.053	0.045

- Earlier Hon'ble Central Commission as well as Hon'ble Appellate Tribunal allowed P & G Fund in Tariff while determining tariff for DVC as a special case. Apex Court also in its judgement dated 23.07.2018 upheld the judgement of Hon'ble tribunal.

Submission:

- DVC 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 organisations like DVC.

Increase for Cut Off Date for Claim of Addn. Capital Expenditure (ACE)

- Execution of original scope of work gets delayed much beyond 36 months in a number of cases.
- Provided examples of DVC and other plants claiming substantial ACE beyond 3 years. 
- Uncontrollable reasons like delays in getting statutory approvals for some works from external agencies, dependency on execution of work with external agencies/Government departments or other deferred works.
- Loss to the generating companies as some of ACE claims gets rejected beyond the cut off date due to above uncontrollable reasons
- **Proposed for extension of cut off date to 5 years.**

Provision for recovery of unrecovered depreciation and/or incentive scheme Generator.

- The concept of **high demand and low demand season** was introduced only during the **2019-24 regulations** for promoting availability during the high demand season. After, observing the actual power scenario, the provision has now been removed in draft Regulation.
- In few plants of DVC, because of **separate accounting of availability during high demand season**, a portion of approved **annual fixed charges was left unrecovered** in absence of adjust provision by giving higher availability in low demand season to meet the gap on account of availability during high demand season.
- Moreover, there is no provision for incentive in case of Thermal Generator, achieving Plant availability more than NAPAF although onus to support Grid at the need of hour lies on Thermal & Hydro Generator.

Submission:

DVC's prayer to the Hon'ble Commission to--

(1) Generator may be **allowed** to recover at least the **unrecovered depreciation** due to the effect of segregated accounting of availability during high demand season (as allowed in past till 2009-14 period) either at the end of useful life or on achieving availability higher than NAPAF.

and /or

(2) Keep provision for incentive on achieving availability more than NAPAF similar to Transmission System.

Operation and Maintenance Expenses or 'O&M Expenses

CERC Tariff Regulations 2019	CERC Tariff Regulations 2024	Implication/ Impact of proposed Change
<p>3 (45): '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, consumables, insurance and overheads and fuel other than used for generation of electricity</p>	<p>3 (56): '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.....:</p>	<ul style="list-style-type: none">• CERC has defined the Capital Spares as spares individually costing above Rs. 20 lakh which shall be allowed separately.• Whereas, CERC has added the expenses incurred for other spares of capital nature valuing less than Rs. 20 lakhs and additional capital expenditure of an individual asset costing up to Rs. 20 lakhs in the definition of O&M expenses and shall be allowed under the normative O&M norms.

Normative Annual Plant Availability Factor (NAPAF)

- The NAPAF proposed norms under draft regulation is as below
 - ✓ 85% for all thermal generating stations, except those covered under clauses (c), (c), (d) & (d)
 - ✓ 80% for coal and lignite based generating stations completing 30 years from COD as on 31.03.2024

- Mejia TPS units #1-3 commenced operation in Dec' 1997, Mar' 1999 and Sept' 1999 respectively and are age old plants.



धन्यवाद

DAMODAR VALLEY CORPORATION

CHART-1

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

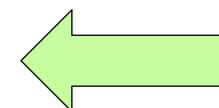


CHART-2

Comparison of Normative V/s Actual O&M expenses (in Rs. Cr.)

