

**BEFORE THE HON'BLE
MAHARASHTRA ELECTRICITY REGULATORY COMMISSION,
MUMBAI**

Case No. 182 Of 2024

IN THE MATTER OF

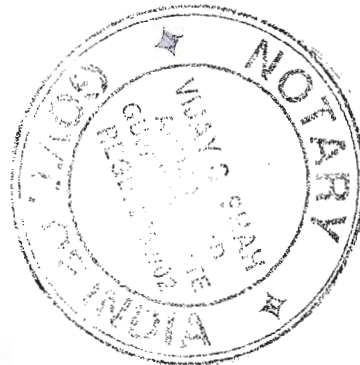
Petition for True-up of ARR for FY 2022-23 & FY 2023-24, Provisional True-up of ARR for FY 2024-25 & Projection of ARR for FY 2025-26 to 2029-30 for Maharashtra Eastern Grid Power Transmission Company Limited (MEGPTCL); under the provisions of Section 61 and Section 62 read with Section 86 of the Electricity Act, 2003 and Maharashtra Electricity Regulatory Commission (Multi Year Tariff) Regulations, 2019 and Maharashtra Electricity Regulatory Commission (Multi Year Tariff) Regulations, 2024

AND

IN THE MATTER OF

Maharashtra Eastern Grid Power Transmission Company Limited
Adani Corporate House, Shantigram, Near Vaishnodevi,
Ahmedabad, Gujarat – 382 421

..... **Petitioner**



S. No.....8799/2024

26✓
VIJAY C. SHAH
NOTARY
GOVT. OF INDIA

AFFIDAVIT

16 NOV 2024

I, Prashant Kumar, S/o Shri Jagdish Prasad, age 47 years, being the Authorized Signatory of Maharashtra Eastern Grid Power Transmission Company Limited having office at 4th Floor South Wing, KP Epitome, Makarba, Ahmedabad, 380051, do hereby solemnly affirm and state as under:

1. I am an Authorized Signatory of Maharashtra Eastern Grid Power Transmission Company Limited, the Petitioner in the above matter, and I am duly authorized and competent to make this affidavit.
2. The statements made in the Replies to Data gaps are true to my knowledge and belief and are based on information and I believe them to be true.
3. I say that there are no proceedings pending in any court of law/ tribunal or arbitrator or any other authority wherein the petitioners are a party and where issues arising and / or relief sought are identical or similar to the issues arising in the matter pending before the Commission.



Prashant Kumar

DEPONENT

VERIFICATION

Solemnly affirmed at Ahmedabad on this 16th day of November, 2024 that the contents of the above affidavit are true to my knowledge and belief and no part of it is false and nothing material has been concealed therefrom.



Prashant Kumar

DEPONENT

SOLEMNLY AFFIRMED
BEFORE ME ✓

26✓
VIJAY C. SHAH
NOTARY
GOVT. OF INDIA

16 NOV 2024



Replies to Data Gaps and Additional Information Requirement [Set I]- MEGPTCL MYT Petition (Case No. 182 of 2024)

Petition for approval of Truing-up for FY 2022-23 & FY 2023-24, Provisional Truing-up for FY 2024-25, and Aggregate Revenue Requirement for the Control Period from FY 2025-26 to FY 2029-30

A. Specific Data Gaps/Issues

Sr. No.	Particular
Q. 1	MEGPTCL should submit the Cost Audit Report for FY 2022-23 and FY 2023-24 to justify the revenue expenses incurred as well as inventory management policies according to Regulation 23.4 of MERC MYT Regulations, 2019.
R. 1	Cost Audit Reports for FY 2022-23 & FY 2023-24 are provided as Annexure D1 & Annexure D2 respectively.
Q. 2	For FY 2022-23 and FY 2023-24, MEGPTCL should submit the Accounting Statements Formats prescribed by the Commission for Transmission Licensees, duly certified by the Statutory Auditor.
R. 2	Accounting Statements Format for FY 2022-23 & FY 2023-24 are under finalization and same will be submitted shortly.
Q. 3	Table 3-3 of the Executive Summary has been pasted incorrectly, as the Table 3-1 has been pasted again here. MEGPTCL should incorporate the correct Table in this place.
R. 3	Changes will be done as part of Revised Petition.
Q. 4	Some of the Formats (eg: F1, F2, F2.1, F3, F3.1, F3.2, F3.3, F4, F4.1 (Existing), F4.1 (New), F5, F8, F11, F15, etc.) are not legible in the Annexures to the Petition. MEGPTCL should ensure that all Tables are legible by appropriate formatting.
R. 4	Changes will be done as part of Revised Petition.
Q. 5	MEGPTCL has claimed 'Miscellaneous Expenses' of Rs. 4.04 Crore and Rs. 3.31 Crore under actual O&M Expenses, respectively, for FY 2022-23 and FY 2023-24. MEGPTCL should submit the following in this regard: <ul style="list-style-type: none"> a. Break up of 'Miscellaneous Expenses' w.r.t. expenses booked in the Audited Accounts of FY 2022-23 and FY 2023-24. b. Justification for the above heads of expenses under 'Miscellaneous Expenses' to be considered in actual O&M Expense. c. Confirmation that no penalties or compensation or expenses against or Donations have been claimed under actual O&M expenses.
R. 5	a. Major heads of Miscellaneous Expenses booked in the Audited Accounts of FY 2022-23 and FY 2023-24 is as under:

Sr. No.	Particular		
	Particular	FY 2023-24 (Rs. Crore)	FY 2022-23 (Rs. Crore)
	Post & Courier Charges	0.06	0.03
	Print & Stationery Expenses	0.05	0.01
	Cont. Manpower -Gen & Admin	0.87	0.51
	Horticulture Expenses	0.61	0.81
	Compensation for ROU/ROW	0.98	1.07
	Fire & Safety Expenses	0.01	0.01
	Security Automn Expenses	0.42	0.47
	Other	0.29	1.13
	Total	3.30	4.04
	<p>b. As can be seen above, these are expenses pertaining to operation period and hence booked as part of O&M expenses. There are various cost sub-heads in O&M expenses by these expenses being immaterial in nature have been clubbed together and shown under the head of Miscellaneous Expenses. It is further to submit that major expenses are pertaining to ROU/ ROW charges paid to land owners while accessing their land for carrying out R&M activities on the transmission lines, Security automation, contractual manpower, horticulture etc.</p> <p>c. No penalties or compensation or expenses against Corporate Social Responsibility (CSR) or Donations have been claimed under actual O&M expenses.</p>		
Q. 6	The closing loan balance for FY 2021-22 has been shown as Rs. 1788.46 Crore (MSETCL claim consequential impact Excel file), whereas the Opening Balance of Net Normative Loan for FY 2022-23 has been shown as Rs. 1788.44 Crore (Form F5). MEGPTCL should clarify this discrepancy.		
R. 6	Changes will be done as part of Revised Petition.		
Q. 7	The Auditor's Certificate on Statement of Rate of Interest (Annexure 12) has no mention of the interest rate, which is given separately and signed by the Company representative, rather than the Auditor.		
R. 7	Annexure to statutory auditor certificate has rate of interest of 13.25% which has seal of auditor and verified by the statutory auditor as indicated in the certificate.		
Q. 8	In Form F5 and Para 4.25 and Table 4-4 of the Petition, MEGPTCL has considered the rate of interest on actual loan as 13.25%. However, the actual interest rate (derived based on opening and closing loan balance and interest amount shown in Form F5) works out to 13.81% for FY 2022-23 and 12.79% for FY 2024-25. MEGPTCL should explain the same.		

MEGPTCL True-up Petition for FY22-23 & FY23-24, Provisional True up for FY 2024-25 & ARR for FY25-26 to FY29-30: Data Gaps- Set I

Sr. No.	Particular
R. 8	<p>MEGPTCL has availed long-term loan from single source only i.e. Inter Corporate Deposit. The ICD loan availed by ATIL is fixed rate loan at the rate of 13.25%. Accordingly, weightage average interest rate of actual loan is 13.25%. The same is certified by the statutory auditor and provided as part of Petition.</p> <p>Interest paid on the long-term loan is based on the actual movement of the loan whereas rate derived in the query is working out based on simple average loan which is worked out based on opening and closing balance instead of weightage average rate of interest prescribed in the MYT Regulations.</p> <p>It is a known fact that if repayment is done in initial part of the financial year then interest rate works out based on the simple average methodology (based on opening balance and closing balance) is always on lower side. Similarly, if repayment is done at the later part of the financial year then interest rate works out based on the simple average methodology (based on opening balance and closing balance) is always on higher side.</p>
Q. 9	<p>The contribution to Contingency Reserve for FY 2022-23 has been shown in Table 4-8 as Rs. 14.46 Crore, whereas in Form F10, the contribution to Contingency Reserve is shown as Rs. 14.80 Crore, and in Note 12 of Audited Accounts for FY 2023-24, the investment in Contingency Reserve is shown as Rs. 14.05 Crore. MEGPTCL should clarify this discrepancy.</p>
R. 9	<p>Closing balance of Contribution to contingency reserves approved by the Hon'ble Commission is Rs. 76.07 Crore. As per statutory auditor certificate, amount invested as on 30 September 2023 is Rs. 90.76 Crore. Accordingly, net investment towards contingency reserve during FY 2023-23 works out to Rs. 14.69 Crore. The same will be rectified in the revised Petition.</p>
Q. 10	<p>The documentary evidence submitted by MEGPTCL towards investment in Contingency Reserves (Annexure 6) shows that MEGPTCL has invested the amount of Contingency Reserve of FY 2022-23 and FY 2023-24 for 1 year. MEGPTCL should justify investment of Contingency Reserves against such short-term instruments, though it is envisaged that the same shall be invested in long-term instruments and utilised only against specific requirement with prior approval of the Commission.</p>
R. 10	<p>It is to submit that ATIL has made few investments towards contingency reserves in short-term government securities in earlier periods and reinvested the same once it is matured. Hence, even though, ATIL has made higher amount towards investment in contingency reserves, it has only claimed net increase in investment towards contingency reserves for respective financial year. ATIL has invested the contingency reserve amount in government securities in line with</p>

MEGPTCL True-up Petition for FY22-23 & FY23-24, Provisional True up for FY 2024-25 & ARR for FY25-26 to FY29-30: Data Gaps- Set I

Sr. No.	Particular																					
	the MYT Regulations, 2019. Even though ATIL has made investment in short-term government securities, it has reinvested the same in the government securities once it is matured and has not utilized the investment towards contingency reserves for any other purpose.																					
Q. 11	As regards Income-Tax, MEGPTCL should submit a copy of Income Tax Return Verification (ITRV) Form for FY 2022-23 (AY 2023-24) and FY 2023-24 (AY 2024-25) for the computation of tax paid by the Company as a whole.																					
R. 11	Income Tax Return Verification (ITRV) Form for FY 2022-23 (AY 2023-24) are provided as an Annexure D3. Deadline for filing of Income Tax Return (ITR) Form for FY 2023-24 (AY 2024-25) is 30 th November, 2024 and MEGPTCL is yet to file its ITR. Accordingly, it will submit ITRV, once ITRV received.																					
Q. 12	In Table 4-6, MEGPTCL has computed the Interest on Working Capital (IoWC) by considering the actual O&M expenses for FY 2022-23 and FY 2023-24; however, the applicable MYT Regulations require IoWC to be calculated at the time of truing up based on the revised normative expenses. MEGPTCL should revise the computation of IoWC for all years.																					
R. 12	Changes will be done as part of Revised Petition.																					
Q. 13	As regards capitalisation claimed in FY 2022-23 and FY 2023-24: <div><div>a. MEGPTCL should submit the cost-benefit analysis of each of the scheme for which capitalization has been claimed in the respective years.</div><div>b. MEGPTCL should submit the documentary evidence of all the assets put to use during the respective years, in terms of Certificate of Chief Electrical Inspector, asset Loading, etc.</div><div>c. With reference to Para 4.12 of the Petition, MEGPTCL should submit the copy of the letter sent by Hon'ble Collector, District-Bhandara in reference to Hon'ble High Court Order dated 5th January 2022</div></div>																					
R. 13	<div><div>a. MEGPTCL has capitalized Rs. 8.66 Crore and Rs. 2.00 Crore for FY 2022-23 & FY 2023-24 respectively. Asset head wise bifurcation of the same is as under:</div><table><tr><th>Particular</th><th>FY 2022-23</th><th>FY 2023-24</th></tr><tr><td>Office Equipment and Furniture</td><td>0.68</td><td>0.06</td></tr><tr><td>Building and Civil Works</td><td>0.52</td><td></td></tr><tr><td>Substation & Transmission Line</td><td>3.42</td><td>0.12</td></tr><tr><td>Computer Equipment</td><td>2.60</td><td>1.78</td></tr><tr><td>Software</td><td>1.44</td><td>0.04</td></tr><tr><td>Total</td><td>8.66</td><td>2.00</td></tr></table><div>As can be seen from the above, major capitalization is towards substation & transmission line, computer equipment and Software.</div></div>	Particular	FY 2022-23	FY 2023-24	Office Equipment and Furniture	0.68	0.06	Building and Civil Works	0.52		Substation & Transmission Line	3.42	0.12	Computer Equipment	2.60	1.78	Software	1.44	0.04	Total	8.66	2.00
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MEGPTCL True-up Petition for FY22-23 & FY23-24, Provisional True up for FY 2024-25 & ARR for FY25-26 to FY29-30: Data Gaps- Set I

Sr. No.	Particular
	<ul style="list-style-type: none"> • Computer Equipment & Software – MEGPTCL has capitalized Rs. 4.04 Crore & Rs. 1.82 Crore for FY 2022-23 & FY 2023-24. It is to submit that MEGPTCL has carried out procurement of hardware and software to meet its day-to-day business requirement considering increasing trend of technology usage. Considering the business requirement, there is no requirement for working out cost benefit analysis for such capitalization. • Online DGA installation at Akola, Koradi & Ektuni – MEGPTCL has capitalized Rs. 3.33 Crore for installation of online DGA at Akoa, Koradi & Ektuni. It is to submit that the capital expenditure was started in FY 2021-22 and capitalization done during FY 2021-22 was approved by the Hon'ble Commission in its MYT Order in Case No. 237 of 2022. There is no requirement to get clearance/ certification from any authority. • Bird Divertor – MEGPTCL has capitalized Rs. 0.11 Crore during FY 2023-24 for installation of Bird Divertor on its transmission line. The said scheme was approved by the Hon'ble Commission in its MTR Order in Case No. 237 of 2022 as it is a statutory requirement. As the capital expenditure carried out by MEGPTCL is due to statutory requirement, no cost benefit has been worked out for the same. <p>b. MEGPTCL has capitalized mainly four categories of expenditure i.e. Computer equipment, software, DGA and Bird Divertor. It is to submit that for capitalization of the assets added during FY 2022-23 & FY 2023-24, no approval/ certification is required from any authority.</p> <p>c. Copy of the letter sent by Hon'ble Collector along with Hon'ble High Court Order is provided as an Annexure D5.</p>
Q. 14	With reference to Table 4-9, MEGPTCL has considered the effective rate of RoE as 18.78% for FY 2023-24. However, in the Excel model, MEGPTCL has considered the effective rate of RoE as 18.79% for FY 2023-24, based on which the actual claim of RoE has been considered. MEGPTCL should revise the computations by considering the effective rate of RoE as 18.78% for FY 2023-24.
R. 14	Changes will be done as part of Revised Petition.
Q. 15	With reference to Table 4-10, MEGPTCL should clarify the reasons for the difference in the amount of rebate availed and rebate booked in Accounts/proposed for approval, for FY 2022-23 and FY 2023-24, as the rebate availed is shown as Rs. 0.92 Crore and Rs. 1.44 Crore, whereas the amount proposed for approval is shown as Rs. 2.09 Crore and Rs. 2.62 Crore for FY 2022-

MEGPTCL True-up Petition for FY22-23 & FY23-24, Provisional True up for FY 2024-25 & ARR for FY25-26 to FY29-30: Data Gaps- Set I

Sr. No.	Particular
	23 and FY 2023-24, respectively.
R. 15	<p>It is to mention that for booking of the rebate in annul accounts is done once reconciliation statement is signed with MSETCL (STU). Rebate for FY 2014-15 to FY 2018-19 was reconciled as part of reconciliation statement of FY 2019-20 and hence rebate of FY 2014-15 to FY 2018-19 was booked in annual accounts of FY 2019-20. Similarly Rebate of FY 2019-20 was reconciled as part of reconciliation statement of FY 2020-21 and hence rebate of FY 2019-20 was booked in annual accounts of FY 2020-21.</p> <ul style="list-style-type: none"> • MEGPTCL has booked rebate of Rs. 2.09 Crore (Rs. 0.92 Crore of FY 2022-23 and Rs. 1.18 Crore of FY 2020-21) in its books during FY 2022-23. • MEGPTCL has booked rebate of Rs. 2.62 Crore (Rs. 1.44 Crore of FY 2023-24 and Rs. 1.18 Crore of FY 2021-22) in its books during FY 2023-24.
Q. 16	<p>As regards the Additional Income Tax of Rs. 226.02 Crore claimed in the True-up of FY 2023-24 for recoveries pertaining to FY 2019-20 and earlier, the Commission has already disallowed the same in the MTR Order, and MEGPTCL has filed an Appeal before Hon'ble APTEL on this issue, which is sub-judice. As the MYT Petition has been filed without prejudice to MEGPTCL's claims in Appeal, MEGPTCL should justify claiming this amount again in the true-up for FY 2023-24.</p>
R. 16	<p>It is to submit that Hon'ble Commission has allowed income tax on past recoveries (FY 2019-20 and earlier) as part of FY 2023-24 ARR recoveries in its consequential relief Order in Case No. 50 of 2016 dated 03.06.2021. As MEGEPTCL has filed final truing-up of ARR for FY 2023-24 in present Petition where amount of past recoveries as well as applicable income tax rate is finalized and accordingly, MEGPTCL has claimed the additional impact of income tax. It is further to submit that in case, the Hon'ble Commission approves income tax on past recoveries in present proceedings, MEGPTCL will amend the appeal accordingly.</p>
Q. 17	<p>As regards the proposed Capitalisation of Rs. 6 Crore for improving the reliability of the sub-station, MEGPTCL should justify the proposed capex in terms of existing reliability, documentary evidence of trippings, cost benefit analysis, etc.</p>
R. 17	<p>MEGPTCL has proposed capitalization of Rs. 6 Crore towards Auxiliary supply from Tertiary of Transformers at Akola and Koradi Substation.</p> <ul style="list-style-type: none"> • Auxiliary supply is essential for the operation of critical Substation components i.e. Circuit breaker closing, isolator motors, SCADA and other systems and frequent failure/interruptions in the auxiliary system leads to poor power quality and failure of sensitive electronic components and electronic cards. • CEA, vide Grid Regulations 2007 -Part III clause no 6. A had recommended

Sr. No.	Particular																																																																																																																								
	<p>for 2 nos HT supplies from different sources for 220 kV and above Substations. CEA Grid Regulations 2007 is provided as an Annexure D6.</p> <ul style="list-style-type: none">Monthly data regarding existing installed system reliability and availability as well as SAIFI (System Average Interruption frequency Index) for FY 2023-24 is as under: <table><tr><th colspan="4">11KV Auxiliary Supply Disturbance Sheet for the FY (2023-2024) at kORADI SS</th></tr><tr><th>Month</th><th>SAIFI</th><th>Hours</th><th>Availability</th></tr><tr><td>April</td><td>52.00</td><td>11:21</td><td>98.42%</td></tr><tr><td>May</td><td>17.00</td><td>3:20</td><td>99.55%</td></tr><tr><td>June</td><td>17.00</td><td>2:55</td><td>99.59%</td></tr><tr><td>July</td><td>22.00</td><td>5:18</td><td>99.29%</td></tr><tr><td>August</td><td>20.00</td><td>5:50</td><td>99.22%</td></tr><tr><td>September</td><td>20.00</td><td>6:59</td><td>99.03%</td></tr><tr><td>October</td><td>24.00</td><td>5:15</td><td>99.29%</td></tr><tr><td>November</td><td>11.00</td><td>2:55</td><td>99.59%</td></tr><tr><td>December</td><td>5.00</td><td>0:54</td><td>99.88%</td></tr><tr><td>January</td><td>5.00</td><td>1:34</td><td>99.79%</td></tr><tr><td>February</td><td>12.00</td><td>1:57</td><td>99.71%</td></tr><tr><td>March</td><td>23.00</td><td>5:25</td><td>99.27%</td></tr><tr><td>Total</td><td>228</td><td>202:35:00</td><td>99.39%</td></tr></table> <table><tr><th colspan="4">11KV Auxiliary Supply Disturbance Sheet for the FY (2023-2024) at Akola SS</th></tr><tr><th>Month</th><th>SAIFI</th><th>Hours</th><th>Availability</th></tr><tr><td>April</td><td>115</td><td>125:26</td><td>82.58%</td></tr><tr><td>May</td><td>13</td><td>8:09</td><td>98.90%</td></tr><tr><td>June</td><td>25</td><td>6:56</td><td>99.04%</td></tr><tr><td>July</td><td>17</td><td>7:29</td><td>98.99%</td></tr><tr><td>August</td><td>24</td><td>8:07</td><td>98.91%</td></tr><tr><td>September</td><td>22</td><td>7:20</td><td>98.98%</td></tr><tr><td>October</td><td>25</td><td>6:58</td><td>99.06%</td></tr><tr><td>November</td><td>16</td><td>9:32</td><td>98.68%</td></tr><tr><td>December</td><td>6</td><td>1:24</td><td>99.81%</td></tr><tr><td>January</td><td>13</td><td>3:05</td><td>99.59%</td></tr><tr><td>February</td><td>15</td><td>8:21</td><td>98.76%</td></tr><tr><td>March</td><td>16</td><td>9:48</td><td>98.68%</td></tr><tr><td>Total</td><td>307</td><td>202:35:00</td><td>97.67%</td></tr></table> <ul style="list-style-type: none">In line with the same, it is proposed to have an additional source through the tertiary of the Transformer.	11KV Auxiliary Supply Disturbance Sheet for the FY (2023-2024) at kORADI SS				Month	SAIFI	Hours	Availability	April	52.00	11:21	98.42%	May	17.00	3:20	99.55%	June	17.00	2:55	99.59%	July	22.00	5:18	99.29%	August	20.00	5:50	99.22%	September	20.00	6:59	99.03%	October	24.00	5:15	99.29%	November	11.00	2:55	99.59%	December	5.00	0:54	99.88%	January	5.00	1:34	99.79%	February	12.00	1:57	99.71%	March	23.00	5:25	99.27%	Total	228	202:35:00	99.39%	11KV Auxiliary Supply Disturbance Sheet for the FY (2023-2024) at Akola SS				Month	SAIFI	Hours	Availability	April	115	125:26	82.58%	May	13	8:09	98.90%	June	25	6:56	99.04%	July	17	7:29	98.99%	August	24	8:07	98.91%	September	22	7:20	98.98%	October	25	6:58	99.06%	November	16	9:32	98.68%	December	6	1:24	99.81%	January	13	3:05	99.59%	February	15	8:21	98.76%	March	16	9:48	98.68%	Total	307	202:35:00	97.67%
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Q. 18	MEGPTCL should submit the basis for escalation of 6.52% assumed for calculation of interest on Contingency Reserve under NTI.																																																																																																																								
R. 18	MEGPTCL has considered the latest rate of interest on investment of its treasury																																																																																																																								

MEGPTCL True-up Petition for FY22-23 & FY23-24, Provisional True up for FY 2024-25 & ARR for FY25-26 to FY29-30: Data Gaps- Set I

Sr. No.	Particular
	bills which is of 6.52% and hence considered the same for calculation of interest on contingency reserves of future period.
Q. 19	<p>As regards the proposed Capex scheme of 'Tower strengthening of MEGPTCL 765 kV Tiroda – Koradi – Akola – Ektuni transmission lines', MEGPTCL should confirm the following:</p> <ol style="list-style-type: none"> Whether the said scheme is to be considered under Capex, in accordance with the MERC Capital Expenditure Approval Regulations, 2022 Whether the CEA Guidelines referred by MEGPTCL are applicable retrospectively, i.e., are they applicable for 765 kV infrastructure created prior to the notification of the said Guidelines? whether other Licensees like PGCIL, MSETCL, etc., are also undertaking such capex to conform with the said CEA Guidelines? Whether the proposed scheme is under STU Plan
R. 19	<ol style="list-style-type: none"> Yes, the proposed scheme is to be considered under Capex, in accordance with the MERC Capital Expenditure Approval Regulations, 2022 CEA Guidelines referred by MEGPTCL is with respect to installation of delta type towers by transmission licensees. CEA has recommended that Delta configuration towers shall not be used for 765 kV single circuit line. However, considering the recommendation of CEA and incidences of tower collapse of PGCIL, Hon'ble CERC has approved strengthening of delta type towers. Hon'ble CERC has approved capital expenditure towards tower strengthening in its various Tariff Orders. Some of the reference Order are as under: <ol style="list-style-type: none"> CERC Order dated 28.10.2011 passed in Petition No. 144/2009 CERC Order dated 16.05.2016 passed in Petition No. 19/TT/2014 CERC Order dated 26.02.2016 passed in Petition No. 426/TT/2014 CERC Order dated 02.06.2022 passed in Petition No. 274/TT/2020 The Proposed scheme of tower strengthening is already approved by Maharashtra Transmission Committee vide its 11th MTC meeting held on 16.10.2024. The relevant part of the same is provided as an Annexure D4. Further, MTC has directed the transmission scheme for approval in Grid Coordination Committee. MEGPTCL has also submitted Detailed Project Report to STU vide its letter dated 24.09.2024. After approval from GCC same will be submitted for inclusion in STU plan.
Q. 20	MEGPTCL has proposed capitalisation of Rs. 59.57 Crore and Rs. 693.25 Crore in FY 2025-26 and FY 2026-27, respectively, against the below 2 mentioned

MEGPTCL True-up Petition for FY22-23 & FY23-24, Provisional True up for FY 2024-25 & ARR for FY25-26 to FY29-30: Data Gaps- Set I

Sr. No.	Particular
	<p>schemes:</p> <ul style="list-style-type: none"> • Installation of Additional 765/400kV ICT & associated bays at Tiroda Substation – Rs. 363.71 Crore • Installation of Additional 765/400kV ICT & associated bays at Akola-II Substation – Rs. 275.44 Crore <p>In this regard, MEGPTCL should confirm whether the above proposed schemes are part of the STU Plan, and whether they have been approved by the STU, in accordance with the provisions of the MERC Capital Expenditure Approval Regulations, 2022.</p>
R. 20	<p>The Hon'ble Commission has approved amendment to its license No. 1 of 2010 on 04.07.2017 to install one Additional ICT of 1500 MVA each at Tiroda and Akola Sub-Station.</p> <p>The proposed scheme of Installation of Additional 765/400kV ICT & associated bays at Tiroda & Akola-II S/s is also approved by Maharashtra Transmission Committee vide its 11th MTC meeting held on 16.10.2024. The relevant part of the same is provided as an Annexure D4. Further, MTC has directed the transmission scheme for approval in Grid Coordination Committee. The scheme will be submitted for inclusion in the STU plan after approval from GCC.</p> <p>Petitioner has also submitted Detailed Project Report for the Installation of Additional 765/400kV ICT & associated bays at Tiroda & Akola-II S/s vide its letter dated 24.09.2024.</p>
Q. 21	<p>MEGPTCL should submit the basis for escalation of 6.52% assumed for calculation of interest on Contingency Reserve under NTI for each year of the MYT Control Period.</p>
R. 21	<p>MEGPTCL has considered latest rate of interest on investment of its treasury bills which is of 6.52% and hence considered the same for calculation of interest on contingency reserves of future period.</p>
Q. 22	<p>As regards additional capitalization for EKTUNI S/S as claimed by MSETCL for Rs. 31.31 Crore:</p> <ol style="list-style-type: none"> MEGPTCL should submit the documentary evidence and justification for amount of Rs. 7.19 Crore (Rs. 47.57-Rs. 40.38) claimed by MSETCL. Documentary proof that the scheme against which capitalisation is claimed has been put to use.
R. 22	<ol style="list-style-type: none"> Amount of Rs. 7.19 Crore (Rs. 47.57-Rs. 40.38) claimed by MSETCL is on account of applicable GST. The same is indicated in the additional demand note raised by MSETCL. Additional demand note raised by MSETCL is against construction of bays

*MEGPTCL True-up Petition for FY22-23 & FY23-24, Provisional True up for FY 2024-25
& ARR for FY25-26 to FY29-30: Data Gaps- Set I*

<u>Sr. No.</u>	<u>Particular</u>
	at Ektuni S/S for which COD was already approved by the Hon'ble Commission.

