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lives

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ODISHA ELECTRICITY REGULATORY COMMISSION
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No.DIR (T)-368/09/19/ 1195

Dated-17.10.2024

To-

The Chief Executive Officer,
TPWODL, At/P.O. Burla,
Dist. Sambalpur, Odisha-768017

Sub: **Record Note of Discussion on the Annual Review of Performance of TPWODL for the FY 2023-24.**

Sir,

I am directed to send herewith the aforesaid Record Note of discussion during the Annual Performance Review of TPWODL for the period from April 2023 to March 2024 held on 30.08.2024 at 11.30 AM for your information and necessary action.

Encl: As above.

Yours faithfully,

SECRETARY

17.10.24

Copy to:

- i) The Principal Secretary, Department of Energy, Govt. of Odisha along with copy of the enclosure for favour of information.
- ii) The CMD, OPTCL, Janpath, Bhubaneswar along with copy of the enclosure for favour of information.
- iii) The MD, GRIDCO, Bhubaneswar along with copy of the enclosure for favour of information.

etc

Record Note of Annual Performance Review of TPWODL held on 30.08.2024 at 11:30AM at OERC in the presence of the Commission

Date of Review : 30th August, 2024

Period of Review : April 2023 - March 2024

The performance of TPWODL for the Financial Year 2023-24, i.e. period starting from April, 2023 to March, 2024 was reviewed by the Commission on 30th August, 2024, 11:30 AM in hybrid mode. The Chief Executive Officer, TPWODL presented the performance of TPWODL and senior officials of TPWODL were present during the review.

TPWODL started its operation w.e.f. 01.01.2021 after getting a vesting order from the Commission. The operational area of TPWODL spreads across 48,373 sq.kms. area having 314 Nos. of 33/11 kV sub-stations with 689 Nos. of Power Transformer and 77,020 Nos. of Distribution Transformers. It has a 33 kV network of 5632 ckt. kms., 11 kV network of 51708 ckt. kms. and LT network consisting of 68,558 kms. out of which 42,444 ckt. kms. consists of AB cable. It caters its services to a consumer base of about 20.74 lakhs as on 31.03.2024 covering 9 Revenue Districts (5 Circles, 17 Divisions & 57 Sub-Divisions) of Western part of Odisha including the Steel city Rourkela and Handloom city Sambalpur.

TPWODL has seen a positive growth in HT and Lt sales with an increase of 12.05% and 8.69% in FY 2023-24 over FY 2022-23 while the EHT sales have decreased by 7.69%. The total numbers of consumers as on 31.03.2024 is 20,74,615 out of which only 2,707 Nos. of consumers have AMR metering facility. It has an employee strength of total 3374. The total energy sales have increased by 0.32 % from 10609.62 MUs in FY 2022-23 to 10,643.73 MUs in FY 2023-24 with average load of 573.35 MW in FY 2023-24.

TPWODL has taken various initiatives for reduction in AT&C losses and improvement in quality and reliability of the power supply. It has 203 numbers of SCADA enabled PSS (out of total 314 PSSs) and 66 nos of Auto-Reclosure & Sectionalizer have communicated through SCADA. TPWODL has implemented a pilot project of ADMS in Industrial Estate subdivision of RSED in Rourkela Circle and 470 numbers of 11kV feeders data has been mapped in ADMS system. It has also conducted knowledge sharing sessions with the stakeholders, employee engagement programs, various CSR initiatives in the field of education, health & employment and development of safety culture among employees & general public.