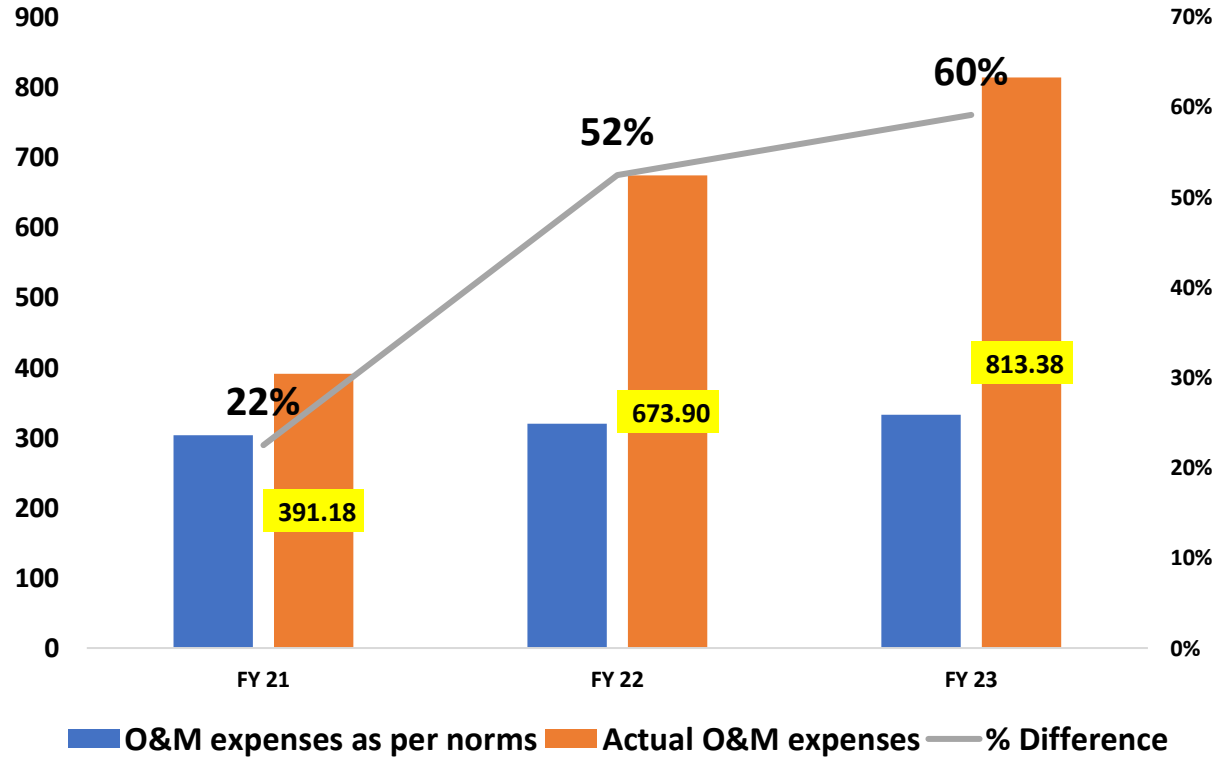
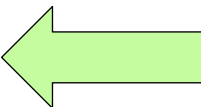
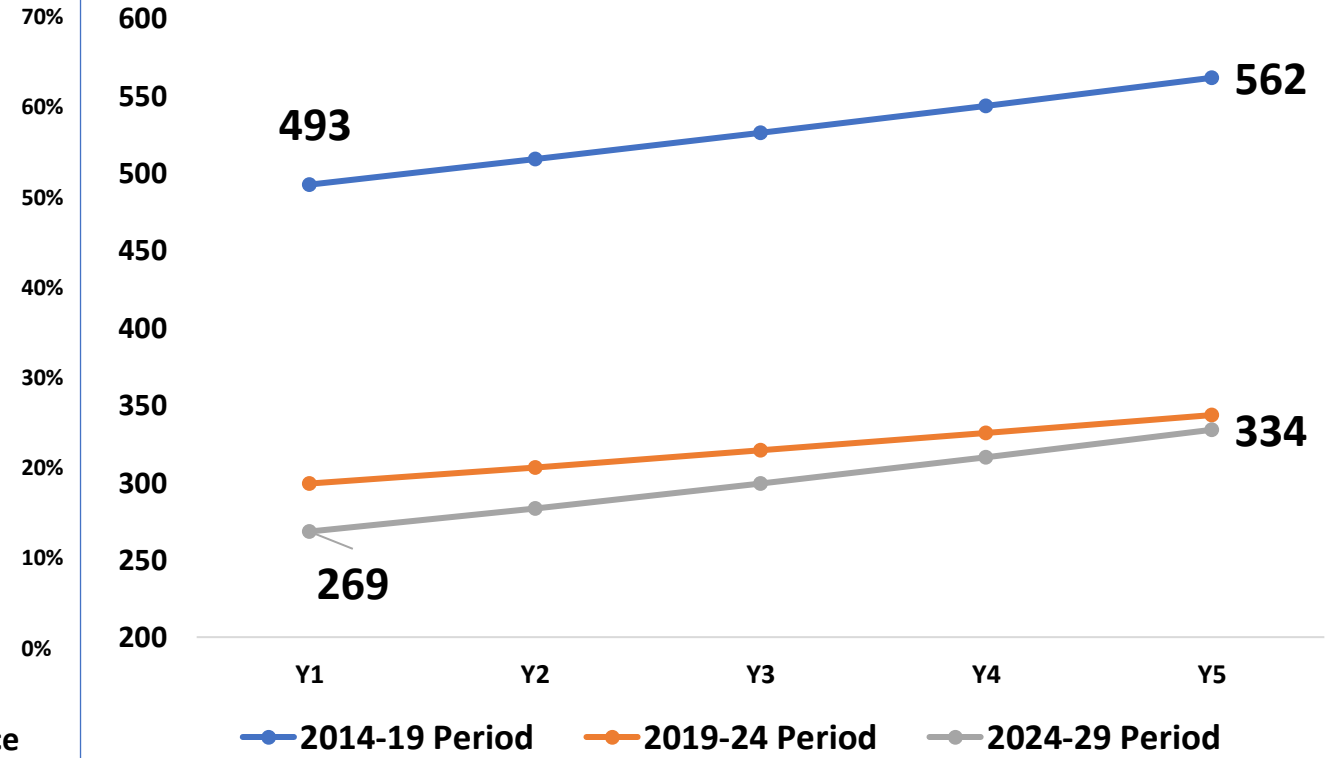


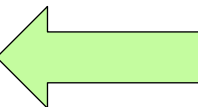
CHART-3

Normative O&M Expenses for DVC T&D system (in Rs. Cr)



Heat Rate Non-Compliance

Name of the plant	Actual Station Heat Rate (2023-24) (kCal/kWh)	Heat 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



Increase for Cut Off Date for Claim of ACE

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)01.03.2013 ii)27.03.2014	27.03.2017	633982.7	631346.7	2635.9	25031.0	21448.0	3583.0
2	NTPC Rihand STP	i) 19.11.2012 ii) 27.03.2014	27.03.2017	554745.6	551385.4	3360.3	21828.7	12452.00	9376.7
3	NTPC Talcher STP	i) 01.8.2003 ii) 01.3.2004 iii) 01.11.2004 iv) 01.8.2005	31.03.2008	558157.7	555664.4	2493.3	103154.9	21236.91	81917.9
4	NTPC Unchahar STP Stage-3	01.01.2007	31.03.2009	88728.9	88680.96	47.96	386.9	0.00	386.9
6	NTPC Unchahar STP Stage-4	30.09.2017	30.9.2020	247436.9	247434.5	2.38	36825.6	35702.05	1123.5