Annexure D1

Maharashtra Eastern Grid Power Transmission Company Limited

**COST AUDIT REPORT
(2022-2023)**

**K V Melwani & Associates
Cost Accountants**

P/2, 5th Floor, Kalyani Apartments,
4/A, Sattar Taluka Society,
P.O.Navjivan,
Ahmedabad :- 380 014.
Email :- koushlya2001@yahoo.co.in



K V Melwani & Associates

COST ACCOUNTANTS

P/2, 5th Floor, Kalyani Apartments,
4/A, Sattar Taluka Soc., Nr. C. U. Shah College,
Off Income-tax, P. O. Navjivan,
Ahmedabad - 380 014.

email : koushlya2001@yahoo.co.in

Phone (O): +91-79-27540483

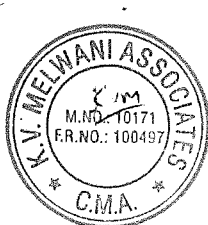
: +91-79-27543090

(M) 93761 61612

COST AUDIT REPORT

We, K V Melwani & Associates, Cost Accountants having been appointed as Cost Auditor(s) under sub-section(3) of section 148 of the Companies Act, 2013 (18 of 2013) of **MAHARASHTRA EASTERN GRID POWER TRANSMISSION COMPANY LIMITED** having its registered office at "Adani Corporate House", Shantigram, Near Vaishno Devi Circle, S.G.Highway, Khodiyar, Ahmedabad – 382 421, Gujarat, India (hereinafter referred to as the Company), have audited the Cost Records maintained under section 148 of the said Act, in compliance with the cost auditing standards, in respect of **Transmission of Electricity** for the year ended **31st March, 2023** maintained by the Company and report, in addition to our observations and suggestions in Para 2.

- i. We have obtained all the information and explanations, which to the best of our knowledge and belief were necessary for the purpose of this audit.
- ii. In our opinion, proper Cost Records, as per Rule 5 of the Companies (Cost Records and Audit) Amendment Rules, 2014 have been maintained by the Company in respect of service under reference.
- iii. As there are no branches of the Company the returns adequate for the purpose of the Cost Audit are not required.
- iv. In our opinion and to the best of our information, the said books and records give the information required by the Companies Act, 2013, in the manner so required.
- v. In our opinion, the company has adequate system of internal audit of cost records which in our opinion is commensurate to its nature and size of its business. Our opinion is based on the information and explanation provided by the management.
- vi. In our opinion, information, statements in the annexure to this cost audit report gives a true and fair view of the cost of rendering of service, cost of sales, margin and other information relating to service under reference.
- vii. Detailed service cost statements and schedules thereto in respect of service under reference of the Company duly audited and certified by us are kept in the Company.





K V Melwani & Associates
COST ACCOUNTANTS

P/2, 5th Floor, Kalyani Apartments,
4/A, Sattar Taluka Soc., Nr. C. U. Shah College,
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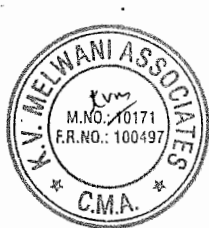
2. Observations and suggestions, if any, of the Cost Auditor, relevant to the Cost Audit :

(A) Observations and suggestions :

We have not come across any significant variation in the F.Y. 2022-23 figures over the previous year 2021-22 figures for other items of the Annexure to the Cost Audit Report where reporting is made by the Company as a whole except minor variations which have been justified by the management.

(B) Notes to Annexure to Cost Audit Report :

- a. The audit has been conducted in compliance with the Standards on Cost Auditing so far approved by the Ministry Of Corporate Affairs (SCA 101-104).
- b. The Available Capacity i.e. Installed Capacity shown in Part - C(1) in respect of the Activity is as certified by the management.
- c. The company as a whole has carried out the transaction with related parties which are at arm's length price. Para 5 of Part D of Annexure to the Cost Audit Report is prepared in line with the information reported in the audited Annual Report of the company. Normal Price and basis adopted to determine the normal price is as certified by the management. However detailed verification of the same has not been carried out by us.
- d. Reconciliation of Indirect Taxes (for the Company as a whole) (Part D-6) the figure are based on the monthly returns submitted by the Company to various authorities and Prima facie reviewed by us. This includes indirect taxes paid by the company covering CGST/IGST/SGST, RCM etc. However we have not carried out detailed audit of the same.





K V Melwani & Associates
COST ACCOUNTANTS

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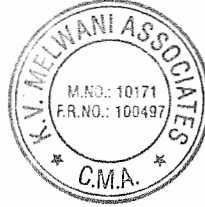
email : koushlya2001@yahoo.co.in
Phone (O): +91-79-27540483
: +91-79-27543090
(M) 93761 61612

3. Unit of Measurement (UOM)

The Unit of Measurement (UOM) as per Custom Tariff Act, 1975 is not applicable as it is not provided for any service and the relevant service industry is Transmission

For,

K V Melwani & Associates
Cost Accountants
F.R.N. 100497



Koushlya Melwani
Koushlya Melwani
Proprietor
M. No.10171

UDIN : 2310171A16L38LT6WF

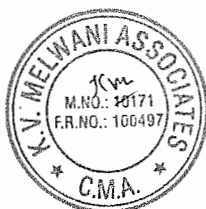
Date : 07/08/2023
Place: Ahmedabad

Annexure To The Cost Audit Report

PART - A

1. General Information :-

1	Corporate Identity Number or Foreign Company Registration Number	U40100GJ2010PLC059593
2	Name of Company	Maharashtra Eastern Grid Power Transmission Company Limited
3	Address of Registered Office or of Principal Place of Business In India of Company	"Adani Corporate House", Shantigram, Near Vaishno Devi Circle, S.G.Highway, Khodiyar, Ahmedabad – 382 421.
4	Address of Corporate Office of Company	"Adani Corporate House", Shantigram, Near Vaishno Devi Circle, S.G.Highway, Khodiyar, Ahmedabad – 382 421.
5	E-Mail Address of The Company	prashantkumar.pancholi@adani.com
6	Date of Beginning of Reporting Financial Year	01/04/2022
7	Date of End of Reporting Financial Year	31/03/2023
8	Date of Beginning of Previous Financial Year	01/04/2021
9	Date of End of Previous Financial Year	31/03/2022
10	Level of Rounding Used in Cost Statements (in INR)	Crores
11	Whether Indian Accounting Standards are applicable to the Company	Yes
12	Number of Cost Auditors For Reporting Period	1
13	Date of Board of Director's Meeting In Which Annexure To Cost Audit Report Was Approved	27/07/2023
14	Whether Cost Auditors Report Has Been Qualified or Has Any Reservations or Contains Adverse Remarks	No
15	Consolidated Qualifications, Reservations or Adverse Remarks of All Cost Auditors	Nil
16	Consolidated Observations or Suggestions of All Cost Auditors	The observations of the single cost auditor are provided in the cost audit report (FORM CRA-3).
17	Whether Company Has Related Party Transactions For Sale or Purchase of Goods or Services	Yes



2. General Details of Cost Auditor

1	Whether Cost Auditor is Lead Auditor	Yes
2	Category of Cost Auditor	Proprietor
3	Firm's Registration Number	100497
4	Name of Cost Auditor/Cost Auditor's Firm	K V Melwani & Associates
5	PAN of Cost Auditor/Cost Auditor's Firm	ACBPM7559F
6	Address of Cost Auditor or Cost Auditor's Firm	P/2, Kalyani Apartments, 4A, Sattar Taluka Society, Nr. C. U. Shah College, P.O. Navjivan, Ahmedabad - 380 014.
7	Email Id of Cost Auditor or Cost Auditor's Firm	koushlya2001@yahoo.co.in
8	Membership Number of Member Signing Report	10171
9	Name of Member Signing Report	Koushlya Vijay Melwani
10	Name(S) of Product(S) or Service(S) With CTA Heading	Not Applicable
11	SRN Number of Form CRA-2	F02282259
12(a)	Number of audit committee meeting (s) during the year for which Cost Auditor was invited.	Nil
12(b)	Number of audit committee meeting(s) attended by cost auditor during year	Nil
13	Date of Signing Cost Audit Report And Annexure By Cost Auditor	07/08/2023
14	Place of Signing Cost Audit Report And Annexure By Cost Auditor	Ahmedabad



3. Cost Accounting Policy :

- 1) The company is engaged in the activity of electric power transmission through establishing or using stations, sub stations and transmission lines. The Company operates Tiroda – Aurangabad 765 KV Transmission System of 1217 Ckms from Tiroda to Aurangabad in the State of Maharashtra. The Company controls its operations and activities through SAP system. The data is collected from various modules and compiled to determine the Cost of Services provided and Cost of Sales of Transmission of Power Services. The cost statements are in the line with the nature of activity and methodology is reasonably correct for cost determination of the transmission services as per Form CRA -1 required under Companies (Cost Records and Audit) Amendment Rules, 2014. The various items of Incomes and Expenses and other details of financial records are taken as relevant basis for its inclusion in Cost Accounts.
- a) The various cost centres identified are Transmission Service, Operation & Maintenance Service, Administrative, Selling & Financial Overheads.
- b) The transmission costs i.e. utilities, direct employee cost, consumables, stores and spares, repairs and maintenance, depreciation and other overheads are analysed based on the nature of expenses and allocated to various cost centres. The other expenses are then analysed and classified according to the functions, grouped under the administrative, selling and distribution and financial overheads.
- c) Being engaged in single activity all transmission costs allocated are fully absorbed in the cost of service.
- d) Depreciation is recognized based on the cost of assets (other than land) less their residual values over their useful lives. Being a regulated industry depreciation in respect of assets related to electricity transmission business covered under Part B of Schedule II of the Companies Act, 2013, has been provided on the straight line method (considering a salvage value of 5%) at the rates and using the methodology as notified by respective regulators. Amortisation of intangible assets is recognized on a straight – line basis over their estimated useful lives and the computer software is amortised on straight line method over the period of 5 years. Depreciation charged to each asset is allocated to the respective cost centre. The Depreciation on ROU Assets per Ind AS 116 is not considered in cost.
- e) Being service industry there are no by products/ joint products or services, scrap, wastage etc.
- f) Being a service industry the valuation of stock of finished goods and work in progress is not applicable.
- g) The related party transactions are pertaining to service received and service rendered and the basis adopted to determine the normal price for the same is Comparable Uncontrolled Price Method / Actual Cost Method.
- h) Abnormal, non-recurring costs and other non-cost items are omitted from Cost Records.
- i) No other relevant cost accounting policy is adopted by the Company.



- 2) There is no change in the cost accounting policy during the current financial year as compared to the previous year.
- 3) The Budgetary control system of the Company is as summarised below:

- **Budgetary Control System for Revenue Expenditure & Operations & Management:**

For revenue expenditure, the revenue budget is approved and the same is allocated in Fund Management (FM) Module in SAP against each Fund Centre and commitment item. All variable expenses are booked against specific cost centres. It is an automated system so no expense can be booked higher than the approved budget amount.

Further MIS reports are prepared on monthly basis showing the comparison of actual with the budgeted amount. These reports are presented to the management for their review and comments. There is a periodic meeting of senior executives to discuss such MIS reports and variances in detail and the reasons for the variances are analysed. Thereafter the appropriate measures are recommended and adopted which works as the controlling mechanism.

Cost Auditor Observation:

The company has a well laid down budgetary control system.

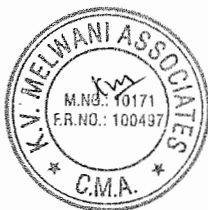
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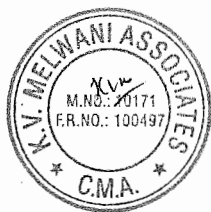
Maharashtra Eastern Grid Power Transmission Company Limited						
"Adani Corporate House"						
Shantigram, Near Vaishno Devi Circle, S.G.Highway,						
Khodiyar, Ahmedabad - 382 421.						
PART - A						
4	SERVICE DETAILS (For The Company As A Whole)					
Sr. No.	Name Of Product(s)/Service(s)	UOM	CTA Heading (Wherever Applicable)	Whether Covered Under Cost Audit Yes/ No	Net Operational Revenue (Net Of Taxes, Duties Etc.)	
					2022-23 (₹ In Crores)	2021-22 (₹ In Crores)
1	Transmission of Electricity	Ckm	N.A.	Yes	1 479.86	1 339.77
	Total Net Operational revenue of Service				1 479.86	1 339.77
	Other Operative Incomes of the Company				0.01	0.39
	Total Operative Incomes of the Company				1 479.87	1 340.16
	Other Incomes of Company				12.82	20.91
	Total Revenue As Per Financial Accounts				1 492.69	1 361.07
	Exceptional, Extra Ordinary and Other Comprehensive income, if Any					
	(i) Exceptional and Extra Ordinary income				-	-
	(ii) Other Comprehensive income, if Any				0.15	(0.43)
	Total Revenue Including Exceptional, Extra Ordinary and Other Comprehensive Income, If Any				1 492.84	1 360.64
	Turnover as per Excise / Service Tax / GST records (Note)				952.19	958.51

Reconciliation of Difference between Turnover As Per Financial Books and Turnover As Per GST Records

Particulars	2022-23 (₹ In Crores)
As per Books Turnover	1 479.87
Add : Scrap Sales	0.20
Less : Unbilled Incentive	(527.44)
Less : Other	(0.44)
As per GST Turnover	952.19



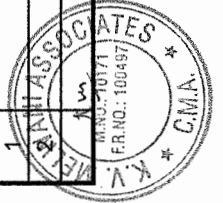
Maharashtra Eastern Grid Power Transmission Company Limited				
"Adani Corporate House" Shantigram, Near Vaishno Devi Circle, S.G.Highway, Khodiyar, Ahmedabad - 382 421.				
PART - C				
1	QUANTITATIVE INFORMATION			
Name Of Service		Transmission of Electricity		
Service Code		Not Applicable		
Sr. No.	Particulars	Unit Of Measurement	2022-23	2021-22
1	Available Capacity			
	(a) Installed Capacity	Ckm	N. A.	N. A.
	(b) Capacity Enhanced During The Year, If Any			
	(c) Total Available Capacity	Ckm	N. A.	N. A.
2	Actual Service Provided			
	(a) Own Service	Ckm	1 217.00	1 217.00
	(b) Service Under Contractual Arrangments			
	(c) Outsourced Services	Ckm		
	(d) Total Services	Ckm	1 217.00	1 217.00
3	Total Service Provided As Per Service Tax Records / GST Records		N. A.	N. A.
4	Capacity Utilization (In-House)		-	-
5	Other Adjustments			
	(a) Self or Captive Consumption	Ckm	-	-
	(b) Other Quantitative Adjustments, if any			
	(c) Total Other Adjustments	Ckm	-	-
6	Total Available Services for Sale [2(d)+5(c)]		1 217.00	1 217.00
7	Actual Services Sold			
	(a) Services Rendered - Domestic	Ckm	1 217.00	1 217.00
	(b) Services Rendered - Export			
	(c) Total Services Rendered	Ckm	1 217.00	1 217.00



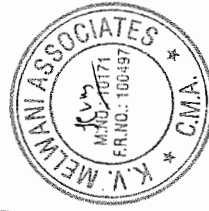
Maharashtra Eastern Grid Power Transmission Company Limited					
"Adani Corporate House" Shantigram, Near Vaishno Devi Circle, S.G.Highway, Khodiyar, Ahmedabad - 382 421.					
PART - C					
2	ABRIDGED COST STATEMENT				
Name Of Service		Transmission of Electricity			
Service Code (If Applicable)		Not Applicable			
Unit Of Measure		Ckm			
	Year	Services Provided	Captive Consumption	Other Adjustments	Services Rendered
	2022-23	1 217.00	-	-	1 217.00
	2021-22	1 217.00	-	-	1 217.00
Sr. No.	Particulars	2022-23		2021-22	
		Amount (₹ In Crores)	Rate/Unit Amount (₹)	Amount (₹ In Crores)	Rate/Unit Amount (₹)
1	Materials Consumed (Details as per Para 2A)	-	-	-	-
2	Utilities (Details as per Para 2B)	0.37	3 015.63	0.32	2 637.63
3	Direct Employees Cost	85.56	7 03 062.03	65.37	5 37 154.21
4	Direct Expenses	5.99	49,194.06	5.99	49 232.16
5	Consumable Stores & Spares	0.64	5 249.90	0.34	2 826.01
6	Repairs & Maintenance	9.19	75 490.89	9.44	77 563.68
7	Quality Control Expenses	-	-	-	-
8	Research & Development Expenses	-	-	-	-
9	Technical Know-How Fee / Royalty	-	-	-	-
10	Depreciation / Amortization	306.68	25 20 003.40	306.26	25 16 555.17
11	Other Overheads	15.93	1 30 932.14	12.22	1 00 423.02
12	Industry Specific Operating Expenses (Details as per Para 2C)	-	-	-	-
13	Total (1 To 12)	424.36	34 86 948.05	399.94	32 86 391.88
14	Less: Credits For Recoveries, If Any	-	-	-	-
15	Cost Of Service Provided (13-14)	424.36	34 86 948.05	399.94	32 86 391.88
16	Cost of Outsourced / Contractual Services	-	-	-	-
17	Total Services Available (15 + 16)	424.36	34 86 948.05	399.94	32 86 391.88
18	Less: Self / Captive Consumption	-	-	-	-
19	Other Adjustments (If Any)	-	-	-	-
20	Cost Of Services Sold (17-18 to 19)	424.36	34 86 948.05	399.94	32 86 391.88
21	Administrative Overheads	23.78	1 95 427.90	26.40	2 16 943.63
22	Selling & Distribution Overhead	0.11	920.51	-	-
23	Cost Of Sales Before Finance Charges (20 to 22)	448.25	36 83 296.46	426.34	35 03 335.51
24	Finance Cost	202.07	16 60 435.44	244.82	20 11 648.32
25	Cost Of Sales (23 + 24)	650.32	53 43 731.90	671.16	55 14 983.83
26	Net Sales Realization (Net of Taxes And Duties)	1 479.86	1 21 59 894.21	1 339.77	1 10 08 806.99
27	Margin [Profit / (Loss) As Per Cost Accounts] (26 - 25)	829.54	68 16 162.31	668.61	54 93 823.16



Maharashtra Eastern Grid Power Transmission Company Limited									
"Adani Corporate House" Shantigram, Near Vaishno Devi Circle, S.G.Highway, Khodiyar, Ahmedabad - 382 421.									
PART - C									
Details Of Materials Consumed									
2A									
Name Of Service		Transmission of Electricity							
Service Code (If Applicable)		Not Applicable							
Sr. No.	Description Of Material	Category	UOM	2022-23		2021-22			
				Quantity	Rate/Unit Amount (₹)	Amount (₹ In Crores)	Quantity	Rate/Unit Amount (₹)	Amount (₹ In Crores)
1			-	-	-	-	-	-	-
2				Not Applicable		-	Not Applicable		-
				-	-	-	-	-	-
Details Of Utilities Consumed									
2B									
Name Of Service		Transmission of Electricity							
Service Code (If Applicable)		Not Applicable							
Sr. No.	Description Of Utilities Consumed	UOM	2022-23		2021-22				
			Quantity	Rate/Unit Amount (₹)	Amount (₹ In Crores)	Quantity	Rate/Unit Amount (₹)	Amount (₹ In Crores)	
1	Electricity Expenses -Operation	KWH	1 66 912.50	19.91	0.33	1 70 183.00	15.90	0.27	
2	Consumption of Fuel	Ltr	4 667.00	95.87	0.04	5 275.35	95.63	0.05	
	Total				0.37			0.32	
Note: Electricity expenses are net of captive solar power generation credit.									
Details Of Industry Specific Operating Expenses									
2C									
Name Of Service		Transmission of Electricity							
Service Code (If Applicable)		Not Applicable							
Sr. No.	Description Of Industry Specific Operating Expenses						2022-23		2021-22
							Amount (₹ In Crores)	Amount (₹ In Crores)	
1							Not Applicable		-
							Not Applicable		-



Maharashtra Eastern Grid Power Transmission Company Limited							
"Adani Corporate House"							
Shantigram, Near Vaishno Devi Circle, S.G.Highway,							
Khodiyar, Ahmedabad - 382 421.							
PART - D							
PRODUCT AND SERVICE PROFITABILITY STATEMENT (For Audited Products / Services)							
1							
			2022-23		2021-22		
Sr. No.	Particulars	Sales (₹ In Crores)	Cost of Sales (₹ In Crores)	Margin (₹ In Crores)	Sales (₹ In Crores)	Cost of Sales (₹ In Crores)	Margin (₹ In Crores)
1	Transmission of Electricity	1 479.86	650.32	829.54	1 339.77	671.16	668.61
	Total	1 479.86	650.32	829.54	1 339.77	671.16	668.61



Maharashtra Eastern Grid Power Transmission Company Limited			
"Adani Corporate House"			
Shantigram, Near Vaishno Devi Circle, S.G.Highway, Khodiyar, Ahmedabad - 382 421.			
2	PROFIT RECONCILIATION (For The Company As A Whole)		
Sr. No.	Particulars	2022-23 (₹ In Crores)	2021-22 (₹ In Crores)
1	Profit Or Loss As Per Cost Accounts		
	(a) For The Audited Services(s)		
	Transmission of Electricity	829.54	668.61
	(b) For The Un - Audited Product(s) / Service(s)	-	-
	Total Profit / (Loss) As Per Cost Accounts	829.54	668.61
2	Add: Incomes Not Considered In Cost Accounts		
	(a) Contingency Reserves Income	-	2.19
	(b) Inc- Services (Reimbursement of Expenses)	0.01	11.02
	(c) Income From Sale of Inventory	-	0.13
	(d) Interest Income- Group CMP	6.78	-
	(e) Interest Income-Others (MP)	5.49	18.64
	(f) Interest Received - TDR / DEPOSIT	-	0.00
	(g) Miscellaneous Income	0.55	0.08
	(h) Round Off	(0.02)	0.01
	Total Of Incomes Not Considered In Cost Accounts	12.81	32.07
3	Less: Expenses Not Considered In Cost Accounts		
	(a) Actual Lease Payment Not taken in Financial Statement	(5.99)	(5.99)
	(b) Corporate Social Responsibility Expenses	8.09	0.72
	(c) Donation-Deduct u/s 80G	2.50	4.75
	(d) Foreign Exchange Fluctuation Loss	0.01	0.00
	(e) IndAS-Depreciation-Right of Use of Leases	3.63	3.63
	(f) IndAS-Dep-ROU- Building	0.11	0.11
	(g) IndAS-Dep-ROU- Computer Equipment	0.30	0.30
	(h) IndAS-Gratuity Employee	0.18	(0.52)
	(i) IndAS-Inc-Lease	-	10.76
	(j) INDAS-Interest on Lease Liability	3.80	4.06
	(k) Interest-Income Tax	-	0.32
	(l) Miscellaneous Expenditure-Donation	1.00	-
	(m) Sundry Balance Written Off/Back	(0.00)	0.00
	Total Of Expenses Not Considered In Cost Accounts	13.63	18.14
4	Difference In Valuation Of Stock Between Financial Accounts And Cost Accounts	-	-
5	Other Adjustments, If Any		
6	Profit / (Loss) As Per Financial Accounts (excluding Other Comprehensive Income for Companies following IndAs)	828.72	682.54

Note: Figures below ₹ 50,000 are denominated by ₹ 0.00 Crs.