Commission's Observations/ Directions:

1. The Commission took cognizance of the presentation made by the TPWODL and analysed various performance parameters. The summarized crucial performance parameters for FY 2023-24 presented by TPWODL along with previous years are given in the table below:-

<u>ANNUAL PERFORMANCE OF TPWODL for FY 2023-24 (31.03.2024)</u>				
BULK SUPPLY	2022-23	2023-24	OERC approval for FY 2023-24	Increase/ Decrease in FY24 over FY23 (%)
DEMAND (MVA)	1794.126	1701.701	1860.00	-5.15%
Energy input (MU)	13002.405	12752.411	13286	-1.92%
SALE TO CONSUMERS (MU)				
EHT	5862.70	5411.622	5351.54	-7.69%
HT	2164.94	2425.779	2199.81	12.05%
LT	2581.98	2806.327	3332.37	8.69%
TOTAL	10,609.62	10,643.73	10,883.72	0.32%
% of LT Sale	24.34%	26.37%	30.62%	2.03%
DISTRIBUTION LOSS (%)				
LT	41.37%	35.16%	34.66%	-6.21%
HT & LT	33.51%	28.73%	30.28%	-4.79%
OVERALL	18.40%	16.54%	18.08%	-1.87%
BILLING EFFECIENCY (%)				
HT	92.00%	92.00%	92.00%	0.00%
LT	58.63%	64.84%	65.34%	6.21%
HT & LT	66.49%	71.27%	69.72%	4.79%
OVERALL	81.60%	83.46%	81.92%	1.87%
BILLING TO CONSUMERS (CR.)				
EHT	3611.10	3366.62	3286.02	-6.77%
HT	1339.52	1495.56	1350.95	11.65%
LT	1290.40	1423.70	1615.02	10.33%
TOTAL	6,241.02	6,285.88	6,251.99	0.72%
COLLECTION RECEIVED (CR.)				
EHT	3574.03	3452.91	3253.16	-3.39%
HT	1339.52	1506.01	1337.44	12.43%
LT	1336.39	1404.52	1598.87	5.10%
TOTAL	6249.94	6363.44	6189.47	1.82%
COLLECTION EFFICIENCY (%)				
EHT	98.97%	102.56%	99.00%	3.59%
HT	100.00%	100.70%	99.00%	0.70%
LT	103.56%	98.65%	99.00%	-4.91%
HT & LT	101.75%	99.70%	99.00%	-2.05%
OVERALL	100.14%	101.23%	99.00%	1.09%
AT & C LOSS (%)				
LT	39.28%	36.03%	35.31%	-3.25%
HT & LT	32.35%	28.94%	30.97%	-3.41%
OVERALL	18.29%	15.51%	18.90%	-2.78%

From the above table it is observed that there has been an increase in sales in HT and LT level whereas the EHT sales have reduced. The total sales of TPWODL has increased to 10,643.73 MU which is merely 0.32% higher compared to total sales of 10,609.62 MU in the FY 2022-23. The LT sales amount to 26.37%. HT sales contribute 22.79% and EHT sales contribute 50.84% of the total sales in FY 2023-24. The share of EHT sales in FY 2022-23 was 55.25% and a definite decrease of 4.41 % is seen.

