

ODISHA ELECTRICITY REGULATORY COMMISSION
PLOT NO. 4, CHUNOKOLI, SAILASHREE VIHAR
BHUBANESWAR - 751 021

No.DIR (T)-368/09/19/ // 27
Dated-04.08.2023

From

Antaryami Sahoo,
Secretary

To

The Chief Executive Officer,
TPSODL, At/P.O. Courtpeta,
Berhampur, Dist. Ganjam.

Sub: **Review of Annual Performance of TPSODL for FY 2022-23 on 15th July 2023.**

Sir,

I am directed to send herewith the aforesaid Record note of Review of Annual Performance of TPSODL for the FY 2022-23 held on 15TH July 2023 at OERC office for your kind information and necessary action.

Yours faithfully,

Encl: As above.


04/08/23
SECRETARY

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.


04/08/23
SECRETARY

Record Note of Annual Performance Review of TPSODL held on 15.07.2023 at 11:00AM at OERC in the presence of the Commission

Date of Review : 15th July, 2023

Period of Review : April 2022-March 2023

The performance of TPSODL for the period April 2022 to March 2023 of FY 2022-23 was reviewed by the Commission on 15th July, 2023 at 11:00 AM at OERC office premises. The Chief Regulatory Officer, TPSODL presented the performance of TPSODL and senior officials of TPSODL were present during the review.

TPSODL was vested with operation of Southern part of distribution system of Odisha on 01.01.2021. TPSODL, spread across 48,751 sq.km. of area, have 250 Nos. of 33/11 kV sub-station, 4041.74 kms. of 33 kV lines, 45208 kms. of 11 kV lines and 40117 kms. of LT lines and caters to consumer base of about 22.65 Lakhs as on 31.03.2023 covering 8 Districts (6 Circles, 19 Divisions & 51 Sub-Divisions) of Southern part of Odisha.

The Commission reviewed the compliance of the directions given in the last performance review meeting held on 30.12.2022. The Chief Regulatory Officer, TPSODL appraised the Commission about the following compliances made by TPSODL.

- **Low Voltage Pockets and Future Action Plans:** - TPSODL has identified 504 nos. of low voltage pockets and the same will be mitigated by December, 2023.
- **Action Plan for Reduction of 33 kV and 11 kV Feeders Circuit Length:** - TPSODL has identified 34 Nos. of 33 kV feeders having line length more than 30 Kms. and 248 Nos. of 11 kV feeders having length more than 50 Kms.
- **Maintenance of Regular Spare:** - TPSODL is maintaining minimum stock level and has defined reorder level (ROL) for all the material, which is arriving from the past data of consumption and past experience. While the material stock reaches ROL, the procurement process is triggered. For equipment, mandatory spares around 5% of the equipment population are maintained.
- **Material Bank for Natural Disaster:** - Under the norms of maintaining material bank for natural disaster, TPSODL has maintained stock in various location like main store in circles and small stores in sections. The quantum of material based on expected requirement during a cyclone and the storage capacity of the storage location. For disasters, apart from the stock available in the stores, the regular vendors are informed to urgently provide the stock available in their factories.
- **Agricultural Feeder Segregation:** - TPSODL has planned 22 Nos. of dedicated 11 kV Agricultural Feeder and the work will be completed by FY 2023-24.
- **Action Plan for Dedicated Industrial Feeder:** - TPSODL has planned 7 Nos. of new 11 kV dedicated industrial feeders and the work will be completed by FY 2023-24.

- **Load Flow Study:** - TPSODL has carried out Load Flow Study using CYMDIST software. Feeder loading including feeder wise loading of Grids & technical losses are evaluated and reported using the software. Abnormal conditions like overloading of cables, lines and transformers are reported. The major contributor of technical loss in 33 kV network are 33 kV lines since most of the feeders are radial and lengthy resulting into high technical loss. Same is also found in 11 kV network. Total 28 nos. of 33 kV overloaded feeders have been identified considering 5 years load growth. Similarly total 75 nos. of 11 kV overloaded feeders have been identified considering 5 years load growth. 36 numbers of 33 kV feeders and 219 nos. of 11 kV feeders are found facing low voltage issue.
- **GIS based Asset Mapping and Consumer Indexing:** - TPSODL has completed 100% of asset mapping and consumer indexing in City Circle, Berhampur Circle and Aska Circle (3 out of 6 circles) by 31st march, 2023 and it has completed consumer indexing of 9.1 Lakh consumers. GIS data is further integrated with CYME software, SCADA/ADMS and Mo Bidyut for new connection application. Asset mapping and consumer indexing for balance 3 circles of Bhanjanagar, Rayagada and Jeypore will be completed by March, 2024.
- **Status of Protection Scheme & SCADA:** - In FY 2022-23, TPSODL has completed SCADA integration of 101 no. of PSSs and handed over to PSCC and the work is in progress in 34 no. of PSSs. 117 Nos. of 33 kV incomer (out of 132 Nos.) and 112 Nos. of 33 kV outgoing feeders (out of 137 nos.) have protection system in place. 438 Nos. of 33/11 kV PTR (out of 554 nos.) have protection system in place. Similarly, 826 Nos. of 11 kV outgoing feeder have protection system. TPCODL have installed 344 Nos. of VCB in FY 2022-23.
- **Status of Metering:** - TPSODL has metered all the consumers, however the meters which are defective are being replaced from time to time. TPSODL will complete feeder metering of both 33 kV and 11 kV by the end of FY 2023-24. In FY 2022-23 TPSODL has installed 47515 nos. of smart meters.