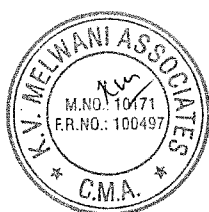


Maharashtra Eastern Grid Power Transmission Company Limited			
"Adani Corporate House"			
Shantigram, Near Vaishno Devi Circle, S.G.Highway, Khodiyar, Ahmedabad - 382 421.			
3	VALUE ADDITION AND DISTRIBUTION OF EARNINGS (For The Company As A Whole)		
Sr. No.	Particulars	2022-23 (₹ In Crores)	2021-22 (₹ In Crores)
	Value Addition:		
1	Revenue from Operations	1 479.87	1 340.16
2	Less: Taxes and Other Duties	-	-
3	Net Revenue from Operations	1 479.87	1 340.16
4	Add: Export Incentives	-	-
5	Add / Less : Adjustments In Stocks	-	-
6	Less Cost Of Bought Out Inputs :		
	(a) Cost Of Materials Consumed	-	-
	(b) Process Materials / Chemicals	-	-
	(c) Stores & Spares Consumed	0.64	0.34
	(d) Utilities (e.g. power & fuel)	1.49	1.15
	(e) Others, if any (Expenses Considered in Cost)	44.62	34.31
	Total Cost Of Bought Out Inputs	46.75	35.80
7	Value Added	1 433.12	1 304.36
8	Add : Income From Any Other Sources	12.82	20.91
9(i)	Exceptional & Extra Ordinary Income	-	-
9(ii)	Other Comprehensive Income, if any	0.15	(0.43)
10	Earnings Available For Distribution	1 446.09	1 324.84
	Distribution Of Earnings To:		
1	Employees As Salaries & Wages , Retirement Benefits,etc.	86.45	65.31
2	Shareholders As Dividend	-	-
3	Company As Retained Funds	997.17	874.99
4	Government As Taxes (Specify)	144.82	119.31
5	Exceptional and Extra Ordinary Expenses, if any	-	-
6	Others (Expenses Not Considered in Cost & Finance cost)	217.65	265.23
7	Total Distribution Of Earnings	1 446.09	1 324.84



Maharashtra Eastern Grid Power Transmission Company Limited				
"Adani Corporate House"				
Shantigram, Near Vaishno Devi Circle, S.G.Highway, Khodiyar, Ahmedabad - 382 421.				
PART - D				
4	FINANCIAL POSITION AND RATIO ANALYSIS (For The Company As A Whole)			
Sr. No.	Particulars	Units	2022-23	2021-22
A.	Financial Postion			
1	Share Capital	(₹ In Crores)	707.50	707.50
2	Reserves and Surplus	(₹ In Crores)	3 037.25	2 353.20
3	Long Term Borrowings	(₹ In Crores)	1 493.14	1 063.63
4	(a) Gross Fixed Assets (Including CWIP)	(₹ In Crores)	5 743.00	5 734.30
	(b) Net Fixed Assets (Including CWIP)	(₹ In Crores)	3 272.35	3 576.78
5	(a) Current Assets	(₹ In Crores)	893.40	254.09
	(b) Less: Current Liabilities	(₹ In Crores)	186.98	737.31
	(c) Net Current Assets	(₹ In Crores)	706.43	(483.23)
6	Capital Employed	(₹ In Crores)	3 593.30	3 756.67
7	Net Worth (A1+A2)	(₹ In Crores)	3 744.75	3 060.70
B.	Financial Performance			
1	Value Added	(₹ In Crores)	1433.12	1304.36
2	Net Revenue From Operations Of Company	(₹ In Crores)	1 479.87	1 340.16
3	Profit / (Loss) Before Tax (PBT)	(₹ In Crores)	828.72	682.54
C.	Profitability Ratios			
1	PBT To Capital Employed (B3/A6)	%	23.06	18.17
2	PBT To Net Worth (B3/A7)	%	22.13	22.30
3	PBT To Value Added(B3/ B1)	%	57.83	52.33
4	PBT To Net Revenue from Operations (B3/ B2)	%	56.00	50.93
D.	Other Financial Ratios			
1	Debt-Equity Ratio (A3/(A7)		0.40	0.35
2	Current Assets To Current Liabilities (A5(a)/A5(b))		4.78	0.34
3	Value Added To Net Revenue from Operations (B1/B2)	%	96.84	97.33
E.	Working Capital Ratios			
1	Raw Materials Stock To Consumption	Months	-	-
2	Stores & Spares To Consumption	Months	54.31	71.53

Note : The ratios are computed as per Form CRA-3 pursuant to Rule 6(4) of the Companies (Cost Records and Audit) Rules 2014.



Maharashtra Eastern Grid Power Transmission Company Limited

"Adani Corporate House"
Shanigram, Near Vaishno Devi Circle, S.G.Highway,
Khodiyar, Ahmedabad - 382 421.

PART - D										
RELATED PARTY TRANSACTION (For The Company As A Whole)										
5	Sr.No.	Name & Address Of The Related Party	CIN/PAN	Name of the Product / Service	Nature of Transaction (Sale, Purchase, Service Received/ Service Rendered etc.)	Quantity	Transfer Price (₹)	Amount (₹ In Crores)	Normal Price (₹)	Basis Adopted to determine the Normal Price
1		Adani Infrastructure Management Service Limited	U74999GJ2017PLC097813	O&M Agreement Charges	Services Received	-	-	7.17	-	Comparable Uncontrolled Price Method
2		Adani Enterprise Limited	L51100GJ1993PLC019067	Professional and Consultancy fees	Services Received	-	-	12.36	-	Comparable Uncontrolled Price Method
3		Belvedere Golf And Country Club Private Limited	U92412GJ2008PTC055617	Reimbursement of the expenses	Services Received	-	-	0.26	-	Any Other Method (Note-1)
4		Adani Power Mundra Limited	U40300GJ2015PLC082295	Reimbursement of the expenses	Services Received	-	-	0.01	-	Any Other Method (Note-1)
5		Adani Total Gas Limited (Note-2)	L40100GJ2005PLC046553	Reimbursement of the expenses	Services Received	-	-	0.00	-	Any Other Method (Note-1)
6		Adani Transmission Step-One Limited	U40108GJ2020PLC116749	Interest Expenses	Services Received	-	-	98.27	-	Any Other Method (Note-1)
7		Adani Transmission Limited	U40101GJ2013PLC077700	Interest Expenses	Services Received	-	-	90.07	-	Any Other Method (Note-1)
8		Adani Infrastructure Management Service Limited	U74999GJ2017PLC097813	Repairs & Maintenance	Services Received			0.28	-	Comparable Uncontrolled Price Method
9		Adani Transmission Limited	U40101GJ2013PLC077700	Interest Income	Services Rendered			6.78	-	Comparable Uncontrolled Price Method
10		Adani Ports And Special Economic Zone Ltd	L63090GJ1998PLC034182	Lease Rent	Services Received	-	-	3.56	-	Comparable Uncontrolled Price Method
11		Adani Estate Management Private Limited	U45200GJ2005PTC047086	Staff Welfare Expenses	Services Received	-	-	0.02	-	Comparable Uncontrolled Price Method
12		Adani Infrastructure Management Service Limited	U74999GJ2017PLC097813	Equipment Hire Charges	Services Rendered	-	-	0.00	-	Comparable Uncontrolled Price Method
13		Rajpur-Rajnandgaon-Warora Transmission Limited	L40100GJ2005PLC046553	Equipment Hire Charges	Services Rendered	-	-	0.01	-	Comparable Uncontrolled Price Method
14		Rajpur-Rajnandgaon-Warora Transmission Limited	L40100GJ2005PLC046553	Reimbursement of the expenses received	Services Received	-	-	0.01	-	Comparable Uncontrolled Price Method
15		Adani Institute For Education & Research	U80903GJ2014NPL081534	Training Expenses-Behavioural	Services Received	-	-	0.02	-	Comparable Uncontrolled Price Method
16		Adani Hospitals Mundra Private Limited	U85110GJ2013PTC077422	Reimbursement of the expenses received	Services Received	-	-	0.03	-	Comparable Uncontrolled Price Method

Note 1 : Actual Transaction Value.

Note 2 : Figures below ₹ 50,000 are denominated by ₹ 0.00 Crs.



Maharashtra Eastern Grid Power Transmission Company Limited							
"Adani Corporate House"							
Shantigram, Near Vaishno Devi Circle, S.G.Highway,							
Khodiyar, Ahmedabad - 382 421.							
Reconciliation of Indirect Taxes (for the company as a whole)							
Particulars	Taxable Value/ Assessable Value	Excise Duty /VAT, CST, Cess Etc./ Other State Taxes, if any	Goods & Service Tax				Cess and Others
			CGST	SGST/UTGST	IGST		
	(₹ In Crores)	(₹ In Crores)	(₹ In Crores)	(₹ In Crores)	(₹ In Crores)	(₹ In Crores)	(₹ In Crores)
Sr. No. Duties/Taxes Payable							
Excise Duty							
1 Domestic	-	-	-	-	-	-	-
2 Export	-	-	-	-	-	-	-
3 Stock Transfers	-	-	-	-	-	-	-
4 Others, if any	-	-	-	-	-	-	-
5 Total Excise Duty (1 to 4)	-	-	-	-	-	-	-
6 VAT,CST,Cess etc.	-	-	-	-	-	-	-
7 Other State Taxes, If any	-	-	-	-	-	-	-
Goods & Service Tax							
8 Outward Taxable Supplies (Other than zero rated, Nil Rated and Exempted)	0.21	-	0.02	0.02	0.00	-	-
9 Outward Taxable Supplies (zero rated)	-	-	-	-	-	-	-
10 Inward Supplies (liable to Reverse Charge)	2.80	-	0.05	0.05	0.24	-	-
11 Other Outward Supplies (Nil Rated, Exempted)	951.98	-	-	-	-	-	-
12 NON-GST Outward Supplies	-	-	-	-	-	-	-
13 Total (8 to 12)	954.99	-	0.07	0.07	0.24	-	-
14 Total Duties / Taxes Paid (5+6+7+13)	954.99	-	0.07	0.07	0.24	-	-
Duties/ Taxes Paid [by Utilisation of Input Tax Credit and Payment through Cash Ledger, as the case may be]							
Input Tax Credit Utilised							
15 CGST / CENVAT	-	-	0.02	-	0.00	-	-
16 SGST / UTGST / VAT	-	-	-	0.02	-	-	-
17 IGST	-	-	-	-	-	-	-
18 Cess	-	-	-	-	-	-	-
19 Transitional Credit	-	-	-	-	-	-	-
20 Others, if any	-	-	-	-	-	-	-
21 Total Input Tax Credit Utilised (15 to 20)	-	-	0.02	0.02	0.00	-	-
22 Payment through Cash Ledger	-	-	0.05	0.05	0.24	-	-
23 Total Duties / Taxes Paid (21+22)	-	-	0.07	0.07	0.24	-	-
Difference between Taxes Paid and Payable (14-23)	-	-	-	-	-	-	-
24 Interest / Penalty / Fines Paid	-	-	-	-	-	-	-

K V Melwani & Associates

F. R. No. 100497

Cost Accountants

Koushlya Melwani

Koushlya Vijay Melwani
Proprietor

M. No. 10171

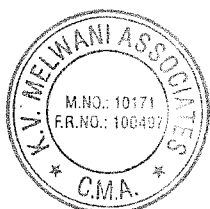
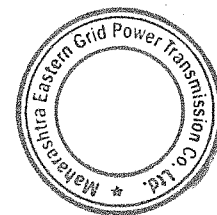
UDIN : 2310171A16L38LT6WF

For And On Behalf Of The Board

Maharashtra Eastern Grid Power Transmission Company Limited

Rohit Soni
Director

DIN : 09336186



Annexure D2

Maharashtra Eastern Grid Power Transmission Company Limited

**COST AUDIT REPORT
(2023-2024)**

**K V Melwani & Associates
Cost Accountants**

P/2, 5th Floor, Kalyani Apartments,
4/A, Sattar Taluka Society,
P.O.Navjivan,
Ahmedabad :- 380 014.
Email :- koushlya2001@yahoo.co.in



K V Melwani & Associates

COST ACCOUNTANTS

P/2, 5th Floor, Kalyani Apartments,
4/A, Sattar Taluka Soc., Nr. C. U. Shah College,
Off Income-tax, P. O. Navjivan,
Ahmedabad - 380 014.

email : koushlya2001@yahoo.co.in
Phone (O): +91-79-27540483
: +91-79-27543090
(M) 93761 61612

COST AUDIT REPORT

We, **K V Melwani & Associates , Cost Accountants** having been appointed as Cost Auditor(s) under sub-section(3) of section 148 of the Companies Act, 2013 (18 of 2013) of **MAHARASHTRA EASTERN GRID POWER TRANSMISSION COMPANY LIMITED** having its registered office at "**Adani Corporate House**", **Shantigram, Near Vaishno Devi Circle, S.G.Highway, Khodiyar, Ahmedabad – 382 421, Gujarat, India** (hereinafter referred to as the Company), have audited the Cost Records maintained under section 148 of the said Act, in compliance with the cost auditing standards, in respect of **Transmission of Electricity** for the year ended **31st March, 2024** maintained by the Company and report, in addition to our observations and suggestions in Para 2.

- i. We have obtained all the information and explanations, which to the best of our knowledge and belief were necessary for the purpose of this audit.
- ii. In our opinion, proper Cost Records, as per Rule 5 of the Companies (Cost Records and Audit) Amendment Rules, 2014 have been maintained by the Company in respect of service under reference.
- iii. As there are no branches of the Company the returns adequate for the purpose of the Cost Audit are not required.
- iv. In our opinion and to the best of our information, the said books and records give the information required by the Companies Act, 2013, in the manner so required.
- v. In our opinion, the company has adequate system of internal audit of cost records which in our opinion is commensurate to its nature and size of its business. Our opinion is based on the information and explanation provided by the management.
- vi. In our opinion, information, statements in the annexure to this cost audit report gives a true and fair view of the cost of rendering of service, cost of sales, margin and other information relating to service under reference.
- vii. Detailed service cost statements and schedules thereto in respect of service under reference of the Company duly audited and certified by us are kept in the Company.





K V Melwani & Associates

COST ACCOUNTANTS

P/2, 5th Floor, Kalyani Apartments,
4/A, Sattar Taluka Soc., Nr. C. U. Shah College,
Off Income-tax, P. O. Navjivan,
Ahmedabad - 380 014.

email : koushlya2001@yahoo.co.in

Phone (O): +91-79-27540483

: +91-79-27543090

(M) 93761 61612

2. Observations and suggestions, if any, of the Cost Auditor, relevant to the Cost Audit :

(A) Observations and suggestions

We have not come across any significant variation in the F.Y. 2023-24 figures over the previous year 2022-23 figures for other items of the Annexure to the Cost Audit Report where reporting is made by the Company as a whole except minor variations which have been justified by the management.

(B) Notes to Annexure to Cost Audit Report :

- a. The audit has been conducted in compliance with the Standards on Cost Auditing so far approved by the Ministry Of Corporate Affairs (SCA 101-104).
- b. The Available Capacity i.e. Installed Capacity shown in Part - C(1) in respect of the Activity is as certified by the management.
- c. The company as a whole has carried out the transaction with related parties which are at arm's length price. Para 5 of Part D of Annexure to the Cost Audit Report is prepared in line with the information reported in the audited Annual Report of the company. Normal Price and basis adopted to determine the normal price is as certified by the management. However detailed verification of the same has not been carried out by us.
- d. Reconciliation of Indirect Taxes (for the Company as a whole) (Part D-6) the figures are based on the monthly returns submitted by the Company to various authorities and Prima facie reviewed by us. This includes indirect taxes paid by the company covering CGST/IGST/SGST, RCM etc. However we have not carried out detailed audit of the same.





K V Melwani & Associates

COST ACCOUNTANTS

P/2, 5th Floor, Kalyani Apartments,
4/A, Sattar Taluka Soc., Nr. C. U. Shah College,
Off Income-tax, P. O. Navjivan,
Ahmedabad - 380 014.

email : koushlya2001@yahoo.co.in
Phone (O): +91-79-27540483
: +91-79-27543090
(M) 93761 61612

3. Unit of Measurement (UOM)

The Unit of Measurement (UOM) as per Custom Tariff Act, 1975 is not applicable as it is not provided for any service and the relevant service industry is Transmission and Distribution of Electricity.



Date : 23/07/2024
Place: Ahmedabad

For,

K V Melwani & Associates
Cost Accountants
F.R.N. 100497

Koushlya Melwani
Koushlya Melwani
Proprietor
M. No.10171
UDIN : 2410171A1MY363LOW5

Annexure To The Cost Audit Report

PART - A

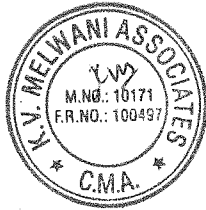
1. General Information :-

1	Corporate Identity Number or Foreign Company Registration Number	U40100GJ2010PLC059593
2	Name of Company	Maharashtra Eastern Grid Power Transmission Company Limited
3	Address of Registered Office or of Principal Place of Business In India of Company	"Adani Corporate House", Shantigram, Near Vaishno Devi Circle, S.G.Highway, Khodiyar, Ahmedabad – 382 421.
4	Address of Corporate Office of Company	"Adani Corporate House", Shantigram, Near Vaishno Devi Circle, S.G.Highway, Khodiyar, Ahmedabad – 382 421.
5	E-Mail Address of The Company	prashantkumar.pancholi@adani.com
6	Date of Beginning of Reporting Financial Year	01/04/2023
7	Date of End of Reporting Financial Year	31/03/2024
8	Date of Beginning of Previous Financial Year	01/04/2022
9	Date of End of Previous Financial Year	31/03/2023
10	Level of Rounding Used in Cost Statements (in INR)	Crores
11	Whether Indian Accounting Standards are applicable to the Company	Yes
12	Number of Cost Auditors For Reporting Period	1
13	Date of Board of Director's Meeting In Which Annexure To Cost Audit Report Was Approved	23/07/2024
14	Whether Cost Auditors Report Has Been Qualified or Has Any Reservations or Contains Adverse Remarks	No
15	Consolidated Qualifications, Reservations or Adverse Remarks of All Cost Auditors	Nil
16	Consolidated Observations or Suggestions of All Cost Auditors	The observations of the single cost auditor are provided in the cost audit report (FORM CRA-3).
17	Whether Company Has Related Party Transactions For Sale or Purchase of Goods or Services	Yes



2. General Details of Cost Auditor

1	Whether Cost Auditor is Lead Auditor	Yes
2	Category of Cost Auditor	Firm
3	Firm's Registration Number	100497
4	Name of Cost Auditor/Cost Auditor's Firm	K V Melwani & Associates
5	PAN of Cost Auditor/Cost Auditor's Firm	ACBPM7559F
6	Address of Cost Auditor or Cost Auditor's Firm	P/2, Kalyani Apartments, 4A, Sattar Taluka Society, Nr. C. U. Shah College, P.O. Navjivan, Ahmedabad - 380 014.
7	Email Id of Cost Auditor or Cost Auditor's Firm	staffkvm@cmamelwani.com
8	Membership Number of Member Signing Report	10171
9	Name of Member Signing Report	Koushlya Vijay Melwani
10	Name(S) of Product(S) or Service(S) With CTA Heading	Transmission Of Electricity
11	SRN Number of Form CRA-2	F62132055
12(a)	Number of audit committee meeting (s) during the year for which Cost Auditor was invited.	Nil
12(b)	Number of audit committee meeting(s) attended by cost auditor during year	Nil
13	Date of Signing Cost Audit Report And Annexure By Cost Auditor	23/07/2024
14	Place of Signing Cost Audit Report And Annexure By Cost Auditor	Ahmedabad



3. Cost Accounting Policy :

- 1) The company is engaged in the activity of electric power transmission through establishing or using stations, sub stations and transmission lines. The Company operates Tiroda – Aurangabad 765 KV Transmission System of 1217 Ckms from Tiroda to Aurangabad in the State of Maharashtra. The Company controls its operations and activities through SAP system. The data is collected from various modules and compiled to determine the Cost of Services provided and Cost of Sales of Transmission of Power Services. The cost statements are in the line with the nature of activity and methodology is reasonably correct for cost determination of the transmission services as per Form CRA -1 required under Companies (Cost Records and Audit) Amendment Rules, 2014. The various items of Incomes and Expenses and other details of financial records are taken as relevant basis for its inclusion in Cost Accounts.
 - a) The various cost centres identified are Transmission Service, Operation & Maintenance Service, Administrative, Selling & Financial Overheads.
 - b) The transmission costs i.e. utilities, direct employee cost, consumables, stores and spares, repairs and maintenance, depreciation and other overheads are analysed based on the nature of expenses and allocated to various cost centres. The other expenses are then analysed and classified according to the functions, grouped under the administrative, selling and distribution and financial overheads.
 - c) Being engaged in single activity all transmission costs allocated are fully absorbed in the cost of service.
 - d) Depreciation is recognized based on the cost of assets (other than land) less their residual values over their useful lives. Being a regulated industry depreciation in respect of assets related to electricity transmission business covered under Part B of Schedule II of the Companies Act, 2013, has been provided on the straight- line method at the rates and using the methodology as notified by respective regulators. Amortisation of intangible assets is recognized on a straight – line basis over their estimated useful lives. Depreciation charged to each asset is allocated to the respective cost centre. The Depreciation on ROU Assets per Ind AS 116 is not considered in cost.
 - e) Being service industry there are no by products/ joint products or services, scrap, wastage etc.
 - f) Being a service industry the valuation of stock of finished goods and work in progress is not applicable.
 - g) The related party transactions are pertaining to purchase/ sale of goods and service received/ rendered and the basis adopted to determine the normal price for the same is Comparable Uncontrolled Price Method / Actual Cost Method.
 - h) Abnormal, non-recurring costs and other non-cost items are omitted from Cost Records.
 - i) No other relevant cost accounting policy is adopted by the Company.



- 2) There is no change in the cost accounting policy during the current financial year as compared to the previous year.
- 3) The Budgetary control system of the Company is as summarised below:

- **Budgetary Control System for Revenue Expenditure & Operations & Management:**

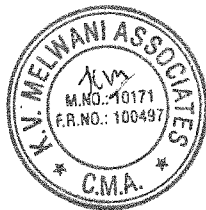
For revenue expenditure, the revenue budget is approved and the same is allocated in Fund Management (FM) Module in SAP against each Fund Centre and commitment item. All variable expenses are booked against specific cost centres. It is an automated system so no expense can be booked higher than the approved budget amount.

Further MIS reports are prepared on monthly basis showing the comparison of actual with the budgeted amount. These reports are presented to the management for their review and comments. There is a periodic meeting of senior executives to discuss such MIS reports and variances in detail and the reasons for the variances are analysed. Thereafter the appropriate measures are recommended and adopted which works as the controlling mechanism.

Cost Auditor Observation:

The company has a well laid down budgetary control system.