2. The overall Distribution loss has reduced to 16.54 % in FY 2023-24 as compared to 18.40 % in FY 2022-23. Appreciable reduction of 6.21 % is seen in reduction of LT distribution loss, which was 41.37% in FY 2022-23 and has come down to 35.16 %. The HT loss is being taken on normative basis as 8%. With network strengthening activities, the actual HT loss is expected to be less than 8% and that would result in higher LT loss than what is currently being derived. Therefore, TPWODL must endeavor to complete the energy audit soon so that the actual LT loss can be calculated. This would help them to focus the real loss prone areas which is otherwise shielded from corrective actions.
3. DTR metering percentage is only 7% which is a matter of concern. Plan should be set out for metering of DTR's particularly 100% metering of DTR's above 100 kVA should be assured. In the absence of energy audit at the lowest level, LT AT&C loss cannot be improved. The AT&C loss at LT level is 36.03% in the FY 2023-24. As per the submission of TPWODL, the existing 5367 metered DTR's are smart metered. The energy data of these DTR's must be analysed on timely basis to identify the loss prone areas and take corrective actions.
4. 100% metering has been done for 11 kV and 33 kV feeders while the energy audit has been done for 72% of 11 kV feeders and 97% of the 33 kV feeders. The auditing must be done with proper time scale planning and 100% auditing should be done in a financial year so that the losses can be reduced with corrective actions. The actual HT loss thus obtained should be submitted to the Commission.
5. As per the submission of TPWODL, the overall AT&C loss of almost all the Divisions are more than 20% except 6 Divisions. Despite huge investment in CAPEX, the losses are not as per expectation. The CAPEX invested particularly in network augmentation/ strengthening is to be submitted by TPWODL since this would predominantly contribute towards loss reduction.
6. TPWODL has overall AT&C loss of 15.51% with a collection efficiency of 101.23%. Without considering the past arrear collection, the actual AT&C loss would be rather high. TPWODL has to put considered effort since the **benefit of arrear collection is not expected to be available in the future.**
7. TPWODL should take necessary steps to identify low voltage pockets and compensation must be put in place for rectification. TPWODL is also directed to submit the list of PSSs where the average incoming voltage from OPTCL grids is less than 33 kV.
8. Action plan should be there to ensure that the protection system including provision of Surge Arresters, is in place complete in all respect at 33 kV & 11 kV level for all feeder/lines/cables, power transformers, etc. and timeline for completion needs to be mentioned. The provision of required protection for DTRs should be taken up and completed in phases as early as possible. The relay coordination should be done properly in consultation with OPTCL to avoid tripping at OPTCL end.

9. The system improvement can be identified from the details in the table below:

PERFORMANCE OF TPWODL - SYSTEM IMPROVEMENT			
Particulars	As on 31st March 2022	As on 31st March 2023	As on 31st March 2024
No. of Consumers			
EHT	41	43	46
HT	1082	1281	1412
LT	2,087,702	2,278,080	2,073,157
Total	2,088,825	2,279,404	2,074,615
No. of New Connections	113375	86,136	90097
Network System			
Length of 33 KV lines(km.)	5051	5358	5632
Length of 11 KV lines(km.)	48425	50249	51708
Length of L.T. lines(km.)	62858	65141	68558
No. of 33 KV feeders(excluding GRIDCO interface)	172	186	199
No. of 11 KV feeders	1134	1160	1205
No. of 33/11 kv transformers	655	684	689
No. of Distribution transformers(11/0.4 & 33/0.4 kv)	71402	75485	77020
DTR Capacity in MVA	3487	3686.228	3781
No of Interruptions in 33 KV Feeders	22619	12572	12558
No of Interruptions in 11 KV Feeders	314324	105670	101629
SAIFI at 11 kV (Nos.)	600	468	404
SAIDI at 11 kV (Hrs.)	424	330	310

10. TPWODL has added 1733 ckt. kms. of HT lines and 3417 ckt. kms. of LT lines to its network system in the FY 2023-24. The percentage of AB cable in the LT network system is 62%. The greater share of AB cable in LT network system ensures less interruptions and better reliability of power supply.
11. There are still 25,460 Nos. of consumers without meters and the metering is 92% of the total consumer base. Installation of meters at every consumer point should be of utmost priority and provisional billing should be avoided to reduce disputes and achieve accuracy in accounting.
13. The numbers of fatal accidents in TPWODL operational area is 51 in the FY 2023-24. TPWODL has not submitted the bifurcation of human and animal accidents. The numbers of accidents are high and necessary awareness has to be created among employees and public regarding risks associated with working on electrical equipment. The sagging of conductors and timely patrolling of lines and maintaining the safety clearances would reduce such accidents.
14. The concept behind 33 kV and 11 kV group breakers and feeder breakers installed/ required may be submitted since there is mismatch in the numbers of 33 kV and 11 kV feeders and numbers of breakers. All 33kV & 11kV feeders/lines & 33/11 kV transformers are supposed to be provided with CBs, prioritizing 33kV system followed by 11kV system. Tapping of lines/feeders and Group control breaker arrangement at 33kV and 11kV level should be removed on priority basis to achieve the objective of reliable power supply. It appears that CBs have not been provided at tapping points of 33 kV or 11 kV lines.
15. TPWODL shall submit details of Capacitive Compensation provided in Distribution network along with location of such installation. Further necessary steps must be taken to identify low

