ODISHA ELECTRICITY REGULATORY COMMISSION
PLOT NO. 4, CHUNOKOLI,SAILASHREE VIHAR
BHUBANESWAR - 751 021
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No.DIR (T)-368/09/19/1189
Dated-19 .08.2023

From

Antaryami Sahoo,
Secretary

To

The Chief Executive Officer,
At/P.O. Burla, Dist. Sambalpur.

Sub: **Review of Annual Performance of TPWODL for FY 2022-23 on 19th July 2023**

Sir,

I am directed to send herewith the aforesaid Record note of Review of Annual Performance of TPWODL for the FY 2022-23 held on 19th July 2023 at OERC office for your kind information and necessary action.

Yours faithfully,

Encl: As above.

SECRETARY 14/8/23

Copy to:

i) The Additional Chief 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.

Encl: As above.

SECRETARY 14/8/23

Record Note of Annual Performance Review of TPWODL held on 19.07.2023 at 11:00AM at OERC in the presence of the Commission

Date of Review : 19th July, 2023

Period of Review : April 2022-March 2023

The performance of TPWODL for the period April 2022 to March 2023 of FY 2022-23 was reviewed by the Commission on 19th July, 2023 at 11:00 at OERC office premises. The C.E.O., TPWODL presented the performance of TPWODL and senior officials of TPWODL were present during the review.

TPWODL was vested with operation of Western part of distribution system of Odisha on 01.01.2021. TPWODL spreads across 48,373 sq.km. of area having 307 nos. of 33/11 kV sub-station, 5358 km. of 33 kV lines, 50249 km. of 11 kV lines and 65141 km. of LT lines, which cater to consumer base of about 22.974 lakh as on 31.03.2023 covering 9 Districts (5 Circles, 17 Divisions & 57 Sub-Divisions) of Western part of Odisha including the Steel city Rourkela and Handloom city Sambalpur.

The Commission reviewed the compliance of the directions given in the last performance review meeting held on 03.01.2023. The C.E.O., TPWODL appraised the Commission about the following compliances made by TPWODL.

- **Protection System for 33 kV & 11 kV Lines & Cables, Transformers (PTRs & DTRs) in HV & LV Side**:- TPWODL has implemented 100% protection system for PTR, 33 KV feeders and 11 KV feeders.
- **Implementation of SCADA: -** As on 31st March, 2023, SCADA has been implemented in 128 nos. of PSSs and 115 Nos. of PSS are controlled from PSCC.
- **Status of Metering:-** In FY 2022-23 , 1,80,112 Nos. of single phase meters are replaced and 6065 number of three phase meters installed . Total 34593 nos. of smart meter are installed in FY 2022-23 and FY 2023-24. TPWODL has planned to install smart meters for 2900 nos. of medium industrial consumers, 30,000 agriculture consumers, 75000 high end /valued single phase consumers consuming more than 400 units/month and 18,000 Govt. consumers.
- **Inventory Management of Spares under O & M: -** To ensure (24X7) smooth functioning of network as per OERC Performance Standard, TPWODL normally keeps 10% of spares of total asset for regular O&M activity.
- **Material Bank for Natural Disaster**: -Under the norms for maintaining material bank for natural disaster, TPWODL keeps 5% spares of total asset for natural disaster.

- **Agricultural Feeder Segregation**: - After detail analysis TPWODL has found that it is not financially viable to segregate dedicated agricultural feeder and Commission may consider virtual feeder segregation through technology adoption at DTR level.
- **Action Plan for Dedicated Industrial Feeder**: - TPWODL has 20 Nos. of 33 kV and 28 Nos. of 11 kV dedicated industrial feeders. 8 Nos. of 33 kV new feeders proposed under IDCO new industrial park can be executed in FY 2023-24.
- **Action Plan for Reduction of 33 kV and 11 kV Feeders Circuit Length**: - TPWODL has identified 64 Nos. of 33 kV feeders having line length more than 30 Kms. and 291 Nos. of 11 kV feeders having length more than 50 Kms.
- **Low Voltage Pockets and Future Action Plans:** - TPWODL has identified 231 nos. of low voltage pockets. TPWODL has planned to mitigate low voltage issues of 96 pockets under ODSSP-IV in which 37 nos. of new PSS will be added.
- **Call Centre Performance:** - The number of calls answered in call center has increased from 191404 in FY 2021-22 to 794940 in FY 2022-23. The average waiting time has reduced from 22 sec. to 20 sec. The service level has increased from 94% to 95%. In FY 2022-23, total 13.36 lakh calls were received which includes 6.30 lakh complainant. Total 6.24 lakhs of complaints closed and 7.1 lakhs of queries addressed.
- **Load Flow Study:** - TPWODL has carried out Load flow study of 33 kV & 11 kV network through a load flow software by modelling complete 33 kV & 11 kV existing network along with schemes under execution. The load flow software is run under peak load condition to identify abnormal conditions in network and to take suitable measures to mitigate abnormality which could be overloading, non-availability of (N-1) redundancy, poor reliability or high losses ...etc. The Load flow study reports comprises of abnormalities and mitigation proposals such as New PSSs and Lines, Augmentation of lines, New PTR/DTR, Loss reduction Proposals and utilization level of Power Transformer/ Distribution transformers.