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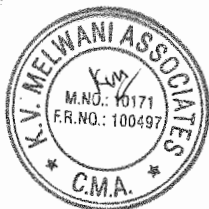
Maharashtra Eastern Grid Power Transmission Company Limited						
"Adani Corporate House"						
Shantigram, Near Vaishno Devi Circle, S.G.Highway,						
Khodiyar, Ahmedabad - 382 421.						
PART - A						
4	SERVICE DETAILS (For The Company As A Whole)					
Sr. No.	Name Of Product(s)/Service(s)	UOM	CTA Heading (Wherever Applicable)	Whether Covered Under Cost Audit Yes/ No	Net Operational Revenue (Net Of Taxes, Duties Etc.)	
					2023-24 (₹ In Crores)	2022-23 (₹ In Crores)
1	Transmission of Electricity	Ckm	N.A.	Yes	977.79	1 479.86
	Total Net Operational revenue of Service				977.79	1 479.86
	Other Operative Incomes of the Company				-	0.01
	Total Operative Incomes of the Company				977.79	1 479.87
	Other Incomes of Company				73.76	12.82
	Total Revenue As Per Financial Accounts				1 051.55	1 492.69
	Exceptional, Extra Ordinary and Other Comprehensive income, if Any					
	(i) Exceptional and Extra Ordinary income				-	-
	(ii) Other Comprehensive income, if Any				(0.59)	0.15
	Total Revenue Including Exceptional, Extra Ordinary and Other Comprehensive Income, If Any				1 050.96	1 492.84
	Turnover as per Excise / Service Tax / GST records (Note)				1 601.98	952.19

Reconciliation of Difference between Turnover As Per Financial Books and Turnover As Per GST Records

Particulars	2023-24 (₹ In Crores)
As per Books Turnover	977.79
Add : Scrap Sales	0.04
Billing Towards Past Year Revenue Gap	624.14
Other	0.01
As per GST Turnover	1 601.98



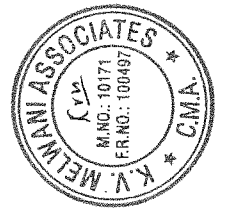
Maharashtra Eastern Grid Power Transmission Company Limited				
"Adani Corporate House" Shantigram, Near Vaishno Devi Circle, S.G.Highway, Khodiyar, Ahmedabad - 382 421.				
PART - C				
1	QUANTITATIVE INFORMATION			
Name Of Service		Transmission of Electricity		
Service Code		Not Applicable		
Sr. No.	Particulars	Unit Of Measurement	2023-24	2022-23
1	Available Capacity			
	(a) Installed Capacity	Ckm	N. A.	N. A.
	(b) Capacity Enhanced During The Year, If Any			
	(c) Total Available Capacity	Ckm	N. A.	N. A.
2	Actual Service Provided			
	(a) Own Service	Ckm	1 217.00	1 217.00
	(b) Service Under Contractual Arrangments			
	(c) Outsourced Services	Ckm		
	(d) Total Services	Ckm	1 217.00	1 217.00
3	Total Service Provided As Per Service Tax Records / GST Records		N. A.	N. A.
4	Capacity Utilization (In-House)		-	-
5	Other Adjustments			
	(a) Self or Captive Consumption	Ckm	-	-
	(b) Other Quantitative Adjustments, if any			
	(c) Total Other Adjustments	Ckm	-	-
6	Total Available Services for Sale [2(d)+5(c)]		1 217.00	1 217.00
7	Actual Services Sold			
	(a) Services Rendered - Domestic	Ckm	1 217.00	1 217.00
	(b) Services Rendered - Export			
	(c) Total Services Rendered	Ckm	1 217.00	1 217.00



Maharashtra Eastern Grid Power Transmission Company Limited					
"Adani Corporate House"					
Shantigram, Near Vaishno Devi Circle, S.G.Highway, Khodiyar, Ahmedabad - 382 421.					
PART - C					
2	ABRIDGED COST STATEMENT				
Name Of Service		Transmission of Electricity			
Service Code (If Applicable)		Not Applicable			
Unit Of Measure		Ckm			
	Year	Services Provided	Captive Consumption	Other Adjustments	Services Rendered
	2023-24	1 217.00	-	-	1 217.00
	2022-23	1 217.00	-	-	1 217.00
Sr. No.	Particulars	2023-24		2022-23	
		Amount (₹ In Crores)	Rate/Unit Amount (₹)	Amount (₹ In Crores)	Rate/Unit Amount (₹)
1	Materials Consumed (Details as per Para 2A)	-	-	-	-
2	Utilities (Details as per Para 2B)	0.52	4 233.03	0.37	3 015.63
3	Direct Employees Cost	91.22	7 49 525.77	85.56	7 03 062.03
4	Direct Expenses	5.95	48 891.74	5.99	49 194.06
5	Consumable Stores & Spares	0.53	4 327.85	0.64	5 249.90
6	Repairs & Maintenance	10.36	85 111.69	9.19	75 490.89
7	Quality Control Expenses	-	-	-	-
8	Research & Development Expenses	-	-	-	-
9	Technical Know-How Fee / Royalty	-	-	-	-
10	Depreciation / Amortization	306.71	25 20 238.35	306.68	25 20 003.40
11	Other Overheads	15.51	1 27 463.77	15.93	1 30 932.14
12	Industry Specific Operating Expenses (Details as per Para 2C)	-	-	-	-
13	Total (1 To 12)	430.80	35 39 792.20	424.36	34 86 948.05
14	Less: Credits For Recoveries, If Any	-	-	-	-
15	Cost Of Service Provided (13-14)	430.80	35 39 792.20	424.36	34 86 948.05
16	Cost of Outsourced / Contractual Services	-	-	-	-
17	Total Services Available (15 + 16)	430.80	35 39 792.20	424.36	34 86 948.05
18	Less: Self / Captive Consumption	-	-	-	-
19	Other Adjustments (If Any)	-	-	-	-
20	Cost Of Services Sold (17-18 to 19)	430.80	35 39 792.20	424.36	34 86 948.05
21	Administrative Overheads	26.80	2 20 219.56	23.78	1 95 427.90
22	Selling & Distribution Overhead	-	-	0.11	920.51
23	Cost Of Sales Before Finance Charges (20 to 22)	457.60	37 60 011.76	448.25	36 83 296.46
24	Finance Cost	206.96	17 00 556.52	202.07	16 60 435.44
25	Cost Of Sales (23 + 24)	664.56	54 60 568.28	650.32	53 43 731.90
26	Net Sales Realization (Net of Taxes And Duties)	977.79	80 34 404.95	1 479.86	1 21 59 894.21
27	Margin [Profit / (Loss) As Per Cost Accounts] (26 - 25)	313.23	25 73 836.67	829.54	68 16 162.31



Maharashtra Eastern Grid Power Transmission Company Limited										
"Adani Corporate House" Shantigram, Near Vaishno Devi Circle, S.G.Highway, Khodiyar, Ahmedabad - 382 421.										
PART - C										
Details Of Materials Consumed										
2A	Transmission of Electricity									
Not Applicable										
Sr. No.	Description Of Material	Category	UOM	Quantity	Rate/Unit Amount (₹)	Amount (₹ In Crores)	Quantity	Rate/Unit Amount (₹)	Amount (₹ In Crores)	
1			-	-	-	-	-	-	-	
2				Not Applicable	-	-	Not Applicable	-	-	
2B	Details Of Utilities Consumed									
Transmission of Electricity										
Not Applicable										
Sr. No.	Description Of Utilities Consumed	UOM	Quantity	Rate/Unit Amount (₹)	Amount (₹ In Crores)	Quantity	Rate/Unit Amount (₹)	Amount (₹ In Crores)		
1	Electricity Expenses -Operation	KWH	1 78 958.00	26.70	0.48	1 66 912.50	19.91	0.33		
2	Consumption of Fuel	Ltr	3 900.00	95.87	0.04	4 667.00	95.87	0.04		
Total					0.52			0.37		
Note: Electricity expenses are net of captive solar power generation credit.										
2C	Details Of Industry Specific Operating Expenses									
Transmission of Electricity										
Not Applicable										
Sr. No.	Description Of Industry Specific Operating Expenses						2023-24	2022-23		
							Amount (₹ In Crores)	Amount (₹ In Crores)		
1							-	-		
2							-	-		
							Not Applicable			

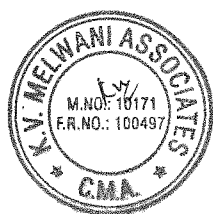


Maharashtra Eastern Grid Power Transmission Company Limited							
"Adani Corporate House" Shantigram, Near Vaishno Devi Circle, S.G.Highway, Khodiyar, Ahmedabad - 382 421.							
PART - D							
PRODUCT AND SERVICE PROFITABILITY STATEMENT (For Audited Products / Services)							
1							
Sr. No.	Particulars	2023-24			2022-23		
		Sales (₹ In Crores)	Cost of Sales (₹ In Crores)	Margin (₹ In Crores)	Sales (₹ In Crores)	Cost of Sales (₹ In Crores)	Margin (₹ In Crores)
1	Transmission of Electricity	977.79	664.56	313.23	1 479.86	650.32	829.54
	Total	977.79	664.56	313.23	1 479.86	650.32	829.54

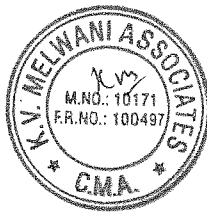


Maharashtra Eastern Grid Power Transmission Company Limited			
"Adani Corporate House" Shantigram, Near Vaishno Devi Circle, S.G.Highway, Khodiyar, Ahmedabad - 382 421.			
2	PROFIT RECONCILIATION (For The Company As A Whole)		
Sr. No.	Particulars	2023-24 (₹ In Crores)	2022-23 (₹ In Crores)
1	Profit Or Loss As Per Cost Accounts		
	(a) For The Audited Services(s)		
	Transmission of Electricity	313.23	829.54
	(b) For The Un - Audited Product(s) / Service(s)	-	-
	Total Profit / (Loss) As Per Cost Accounts	313.23	829.54
2	Add: Incomes Not Considered In Cost Accounts		
	(a) Income- Services (Reimbursement of Expenses)	-	0.01
	(b) Income From Sale of Inventory	0.00	-
	(c) Interest Income- Bank	0.00	0.00
	(d) Interest Income- Group Company	67.79	6.78
	(e) Interest Income-Others	5.64	5.49
	(f) Miscellaneous Income	0.33	0.55
	(g) Electricity Expenses -Provision	0.09	-
	(h) Round Off	0.02	(0.02)
	Total Of Incomes Not Considered In Cost Accounts	73.87	12.81
3	Less: Expenses Not Considered In Cost Accounts		
	(a) Actual Lease Payment Not taken in Financial Statement	(5.95)	(5.99)
	(b) Corporate Social Responsibility Expenses	14.52	8.09
	(c) Donation-Deduct u/s 80G	-	2.50
	(d) Foreign Exchange Fluctuation Loss	0.00	0.01
	(e) IndAS-Depreciation-Right of Use of Leases	4.03	4.04
	(f) IndAS-Gratuity Employee	(0.72)	0.18
	(g) INDAS-Interest on Lease Liability	3.52	3.80
	(h) Miscellaneous Expenditure-Donation	-	1.00
	(i) Sundry Balance Written Off/Back	0.21	(0.00)
	Total Of Expenses Not Considered In Cost Accounts	15.61	13.63
4	Difference In Valuation Of Stock Between Financial Accounts And Cost Accounts	-	-
5	Other Adjustments, If Any		
6	Profit / (Loss) As Per Financial Accounts (excluding Other Comprehensive Income for Companies following IndAs)	371.49	828.72

Note: Figures below ₹ 50,000 are denominated by ₹ 0.00 Crs.



Maharashtra Eastern Grid Power Transmission Company Limited			
"Adani Corporate House"			
Shantigram, Near Vaishno Devi Circle, S.G.Highway, Khodiyar, Ahmedabad - 382 421.			
3	VALUE ADDITION AND DISTRIBUTION OF EARNINGS (For The Company As A Whole)		
Sr. No.	Particulars	2023-24 (₹ In Crores)	2022-23 (₹ In Crores)
	Value Addition:		
1	Revenue from Operations	977.79	1 479.87
2	Less: Taxes and Other Duties	-	-
3	Net Revenue from Operations	977.79	1 479.87
4	Add: Export Incentives	-	-
5	Add / Less : Adjustments In Stocks	-	-
6	Less Cost Of Bought Out Inputs :		
	(a) Cost Of Materials Consumed	-	-
	(b) Process Materials / Chemicals	-	-
	(c) Stores & Spares Consumed	0.53	0.64
	(d) Utilities (e.g. power & fuel)	1.91	1.49
	(e) Others, if any (Expenses Considered in Cost)	46.61	44.81
	Total Cost Of Bought Out Inputs	49.05	46.94
7	Value Added	928.74	1 432.93
8	Add : Income From Any Other Sources	73.76	12.82
9(i)	Exceptional & Extra Ordinary Income	-	-
9(ii)	Other Comprehensive Income, if any	(0.59)	0.15
10	Earnings Available For Distribution	1 001.91	1 445.90
	Distribution Of Earnings To:		
1	Employees As Salaries & Wages , Retirement Benefits,etc.	91.88	86.45
2	Shareholders As Dividend	-	-
3	Company As Retained Funds	619.84	997.17
4	Government As Taxes (Specify)	65.00	144.82
5	Exceptional and Extra Ordinary Expenses, if any	-	-
6	Others (Expenses Not Considered in Cost & Finance cost)	225.19	217.46
7	Total Distribution Of Earnings	1 001.91	1 445.90



Maharashtra Eastern Grid Power Transmission Company Limited				
"Adani Corporate House"				
Shantigram, Near Vaishno Devi Circle, S.G.Highway,				
Khodiyar, Ahmedabad - 382 421.				
PART - D				
4	FINANCIAL POSITION AND RATIO ANALYSIS (For The Company As A Whole)			
Sr. No.	Particulars	Units	2023-24	2022-23
A.	Financial Postion			
1	Share Capital	(₹ In Crores)	707.50	707.50
2	Reserves and Surplus	(₹ In Crores)	3 343.15	3 037.25
3	Long Term Borrowings	(₹ In Crores)	1 322.50	1 493.14
4	(a) Gross Fixed Assets (Including CWIP)	(₹ In Crores)	5 746.80	5 742.99
	(b) Net Fixed Assets (Including CWIP)	(₹ In Crores)	2 962.22	3 272.35
5	(a) Current Assets	(₹ In Crores)	953.70	893.40
	(b) Less: Current Liabilities	(₹ In Crores)	458.24	186.98
	(c) Net Current Assets	(₹ In Crores)	495.46	706.42
6	Capital Employed	(₹ In Crores)	3 789.06	3 593.29
7	Net Worth (A1+A2)	(₹ In Crores)	4 050.65	3 744.75
B.	Financial Performance			
1	Value Added	(₹ In Crores)	928.74	1432.92
2	Net Revenue From Operations Of Company	(₹ In Crores)	977.79	1 479.87
3	Profit / (Loss) Before Tax (PBT)	(₹ In Crores)	371.49	828.72
C.	Profitability Ratios			
1	PBT To Capital Employed (B3/A6)	%	9.80	23.06
2	PBT To Net Worth (B3/A7)	%	9.17	22.13
3	PBT To Value Added(B3/ B1)	%	40.00	57.83
4	PBT To Net Revenue from Operations (B3/ B2)	%	37.99	56.00
D.	Other Financial Ratios			
1	Debt-Equity Ratio (A3/(A7)		0.33	0.40
2	Current Assets To Current Liabilities (A5(a)/A5(b))		2.08	4.78
3	Value Added To Net Revenue from Operations (B1/B2)	%	94.98	96.83
E.	Working Capital Ratios			
1	Raw Materials Stock To Consumption	Months	-	-
2	Stores & Spares To Consumption	Months	83.22	54.31

Note : The ratios are computed as per Form CRA-3 pursuant to Rule 6(4) of the Companies (Cost Records and Audit) Rules 2014.

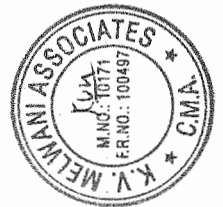


"Adani Corporate House"
Shantigram, Near Vaishno Devi Circle, S.G. Highway,
Khodiyar, Ahmedabad - 382 421.

PART - D									
RELATED PARTY TRANSACTION (For The Company As A Whole)									
Sr.No.	Name & Address Of The Related Party	CIN/ PAN	Name of the Product / Service	Nature of Transaction (Sale, Purchase, Service Received/ Service Rendered etc.)	Quantity	Transfer Price (₹)	Amount (₹ In Crores)	Normal Price (₹)	Basis Adopted to determine the Normal Price
1	Adani Enterprise Limited	L51100GJ1993PLC019067	Professional and Consultancy fees	Services Received	-	-	13.09	-	Comparable Uncontrolled Price Method
2	Adani Green Energy (UP) Limited	U40106GJ2015PLC083925	1. CABLE, ARM, 1.1KV, CU, FRLS, NIS, 12C, 2.5MM	Purchase of Goods	2400 (meter) / 3332 (meter)	172.85	0.10	172.85	Comparable Uncontrolled Price Method
3	Adani Green Energy Limited	L40106GJ2015PLC082007	Staff Welfare Expenses	Services Received	-	-	0.02	-	Comparable Uncontrolled Price Method
4	Adani Green Energy Limited	L40106GJ2015PLC082007	CBL ARM FIRE, 1000V, CU, XLPE, 5C, 2.5MM2	Purchase of Goods	2000 (meter)	120.38	0.02	120.38	Comparable Uncontrolled Price Method
5	Adani Hospitals Mundra Limited	U85110GJ2013PLC077422	Staff Welfare Expenses	Services Received	-	-	0.01	-	Comparable Uncontrolled Price Method
6	Adani Infrastructure Management Service Limited	U74999GJ2017PLC097813	O & M Charges	Services Received	-	-	7.17	-	Comparable Uncontrolled Price Method
7	Adani Infrastructure Management Service Limited	U74999GJ2017PLC097813	CBL ELE ARM, 1.1 KV, COPPER, PVC, 3, 2.5MM2	Sales of Goods	600 (Meter)	69.02	0.00	69.02	Comparable Uncontrolled Price Method
8	Adani Ports And Special Economic Zone Ltd	L63090GJ1998PLC034182	Rent & Electricity Expenses	Services Received	-	-	3.28	-	Comparable Uncontrolled Price Method
9	Adani Power Limited	L40100GJ1996PLC030533	Staff Welfare Expenses	Services Received	-	-	0.01	-	Comparable Uncontrolled Price Method
10	Adani Sportline Private Limited	U92490GJ2019PTC111178	Staff Welfare Expenses	Services Received	-	-	0.00	-	Comparable Uncontrolled Price Method
11	Adani Total Gas Limited	L40100GJ2005PLC046553	Factory & Office Expenses	Services Received	-	-	0.00	-	Comparable Uncontrolled Price Method
12	Belvedere Golf And Country Club Private Limited	U92412GJ2008PTC055617	Staff Welfare Expenses	Services Received	-	-	0.13	-	Any Other Method (Note-1)
13	OBRA-C Badaun Transmission Limited	U40106GJ2018GOI127987	Equipment Rentals-Operations	Services Received	-	-	0.00	-	Comparable Uncontrolled Price Method
14	Rajpur-Rajnandgaon-Warora Transmission Limited	U40300GJ2014GOI094189	Equipment Rentals-Operations	Services Received	-	-	0.01	-	Comparable Uncontrolled Price Method
15	Wardha Solar (Maharashtra) Private Limited	U40106GJ2016PTC086499	CBL ARM FIRE, 1000V, CU, XLPE, 5C, 2.5MM2	Purchase of Goods	2870 (meter)	81.62	0.02	81.62	Comparable Uncontrolled Price Method

Note: 1 Any Other Method is Actual Value.

Note: 2 Figures below ₹ 50,000 are denominated by ₹ 0.00 Crs.



Maharashtra Eastern Grid Power Transmission Company Limited							
"Adani Corporate House"							
Shantigram, Near Vaishno Devi Circle, S.G.Highway,							
Khodiyar, Ahmedabad - 382 421.							
Reconciliaton of Indirect Taxes (for the company as a whole)							
Particulars		Taxable Value/ Assessable Value	Excise Duty /VAT, CST, Cess Etc./ Other State Taxes, if any	Goods & Service Tax			
				CGST	SGST/UTGST	IGST	Cess and Others
		(₹ In Crores)	(₹ In Crores)	(₹ In Crores)	(₹ In Crores)	(₹ In Crores)	(₹ In Crores)
Sr. No.	Duties/Taxes Payable						
	Excise Duty	-	-	-	-	-	-
1	Domestic	-	-	-	-	-	-
2	Export	-	-	-	-	-	-
3	Stock Transfers	-	-	-	-	-	-
4	Others, if any	-	-	-	-	-	-
5	Total Excise Duty (1 to 4)						-
6	VAT,CST,Cess etc.	-	-	-	-	-	-
7	Other State Taxes, If any	-	-	-	-	-	-
	Goods & Service Tax	-	-	-	-	-	-
8	Outward Taxable Supplies (Other than zero rated, Nil Rated and Exempted)	0.11	-	0.01	0.01	0.00	-
9	Outward Taxable Supplies (zero rated)		-	-	-	-	-
10	Inward Supplies (liable to Reverse Charge)	2.88	-	0.05	0.05	0.23	-
11	Other Outward Supplies (Nil Rated, Exempted)	1 601.87	-	-	-	-	-
12	NON-GST Outward Supplies	-	-	-	-	-	-
13	Total (8 to12)	1 604.86	-	0.06	0.06	0.23	-
14	Total Duties / Taxes Paid (5+6+7+13)	-	-	0.06	0.06	0.23	-
	Duties/ Taxes Paid [by Utilisation of Input Tax Credit and Payment through Cash Ledger, as the case may be]						
	Input Tax Credit Utilised						-
15	CGST / CENVAT	-	-	0.01	-	0.00	-
16	SGST / UTGST / VAT	-	-	-	0.01	-	-
17	IGST	-	-	-	-	-	-
18	Cess	-	-	-	-	-	-
19	Transitional Credit	-	-	-	-	-	-
20	Others, if any	-	-	-	-	-	-
21	Total Input Tax Credit Utilised (15 to 20)	-	-	0.01	0.01	0.00	-
22	Payment through Cash Ledger	-	-	0.05	0.05	0.23	-
23	Total Duties / Taxes Paid (21+22)	-	-	0.06	0.06	0.23	-
	Difference between Taxes Paid and Payable (14-23)	-	-	(0.00)	(0.00)	(0.00)	-
24	Interest / Penalty / Fines Paid	-	-	-	-	-	-

Note: Figures below ₹ 50,000 are denominated by ₹ 0.00 Crs.

K V Melwani & Associates

F. R. No. 100497

Cost Accountants

Koushlya Vijay Melwani

Koushlya Vijay Melwani

Proprietor

M. No. 10171

UDIN : 2410171A1MY363L0W5

For And On Behalf Of The Board Of Directors

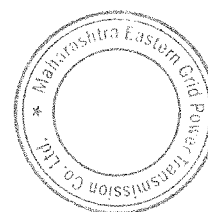
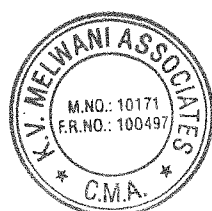
Maharashtra Eastern Grid Power Transmission Company Limited

Rohit Soni

Rohit Soni

Director

DIN : 09336186



Annexure D3

Acknowledgement Number:526146681241123

Date of filing : 24-Nov-2023

INDIAN INCOME TAX RETURN ACKNOWLEDGEMENT

[Where the data of the Return of Income in Form ITR-1(SAHA)], ITR-2, ITR-3, ITR-4(SUGAM), ITR-5, ITR-6, ITR-7
filed and verified]
(Please see Rule 12 of the Income-tax Rules, 1962)

Assessment
Year
2023-24

PAN	AAGCM3620D		
Name	MAHARASHTRA EASTERN GRID POWER TRANSMISSION COMPANY LIMITED		
Address	ADANI CORPORATE HOUSE, SHANTIGRAM, NEAR VIASHNO DEVI CIRCLE, S.G. HIGHWAY, KHODIYAR , AHMEDABAD , 11-Gujarat, 91-INDIA, 382421		
Status	6-Public company	Form Number	ITR-6
Filed u/s	139(1)-On or before due date	e-Filing Acknowledgement Number	526146681241123

Taxable Income and Tax Details	Current Year business loss, if any	1	0
	Total Income	2	6,52,56,940
	Book Profit under MAT, where applicable	3	8,28,46,37,227
	Adjusted Total Income under AMT, where applicable	4	0
	Net tax payable	5	1,44,74,91,816
	Interest and Fee Payable	6	1,75,60,491
	Total tax, interest and Fee payable	7	1,46,50,52,307
	Taxes Paid	8	1,45,72,25,173
	(+) Tax Payable /(-) Refundable (7-8)	9	(+) 78,27,130
Accreted Income and Tax Detail	Accreted Income as per section 115TD	10	0
	Additional Tax payable u/s 115TD	11	0
	Interest payable u/s 115TE	12	0
	Additional Tax and interest payable	13	0
	Tax and interest paid	14	0
	(+) Tax Payable /(-) Refundable (13-14)	15	0

This return has been digitally signed by CHAITANYA SAHOO in the capacity of
Director having PAN BRFPS3200M from IP address 122.15.85.173 on 24-
Nov-2023 14:07:52 at Ahmedabad (Place) DSC SI.No & Issuer 8069351 & 23575258CN=e-
Mudhra Sub CA for Class 3 Individual 2022,OU=Certifying Authority,O=eMudhra Limited,C=IN

System Generated

Barcode/QR Code



AAGCM3620D06526146681241123843e7127685db6437d4b886c026529d8349fba2d

DO NOT SEND THIS ACKNOWLEDGEMENT TO CPC, BENGALURU

Annexure D4



MAHARASHTRA STATE ELECTRICITY TRANSMISSION COMPANY LIMITED
(CIN NO U40109MH2005SGC153646)

Name of Office : Chief Engineer (State Transmission Utility)
Office Address : 4th floor / 'A' Wing, Prakashganga, MSETCL, Plot C -19, E - block, BKC, Bandra (E), Mumbai: - 400051.
Contact No. : (022) 2659 5176 (O), (P) (022) 2659 5175, fax: 022-26591222
E-Mail Id : cestu@mahatransco.in
Website : www.mahatransco.in

MSETCL/CO/STU/Sys/MTC/

7609

Date:

129 OCT 2024

To,
As per mailing list

Sub: Minutes of 11th Maharashtra Transmission Committee (MTC) meeting held on 16 Oct, 2024.