- voltage pockets and required capacitive compensation must be put in place for improvement of voltage. TPWODL is also directed to submit the list of PSSs where the average sending end voltage from OPTCL's GSS is less than 33 kV.
16. Even after completion of three years of operation, asset Mapping and consumer indexing are not yet complete. Necessary steps must be taken to complete the same during current FY 2024-25.
 17. As directed earlier, Consumer Average Interruption Duration Index (CAIDI) shall be estimated starting with Industrial & commercial consumers and extending it to other categories of consumers.
 18. As advised earlier, the transformer rating (e.g. 5 MVA, 8 MVA, 12.5 MVA & 20 MVA) and MVA capacity in PSS (like 10 MVA, 20-25 MVA, 40 MVA) need to be standardized at PSS level along with associated foundation and technical specification keeping adequate space in PSS for future expansion to facilitate faster procurement, delivery, interchangeability, minimization of inventories and to avoid addition of unnecessary PSSs in nearby area of existing PSS. Similarly, efforts must be made to phase out lower rating DTRs (e.g. 10 KVA, 16 KVA etc.) so that maintenance can be carried out properly due to reduction in numbers. DTRs need to be provided with adequate protection to reduce burning of DTRs.
 19. Steps may be taken to for installation of RMUs and Auto reclosures etc. to improve reliability of power supply to important cities by isolating the rural feeders.
 20. The DISCOM (TPWODL) is directed to segregate commercial loss from technical loss in AT&C loss.
 21. TPWODL is directed to address very common complaint of consumers regarding :
 - (a) high meter reading (indicative higher energy consumption) after installation of smart meters compared to other types of meters.
 - (b) non-payment of rebate to consumers having smart meters
 - (c) non-awareness of consumers for availing rebate against digital mode of payment within due date.
 - (d) time taken to give new connection particularly where there is need for enhancement of capacity of DTR.
 12. It is understood that the average line length of 33 kV and 11 kV lines are much more than normal length (i.e. about 20-30 kms for 33 kV line & 10-15 kms for 11 kV lines) and some of the lines are even more than 50 kms. There are numbers of direct tapping of 33 kV & 11 kV lines without provision of RMU/AR resulting in widespread outage and affecting power supply to numbers of consumers at a time in case of fault. Long lines are also creating low voltage problem. DISCOM (TPWODL) is directed to address such issues by providing RMU/AR linking GSS with as many PSS as possible, upgrading the existing PSS and diverting load to nearby PSS. The time frame to eliminate direct tapping of 33 kV and 11 kV line needs to be fixed.
 13. The DISCOM is directed to provide the details of operational and commercial performance including safety of man & equipment and consumer grievance redressal mechanism to address various issues & increase awareness of consumers regarding various initiatives taken for their benefit in respect of the best Division in the area of operation of DISCOM (TPWODL).

22. Following data should be submitted by TPWODL to the Commission:

- (i) Voltage wise arrear status separately for pre-vesting and post-vesting period also mentioning the government arrears.
- (ii) Funding mechanism of the already purchased and installed 1,67,881 smart meters.
- (iii) As per RST Order FY 2024-25, TPWODL was given the responsibility to manage the 'Disaster Resilient Fund' cumulatively amounting to Rs. 135 Crs. allowed during ARR, for all the DISCOMs. TPWODL should provide a detail SOP/ the modalities relating to the said fund.

23. During the review, OPTCL requested that TPWODL should submit the demand forecast in prescribed formats of OPTCL which is very much required for transmission system planning. TPWODL is directed to comply accordingly.


15/10/2024
Officiating Chairperson