Commission's Observations:

1. The Commission took cognizance of the presentation made by the TPWODL and analysed various performance parameters. The summarized crucial performance parameters for FY 2022-23 presented by the TPWODL along with similar parameters of previous years are given in the table below: -

ANNUAL PERFORMANCE OF TPWODL-As on March-2023

BULK SUPPLY	2020-21	2021-22	2022-23	Commisson's approval 2022-23
AVG. DEMAND (MVA)	1422.64	1524.24		1583.65
Energy input (MU)	7624.82	9313.21	**13002.41**	9300.00
BST & Tr.Charge bill (Cr.)	2574.19	3394.64	**5167.48**	
SALE TO CONSUMERS (MU)				
EHT	1305.30	2645.55	**5862.70**	2060
HT	1772.24	1837.87	**2164.94**	1910
LT	2635.96	2872.38	**2581.98**	3507.2
TOTAL	**5,713.50**	**7,355.80**	**10,609.62**	**7,477.20**
% of LT Sale	**46.14%**	**39.05%**	**24.34%**	**46.91%**
DISTRIBUTION LOSS (%)				
Energy input (MU) EHT	1,305.30	2,645.55	5,862.70	2,060.00
HT(Taking loss as 8 %)	1,926.35	1,997.69	2,353.20	2,076.09
LT Purchase Assumed	4,041.72	4,296.37	4,403.59	4,750.80
HT (Assume)	8.00%	8.00%	8.00%	8.00%
LT	34.78%	33.14%	41.37%	26.18%
HT & LT	30.24%	29.36%	33.51%	25.18%
OVERALL	**25.07%**	**21.02%**	**18.40%**	**19.60%**
BILLING EFFECIENCY (%)				
HT	92.00%	92.00%	92.00%	92.00%
LT	65.22%	66.86%	58.63%	73.82%
HT & LT	69.76%	70.64%	66.49%	74.82%
OVERALL	**74.93%**	**78.98%**	**81.60%**	**80.40%**
BILLING TO CONSUMERS (CR.)				
EHT	920.98	1820.08	**3611.10**	1332.14
HT	1039.81	1157.76	**1339.52**	1177.07
LT	1134.00	1390.87	**1290.40**	1610.27
TOTAL	**3,094.79**	**4,368.71**	**6,241.02**	**4,119.48**
COLLECTION RECEIVED (CR.)				
EHT	1016.78	1844.40	**3574.03**	1318.82
HT	1086.99	1162.58	**1339.52**	1165.30
LT	912.51	1041.66	**1336.39**	1594.17
TOTAL	**3016.28**	**4048.64**	**6249.94**	**4078.29**
COLLECTION EFFICIENCY (%)				
EHT	110.40%	101.34%	98.97%	99.00%
HT	104.54%	100.42%	100.00%	99.00%
LT	80.47%	74.89%	103.56%	99.00%
HT & LT	91.98%	86.49%	101.75%	99.00%
OVERALL	**97.46%**	**92.67%**	**100.14%**	**99.00%**
AT & C LOSS (%)				
LT	47.52%	49.93%	39.28%	26.91%
HT & LT	35.84%	38.90%	32.35%	25.93%
OVERALL	**26.97%**	**26.80%**	**18.29%**	**20.40%**

2. The Sale of energy, Distribution loss, Billing & Collection efficiency and AT&C loss relating to business operation of TPWODL for FY 2021-22 and FY 2022-23 are as follows: -

	As on 31.03.2022	As on 31.03.2023	Increase / Decrease	(↑↓)
EHT Sale (MU)	2645.55	5862.70	3217.15	↑
HT Sale (MU)	1837.87	2164.94	327.07	↑
LT Sale (MU)	2872.38	2581.98	290.4	↓
Distribution Loss (%)	21.02	18.40	2.62	↓
Billing Efficiency (%)	78.98	81.60	2.62	↑
Collection Efficiency (%)	92.67	100.14	7.47	↑
AT & C Loss (%)	26.80%	18.29%	8.51	↓

From the above table it is observed that there is increase in sale of electricity by 3217.15 MU (+121.6%), 295.0 MU (+17.8%) at EHT and HT level respectively whereas for LT consumers there is decrease in sale by 290.4 MU (-10.11%) compared to previous year. There is increase in collection & billing efficiency, reduction in distribution loss and overall reduction in AT&C loss.