Please find enclosed herewith minutes of the 11th Maharashtra Transmission Committee (MTC) meeting held on 16 Oct 2024 at 11:00 Hrs. This meeting was hosted by TPC-T at Vikhroli Receiving Station.

It is to be noted that the minutes of above meeting are also available on website www.mahatransco.in in STU section.

Thanking you.

Yours faithfully


Chairperson - MTC And
Chief Engineer (STU)

Copy s.w.r. to:

- 1) The Director (Operations), CO, MSETCL, Mumbai

List of MTC Members

Sr. No.	Name of Organization	Name of Nominee & Designation	Committee position	Email ID
1	State Transmission Utility (STU)	Chief Engineer-STU	Chairperson	CESTU@mahatransco.in
2	State Transmission Utility (STU)	Superintending Engineer -STU	Member Convener	sesys@mahatransco.in
3	SLDC	Chief Engineer-SLDC	Member	ceslde@mahatransco.in
4	MSETCL	Superintending Engineer (O&M)	Member	selom@mahatransco.in
5	MSEDCL	Chief Engineer (Distribution), CO, Mumbai	Member	cedist@mahadiscom.in
6	MSPGCL	Rahul Sohani (Superintending Engineer)	Member	cegw@mahagenco.in, seest1@mahagenco.in
7	Maharashtra eastern grid Power Transmission co Ltd	Atul Sadaria	Member	atulj.sadaria@adani.com
8	Adani Electricity Mumbai Ltd. (Transmission Business)	Rakesh Raj (Head Planning – AEML Transmission)	Member	rakesh.raj2@adani.com
9	Tata Power Co. Ltd.- Mumbai- Transmission	Sh. Kiran Desale (Head-Transmission)	Member	desalekv@tatapower.com gstawre@tatapower.com
10	Central Railway	S.S.Parihar (M Chief Electrical Engineer/Electrical Energy Management/CR)	Member	dyceetrdcrly@gmail.com
11	M/s Tata Power Company Ltd. (Distribution)	S. Savarkar	Member	svsavarkar@tatapower.com
12	Adani Electricity Mumbai Ltd. (Distribution Business)	Abaji Naralkar (Asst. Vice President)	Member	abaji.naralkar@adani.com
13	BEST Undertaking	Smt. Manisha Krupanand Daware.Divisional Engineer (Project)	Member	depro@bestundertaking.com
Additional Member:				
1	MSETCL	Superintending Engineer (Project Scheme-I)	Member	SE1prj@mahatransco.in

SE(System),STU to coordinate for these studies and complete the same within time bound manner.

Agenda Point No. AD6:

Additional 765/400 kV, 1500 MVA ICT each at 765/400 kV Tiroda substation

MEGPTCL representative placed before the MTC a proposal for “Additional 765/400 kV, 1500 MVA ICT each at 765/400 kV Tiroda substation”.

MEGPTCL representative submitted that MEGPTCL was granted transmission license by Hon'ble commission for installing 2nd ICT at Tiroda substation and submit the DPR to commission for in-principle approval in accordance with guidelines for capital investment. Presently there is only 1 x 1500 MVA 765/400kV ICT at Tiroda Substation.

Requirement of additional ICT at 765/400kV Tiroda Substation to meet N-1 and N-1-1/N-2 contingencies. Joint study carried out by STU and MEGPTCL indicated 400 kV Tiroda-Warora S/C line gets overloaded during contingency of other parallel circuit and ICT at Tiroda (N-1-1) under peak load conditions. Further considering events of tower collapse in recent past, in the case of outage of both the circuit (N-2 contingency) of Tiroda-Warora line the ICT will be loaded to 1890 MW which is nearly 120% of its rated capacity. With 2nd ICT at Tiroda both N-1-1 & N-2 contingencies all lines and ICT flows are within limit. Hence, MEGPTCL submitted proposal for Installation of additional 765/400kV ICT & associated bays at Tiroda substation of MEGPTCL.

The Estimated cost of cited scheme is ₹ 363.71 Crore.

In view of the requirement to fulfill present & future load demand, enhance system reliability, and present N-1-1/ N-2 non compliance for 765 kV level and the scheme already included in the License of MEGPTCL ,after detailed deliberation and discussion, the committee recommended the scheme for submission to GCC for approval and directed MEGPTCL to submit DPR to STU.

Agenda Point No. AD7:

Additional 765/400 kV, 1500 MVA ICT each at 765/400 kV Akola substation

MEGPTCL representative placed before the MTC a proposal for “Additional 765/400 kV, 1500 MVA ICT each at 765/400 kV Akola substation”.

MEGPTCL representative submitted that presently there is only 1 x 1500 MVA 765/400kV ICT at Akola Substation. There is requirement of additional ICT at 765/400kV Akola Substation to meet N-1 and N-1-1/N-2 contingencies.

MEGPTCL representative highlighted that Joint study carried out by STU and MEGPTCL indicated 765/400kV Akola ICT gets overloaded during N-1-1/N-2 contingency of 765kV Akola II Aurangabad III D/C Line. Further in case of tripping of remaining ICT the 765kV system will collapse and there will be no path available for evacuation of 2 x 600 MW generation of Adani. With 2nd ICT at Akola both N-1-1 & N-2 contingencies all lines and ICT flows are within limit.

The Estimated cost of cited scheme is ₹ 275.44 Crore.

In view of the requirement to fulfill present & future load demand, enhance system reliability, and present N-1-1/ N-2 non compliance for 765 kV level and the scheme already included in the License of MEGPTCL , after detailed deliberation and discussion, the committee recommended the scheme for submission to GCC for approval and directed MEGPTCL to submit DPR to STU.

Agenda Point No. AD8:

Proposal for delta type suspension type tower strengthening of MEGPTCL 765 kV Tiroda – Koradi – Akola – Ektuni transmission lines

MEGPTCL representative placed before the MTC a proposal for Proposal for delta type suspension type tower strengthening of MEGPTCL 765 kV Tiroda – Koradi – Akola – Ektuni transmission lines

MEGPTCL representative submitted that 765 kV S/C Tiroda – Koradi – Akola – Aurangabad (Ektuni) transmission lines transfer the bulk amount of power from Northeastern Maharashtra to critical load centres of Maharashtra like Mumbai, Pune & Aurangabad which was commissioned in Feb. 2014.

The transmission system of MEGPTCL comprises of 1868 no. of 765 kV Wind Zone-2 delta type design towers. Since last few years, MEGPTCL is facing issue of 765 kV tower collapse, incidents as under:

MEGPTCL representative highlighted tat in the event of breakdown in any of these lines the Maharashtra state grid enters in the red alert (Critical) mode due to absence of N-1 contingency. Hence, there is need for strengthening of towers due to revised guidelines as per the revised IS

802 code & the climate change effects resulting into temperature rise and increased frequency of the localized cyclonic storms in Maharashtra region.

MEGPTCL representative submitted that they have carried out route cause analysis with third party consultant & also obtained PGCIL inputs on tower design. MEGPTCL Tower collapse incidences were also discussed in 39th and 42nd NRPC meeting. NRLDC highlighted tower collapsed incidences of recent past years for the same design type of towers in Wind Zone 2.

MSETCL representative mentioned that PGCIL has revised/ upgraded/ strengthened the 765 kV suspension delta type tower design due to persistent failure of delta type suspension towers.

MSETCL representative added that as per CEA (Technical Standards for Construction of Electrical Plants and Electric Lines) Regulations, 2022 Clause 85, Sub clause (j) *mentioned that the "Delta configuration towers shall not be used for 765 kV single circuit line"*.

Considering the criticality of line & repeated nature of tower collapse incidents, MEGPTCL studied of the delta type towers and tower collapse incidents. It is also observed that their need for strengthening of Delta type towers in similar incidents faced by PGCIL. Further, MEGPTCL has also come across Order/ Report with respect to failure of EHV Transmission Line towers.

MEGPTCL representative submitted that based on the analysis of CERC Order and CEA report, it is observed that there is issue with the delta type of towers and many incidents had happened of tower collapse. The Estimated cost of cited scheme is **₹ 110 Crore**.

Considering the criticality of the 765 kV Line corridor of Maharashtra Grid for North-Eastern Maharashtra to critical load centres Mumbai, Pune & Aurangabad the availability of corridor is very essential. Thus the strengthening of the delta type towers for 765 kV line of MEGPTCL are required to be carried out, after detailed deliberation and discussion, the committee recommended the scheme for submission .

Points for discussion:

Review of Projects under STU Plan

The Chairman, MTC informed the forum that as per MEGC-2020 MTC is mandated to monitor and review the progress of all projects under STU plan and approved by MTC. It has already been decided that licensees have to submit the quarterly progress of projects included in STU Plan for review during MTC meetings. The Progress report is to be submitted on or before 5th of each Quarter Month. However it is observed that licensees are not following the same. He therefore requested all licensees to scrupulously follow and submit the progress in timely manner hence forth.

Annexure D5

ANNEXURE 1.8.1 b

मौका पंचनामा

मौका पंचनामा आज दिनांक २५/०८/२०२२ ला वनविभाग तुमसर जिल्हा भंडारा तसेच महाराष्ट्र ईस्टन ग्रीड पॉवर ट्रान्समिशन कंपनी लिमिटेडेचे कर्मचारी यांच्या सयुक्त निरीक्षणाणे करण्यात आला असून निरीक्षणात ७६५ के.व्ही. तिरोडा — कोराडी लाईन सर्किट १ मध्ये टॉवर क्रमांक ४४ ते टॉवर क्रमांक ७७ पर्यंत आणि ७६५ के.व्ही. तिरोडा — कोराडी लाईन सर्किट २ मध्ये टॉवर क्रमांक ४२ ते टॉवर क्रमांक ५२ पर्यंतच्या क्षेत्रामध्ये सारस पक्ष्यांचा जाणे — येणे तसेच भ्रमण करण्याचा मार्ग आहे.

वनविभाग तुमसर

महाराष्ट्र ईस्टन ग्रीड पॉवर
ट्रान्समिशन कंपनी लिमिटेड तर्फे

समजला
(MoS)
ओ. एन. मोरे
बि.र. सोनेगांव-०२

C. E. Bhandale
म.ग. रत्नागडाले
वन परिक्षेत्रधिकारी
तुमसर

In 765KV T-K (Ckt-I) = 10.824 km
Total tower covered = 34 Nos

In 765KV T-K (Ckt-II) = 3.393 km
Total tower covered = 11 Nos

Vijay Kumar Singh
VIJAY KUMAR SINGH
ASSOCIATE MANAGER
T/L O&M-TIRODA



स्वातंत्र्याचा अमृत महोत्सव

वनपरिक्षेत्र अधिकारी तुमसर यांचे कार्यालय

Email id - rfotumsar@gmail.com



Ph-07183-232206

विषय:- सारस पक्षी संवर्धना बाबत.

क्रमांक/वपअ/तुम - 1209

तुमसर, दिनांक - 06/09/2022

प्रति,

मा. उपवनसंरक्षक,
भंडारा वनविभाग भंडारा.

संदर्भ :- आपले कार्यालयीन पत्र क्रं.कक्ष-7/दक्षता/1057 भंडारा दिनांक 22/08/2022.

महोदय,

उपरोक्त संदर्भीय पत्राचे अनुषंगाने वनपरिक्षेत्र तुमसर अंतर्गत दिनांक 25/08/2022 ला सारस पक्षी संवर्धना करिता, सारस पक्ष्याचे वास्तव्य व त्यांची येण्या-जाण्याचे मार्ग पाहणी केली व 765 के.व्ही. तिरोडा- कोराडी लाईन सर्किट-1 मधील टॉवर क्रं. 44 ते टॉवर क्रं. 77 = 34 टॉवर व सर्किट-2 मधील टॉवर क्रं. 42 ते 52 = 11 टॉवरची खालील प्रमाणे पाहणी केली.

अ.क्र.	लाईनचे नाव	सारस पक्ष्याचे भ्रमंतीचा मार्ग / गावाचे नाव	मार्गाची लांबी (कि.मी.)	शेरा
1	765 के.व्ही. तिरोडा- कोराडी सर्किट-1	नवरगाव, उमरवाडा, तामसवाडी, रेंगेपार, पांजरा, कर्कापुर, परसवाडा.	10.824 कि.मी.	
2	765 के.व्ही. तिरोडा- कोराडी सर्किट-2	सिलेगाव, परसवाडा, मांडवी.	3.393 कि.मी.	

करिता माहिती व योग्य कार्यवाहीस सविनय सादर.

ड.ग.रहांगडाले
वन-परिक्षेत्राधिकारी
तुमसर

प्रतिलिपी :- 1. मा. प्रकाष्ठ निष्कासन अधिकारी गडेगाव, भंडारा वनविभाग भंडारा यांना माहिती व योग्य कार्यवाहीस सविनय सादर.

✓ 2. महाराष्ट्र ईस्टन ग्रिड पॉवर ट्रान्समिशन को. लि. 765/400 KV अडाणी पॉवर प्लंट तिरोडा यांना माहिती सस्नेह अग्रेषित.

ड.ग.रहांगडाले
वन-परिक्षेत्राधिकारी
तुमसर



जिल्हाधिकारी भंडारा यांचे कार्यालय	
क्र.म.स./ संकीर्ण-2/कावि/ 1205/2022	दिनांक: 06 सप्टेंबर, 2022
ई-मेल आयडी- rdcbandara4@gmail.com	दुरध्वनी क्र. 07184-252346

प्रति,


व्यवस्थापक,
महाराष्ट्र ईस्टर्न ग्रीड पॉवर कंपनी लिमिटेड, (MEGPTCL)
तिरोडा जि.गोंदिया.

विषय:- Suo Motu Public Interest Ligation No.2/2021 Filed by Courts on Its Own Motion-
Vs- State Of Maharashtra & 19 other (Matter Pertaining to the threat of the
rehabitation of Saru-crane bird) या प्रकरणाचे अनुषंगाने सारस पक्ष्यांचे संरक्षण करण्याबाबत

संदर्भ:- जिल्हा सारस संवर्धन व्यवस्थापन आराखडा समिती भंडारा सभा दिनांक 06/09/2022

---000---

उपरोक्त विषयांकीत प्रकरणी जिल्हा सारस संवर्धन व्यवस्थापन आराखडा समिती सभा दिनांक 06/09/2022 रोजीच्या सभेमध्ये मा.जिल्हाधिकारी महोदयांनी दिलेल्या निर्देशानुसार आपण 765 KV तिरोडा कोराडी लाईन CKT I & II यामधील मौजा उमरवाडा, तामसवाडी, पांजर,कर्कापूर,रेंगेपार, परसवाडा,मांडवी,सिलेगांव या गावातील पोल तसेच तारांवर Bird Diverter Installation व इतर आवश्यक असलेल्या बाबींचा आवश्यक निधीसह कार्ययोजन आराखडा समितीस सादर करावा.


(घनश्याम भुगावकर)
अपर जिल्हाधिकारी, भंडारा

SMPIL 2 of 2021.odt

IN THE HIGH COURT OF JUDICATURE AT BOMBAY
NAGPUR BENCH, NAGPUR

Suo Motu PIL No.2 of 2021

Court on it's own Motion

Versus

State of Maharashtra, Ministry of Climate Change, Mumbai,
through Secretary, and others

Office Notes, Memoranda of Coram,
appearances, Court's orders or directions Court's or Judge's orders
and Registrar's order

Ms Radhika Bajaj, Amicus Curiae.

Shri N.S. Rao, A.G.P. for Respondent Nos.1, 4, 8, 11, 13, 14,
22, 23 and 24.

Shri R.A. Bhandakkar, Advocate, holding of Shri Kartik Shukul,
Advocate for Respondent Nos.2, 5, 6, 7, 9, 17 and 18.

Shri A. Parihar, Advocate for Respondent No.10.

Shri Sanjay Jagtap, Advocate for Respondent No.12.

Shri D.M. Kale, Advocate for Respondent No.15.

Shri S.V. Purohit, Advocate for Respondent No.16.

Shri H.A. Khedikar, Advocate for Respondent No.19.

Shri H.S. Chauhan, Advocate for Respondent No.20.

CORAM : SUNIL B. SHUKRE &
ANIL L. PANSARE, JJ.

DATE : 5th JANUARY, 2022

1. Heard.

2. Leave to add "Union of India, through Ministry of Environment, Forest and Climate Change, New Delhi, through Secretary"; "Divisional Commissioner, Nagpur"; "District Collector, Chandrapur", "District Collector, Bhandara"; "Zilla Parishad, Chandrapur, through Chief Executive Officer"; and "Zilla Parishad, Bhandara, through Chief Executive Officer" as party-respondents. Amendment to the cause-title of the petition be carried out forthwith.

3. Leave to carry out the correction in the name of respondent No.15 is granted. Amendment be carried out forthwith.
4. The reply filed on behalf of respondent No.19 is taken on record.
5. Issue notice to the newly-added respondents.
6. Shri N.S. Rao, learned A.G.P., waives service of notice for the newly-added respondent Nos.22, 23 and 24.
7. As directed by this Court on the last occasion, the Authorities have remained present before this Court today. Notably amongst them are Shri Sunil Limaye, Principal Chief Conservator of Forests (Wildlife), Maharashtra State; Smt. Naina Gunde, Collector, Gondia; Shri Ramanujam, Conservator of Forest, Gondia; Shri Kulrajsingh, Deputy Conservator of Forests, Gondia; Smt. Sonule, Executive Engineer, Gondia Irrigation Division, Gondia; Shri Satish Aney, Chief Engineer, Maharashtra State Electricity Transmission Co. Ltd., Nagpur; Shri Sawan Bahekar, President, Sustaining Environment and Wildlife Assemblage (SEWA), Gondia . All of them have rendered valuable assistance to the Court in resolving the issues arising out of the cause taken in this petition and this Court places on record its appreciation for the valuable assistance so rendered.
8. Smt. Naina Gunde, Collector, Gondia, has pointed out that so far as Gondia District is concerned, specific plan for preservation, conservation and development of Sarus bird is

in the process of preparation in co-ordination with the Forests Department. She informs that since Sarus bird is found to be present not only in Gondia, but in other Districts, like Bhandara and Chandrapur, the plan to be prepared would be a comprehensive one for all the Districts where there is presence of this bird. She further submits that once the draft plan is prepared, it would be sent to the State Government for approval, and depending upon approval and its conditions, necessary action in the matter would be taken by the Authorities. We expect that the proposal to be sent to the Government shall be prepared and sent within four weeks from the date of this order. Copy of the proposal be placed on record.

9. Shri Sunil Limaye, Principal Chief Conservator of Forests (Wildlife), Maharashtra State, submits that Sarus birds are found not only in the marshy land of water bodies, but also in the paddy farms and generally they visit paddy farms apart from the marshy land for feeding. He further states that many a times, nests are built by these birds in paddy farms and also on bunds, and because of this habit of the birds, the eggs which are laid in the nest and the young chicks become vulnerable to forest/farming activities and also stray dogs. He further points out that the Forest Department has already taken steps to create awareness amongst the farmers and the farmers have agreed to co-operate with the Forests Department and are taking every effort in protecting the nests of these birds. He further submits that sometimes, damage is suffered by the farmers because of building of nests in the midst of the paddy farms or on the bunds between two paddy farms and in such a case, whenever the concerned farmer approaches the Forest Department, due

compensation is paid to such farmer. However, upon a query made by this Court, he submits that so far there is no policy decision taken in this regard nor any specific scheme has been framed by the State of Maharashtra. He, however, assures to take steps for moving a proposal to the State of Maharashtra in this regard. We request to do so at the earliest, as far as possible, within four weeks from the date of the order.

10. Shri Limaye further informs that apart from creation of awareness amongst the farmers and payment of compensation to the farmers on account of the damage suffered by them due to building of nests by Sarus bird, the Forest Department is also taking steps for removal of weeds in the wet lands, such as Ipomoea and promoting growth of edible aquatic plants, which are locally called in common parlance as "Chilla". He also submits that apart from the edible aquatic plants, there are some varieties of grasses which grow near the water bodies and which are liked by Sarus birds. He submits that these edible grasses are locally called as "Deodhan", "Vetiver (Khus)" and "Gad". He submits that not all the wet and marshy areas lie within the forest area, still, with the help of locals and local NGOs, the Forest Department is making efforts to increase the cultivation of these grasses in such areas so that abundant food becomes available to Sarus birds. We request the Collectors of Gondia, Bhandara and Chandrapur, and also the Chief Executive Officers of these Districts to render co-operation to the NGOs and Forests Department in increasing the area of cultivation of the aforesaid edible grasses, even in non-forest areas, wherever such cultivation is possible.

11. Shri Bahekar, representing respondent No.19- SEWA, has provided important information to the Court. He has also filed a detailed reply containing the challenges faced in protecting and conserving Sarus birds and the steps and measures which can be taken in this regard. We have gone through the reply. It is a comprehensive one and it is quite enlightening regarding the issues involved in this petition. The areas of immediate concern are such as high mortality of Sarus birds due to their coming in contact with electricity transmission lines, whether high voltage or low voltage, eating of grasses which are adulterated with pesticides and insecticides and falling of prey to stray dogs.

12. Shri Limaye, Principal Chief Conservator of Forests (Wildlife), Maharashtra State, has made an important suggestion by drawing upon good experience of Tadoba-Andhari Tiger Reserve. He informs that similar problem was also faced in Tadoba-Andhari Tiger Reserve but, it came to be resolved when the Transmission Company agreed to provide insulation to the low voltage transmission line by resorting to aerial bunching. As regards, the high voltage line, he suggests that the Transmission Company can think of installing bird diverters at certain places so that these birds would not come in contact with high voltage electricity line.

13. We request the Chief Engineer of the Transmission Company, who is personally present during the hearing, to consider these suggestions and come out with a time-bound plan for carrying out of aerial bunching of low transmission line and installation of bird diverters on high voltage line. It

appears that there is a division of work between the Transmission Company and Distribution Company and, therefore, the Chief Engineer, who is representing the Transmission Company, may find it difficult to implement the suggestions in their letter and spirit. In order to overcome the difficulties, we request the learned counsel for the Distribution Company, Shri Purohit, to obtain instructions from the Distribution Company and ensure that the officials of the Distribution Company co-ordinate with the officials of the Transmission Company so that that a permanent solution is provided, which would avert what could be called as bird accidents and bird deaths due to electrocution.

14. Shri Bahekar in his detailed reply has also spoken about various corrective measures. We are of the opinion that the suggestions so given are required to be considered appropriately by the State Authorities as well as the Authorities of the Union and establishing a proper co-ordination between them, they must implement these suggestions. For that purpose, a comprehensive plan would have to be prepared. We request the State Authorities as well as the Central Government Authorities to prepare a joint action plan for preservation and conservation of Sarus birds in three Districts of Gondia, Chandrapur and Bhandara and submit the same to this Court for further directions in the matter. We expect that such a plan shall be made within two months from the date of the order.

15. There is another issue, which has been highlighted by Shri Bahekar, which, according to him, requires urgent redressal. He submits that many a times, the members of the N.G.Os. and some environmentalists come across Sarus

birds in distressed condition needing immediate help. He also submits that sometimes, some individual persons also require help in relation to the issues arising out of preservation and conservation of Sarus birds. But, there is no helpline established by the Forests Department for addressing such grievances nor there is any cell formed by the State Government or the District Authorities for dealing with such issues.

16. We are of the opinion that the concern so raised by respondent No.19 is important and requires consideration by this Court. Giving our thoughtful consideration to the same, we direct that for each of the Districts of Gondia, Bhandara and Chandrapur, a Committee be established, which shall be called "Sarus Conservation Committee", having members as follows :

- (1) Collector of the District - as Chairman.
- (2) Chief Executive Officer of the Zilla Parishad - as Member Secretary.
- (3) Deputy Conservator of Forests of the District - as Member.
- (4) Executive Engineer of Irrigation Department - as member.
- (5) District Superintendent of Agriculture Department - as member.
- (6) One Representative of SEWA in each of the Districts - as member.

17. The Committee shall have power to invite the officers and officials of the other Departments for consultation and also seek help from different sources - governmental and

private – for the purpose of redressal of the issues arising out of preservation and conservation of Sarus birds. The Committee shall also have the power to cause visits to any place where presence of Sarus and get it inspected through its members or authorized officers and take such action as may be necessary for preservation and conservation of Sarus birds within the four corners of law.

18. We direct that a comprehensive plan for radio tagging of Sarus birds in all the three Districts be prepared and sanctioned by the State Government at the earliest, as far as possible within three months from the date of the order. We further direct that Sarus birds be included in the “Bio-diversity Register” of the concerned places, if not included so far immediately, as we find that this bird fulfills the criteria requisite for its inclusion in “Bio-diversity Register” in terms of the provisions made in the Biological Diversity Act, 2002.

19. We further direct that respondent No.8 shall immediately start the exercise of identifying the wet lands wherever Sarus birds are found to be present and notifying them in accordance with the rules made in the Wetlands (Conservation and Management) Rules, 2017 and submit it's report to this Court in that regard within two months from the date of the order.

20. We direct respondent Nos.2, 6, 7, 19 and 20 to carry out a detailed survey of Sarus birds in three Districts of Gondia, Bhandara and Chandrapur and submit the survey report to this Court within two months. The expenditure, that may be incurred in the process, shall be borne by

respondent No.2.

21. We direct respondent No.13 to clarify the issue of ban imposed by the Central Government upon certain preparations of insecticides and pesticides, including phorate, on or before the next date.

22. Stand over to **27-1-2022**.

JUDGE

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Annexure D6

भारत का राजपत्र

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(केन्द्रीय विद्युत प्राधिकरण)

अधिमूचन

नई दिल्ली, 21 फरवरी 2007

सं. 12/एक्स/एस. टी. डी. (कॉन्)/ग्रिड/के. वि. प्रा.—जबकि विद्युत (पूर्व प्रकाशन के लिए प्रक्रिया) नियमावली, 2005 के नियम 3 के साथ पठित विद्युत अधिनियम, 2003 (2003 का 36) की धारा 177 की उप-धारा (3) द्वारा तथा अपेक्षित केन्द्रीय विद्युत प्राधिकरण (ग्रिड के संयोजन के लिए तकनीकी मानक) विनियम, 2006 को मसौदे के प्रकाशित किया गया था।

अतः अब, केन्द्रीय विद्युत प्राधिकरण विद्युत अधिनियम, 2003 की धारा 177 की उप-धारा (2) के साथ पठित धारा 7 और धारा 73 के खण्ड (ख) द्वारा प्रदत्त शक्तियों का प्रयोग करते हुए ग्रिड के संयोजन के लिए तकनीकी मानकों के विनियमन के लिए एनएलडीसी द्वारा निर्धारित विनियम तैयार करता है, नामशः :-

1. अल्प नाम तथा प्रवर्तन

- (1) इन विनियमों को केन्द्रीय विद्युत प्राधिकरण (ग्रिड के संयोजन के लिए तकनीकी मानक) विनियमन, 2007 के नाम से जाना जाएगा;
- (2) ये सरकारी राजपत्र में उनके प्रकाशन की तिथि से लागू होंगे।

2. परिभाषाएँ

इन विनियमों में जब तक कि संदर्भ में अन्यथा अपेक्षित न हो।

- (1) "अधिनियम" से अभिप्राय विद्युत अधिनियम, 2003 (2003 की सं. 36) से है;
- (2) "उपयुक्त चार प्रेषण केन्द्र" से अभिप्राय है राष्ट्रीय भार ट्रेन्स केन्द्र (एनएलडीसी), क्षेत्रीय भार प्रेषण केन्द्र (आरएलडीसी) अथवा राज्य भार प्रेषण केन्द्र (एसएलडीसी) अथवा क्षेत्रीय भार प्रेषण केन्द्र, जैसा भी संदर्भ हो;
- (3) "क्षेत्रीय भार प्रेषण केन्द्र" से अभिप्राय है राज्य के एक विशेष क्षेत्र में भार प्रेषण एवं नियंत्रण के लिए राज्य द्वारा यथा-स्थापित केन्द्र;
- (4) "उपयुक्त संचारण युटिलिटी" से अभिप्राय है केन्द्रीय संचारण युटिलिटी अथवा राज्य संचारण युटिलिटी, जैसा भी संदर्भ हो;
- (5) "स्वचालित उत्पादन नियंत्रण" (एजीसी) से अभिप्राय कुल विद्युत संयंत्र उत्पादन, ट्रांस-लाइन विद्युत प्रवाह और विद्युत प्रणाली आवृत्ति के संदर्भ में चुनिन्दा इकाइयों के विद्युत उत्पादन को विनियमित करने की क्षमता से है;

- (6) "स्वचालित बोल्टेज रेगुलेटर" (एलवीआर) से अभिप्राय एक उत्पादक यूनिट टर्मिनल बोल्टेज को विनियमित करने के लिए सतत आधार पर कार्य कर रही स्वचालित उद्दीपन नियंत्रण प्रणाली से है;
- (7) "ब्रिटिश मानक" (बीएस) से अभिप्राय उन मानकों और विनिर्देशनों से है, जिन्हें ब्रिटिश मानक संस्थान द्वारा स्वीकृत किया गया है;
- (8) "बल्क उपभोक्ता" से अभिप्राय उस उपभोक्ता से है जो 33 कि.वो. अथवा अधिक को वोल्टेज पर आपूर्ति प्राप्त करता है;
- (9) एक त्रि-फलक प्रणाली में एक स्थल में "भू-रोष गुणक" से अभिप्राय होता है कि भू-रोष (एक या अधिक फलकों को प्रभावित करने वाला) के दौरान एक सुदृढ़ फलक पर फेज से भूमि तक विद्युत प्रायिकता वोल्टेज के उच्चतम वर्ग माध्य मूल का अनुपात जो बिना रोष के चयनित स्थलों पर प्राप्त किया गया हो;
- (10) "भू-सम्पर्कन" से अभिप्राय है कि एक भू-सम्पर्कन साधन द्वारा चालक पुंजों और भू-सम्पर्क के सामान्य द्रव्यमान के बीच संयोजन;
- (11) "ऊर्जा प्रबंधन प्रणाली" (ईएमएस) से अभिप्राय सुरक्षा, विश्वसनीयता तथा मितव्ययिता कायम रखते हुए एक विद्युत प्रणाली को प्रचालन को सुकर बनाने के लिए साफ़सेवर सहित एक सम्पूर्ण प्रणाली से है;
- (12) "ईवेंट लॉगिंग सुविधाओं" से अभिप्राय प्रसारण तथा अन्य उपकरणों के प्रचालनों को कालक्रमिक अनुक्रम में रिकॉर्ड करने के लिए उपलब्ध कटाए गए एक साधन से है;
- (13) "आवृत्ति" से अभिप्राय प्रति सेकेंड प्रत्यक्ष चक्रों की संख्या (हर्ट्ज में व्यक्त) से है;
- (14) "उत्पादक इकाई" से अभिप्राय उस विद्युत उत्पादक से है जो एक विद्युत केन्द्र के भीतर उस विद्युत केन्द्र पर सभी संयंत्र और उपकरणों के साथ (संयोजन बिन्दु तक) एक मुख्य प्रवर्तक से जुड़ी है और जो सिर्फ उस जनरेटर के प्रचालन से संबंधित है;
- (15) "आईईसी मानक" से अभिप्राय अंतर्राष्ट्रीय विद्युत तकनीकी आयोग द्वारा अनुमोदित मानक से है;
- (16) "भारतीय मानक" (आईएस) से अभिप्राय भारतीय मानक संस्थान द्वारा विनिर्दिष्ट मानकों से है;
- (17) "अंतःसंयोजन बिन्दु" से अभिप्राय उस उप-केन्द्र अथवा बिच बार्ड से है जिस पर अनुरोधकर्ता तथा ग्रिड के बीच अंतःसंयोजन स्थापित किया गया है;
- (18) "आईसोलेटर" से अभिप्राय विद्युत प्रणाली के एक हिस्से का रोष प्रणाली से वियोजन प्राप्त करने के एक साधन से है;
- (19) एक उत्पादन इकाई को "अधिकतम अखिल निर्धारण" (एमसीआर) से अभिप्राय निर्धारित मापदंडों पर विनिर्माता द्वारा गारंटी दिए गए जनित्र टर्मिनल पर मेगावॉट में अधिकतम अखिल उत्पादन से है;
- (20) "नई इकाई" से अभिप्राय उस उत्पादक इकाई से है जिसके लिए अनुरोधकर्ता ग्रिड के संयोजन की मांग कर रहा है;
- (21) "विद्युत कारक" से अभिप्राय एक ऐसी हलैक्ट्रीकल सर्किट में वोल्टेज और करंट का प्लेक्सर के बीच इलेक्ट्रीकल कोण की कोटिंग्या (कोसाइन) से है;
- (22) "विद्युत प्रणाली स्टेबिलाइजर" (पीएसएस) से अभिप्राय उस नियंत्रक उपकरण से है जो एक सम्कालिक मशीन के विद्युत पोलन अवमंदन के लिए वोल्टेज नियंत्रक के माध्यम से उद्देजन को नियंत्रित करने के लिए गति, प्रायिकता तथा विद्युत के निर्विष्ट सिग्नलों को ग्रहण करता है;
- (23) "संरक्षण प्रणाली" से अभिप्राय उस उपकरण से है जिसके द्वारा ग्रिड में अनियमित परिस्थितियों का पता लगाया जाता है तथा प्रचालक द्वारा बिना हस्तक्षेप के दोष क्लीयरेंस, संचालन संकेत अथवा निर्देशन आरंभ किए जाते हैं;
- (24) ऐसी विद्युत प्रणाली में "प्रतिधारी विद्युत" से अभिप्राय है धर्मा माध्य मूल (आरएमएस) वोल्टेज, वर्ग माध्य मूल (आरएमएस) धारा तथा वोल्टेज का प्लेक्सर तथा धारा का प्लेक्सर के बीच वैद्युत फलक कोण की ज्या (साइन) का प्रतिफल, जो वोल्ट एम्पियर प्रतिघाता (वैएआर) मानक गुणक में अभिव्यक्त है;
- (25) "अनुरोधकर्ता" से अभिप्राय है कोई व्यक्ति जैसे एक उत्पादक कंपनी कोटिंग्य उत्पादक संयंत्र सहित अथवा संचारण लाइसेंस-धारक (केन्द्रीय परीक्षण युटिलिटी और राज्य परीक्षण युटिलिटी को छोड़कर), वितरण लाइसेंसधारक अथवा बल्क उपभोक्ता जो 33 कि.वो. और उससे अधिक को वोल्टेज स्तर पर ग्रिड से अपने नए अथवा विस्तारित वैद्युत संयंत्र का संयोजन प्राप्त कर रहा है;
- (26) "स्काफ़ा" से अभिप्राय है पर्यवेक्षण नियंत्रण तथा डाटा अर्जन प्रणाली, जो संचार संयोजनों पर दूरस्थ स्थलों से डाटा अर्जित करती है तथा प्रयोग, पर्यवेक्षण नियंत्रण के साथ-साथ निर्णय लेने के लिए केन्द्रीकृत नियंत्रण स्पल पर प्रक्रमण करती है;
- (27) "स्थल संज्ञा उद्देख" से अभिप्राय है एक उद्देख जिसे एक संयोजन स्थल जो संयोजन स्थल का व्यापार करता है, संज्ञा सुरक्षा तथा नियंत्रण उद्देखों को संज्ञा सेवाओं को दर्शाने के लिए तैयार किया गया है;

- (28) "स्थल उत्तरदायित्व अनुसूची" (एसआरएस) से अभिप्राय है अंतःसंयोजन बिन्दु पर उपस्कर के नियंत्रण, प्रचालन तथा अनुसंधान के लिए स्वाभिव्यक्ति, दायित्व दर्शाने के लिए एक अनुसूची है;
- (29) "प्रणाली संरक्षण स्कीम" से अभिप्राय एक ऐसी स्कीम से है जो असामान्य प्रणाली परिस्थितियों का पता लगाने के लिए तैयार की गई है और जो प्रणाली सम्पूर्णता के संरक्षण के लिए पूर्वनिर्धारित, उपचारात्मक कार्रवाई कर सके और स्वीकार्य प्रणाली निष्पादन उपलब्ध करा सके;
- (30) "ताप विद्युत उत्पादक इकाई" से अभिप्राय उस उत्पादक इकाई से है जो जोषारम ईंधन जैसे कोयला, लिग्नाइट, गैसीय तथा तरल ईंधन का प्रयोग कर रही है;
- (31) "कूल हार्मोनिक विकृति" (टीएचडी) से अभिप्राय घोल्टता अधिका करंट धारा रूप (जो आदर्शतः ज्ञातकरणीय होगा) की विकृति का माप है और यह मूल की मात्रा के प्रतिशत के रूप में व्यक्त सभी घोल्टता के वर्गों का योग अधिका करंट हार्मोनिक का वर्गमूल है;
- (32) "संचारण प्रणाली" से अभिप्राय है संचारण लाइनों तथा उप केन्द्रों का नेटवर्क;
- (33) "अंतर आवृत्ति प्रसारण" से अभिप्राय है एक ऐसा प्रसारण जो तब कार्य करता है जब प्रणाली प्राथिकता पूर्व-निर्धारित मूल्य से नीचे गिर जाती है;
- (34) "उपभोक्ता" से अभिप्राय है कोई व्यक्ति जैसे एक उत्पादक कंपनी के प्रति उत्पादक संयंत्र सहित अथवा संचारण लाइसेंसधारक (केन्द्रीय पारेषण यूटिलिटी और राज्य पारेषण यूटिलिटी के अधिकृत), वितरण लाइसेंसधारक अथवा बल्क उपभोक्ता जिसका इलेक्ट्रिकल संयंत्र 33 कि.वो. और इससे अधिक के घोल्टता स्तर पर ग्रिड से जुड़ा है; और
- (35) "घोल्टता असंतुलन" तीनों फेसों की औसत लाइन घोल्टता द्वारा विभाजित उच्चतम और न्यूनतम लाइन के बीच विचलन के रूप में परिभाषित किया जाता है।

प्रयुक्त शब्दों तथा अभिव्यक्तियों, जिनको इन विनियमों में परिभाषित नहीं किया गया है लेकिन अधिनियम में परिभाषित हैं, के लिए अधिनियम में इनके लिए जो अर्थ दिए गए हैं, वही रहेंगे।

3. विनियमों की प्रयोग्यता

ये विनियम सभी उपभोक्ताओं, अनुरोधकर्ताओं, केन्द्रीय पारेषण यूटिलिटी तथा राज्य पारेषण यूटिलिटी पर लागू होंगे।

4. उद्देश्य

- (1) इन विनियमों का उद्देश्य ग्रिड का सुरक्षित प्रचालन, सुव्यवस्था तथा विश्वसनीयता को सुनिश्चित करने के लिए है।
- (2) नए संयोजन का ग्रिड पर कोई विपरीत प्रभाव नहीं पड़ेगा। ग्रिड केन्द्रीय विद्युत प्राधिकरण (संचारण लाइनों के प्रचालन एवं रख-रखाव के लिए ग्रिड मानदंड) विनियम जैसे और जब भी वे लागू होंगे, के अनुसार विशिष्टीकृत विश्वसनीयता, सुरक्षा तथा गुणवत्ता के साथ कार्य करना जारी रखेंगे। तथापि अनुरोधकर्ता अथवा उपभोक्ता के संयंत्र और उपकरणों के संरक्षण के लिए इन विनियमों पर परीक्षा नहीं किना जा सकता।
- (3) एक अनुरोधकर्ता को ग्रिड में शामिल होने के लिए अपनी प्रणाली द्वारा पूरा किए जाने वाले मानकों और शर्तों को पढ़ने से ही जानकारी होना अपेक्षित है।

5. मानक

उपकरण ग्रिड से संयोजन के लिए तकनीकी मानकों के प्रावधानों के अनुसार में आवश्यकताओं को पूरा करेंगे जैसा कि इन विनियमों को अनुसूची और केन्द्रीय विद्युत प्राधिकरण (संचारण लाइनों के प्रचालन एवं रख-रखाव के लिए ग्रिड मानदंड) विनियम, जैसे और जब भी वे लागू होंगे, और ग्रिड कोड तथा स्टेट ग्रिड कोड जैसाकि उपयुक्त आयोग द्वारा ब्रिटिशिस्ट किया गया है, में दिया गया है।

6. सामान्य संयोजन परिस्थिति

- (1) अनुरोधकर्ता विनिर्माण, प्रचालन और रख-रखाव तथा संयोजन एवं अन्य सर्वाधिक प्रावधानों के लिए विनियमों के अध्याधीन अपने स्वयं के उपकरणों की योजना, अभिकल्प, विनिर्माण, विश्वसनीयता, संरक्षण तथा सुरक्षित प्रचालन के लिए उत्तरदायी होगा।
- (2) अनुरोधकर्ता तथा उपभोक्ता को ग्रिड के साथ अंतःसंयोजन की अनुमति देने के लिए उपयुक्त संचारण यूटिलिटी अथवा लाइसेंसधारक अथवा उत्पादक स्टेशन, जिसकी प्रणाली द्वारा अंतःसंयोजन का प्रस्ताव है, द्वारा आर्किव्ड प्रस्तुत करना गव्यापेक्षित है।

- (3) अनुरोधकर्ता तथा उपभोक्ता आवाज और आंकड़ों के संचारण तथा ऑन-लाइन प्रचालनात्मक आंकड़ों के हस्तंतरण जैसे वोल्टता, आवृत्ति, लाइन प्रवाह, बेकर एवं आइसोलेटर की स्थिति तथा उपयुक्त भार प्रेषण केन्द्र द्वारा यथा-निर्धारित अन्य मानदंडों के लिए आवश्यक सुविधाएं उपलब्ध कराएँ।
- (4) अनुरोधकर्ता तथा उपभोक्ता नीचे सूची में दिए गए मामलों, किन्तु इन तथा सेमित नहीं, के संबंध में क्षेत्रीय विद्युत समिति तथा उपयुक्त भार प्रेषण केन्द्रों के साथ सहयोग करेंगे :-
- (क) इसके संरक्षणात्मक प्रसारण का तदनुसार संरक्षण समन्वय तथा सेंटिंग;
- (ख) अपने अधिकार क्षेत्र में मीटरों और संचारण प्रणाली को अक्षम स्थिति में रखने को सहमत;
- (ग) उपयुक्त भार प्रेषण केन्द्र द्वारा यथा-निर्णीत प्रक्रिया के अनुसार संभवतया प्रचालनों जैसे लोड रोडिंग, उत्पादन को बढ़ावा अथवा कम करना, आइलैंडिंग, ब्लैक स्टार्ट, स्टार्ट-अप पावर उपलब्ध कराना तथा मरम्मत में भार लेना;
- (घ) प्रणाली अध्ययन अथवा डिज़ींग के विश्लेषण को सुकर बनाने अथवा विद्युत प्रणाली में व्यवधान के लिए उपयुक्त संचारण यूटिलिटी अथवा संचारण लाइसेंसधारक, उपयुक्त भार प्रेषण केन्द्र, उपयुक्त क्षेत्रीय विद्युत समिति तथा प्राधिकरण अथवा उपयुक्त सरकार द्वारा गठित कोई अन्य समिति द्वारा यथा-अपेक्षित आंकड़े प्रस्तुत करना;
- (ङ) शार्ट-सर्किट टेबल, संरक्षण समन्वय तथा प्रचालन आवश्यकताओं के कारण आवश्यक माने गए अन्य तकनीकी कारणों के संबंध में उसके उपकरणों में संशोधन करना;
- (च) क्षेत्रीय विद्युत समिति द्वारा यथा-अनुमोदित उत्पादन इकाईयों तथा संचारण लाइनों के संबंध में राज्ज और क्षेत्र के समन्वित कानूनी योजना का पालन करना; और
- (छ) उत्पादन इकाई की उद्दीयन प्रणाली में उपलब्ध कराए गए विद्युत प्रणाली स्टैंडलाइज़र की ट्यूनिंग के लिए क्षेत्रीय विद्युत समिति के साथ सहयोग करना।
- (5) अनुरोधकर्ता तथा उपभोक्ता अपनी प्रणाली के नियंत्रण और टैली-मीटरिंग विशेषताओं का स्वचालित उत्पादन नियंत्रण, स्वचालित भार रोडिंग, विशेष संरक्षण प्रणाली, ऊर्जा प्रबंधन प्रणाली और संबंधित अन्य अथवा क्षेत्र की स्काफ़ा प्रणाली में समेकन करने के लिए प्रबंध करेंगे।
- (6) अंतःसंयोजन अध्ययन के लिए, अनुरोधकर्ता उपयुक्त संचारण यूटिलिटी के पास योजना अवस्था में संयोजन के लिए अनुरोध कर सकता है। यदि एक अनुरोधकर्ता वितरण प्रणाली से अंतःसंयोजन की मांग करता है तो ऐसा अनुरोध वितरण लाइसेंसधारक के पास किया जाएगा। उपयुक्त अंतःसंयोजन यूटिलिटी अथवा वितरण लाइसेंसधारक अंतःसंयोजन उपलब्ध कराने के लिए अंतःसंयोजन का केन्द्र निर्धारित करने, अपेक्षित अंतःसंयोजन सुविधाएं तथा मौजूदा डिंडों पर अपेक्षित संशोधन, यदि कोई हों, का अंतःसंयोजन अध्ययन कर सकता है। अध्ययन में संचारण प्रणाली क्षमता, परिणामन स्थिरता, वोल्टता स्थिरता, हावि, वोल्टता विनियमन, हारमोनिक्स, वोल्टता फ्लिकर, इलेक्ट्रोमैग्नेटिक परिणमन, मशीन डाइनेमिक्स, फेरी रेजोनेंस, मीटरिंग आवश्यकताएं, संरक्षणात्मक प्रसारण, उपस्थल भू-समयक तथा दाय ड्यूटी, जैसा भी मामला हो, का भी समाधान किया जाएगा।
- (7) (1) ग्रिड के साथ अनुरोधकर्ता की प्रणाली का प्रत्येक संयोजन अनुरोधकर्ता और
- (क) अंतराज्य संचारण प्रणाली अथवा अंतःराज्य संचारण प्रणाली, जैसा भी संदर्भ हो, को संयोजन के मामले में उपयुक्त संचारण यूटिलिटी;
- (ख) वितरण लाइसेंसधारक की प्रणाली के अंतःसंयोजन के मामले में वितरण लाइसेंसधारक; और
- (ग) संचारण लाइसेंसधारक और उपयुक्त संचारण यूटिलिटी, एक संचारण लाइसेंसधारक के अंतःसंयोजन के मामले में (त्रिपक्षीय कार)।
- (2) संयोजन करार में उस संयोजन पर लागू सामान्य और विशिष्ट तकनीकी स्थितियां शामिल होंगी।

7. स्थल उत्तरदायित्व अनुसूची

- (1) प्रत्येक संयोजन बिंदु के लिए उप-केन्द्र के स्वामी द्वारा जहां संयोजन लगाया जा रहा है, एक स्थल उत्तरदायित्व अनुसूची (एसआरएस) तैयार की जाएगी।
- (2) स्थल उत्तरदायित्व अनुसूची में निम्नलिखित सूचना शामिल की जाएगी, नामशः :-
- (क) इलेक्ट्रीकल उपकरण सेवा एवं आगुति की अनुसूची;
- (ख) दूरसंचार तथा मापन उपकरणों की अनुसूची; और
- (ग) प्रत्येक संयंत्र तथा उपकरण पर लागू सुरक्षा नियम।

- (3) संयोजन स्थल पर अधिष्ठापित उपकरणों की प्रत्येक मद के लिए स्थल उत्तरदायित्व अनुसूची में निम्नलिखित सूचना भी प्रस्तुत की जाएगी, नामशः :-
- (क) उपकरण का स्वायत्तत्व;
 - (ख) उपकरण के नियंत्रण का उत्तरदायित्व;
 - (ग) उपकरण के रख-रखाव का उत्तरदायित्व;
 - (घ) उपकरण के प्रचालन का उत्तरदायित्व;
 - (ङ) स्थल का घेनेजर;
 - (च) स्थल पर व्यक्तियों की सुरक्षा से संबंधित सभी मामलों का उत्तरदायित्व; और
 - (छ) स्थल पर उपकरणों की सुरक्षा से संबंधित सभी मामलों का उत्तरदायित्व ।

8. संयोजन स्थल पर पहुंच

वैद्युत संघर्ष के अनुरोधकर्ता अथवा प्रयोगकर्ता, जैसा भी मामला हो, लाइसेंसधारक अथवा उपयुक्त संचारण यूटिलिटी अथवा उपयुक्त भार प्रेषण केन्द्र, जिसका उपकरण अधिष्ठापन, प्रचालन और उपकरण के रख-रखाव इत्यादि के लिए संयोजन स्थल पर अधिष्ठापित है अथवा अधिष्ठापित करने का प्रस्ताव है, को उचित पहुंच और अन्य अपेक्षित सुविधाएं उपलब्ध कराएगा ।

9. स्थल साझा अधिरेख

प्रत्येक संयोजन बिंदु के लिए स्थल साझा अधिरेख उप-केन्द्र के स्वामी, जहां संयोजन किया जा रहा है, के द्वारा तैयार किए जाएंगे ।

अनुसूची

(विनियम सं. 5 देखें)

ग्रिड में संयोजन के लिए मानक

भाग I

सामान्य

1. कार्यप्रणाली के मानक एवं कोड

- (1) अनुरोधकर्ता उपकरण अधिष्ठापन और इसके प्रचालन एवं प्रबोधन के संबंध में उद्योग सर्वोत्तम कार्यप्रणाली तथा लागू उद्योग मानकों का अनुसरण करेगा ।
- (2) ओवरहेड लाइनें और केबल सहित सभी उपकरण संगत भारतीय मानकों, ब्रिटिश मानकों (बीएस) अथवा अंतर्राष्ट्रीय इलेक्ट्रिक तकनीकी आयोग (आईईसी) मानक अथवा अमेरिकन नेशनल स्टैंडर्ड्स इंस्टीट्यूट (एनएसआई) अथवा किसी अन्य समान अंतर्राष्ट्रीय मानक का अनुपालन करेंगे ।