3. TPWODL has submitted that 87,898 number of consumers have been added during FY 2022-23 with 452 MW addition of CD. The total number of consumers as on 31.03.2023 is 22,794,04.

4. In FY 2022-23, TPWODL has added 29 Nos. of power transformers and 4083 nos. of distribution transformers of capacity 200 MVA.

5. For improving the Billing efficiency of the system, TPWODL has initiated monthly review of field team with Circle heads, monitoring consumption pattern of Commercial / Agricultural establishment., theft information through Meter readers.

6. TPWODL has taken various initiatives for improvement of LT collection efficiency which includes: -

- Real time monitoring of Collection system with help of Power Business Intelligence (BI) module
- Introduction of MISS call by consumer to facilitate digital payment.
- Digital Payment Stickers in consumer premises to spread awareness.
- Out calling through call center agents to nonpaying consumers.
- Section wise allocation of Bill Collector and Settlement of disputes through Bill revision.
- Improving number of Female Bill Collectors for gender equality.
- Regular Collection camps @ monthly 4 per Section.
- TPWODL has provided POS machine to all the collection agents & carrying out awareness campaign about existing Digital payment avenues.

7. TPWODL's effort in improving the LT collection efficiency has resulted in more than 25% increase in LT collection efficiency compared to FY 2021-22 and more than 10% reduction in AT & C loss at LT level.

8. TPWODL has improved its Call centers and total 13.36 Lakhs of call received in FY 2022-23 Total 6.30 Lakhs of complaints received in FY 2022-23 and 6.24 Lakhs of complaints closed. Total 7.1 Lakhs of queries addressed. The Average time taken to resolve the issue has reduced from 285 seconds in FY 2021-22 to 146 seconds in FY 2022-23.

9. The consumers with electricity consumption less than 50 units (<50 units) are 6.24 lakhs, which is about 27.37 % of the total consumers and only 0.2% of the revenue amounting to 6.65 crores is contributed by such consumers.

10. Under Smart Meter Installation progress, till now TPWODL has installed 34593 nos. of smart meters including 6072 nos. for Government connections, 24387 nos. for three phase customers, 4134 nos. of agriculture consumer. TPWODL has planned to provide smart meters for all Single-phase consumers having average monthly consumption more than 400 units.

11. TPWODL has audited all the 187 BST points Consumption Audit with respect to GRIDCO Bill and all the EHT consumption with BST consumption found OK.

12. TPWODL has completed metering of only 7% of DTRs and till now less than 1% of DTRs are audited, which needs improvement. After 33 kV feeder audit, it is found out that feeders with loss level more than 4% are due to 11 kV feeder meter problem and TPWODL is in process of rectification of the same.

13. The AT & C loss has decreased from 26.8% in the FY 2021-22 to 18.29% in FY 2022-23. The billing efficiency (77.33%), collection efficiency (102.91%) is 2.5% & 7.5% more than previous FY 2021-22. These are good indicator of performance improvement.

14. The SAIFI and SAIDI of divisions under TPWODL are 468 and 330 Hrs. respectively, which are less compared to FY 2021-22.

15. The Commission reviewed the progress in consumer metering. C.E.O., TPWODL informed that presently consumer metering is 83%. Regarding Energy Audit & metering, TPWODL has submitted that out of 186 nos. of 33 kV feeders, 184 nos. have OK meter and 114 nos. of 33 kV feeders have been audited, out of 1160 nos. of 11 kV feeders, 980 nos. of feeders have ok meter and none of them have been audited, out of 75,485 nos. of DTRs, 4055 DTRs are metered and none of the DTRs have been audited.

16. The failure of Power Transformers (PTRs), burning of Distribution Transformers (DTs), no. of interruptions of 33 kV feeders & 11 kV feeders are 16 nos., 3143 nos., 12572 nos. and 105670 nos. respectively. ~~In FY 2022-23, 3624 nos. of Grievances have been received.~~

17. The Commission expressed displeasure over the high DTR and PTR failure rate in TPWODL area.

Directives of the Commission:

The Commission directs to take following action and to provide the time frame for implementation:

1. The number of PSS are quite large compared to peak demand and even for expected peak demand in next five years. The Transformation capacity of PTRs & DTRs w.r.t Peak demand is also quite high indicating non-uniform loading of PTRs & DTRs. Therefore, efforts shall be made for optimum utilization of existing assets, reduction in associated technical loss and O&M cost.
2. All 33kV & 11kV feeders/lines & transformers have 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 shall be removed on priority basis to achieve the objective of reliable power supply.
3. Action plan should be to ensure that the protection system is in place complete in all respect prioritizing 33 kV & 11 kV level (all feeder/lines/cables, transformers, etc.) and DTRs in stages.
4. The line length/ section length of 33 kV & of 11 kV feeder shall be adequately reduced in order to improve voltage profile of the system. The action plan shall start with longest feeder and a timeline shall be fixed for completion of such work.
5. Transformer overloading should be mitigated on priority basis in sequence of importance of connected load.
6. Asset Mapping and consumer indexing shall be completed on priority basis.
7. DISCOM shall be more proactive during disaster (e.g. Kalbaishakhi & cyclone, etc.) with adequate rolling material bank/ inventory out of O&M budget every year. Since most of the O&M activity have been outsourced, management of DISCOM shall be more vigilant during any impending disaster. There shall be a close coordination between the permanent employees and outsourced employees in order to effectively mitigate any such disaster.
8. SAIFI / SAIDI/ MAIFI target for an ideal situation along with the timeline to achieve the same may be furnished. The interruption should come down sharply as adequate investment in CAPEX is being made.
9. Consumer Average Interruption Duration Index (CAIDI) shall be estimated starting with Industrial & commercial consumers and extending it to other category of consumer.
10. The transformer rating (e.g. 5 MVA, 8 MVA, 12.5 MVA & 20 MVA) and MVA capacity (like 10 MVA, 20-25 MVA, 40 MVA) need to be standardized at PSS level along with associated foundation and standard specification may be prepared accordingly to facilitate faster procurement, delivery, interchangeability and minimization of inventories.
11. Steps may be taken to have identical ratings of PTRs in a PSS instead of having different ratings like 5MVA, 8MVA &12.5MVA to avoid different spare inventories.
12. To avoid damage to DTRs due to cyclonic wind / Kalbaishakhi, the DTRs of 100KVA and above shall be plinth mounted.
13. The distribution licensees need to plan to phase out 10 KVA, 16 KVA and 25 KVA DTRs and minimum rating of DTR may be 63KVA to take care of any future load growth.

14. Steps need to be taken to reduce fatal and nonfatal accidents, which is quite high.

15. Govt. establishments with smart meters shall be provided with pre-paid features and automatic disconnection feature may be enabled for Govt. consumers, except for essential services like hospitals, waterworks etc.

16. Steps may be taken to island important cities using RMU and Auto reclosures etc. to improve reliability of power supply.

17. The DISCOM shall make effort to reduce tripping during next summer season.

18. Enforcement activities should start from high end/value consumers.

19. DISCOM shall open Bidyut Seva Kendra (BSK) at Panchayat level as one stop solution for mitigating any issues faced by the consumer. In the said BSK, there shall be prominent display of the New connection procedure, contact person detail for Bill revision, mechanism for grievance redressal and any other information for the benefit of the consumers. The list of the prominent defaulter(s) shall also be displayed in the BSK in order to deter such habit. Thrust has to be given for consumer awareness program and for better consumer service.

20. The FCC/BSK may be extended to block headquarters in rural areas to provide better consumer service & enhancing consumer satisfaction level.

21. DISCOM should fill up the Vacancy at different levels as per direction of Commission. Recruitment shall also be made at the Asst. Engineer & Lineman level in order to strengthen base level cadre and shall ensure that the employees being recruited have adequate knowledge, quality and competency to justify their assigned job. The strength of permanent employee & out sourced employees should be optimized over the years after introduction of automation.

22. The out sourced employees shall also be adequately trained so as to carry out their assigned work effectively. These outsourced employees may also be provided with uniforms with DISCOM logo for their visibility and acceptance by the consumers as a part of the DISCOM.

23. The collection efficiency being one of the performance indicators, the DISCOMs shall calculate the same for a financial year without considering the past arrears. However, collection efficiency with past arrears may be calculated for comparison purpose.

24. As regard the payments pertaining to the old liabilities under ASL, the Commission observes that past liabilities have not been settled so far. The Commission therefore directs that approval for all such liabilities of pre vesting period may be submitted to the Commission by 31st October 2023 and no such approval will be entertained after such date. The Commission will entertain only those liabilities which are settled by court of law after such date. The DISCOMs may communicate the vendors/parties accordingly.

25. Senior Officers of DISCOM will verify various important parameters related to System strengthening and consumer satisfaction level of DISCOMs.

26. More emphasis should be given on increasing performance parameters of LT consumers like Billing & Collection efficiency and reduction in AT&C loss. Improvement in LT feeder should be monitored closely.

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