बशर्ते की जब भी किसी अंतर्राष्ट्रीय मानक अथवा अंतर्राष्ट्रीय इलेक्ट्रिक तकनीकी आयोग (आईईसी) मानक का अनुसरण किया जाता है तो उक्त मानकों को वास्तव में अंगीकार करने के पहले अधिहित प्रणाली प्रयुक्तता, अधिहित प्रणाली शैल्युता, परिवेशी तापमान, आर्द्रता तथा ध्वनि में प्रचलित अन्य परिस्थितियों के लिए आवश्यक सुधार अथवा संशोधन किए जाएंगे ।

- (3) संयोजित सुविधाओं के आरेखन और प्रचालन में वायु, भूकान, वाद, तड़ित, उद्विग्लेप, तापमान आधिक्य, आर्द्रसिग, प्रदूषण और भूकम्प के प्रभावों पर विचार किया जाना चाहिए ।
- (4) अनुरोधकर्ता द्वारा उपकरण का अधिष्ठापन, प्रचालन तथा रख-रखाव अधिनियम की धारा 177 तथा भाग 73 के अंतर्गत प्राधिकरण द्वारा विनिर्दिष्ट संगत मानकों के अनुसार होगा, जब कभी वे लागू हों ।

2. सुरक्षा

अनुरोधकर्ता भारतीय विद्युत अधिनियम, 1956 के विनियमों का तब तक अनुपालन करेगा, जब तक कि कोन्द्रीय विद्युत प्राधिकरण (सुरक्षा एवं विद्युत आपूर्ति) विनियम लागू नहीं होते ।

3. उपकेन्द्र धू-संपर्कन

प्रत्येक संचारण उपकेन्द्र का एक धू-संपर्कन मैट होगा जो सभी धात्विक ढांचों और अन्य गैर-ऊर्जावित धात्विक उपकरण से सुदृढ़ रूप से जुड़ा हुआ । यह मैट धू-संपर्क संभाव्यता प्रवणता को ऐसे वोल्टेज और करंट स्तरों तक सीमित करेगा जो लोगों की सुरक्षा को खतरों में नहीं डालेगा अथवा उसमें लगे उपकरणों को नुकसान नहीं पहुंचाएगा, समान्य और खराबी की स्थिति में, स्टेशन अथवा स्टेशन से पारवर्त्य में ।

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भू-संपर्क मैट का आकार एवं प्रकार स्थानीय भूमि स्थितियों और उपलब्ध वैद्युत दोष करंट मात्रा पर आधारित होगा। उन क्षेत्रों में जहाँ भू-संपर्क मैट खोल्डता स्वीकार्य और सुरक्षित सीमाओं के भीतर नहीं होगा (उदाहरण के लिए उच्च भूमि प्रतिरोधकता अथवा सीमित उपकेंद्र स्थान के कारण), स्वीकार्य स्तरों तक भू-संपर्कन ग्रिड प्रतिरोधन को कम करने के लिए भू-संपर्कन रॉड्स अथवा भू-संपर्क कुओं का उपयोग किया जा सकता है। उपकेंद्र भू-संपर्कन इंस्टीट्यूट ऑफ इलेक्ट्रिकल एंड इलेक्ट्रॉनिक्स इंजीनियर्स (आईईईई)-80 के मानदंडों अनुसार किया जा सकता है।

4. मोटरिंग

केंद्रीय विद्युत प्राधिकरण (मोटरों का अधिष्ठापन और प्रचालन) विनियम, 2006 में यथा-विनिर्दिष्ट नियमों के अनुसार मोटर उपलब्ध कराया जाएगा।

5. मूल विद्युत रोधन स्तर तथा विद्युत रोधन समन्वयन

- (1) उपकरणों की विभिन्न मरों का मूल विद्युत रोधन स्तर (वीआईएल) और उत्पादन केंद्रों, लाइनों और उपकेंद्रों के लिए प्रोत्कर्ष निरोधकों की रेटिंग पर प्राथमिकता के निम्नलिखित क्रम में निर्णय किया जाएगा, नामशः :-
 - (क) जनता तथा प्रचलन कार्मिकों को सुरक्षा सुनिश्चित करना;
 - (ख) संयंत्र को स्थायी क्षति से बचाना;
 - (ग) महंगे उपकरण को फेल होने से रोकना;
 - (घ) सर्किट व्यवधानों को कम करना; और
 - (ङ) उपयोक्ताओं को विद्युत आपूर्ति का व्यवधान कम करना।
- (2) उपस्कर तथा अनुरोधकर्ता के संयोजन बिंदू के दोनों साइडों के लाइनों का तथा ग्रिड के विद्युत रोधन समन्वयन को संपादित तथा समन्वयन उपयुक्त संचारण यूटिलिटी द्वारा किया जाएगा।

6. सुरक्षा प्रणाली तथा समन्वय

- (1) सुरक्षा प्रणाली का अभिकल्पन विभिन्न असामान्य परिस्थितियों पर विश्वसनीय रूप में दोष का पता चलाने के लिए किया जाएगा तथा उपस्कर अथवा प्रणाली को स्वतः रूप से आईसोलेट करने का समुचित साधन तथा स्थल मुहैया कराएंगी। सुरक्षा प्रणाली सुरक्षा क्षेत्र के भीतर विद्युत प्रणाली दोषों का पता चलाने में अवश्य ही सक्षम होगी। सुरक्षा प्रणाली उपस्कर विफलता अथवा ओपन-फेस परिस्थितियों जैसे असामान्य प्रचालन स्थितियों का भी पता चलाएगी।
- (2) विद्युत प्रणाली का प्रत्येक घटक अपेक्षित विश्वसनीयता, चयन, गति, भेदभाव तथा संवेदनशीलता के साथ एक मानक सुरक्षा प्रणाली द्वारा सुरक्षित होगा। जहाँ पर अनुरोधकर्ता प्रणाली में एक सुरक्षा रिले की विफलता ग्रिड पर पर्याप्त प्रभाव है, सुरक्षा के रूप में एक अनिर्दिष्ट सुरक्षा जोड़ी जाएगी।
- (3) ग्रिड में सुरक्षा प्रणालियों को मुहैया कराने के बावजूद ग्रिड में दोष आरंभ होने से पहले अपनी प्रणाली की रक्षा के लिए अनुरोधकर्ता तथा उपयोक्ता अपेक्षित सुरक्षा मुहैया कराएंगे।
- (4) विनियमनों में जहाँ कहीं भी अनुबद्ध हो, बसबार सुरक्षा तथा ब्रेकर फेल सुरक्षा अथवा स्थानीय ब्रेकर वेक-अप सुरक्षा मुहैया कराए जाएंगी।
- (5) भार कटौती, वोल्टेज अस्थिरता, कोणीय अस्थिरता, उत्पादन बैकिंग डाउन के लिए अंडर फ्रीक्वेंसी रिले अथवा आईलैंडिंग स्क्रीमों जैसे विरोध सुरक्षा स्क्रीमों की आवश्यकता प्रणाली बाधाओं के निवारण के लिए होगी।
- (6) सुरक्षा समन्वय समलों को क्षेत्रीय विद्युत समिति द्वारा अंतिम रूप दिया जाएगा।
- (7) अनुरोधकर्ता तथा प्रयोगकर्ता अपने कार्मिकों के प्रयोग तथा संदर्भ के लिए विभिन्न मानकों के अनुरूप सुरक्षा मेनुअल विकसित करेंगे।

7. बाधा रिकॉर्डिंग तथा घटना अभिलेख सुविधाएं

220 कि.वो. अथवा उससे अधिक पर ग्रिड से सम्बद्ध प्रत्येक उत्पादक केंद्र तथा उपकेंद्र को बाधा रिकॉर्डिंग तथा घटना अभिलेख सुविधाओं से मुहैया कराया जाएगा। ऐसे सभी उपस्करों को ग्लोबल टाइम रेफरेंस के लिए समय तुल्यकालिक सुविधाओं से मुहैया कराया जाएगा।

8. सक्षिप्त आरेख

इसकी प्रणाली सुविधा के संबंध में अनुरोधकर्ता तथा प्रयोगकर्ता सिंगल लाइन सक्षिप्त आरेख तैयार करेगा तथा उसे उपयुक्त संचारण यूटिलिटी अथवा लाइसेंसधारी जिसके द्वारा उसकी प्रणाली सम्बद्ध की गई है तथा उपयुक्त भार प्रेषण केंद्र को उपलब्ध कराएगा।

9. संयोजन से पहले निरीक्षण, परीक्षा, केलीब्रेशन तथा अनुसूचन

सम्बद्ध किए जाने से पहले, अनुसंधकर्ता उपयुक्त संचारण यंत्रिलिटी अथवा लाइसेंसधारी अथवा उत्पादन केन्द्र जिससे उसके उपस्कर सम्बद्ध है के साथ परामर्श में सभी निरीक्षणों तथा परीक्षणों को अंतिम रूप देने के लिए पुर करेगा। उपयुक्त संचारण यंत्रिलिटी अथवा लाइसेंसधारी अथवा उत्पादन केन्द्र जैसा भी मामला हो, के लिए अनुसंधकर्ता समन्वित प्रचालन से संबंधित परियोजना उपस्कर के सभी आरेखों, विनिर्देशन तथा परीक्षा रिकॉर्ड उपलब्ध कराएगा।

भाग II

उत्पादन इकाईयों पर लागू होने वाले ग्रिड संयोजक मानक

विनियमनों में दी गई सामान्य संयोजक परिस्थितियों तथा अनुसूची के भाग-1 में दी गई सामान्य आवश्यकताओं के अलावा एक उत्पादन केन्द्र पर ग्रिड से सम्बद्ध की जाने वाली प्रस्तावित इकाइयां निम्नलिखित आवश्यकताओं का अनुपालन करेंगी :-

1. नई उत्पादन इकाइयां

(1) प्रत्येक उत्पादन इकाई के लिए उतेजन प्रणाली :-

(क) के पास आधुनिकतम उतेजन प्रणाली होगा;

(ख) में एक स्वचालित वोल्टेज रेगुलेटर होगा। 100 मे.वा. रेटिंग तथा अधिक के जेनरेटरों में डिजिटल कंट्रोल सहित एक स्वचालित वोल्टेज रेगुलेटर तथा स्वतंत्र इनपुट तथा स्वचालित चेंजोवर वाले दो पृथक चैनल होंगे; और

(ग) 100 मे.वा. तथा अधिक के जेनरेटरों के स्वचालित वोल्टेज रेगुलेटर में विद्युत प्रणाली स्टेबलाइजर (पीएएएस) शामिल होंगे।

(2) जेनरेटरों के लिए शार्ट-सर्किट अनुपात (एससीआर) अंतर्राष्ट्रीय विद्युत तकनीकी आयोग (आईईसी)-34 के अनुसार होंगे।

(3) जेनरेटर ट्रांसफार्मर वॉल्टेज की निम्न वोल्टेज साइड पर डेल्टा कनेक्शन तथा उच्च वोल्टेज साइड पर स्टार कनेक्शन होगा। उच्च वोल्टेज साइड का स्टार बिन्दु प्रभावी तौर पर (मजबूती से) धूस-सम्पर्कन किया होगा ताकि अर्ध फाल्ट गुणक 1.4 या उससे कम प्राप्त किया जा सके।

(4) क्षमता का ध्यान किए बिना सभी जेनरेटिंग मशीनों में आवृत्ति को नियंत्रित करने के लिए उपयुक्त स्पीड/भार विरोधताओं सहित इलेक्ट्रॉनिकली नियंत्रित गवर्निंग प्रणाली होंगी। ताप विद्युत उत्पादक यूनिटों के नियंत्रकों में से 3 से 6% को शिथिलता (ड्रूप) होंगी तथा जल विद्युत उत्पादक यूनिटों में 0 से 10% तक होंगी।

(5) अनुसंधकर्ता को परियोजना ग्रिड पर वोल्टेज तथा करंट हारमोनिक्स इंस्टीट्यूट ऑफ इलेक्ट्रिकल एंड इलेक्ट्रॉनिक्स इंजीनियर्स (आईईईई) मानक-519 में बताई गई सीमाओं से अधिक नहीं होंगी।

(6) भार केन्द्र के समीप स्थित उत्पादक इकाइयों 0.85 लोडिंग (अति-उत्तेजित) से 0.95 लोडिंग (अल्प-उत्तेजित) के मध्य परिवर्तित विद्युत घटक के लिए दरित आउटपुट पर प्रचालन के लिए सक्षम होंगी तथा भार केन्द्रों से दूर स्थित उत्पादक इकाइयों 0.9 लोडिंग (अति उत्तेजित) से 0.95 लोडिंग (अल्प-उत्तेजित) के मध्य परिवर्तित विद्युत घटक के लिए दरित आउटपुट पर प्रचालन के लिए सक्षम होंगी। उपर्युक्त निम्नान $\pm 5\%$ के निम्नतम वोल्टेज विचलन, $+3\%$ तथा -5% के आवृत्ति विचलन तथा $\pm 5\%$ के संयुक्त वोल्टेज तथा आवृत्ति विचलन पर प्राप्त किए जाएंगे। हालांकि, गैस टरबाइन के लिए उपर्युक्त निम्नान $\pm 5\%$ के वोल्टेज विचलन के लिए प्राप्त किए जाएंगे।

(7) कोयला अथवा लिग्नाइट आधारित ताप विद्युत जेनरेटिंग इकाइयां आवृत्ति प्रातिक्रिया देने के लिए लघु अवधि के लिए अधिकतम अक्षरित निर्धारण (एमसीआर) के 105% उत्पादन करने में सक्षम होंगी (बशर्तें वाल्व वाइड ओपन कंडीशन के तहत भार क्षमता अधिकतम हो)।

(8) जल-विद्युत उत्पादक इकाइयों 110% की दरित क्षमता तक सतत आधार पर उत्पादन के लिए सक्षम होंगी।

(9) सभी उत्पादन इकाइयों में इकाइयों को न केवल इकाइयों के अंदर तथा स्टेशन के अंदर त्रुटियों से परंतु संचारण लाइनों में त्रुटियों से सुरक्षित रखने के लिए मानक सुरक्षा होंगी। 100 मे.वा. से अधिक की दरित क्षमता वाली उत्पादन इकाइयों के लिए स्वतंत्र डायरेक्ट करंट (डीसी) आपूर्तियों से पुरित ट्रिप को दो स्वतंत्र सैटों पर सुरक्षा के दो स्वतंत्र सैट मुहैया कराए जाएंगे। सुरक्षाओं में सम्मिलित होंगे परन्तु लोकल ब्रेकर बैंक-अप (एलबीबी) तक सीमित नहीं होंगे।

(10) जहां संभव हो, 50 मे.वा. तथा अधिक की जल विद्युत उत्पादन इकाइयां तुल्यकालिक कंडेंसर मोड में परिचालन में सक्षम होंगी।

(11) उत्पादन केन्द्रों के सभी स्विचयार्ड पर बस-बार सुरक्षा मुहैया कराई जाएगी।

- (12) निक्वेस्टर की परीयोजना में स्वचालित समकालिक सुविधाएं मुहैया कराई जाएंगी।
- (13) वोल्टेज तथा प्रतिपातक आवश्यकताओं सहित स्टेशन सहायक विद्युत आवश्यकता ग्रिड पर ग्रिड कोड अथवा अन्य ग्रिड कोड जैसा भी मामला हो, में बताए गए प्रतिबंधों से बाहर परिचालित प्रतिबंध नहीं लगाएंगी।
- (14) जल विद्युत उत्पादन इकाईयों के मामले में स्वचालित सुविधा मुहैया कराई जानी चाहिए। ब्लैक स्टार्ट के लिए स्टेशन सहायक आवश्यकताओं को पूरा करने के लिए जल विद्युत उत्पादन केन्द्र में एक छोटा डोजल सेनेरेटर भी होना चाहिए।
- (15) उत्पादन केन्द्रों से सम्बद्ध उप-केन्द्रों के संबंध में मानक इन मानकों के भाग-III के तहत 'उप-केन्द्रों' के संबंध में बताए गए प्रावधानों के अनुसार होंगे।

2. विद्यमान इकाईयां

200 मे.वा. तथा उससे अधिक की ताप विद्युत उत्पादन इकाईयां तथा 100 मे.वा. तथा उससे अधिक की जल विद्युत इकाईयां के लिए नवीकरण एवं आधुनिकीकरण के समय पर निम्नलिखित सुविधाएं उपलब्ध कराई जानी चाहिए :-

- (1) प्रत्येक उत्पादन इकाई में आटोमैटिक वोल्टेज रेगुलेटर होगा। 100 मे.वा. रेटिंग तथा उससे अधिक के जेनेरेटर्स की द्रुत क्षमता में स्वतंत्र इनपुट आटोमैटिक बैकवर्न वाले दो मुख्य चैनलों सहित आटोमैटिक वोल्टेज रेगुलेटर होंगे।
- (2) 100 मे.वा. से अधिक क्षमता की प्रत्येक जेनेरेटिंग इकाई में विद्युत प्रणाली स्थिरकारी होगा।
- (3) सभी उत्पादन इकाईयों में मानक सुरक्षा होंगे जो इकाईयों को न केवल इकाईयों के अंदर तथा स्टेशन के अंदर नुटियों से परंतु संचारण लाइनों में नुटियों से भी सुरक्षित रखेंगे। सुरक्षाओं में सम्मिलित परंतु सीमित नहीं स्थानीय ब्रेकर बैक-अप (एलबीबी) सुरक्षा होगी।

भाग III

संचारण लाइन तथा उप-केन्द्र पर लागू करने के लिए ग्रिड संयोजक मानक

इन विनियमनों तथा अनुसूची के भाग-I में ग्रिड संयोजक के लिए मानकों के तहत सामान्य संयोजक परिस्थितियों के अतिरिक्त ग्रिड से सम्बद्ध संचारण लाइनों तथा उप-केन्द्र निम्नलिखित अतिरिक्त आवश्यकताओं सहित अनुपालन करेंगे :-

- (1) सभी नये उप-केन्द्रों के लिए 220 कि.वो. स्तरों तथा उससे अधिक ऊँची उप-केन्द्रों पर बस-बार सुरक्षा मुहैया कराई जाएगी। विद्यमान उप-केन्द्रों के लिए यह उचित समय-सीमा में लागू किया जाएगा।
- (2) 220 कि.वो. तथा उससे अधिक सभी उप-केन्द्रों के लिए स्थानीय ब्रेकर बैक-अप (एलबीबी) सुरक्षा मुहैया कराए जाएंगे।
- (3) सभी नये उप-केन्द्रों के लिए 220 कि.वो. तथा उससे अधिक सभी संचारण लाइनों पर दो मुख्य न्यूमेरिकल डिस्टेंस सुरक्षा स्कीमें मुहैया कराई जाएंगी। विद्यमान उप-केन्द्रों के लिए यह उचित समय-सीमा में लागू किया जाएगा।
- (4) सर्किट ब्रेकरों, आईसोलेटर्स तथा सभी अन्य करंट ले जाने वाले उपस्कर बिना किसी क्षति के सामान्य तथा आपातकाल पर करंट ले जाने के लिए सक्षम होंगे। उपस्कर अंतराल तथा अंतःगम्य संचारण प्रणाली पर विद्युत हस्तांतरण की क्षमता पर प्रतिबंधक गुणक नहीं होगा।
- (5) सभी सर्किट ब्रेकर तथा अन्य शेष अवरोधी उपाय किसी भी दोष के लिए करंट को जिसके लिए उन्हें अवरोध करने की आवश्यकता होगी, कुशलतापूर्वक अवरोध करने के लिए सक्षम होंगे। सर्किट ब्रेकर में बिना समय विलम्ब के दोष को दूर करने की क्षमता हो। समुचित संचारण मूटिलिटी द्वारा विशेष रूप से न्यूनतम दोष रूकावट आवश्यकता की आपूर्ति किए जाने की आवश्यकता है। सर्किट ब्रेकर सभी अन्य अपेक्षित स्विचिंग द्यूटी करने में सक्षम हो लेकिन वह कोरेस्टिव करंट स्विचन, लोड करंट स्विचिंग तथा आउट ऑफ स्टेप स्विचन तक ही सीमित न हो। सर्किट ब्रेकर परिलम्बन अधिक चालूता सूचित किए बिना जिससे ग्रिड में कहीं भी प्रावधित उपस्करों की क्षति हो सकती है, सभी अपेक्षित द्यूटी का निर्वाह करेगा। प्राधिकरण द्वारा अल्पकालिक तथा संदर्श संचारण योजनाओं पर आधारित सर्किट ब्रेकर की शॉर्ट सर्किट क्षमता पूर्ण होगी।
- (6) उप-केन्द्र सहायक उपस्करों को विद्युत आपूर्ति :

(क) अल्टरनेटिंग करंट (एसी) आपूर्ति (नए उप-केन्द्रों पर प्रयोज्य) के लिये :-

220 कि.वो. तथा अधिक : स्वावलम्बी ज़ोंतों से दो उच्च पारेषण आपूर्तियां व्यवस्थित की जाएंगी। दो उच्च पारेषण आपूर्तियों में से एक उच्च पारेषण आपूर्ति दूसरे की उद्गत होगी। इसके अतिरिक्त उपयुक्त क्षमता का डीजल उत्पादन (डीजी) ज़ोंत से आपातकाल आपूर्ति भी मुहैया कराई जाएगी।

66 कि.घो. तथा 220 कि.घो. से कम : इसमें एक उच्च पारेषण आपूर्ति तथा एक डोजल उत्पादन स्रोत होगा।

33 कि.घो. तथा 66 कि.घो. से कम : इसमें एक उच्च पारेषण आपूर्ति होगी।

(ख) हायरेक्ट करंट (डीसी) आपूर्ति के लिए (नए उप-केंद्रों पर प्रयोज्य) के लिए :

132 कि.घो. तथा अधिक के संचारण प्रणाली के उपकेंद्रों तथा सभी उत्पादन केंद्रों का उप-केंद्र के लिए : इसमें बैट्रियों के दो सेट होने बिनमें प्रत्येक सेट का अपना चार्जर होगा।

132 कि. घो. से कम उपकेंद्रों के लिए : इसमें बैट्री तथा चार्जर का एक सेट होगा।

(7) एक प्रभावी भू-सम्पर्कन प्रणाली के लिए अर्थ फास्ट फैक्टर 1.4 से अधिक नहीं होगा।

भाग IV

वितरण प्रणालियों तथा बल्क उपभोक्ताओं पर लागू किए जाने वाले ग्रिड संयोजक मानक

भाग I में दिए गए ग्रिड संयोजक तथा भाग-III में उप-केंद्रों तथा संचारण लाइनों पर लागू किए जाने वाले इन धिनियमनों तथा सामान्य मानदण्डों में संयोजन परिस्थितियों के अलावा निर्म्मालिखित अतिरिक्त आवश्यकताओं का अनुपालन किया जाएगा।

1. कम आवृत्ति/डीएफ/डीटी प्रसारण

क्षेत्रीय विद्युत समिति में लिए गए निर्णय के अनुसार ग्रिड की गिरती हुई आवृत्ति की स्थितियों में ग्रिड सुरक्षा को सुनिश्चित करने के लिए संपात्न्यता में स्वचालित भार नियंत्रण के लिए कम आवृत्ति तथा डीएफ/डीटी (समय के साथ आवृत्ति के बदलने को दर) प्रसारण को नियोजित करना होगा।

2. अभिक्रियाशील विद्युत

वितरण लाइसेंसधारी अपनी प्रणाली में ग्रेक अभिक्रियाशील विद्युत आवश्यकता की कुल क्षतिपूर्ति के लिए पर्याप्त अभिक्रियाशील मुआवजा मुहैया करायी ताकि वह अभिक्रियाशील विद्युत सहायता के लिए ग्रिड पर निर्भर करें। वितरण प्रणाली तथा बल्क उपभोक्ता का विद्युत गुणक 0.95 से कम नहीं होगा।

3. वोल्टेज तथा करंट हारमोनिकस

- (1) संयोजन बिंदु पर वोल्टेज के लिए कुल हारमोनिक विरूपण 5 प्रतिशत से अधिक नहीं तथा व्यक्तिगत हारमोनिक 3 प्रतिशत से अधिक नहीं होगा।
- (2) संयोजन बिंदु पर किसी भी समय संचारण प्रणाली से निकलती करंट की कुल हारमोनिक विकृत 8 प्रतिशत से अधिक नहीं होगा।
- (3) (1) तथा (2) में निर्धारित की गई सीमाएँ एक चरणबद्ध तरीके से लागू की जाएंगी ताकि इनका इन नियमनों के सरकारी राजपत्र में प्रकाशित होने की तारीख से 5 वर्ष होने से पहले पूरी तरह अनुपालन किया जा सके।

4. वोल्टेज असंतुलन

33 कि.घो. तथा उससे अधिक पर वोल्टेज असंतुलन 3.0 प्रतिशत से अधिक नहीं होगा।

5. वोल्टेज अस्थिरता

- (1) स्टेप बदलाव के लिए वोल्टेज अस्थिरता जो चार-बार हो सकती है, की उचित सीमा 1.5 प्रतिशत है।
- (2) यदाकदा अस्थिरता के लिए स्टेप बदलाव के अलावा अधिकतम उचित सीमा 3 प्रतिशत है।
- (3) उपरोक्त (1) तथा (2) में निर्धारित की गई सीमाएँ इन नियमनों के सरकारी राजपत्र में प्रकाशित होने की तारीख से 5 वर्ष होने से पहले लागू किए जाएंगे।

6. बैंक-एनर्जीजेशन

उपभोक्ता अपने बनेरेटरों अथवा किसी स्वचालित नियंत्रण अथवा मैनुअल स्रोत से संचारण अथवा वितरण प्रणाली को कर्ज नहीं प्रदान करेगा जब तक किसी संचारण अथवा वितरण लाइसेंसधारी द्वारा विशेष रूप से अनुरोध न किया गया हो।

विजय कुमार मिश्र, सचिव

[विज्ञापन III/IV/असा./187 जी/2006]

792 GI/07-3

MINISTRY OF POWER
(CENTRAL ELECTRICITY AUTHORITY)
NOTIFICATION

New Delhi, the 21st February, 2007

No. 12/X/STD (CONN)/GM/CEA.—Whereas the draft of the Central Electricity Authority (Technical Standards for Connectivity to the Grid) Regulations, 2006 were published as required by Sub-section (2) of Section 177 of the Electricity Act, 2003 (36 of 2003) read with rule 3 of the Electricity (Procedure for previous Publication) Rules, 2005;

Now, therefore, in exercise of powers conferred by Section 7 and clause (b) of Section 73 read with Sub-section (2) of Section 177 of Electricity Act, 2003, the Central Electricity Authority hereby makes the following Regulations for regulating the technical standards for connectivity to the grid, namely:—

1. Short title and commencement

- (1) These Regulations may be called the Central Electricity Authority (Technical Standards for Connectivity to the Grid) Regulations, 2007.
- (2) These Regulations shall come into force on the date of their publication in the Official Gazette.

2. Definitions

In these regulations, unless the context otherwise requires,—

- (1) "Act" means The Electricity Act, 2003 (No. 36 of 2003);
- (2) "Appropriate Load Despatch Centre" means the National Load Despatch Centre (NLDC), Regional Load Despatch Centre (RLDC) or State Load Despatch Centre (SLDC) or Area Load Despatch Centre as the case may be;
- (3) "Area Load Despatch Centre" means the centre as established by the state for load despatch and control in a particular area of the state;
- (4) "Appropriate Transmission Utility" means the Central Transmission Utility or State Transmission Utility as the case may be;
- (5) "Automatic Generation Control" (AGC) means capability to regulate the power output of selectable units in response to total power plant output, tie-line power flow, and power system frequency;
- (6) "Automatic Voltage Regulator" (AVR) means a continuously acting automatic excitation control system to regulate a generating unit terminal voltage;
- (7) "British Standards" (BS) means those standards and specifications approved by the British Standards Institution;
- (8) "Bulk consumer" means a consumer who avails supply at voltage of 33 kV or above;
- (9) "Earth Fault Factor" at a location in a three-phase system means the ratio of 'the highest root mean square (r.m.s.) phase-to-earth power frequency voltage on a sound phase during a fault to earth (affecting one or more phases)' to 'the r.m.s. phase-to-earth power frequency voltage which would be obtained at the selected location without the fault';
- (10) "Earthing" means connection between conducting parts and general mass of earth by an earthing device;
- (11) "Energy Management System" (EMS) means a complete system comprising software for facilitating operation of a power system, maintaining safety, reliability and economy;
- (12) "Event Logging Facilities" means a device provided to record the chronological sequence of operations of the relays and other equipment;
- (13) "Frequency" means the number of alternating cycles per second [expressed in Hertz (Hz)];
- (14) "Generating Unit" means an electrical Generator coupled to a prime mover within a Power Station together with all Plant and Apparatus at that Power Station (up to the Connection Point) which relates exclusively to the operation of that generator;
- (15) "IEC Standard" means a standard approved by the International Electrotechnical Commission;
- (16) "Indian Standards" (IS) means standards specified by Bureau of Indian Standards;
- (17) "Interconnection point" means a sub-station or switchyard at which point the interconnection is established between the requester and the grid;
- (18) "Isolator" means a device for achieving isolation of one part of an electrical system from the rest of the system;
- (19) "Maximum Continuous Rating" (MCR) of a generating unit means the maximum continuous output in MW at the generator terminals guaranteed by the manufacturer at rated parameters;

- (20) "New Unit" means a generating unit for which the requester is seeking connection to the grid;
- (21) "Power Factor" means the cosine of the electrical angle between the voltage and current complexors in an AC electrical circuit;
- (22) "Power System Stabilizer" (PSS) means controlling equipment which receives input signals of speed, frequency and power to control the excitation via the voltage regulator for damping power oscillations of a synchronous machine;
- (23) "Protection System" means the equipment by which abnormal conditions in the grid are detected and fault clearance, actuating signals or indications are initiated without the intervention by the operator;
- (24) "Reactive Power" means in relation to an AC electrical system, the product of root mean square (r.m.s.) voltage, root mean square (r.m.s.) current and the sine of the electrical phase angle between the voltage complexor and current complexor, measured in volt-amperes reactive (VAR);
- (25) "Requester" means a person such as a Generating Company including captive generating plant or Transmission Licensee (excluding Central Transmission Utility and State Transmission Utility) or Distribution Licensee or Bulk Consumer, who is seeking connection of his new or expanded electrical plant to the Grid at voltage level 33 kV and above;
- (26) "SCADA" means Supervisory Control and Data Acquisition System that acquires data from remote locations over communication links and processes it at centralised control location for monitoring, supervision, control as well as decision support;
- (27) "Site Common Drawing" means a drawing prepared for a connection site, which depicts layout of connection site, electrical layout, common protection and control drawings and common services;
- (28) "Site Responsibility Schedule" (SRS) means a Schedule for demarcating the ownership, responsibility for control, operation and maintenance of the equipment at the interconnection point;
- (29) "System Protection Scheme" means a scheme designed to detect abnormal system conditions and take predetermined, corrective action to preserve system integrity and provide acceptable system performance;
- (30) "Thermal Generating Unit" means a generating unit using fossil fuels such as coal, lignite, gaseous and liquid fuel;
- (31) "Total Harmonic Distortion" (THD) means a measure of distortion of the voltage or current wave form (which shall ideally be sinusoidal) and is the square root of the sum of squares of all voltage or current harmonics expressed as a percentage of the magnitude of the fundamental;
- (32) "Transmission System" means a network of transmission lines and sub-stations;
- (33) "Under Frequency Relay" means a relay which operates when the system frequency falls below a pre-set value;
- (34) "User" means a person such as a Generating Company including captive generating plant or Transmission Licensee (other than the Central Transmission Utility and State Transmission Utility) or Distribution Licensee or Bulk Consumer, whose electrical plant is connected to the grid at voltage level 33 kV and above; and
- (35) "Voltage Unbalance" means the deviation between highest and lowest line voltage divided by Average Line Voltage of the three phases.

The words and expressions used and not defined in these regulations but defined in the Act shall have the meanings assigned to them in the Act.

3. Applicability of the Regulations

These regulations shall be applicable to all the users, requesters, Central Transmission Utility and State Transmission Utility.

4. Objectives

- (1) The aim of these regulations is to ensure the safe operation, integrity and reliability of the grid.
- (2) The new connection shall not cause any adverse effect on the grid. The grid shall continue to perform with specified reliability, security and quality as per the Central Electricity Authority (Grid Standards for Operation and Maintenance of Transmission Lines) Regulations, as and when they come into force. However, these regulations are not to be relied upon to protect the plant and equipment of the requester or user.
- (3) A requester is required to be aware, in advance, of the standards and conditions his system has to meet for being integrated into the grid.

5. Standards

The equipment shall meet the requirements in accordance with the provisions of Technical Standards for Connectivity to the Grid as given in the Schedule of these regulations and Central Electricity Authority (Grid Standards for Operation and Maintenance of Transmission Lines) Regulations as and when they come into force, and Grid Code and the State Grid Code(s) as specified by the appropriate Commission.

6. General Connectivity Conditions

- (1) The requester shall be responsible for the planning, design, construction, reliability, protection and safe operation of its own equipment subject to the regulations for construction operation and maintenance and connectivity and other statutory provisions.
- (2) The requester and user shall furnish data as required by the Appropriate Transmission Utility or by the licensee or generating station with whose system the inter-connection is proposed, for permitting inter-connection with the grid.
- (3) The requester and user shall provide necessary facilities for voice and data communication and transfer of on-line operational data, such as voltage, frequency, line flows, and status of breaker and isolator position and other parameters as prescribed by the Appropriate Load Despatch Centre.
- (4) The requester and user shall cooperate with the Regional Power Committee, and Appropriate Load Despatch Centres in respect of the matters listed below, but not limited to :—
 - (a) protection coordination and settings of its protective relays accordingly;
 - (b) agree to maintain meters and communication system in its jurisdiction in good condition;
 - (c) participate in contingency operations such as load shedding, increasing or reducing generation, is landing, black start, providing start-up power and restoration as per the procedure decided by the Appropriate Load Despatch Centre;
 - (d) furnish data as required by Appropriate Transmission Utility or Transmission Licensee, Appropriate Load Despatch Centre, Appropriate Regional Power Committee, and any committee constituted by the Authority of appropriate Government for system studies or for facilitating analysis of tripping or disturbance in power system;
 - (e) carryout modifications in his equipment with respect to short circuit level, protection coordination and other technical reasons considered necessary due to operational requirements;
 - (f) abide by the coordinated outage plan of the state and region in respect of generating units and transmission lines as approved by the Regional Power Committee; and
 - (g) cooperate with the Regional Power Committee for tuning of Power System Stabilizer provided in the excitation system of the generating unit.
- (5) The requester and user shall make arrangements for integration of the controls and tele-metering features of his system into the Automatic Generation Control, Automatic Load Shedding, Special Protection System, Energy Management Systems and Supervisory Control and Data Acquisition System of the respective state or region.
- (6) For inter-connection studies the requester shall make a request for connection in the planning stage to the Appropriate Transmission Utility. In case a requester is seeking inter-connection to a distribution system, such a request will be made to the distribution licensee. The Appropriate Transmission Utility or distribution licensee shall carry out the inter-connection study to determine the point of inter-connection, required inter-connection facilities and modifications required on the existing grids, if any, to accommodate the inter-connection. The study may also address the transmission system capability, transient stability, voltage stability, losses, voltage regulation, harmonics, voltage flicker, electromagnetic transients, machine dynamics, ferro resonance, metering requirements, protective relaying, sub-station grounding and fault duties, as the case may be.
- (7) Every connection of a requester's system to the grid shall be covered by a connection agreement between the requester and
 - (a) Appropriate Transmission Utility in case of connection to Inter-state transmission system or intra state transmission system as the case may be;
 - (b) Distribution licensee in case of inter-connection to distribution licensee's system; and
 - (c) Transmission licensee and Appropriate Transmission Utility, in case of inter-connection to a transmission licensee (tri-partite agreement).
- (2) The connection agreement shall contain general and specific technical conditions, applicable to that connection.

7. Site Responsibility Schedule

- (1) A Site Responsibility Schedule (SRS) for every connection point shall be prepared by the owner of the sub-station where connection is taking place.
- (2) Following information shall be included in the Site Responsibility Schedule, namely,—
 - (a) Schedule of electrical apparatus services and supplies;

- (b) Schedule of telecommunications and measurement apparatus; and
 - (c) Safety rules applicable to each plant and apparatus.
- (3) Following information shall also be furnished in the Site Responsibility Schedule for each item of equipment installed at the connection site, namely :—
- (a) the ownership of equipment;
 - (b) the responsibility for control of equipment;
 - (c) the responsibility for maintenance of equipment;
 - (d) the responsibility for operation of equipment;
 - (e) the manager of the site;
 - (f) the responsibility for all matters relating to safety of persons at site; and
 - (g) the responsibility for all matters relating to safety of equipment at site.

8. Access at Connection Site

The requester or user, as the case may be, owning the electrical plant shall provide reasonable access and other required facilities to the licensee or Appropriate Transmission Utility or Appropriate Load Despatch Centre, whose equipment is installed or proposed to be installed at the Connection Site for installation, operation and maintenance, etc. of the equipment.

9. Site Common Drawings

Site Common Drawings shall be prepared for each connection point by the owner of the Sub-station where connection is taking place.

SCHEDULE

(See Regulation No. 5)

Standards for Connectivity to the Grid

Part I

General

1. Standards and Codes of Practice

- (1) The requester shall follow the industry best practices and applicable industry standards in respect of the equipment installation and its operation and maintenance.
- (2) The equipment including overhead lines and cables shall comply with the relevant Indian Standards, British Standard (BS), or International Electrotechnical Commission (IEC) Standard, or American National Standards Institute (ANSI) or any other equivalent International Standard :
Provided that whenever an International Standard or International Electrotechnical Commission Standard is followed, necessary corrections or modifications shall be made for nominal system frequency, nominal system voltage, ambient temperature, humidity and other conditions prevailing in India before actual adoption of the said Standard.
- (3) The effects of wind, storms, floods, lightning, elevation, temperature extremes, icing, contamination, pollution and earthquakes must be considered in the design and operation of the connected facilities.
- (4) Installation, operation and maintenance of the equipment by the requester shall conform to the relevant standards specified by the Authority under Section 177, and Section 73 of the Act, as and when they come into force.

2. Safety

The requester shall comply with the Indian Electricity Rules, 1956 till such time Central Electricity Authority (Safety and Electric Supply) Regulations come into force.

3. Sub-station Grounding

Each transmission sub-station must have a ground mat solidly connected to all metallic structures and other non-energised metallic equipment. The mat shall limit the ground potential gradients to such voltage and current levels that will not endanger the safety of people or damage equipment which are in, or immediately adjacent to, the station under normal and fault conditions. The ground mat size and type shall be based on local soil conditions and available electrical fault current magnitudes. In areas where ground mat voltage rises would not be within acceptable and safe limits (for example due to high soil resistivity or limited sub-station space), grounding rods and ground wells may be used to reduce the ground grid resistance to acceptable levels. Sub-station grounding shall be done in accordance with the norms of the Institute of Electrical and Electronics Engineers (IEEE)-80.

4. Metering

Meters shall be provided as specified in the Central Electricity Authority (Installation and Operation of Meters) Regulations, 2006.

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5. Basic Insulation Level and Insulation Co-ordination

- (1) Basic Insulation Level (BIL) of various items of equipment and ratings of surge arresters for generating stations, lines and sub-stations shall be decided on the following order of priority, namely :—
 - (a) ensure safety to public and operating personnel;
 - (b) avoid permanent damage to plant;
 - (c) prevent failure of costly equipment;
 - (d) minimise circuit interruptions; and
 - (e) minimise interruptions of power supply to consumers.
- (2) Insulation co-ordination of equipment and lines on both sides of a connection point belonging to the requester and the grid shall be accomplished and the co-ordination shall be done by the Appropriate Transmission Utility.

6. Protection System and Co-ordination

- (1) Protection system shall be designed to reliably detect faults on various abnormal conditions and provide an appropriate means and location to isolate the equipment or system automatically. The protection system must be able to detect power system faults within the protection zone. The protection system should also detect abnormal operating conditions such as equipment failures or open phase conditions.
- (2) Every element of the power system shall be protected by a standard protection system having the required reliability, selectivity, speed, discrimination and sensitivity. Where failure of a protective relay in the requester's system has substantial impact on the grid, it shall connect an additional protection as back up protection besides the main protection.
- (3) Notwithstanding the protection systems provided in the grid, the requester and user shall provide requisite protections for safeguarding his system from the faults originating in the Grid.
- (4) Bus Bar Protection and Breaker Fail Protection or Local Breaker Back Up Protection shall be provided wherever stipulated in the regulations.
- (5) Special Protection Scheme such as under frequency relay for load shedding, voltage instability, angular instability, generation backing down or Islanding Schemes may also be required to be provided to avert system disturbances.
- (6) Protection co-ordination issues shall be finalized by the Regional Power Committee.
- (7) The requester and user shall develop protection manuals conforming to various standards for the reference and use of its personnel.

7. Disturbance Recording and Event Logging Facilities

Every generating station and sub-station connected to the grid at 220 kV or above shall be provided with disturbance recording and event logging facilities. All such equipment shall be provided with time synchronization facility for global common time reference.

8. Schematic Diagrams

The requester and user shall prepare single line schematic diagrams in respect of its system facility and make the same available to the Appropriate Transmission Utility or licensee through which his system is connected and the Appropriate Load Despatch Centre.

9. Inspection, Test, Calibration and Maintenance prior to connection

Before connecting, the requester shall complete all inspections and tests finalised in consultation with the Appropriate Transmission Utility or licensee or generating station to which his equipment is connected. The requester shall make available all drawings, specifications and test records of the project equipment pertaining to integrated operation to the Appropriate Transmission Utility or licensee or generating station as the case may be.

Part II**Grid Connectivity Standards applicable to the Generating Units**

The units at a generating station proposed to be connected to the grid shall comply with the following requirements besides the general connectivity conditions given in the regulations and general requirements given in Part I of the Schedule :—

1. New Generating Units

- (1) The excitation system for every generating unit :—
 - (a) shall have state of the art excitation system;
 - (b) shall have Automatic Voltage Regulator (AVR). Generators of 100 MW rating and above shall have Automatic Voltage Regulator with digital control and two separate channels having independent inputs and automatic changeover; and
 - (c) The Automatic Voltage Regulator of generator of 100 MW and above shall include Power System Stabilizer (PSS).

- (2) The Short-Circuit Ratio (SCR) for generators shall be as per IEC-34.
- (3) The generator transformer windings shall have delta connection on low voltage side and star connection on high voltage side. Star point of high voltage side shall be effectively (solidly) earthed so as to achieve the Earth Fault Factor of 1.4 or less.
- (4) All generating machines irrespective of capacity shall have electronically controlled governing system with appropriate speed/load characteristics to regulate frequency. The governors of thermal generating units shall have a droop of 3 to 6% and those of hydro generating units 0 to 10%.
- (5) The project of the requester shall not cause voltage and current harmonics on the grid which exceed the limits specified in Institute of Electrical and Electronics Engineers (IEEE) Standard 519.
- (6) Generating Units located near load centre, shall be capable of operating at rated output for power factor varying between 0.85 lagging (over-excited) to 0.95 leading (under-excited) and Generating Units located far from load centres shall be capable of operating at rated output for power factor varying between 0.9 lagging (over-excited) to 0.95 leading (under-excited). The above performance shall also be achieved with voltage variation of $\pm 5\%$ of nominal, frequency variation of $\pm 3\%$ and $\pm 5\%$ and combined voltage and frequency variation of $\pm 5\%$. However, for gas turbines, the above performance shall be achieved for voltage variation of $\pm 5\%$.
- (7) The coal and lignite based thermal generating units shall be capable of generating up to 105% of Maximum Continuous Rating (subject to maximum load capability under Valve Wide Open Condition) for short duration to provide the frequency response.
- (8) The hydro generating units shall be capable of generating up to 110% of rated capacity (subject to rated head being available) on continuous basis.
- (9) Every generating unit shall have standard protections to protect the units not only from faults within the units and within the station but also from faults in transmission lines. For generating units having rated capacity greater than 100 MW, two independent sets of protections acting on two independent sets of trip coils fed from independent Direct Current (DC) supplies shall be provided. The protections shall include but not be limited to the Local Breaker Back-up (LBB) protection.
- (10) Hydro generating units having rated capacity of 50 MW and above shall be capable of operation in synchronous condenser mode, wherever feasible.
- (11) Bus bar protection shall be provided at the switchyard of all generating station.
- (12) Automatic synchronisation facilities shall be provided in the requester's Project.
- (13) The station auxiliary power requirement, including voltage and reactive requirements, shall not impose operating restrictions on the grid beyond those specified in the Grid Code or state Grid Code as the case may be.
- (14) In case of hydro generating units, self-starting facility may be provided. The hydro generating station may also have a small diesel generator for meeting the station auxiliary requirements for black start.
- (15) The standards in respect of the sub-stations associated with the generating stations shall be in accordance with the provisions specified in respect of 'Sub-stations' under Part III of these Standards.

2. Existing Units

For thermal generating units having rated capacity of 200 MW and above and hydro units having rated capacity of 100 MW and above, the following facilities would be provided at the time of renovation and modernization.

- (1) Every generating unit shall have Automatic Voltage Regulator. Generators having rated capacity of 100 MW and above shall have Automatic Voltage Regulator with two separate channels having independent inputs and automatic changeover.
- (2) Every generating unit of capacity having rated capacity higher than 100 MW shall have Power System Stabilizer.
- (3) All generating units shall have standard protections to protect the units not only from faults within the units and within the station but also from faults in transmission lines. The protections shall include but not limited to the Local Breaker Back-up (LBB) protection.

Part III

Grid Connectivity Standards applicable to the Transmission Line and Sub-Station

The transmission lines and sub-stations connected to the grid shall comply with the following additional requirements besides the general connectivity conditions under these regulations and General Standards for Connectivity in the Grid as specified in Part I of the Schedule.

- (1) Bus bar protection shall be provided on all sub-stations at and above 220 kV levels for all new sub-stations. For existing sub-stations, this shall be implemented in a reasonable time frame.
- (2) Local Breaker Back-up (LBB) protection shall be provided for all sub-stations of 220 kV and above.
- (3) Two main numerical Distance Protection Schemes shall be provided on all the transmission lines of 220 kV and above for all new sub-stations. For existing sub-stations, this shall be implemented in a reasonable time frame.

- (4) Circuit breakers, isolators and all other current carrying equipment shall be capable of carrying normal and emergency load currents without damage. The equipment shall not become a limiting factor on the ability of transfer of power on the inter-state and intra-state transmission system.
- (5) All circuit breakers and other fault interrupting devices shall be capable of safely interrupting fault currents for any fault that they are required to interrupt. The Circuit Breaker shall have this capability without the use of intentional time delay in clearing the fault. Minimum fault interrupting requirement need be specified by the Appropriate Transmission Utility. The Circuit Breaker shall be capable of performing all other required switching duties such as, but not limited to, capacitive current switching, load current switching and out-of-step switching. The Circuit Breaker shall perform all required duties without creating transient over-voltages that could damage the equipment provided elsewhere in the grid. The short circuit capacity of the circuit breaker shall be based on short-term and perspective transmission plans as finalized by the Authority.
- (6) Power Supply to Sub-Station Auxiliaries, shall:
- for alternating current (AC) supply (Applicable to new sub-stations):
 220 kV and above: Two high tension (HT) supplies shall be arranged from independent sources. One of the two high tension supplies shall be standby to the other. In addition, an emergency supply from diesel generating (DG) source of suitable capacity shall also be provided.
 66 kV and below 220 kV: There shall be one HT supply and one diesel generating source.
 33 kV and below 66 kV: There shall be one HT supply.
 - for direct current (DC) Supply (Applicable to new sub-stations): Sub-stations of transmission system for 132 kV and above and sub-stations of all generating stations: There shall be two sets of batteries, each equipped with its own charger.
 For sub-stations below 132 kV: there shall be one set of battery and charger.
- (7) Earth Fault Factor for an effectively earthed system shall be not more than 1.4.

Part IV

Grid Connectivity Standards applicable to the Distribution Systems and Bulk Consumers

The following additional requirements shall be complied with, besides the connectivity conditions in these regulations and general Standards for Connectivity to the Grid given in Part-I and those applicable to transmission lines and sub-stations in Part -III.

1. Under Frequency/dffdt Relays

Under frequency and dff/dt (rate of change of frequency with time) relays shall be employed for automatic load control in a contingency to ensure grid security under conditions of falling grid frequency in accordance with the decision taken in the Regional Power Committee.

2. Reactive Power

The distribution licensees shall provide adequate reactive compensation to compensate the inductive reactive power requirement in their system so that they do not depend upon the grid for reactive power support. The power factor of the distribution system and bulk consumer shall not be less than 0.95.

3. Voltage and Current Harmonics

- The total harmonic distortion for voltage at the connection point shall not exceed 5% with no individual harmonic higher than 3%.
- The total harmonic distortion for current drawn from the transmission system at the connection point shall not exceed 8%.
- The limits prescribed in (1) and (2) shall be implemented in a phased manner so as to achieve complete compliance not later than five years from the date of publication of these regulations in the official Gazette.

4. Voltage Unbalance

The Voltage Unbalance at 33 kV and above shall not exceed 3.0%.

5. Voltage Fluctuations

- The permissible limit of voltage fluctuation for step changes which may occur repetitively is 1.5%.
- For occasional fluctuations other than step changes the maximum permissible limit is 3%.
- The limits prescribed in (1) and (2) above shall come into force not later than five years from the date of publication of these regulations in the Official Gazette.

6. Back-energization

The consumer shall not energize transmission or distribution system by injecting supply from his generators or any other source either by automatic controls or manually unless specifically requested by the Transmission or Distribution Licensee.

BUOY KUMAR MISRA, Secy.

[ADVT-III/V/5-xy/187/G/06]