Commission's Observations:

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

ANNUAL PERFORMANCE OF TPSODL (2022-2023)

BULK SUPPLY	2020-21	2021-22	2022-23	Commission's approval 2022-23
AVG. DEMAND (MVA)	599.68	649.82	722.00	721
Energy input (MU)	3599.29	3941.54	4188.45	4350
SALE TO CONSUMERS (MU)				
EHT	438.43	530.86	704.91	590
HT	182.09	274.43	422.53	350
LT	2148.43	2193.08	2028.23	2352.7
TOTAL	2,768.95	2,998.37	3,155.67	3,292.70
% of LT Sales to Total Sales	77.59%	73.14%	64.27%	71.45%
LOSS (%)				
LT	21.18%	23.41%	27.10%	25.22%
HT & LT	26.27%	27.65%	29.65%	28.88%
OVERALL	23.07%	23.93%	24.66%	25.00%
BILLING EFFECIENCY (%)				
HT	92.0%	92.0%	92.0%	92.0%
LT	78.8%	76.6%	72.9%	74.8%
HT & LT	73.7%	72.3%	70.4%	71.1%
OVERALL	76.93%	76.07%	75.34%	75.00%
BILLING TO CONSUMERS (CR.)				
EHT	278.47	355.75	454.58	395.27
HT	131.48	194.81	313.59	225.05
LT	907.65	1062.15	1046.21	1073.68
TOTAL	1,317.59	1,612.70	1,814.38	1,694.00
COLLECTION RECEIVED (CR.)				
EHT	278.44	348.37	457.74	391.3173
HT	131.56	201.17	328.53	222.7995
LT	788.39	888.03	1072.49	1062.9432
TOTAL	1198.39	1437.57	1858.76	1677.06
COLLECTION EFFICIENCY (%)				
EHT	100%	98%	101%	99%
HT	100%	103%	105%	99%
LT	87%	84%	103%	99%
HT & LT	89%	87%	103%	99%
OVERALL	90.95%	89.14%	102.45%	99.00%
AT & C LOSS (%)				
LT	31.54%	35.96%	25.27%	25.96%
HT & LT	34.73%	37.31%	27.51%	29.59%
OVERALL AT & C Loss	30.03%	32.19%	22.81%	25.75%

2. The Sale of energy, distribution loss, Billing & Collection efficiency and AT&C loss relating to business operation of TPSODL 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)	530.86	704.91	174.05	↑
HT Sale (MU)	274.43	422.53	147.82	↑
LT Sale (MU)	2193.08	2028.23	164.85	↓
Distribution Loss	23.93%	24.66%	0.73%	↑
Billing Efficiency	76.07%	75.34%	0.73%	↓
Collection Efficiency	89.14%	102.45%	13.31%	↑
AT & C Loss	32.19%	22.81%	9.38%	↓

From the above table it is observed that there is increase in sale by about 174.05 MU (+33%), 147.82 MU (+54%) at EHT & HT level respectively and decrease in sale 165 MU (-7.5%) for in LT category of consumers compared to previous year. The decrease in LT sale is due to sanitization of Billing through identification of Ghost consumer.

3. TPSODL submitted that 67,544 number of new consumers have been added during FY 2022-23 with 415 MW addition of CD. The total number of consumers as on 31.03.2023 is 24,24,624.
4. TPSODL has taken various initiatives for AT&C loss reduction which includes: -
- Standalone & Offline (Crest Logistics) Billing System replaced with Real Time Fluent Grid Billing System
 - Spot Billing replaced with Error free, Time Stamping, GPS Co-ordinated Meter Location Billing.
 - Deployment of Special Task Force for Bill Revision Activities.
 - Project "Samadhan": - Camps for Resolution of Disputed Bills
 - Introduction of Optical Character Reading (OCR).
 - E-bill Facility through Whatsapp, Email and SMS.
 - Pre-paid metering for Government and Institutional Consumers.
 - Replacement of Defective and Electromechanical Meters
 - Operationalisation of Four Customer Relation Centres (CRC).
 - Dedicated BA for reduction of cycle time for replacement of Defective Meters
 - Project Satyapan :- Dedicated BA for identification of "Ghost Consumers"
 - Consumer Indexing of 9 Lakh consumers (3 Circles) through GIS Technology

5. Some of the operational highlights of TPSODL are as follows:
- Upgradation of 11 kV and 33 kV Conductor.
 - SCADA link for 101 nos. of PSS.
 - Installation & commissioning of 255 Nos. of new control and relay panel.
 - Providing copper plate PTR neutral earthing in 34 nos. of PTRs.
 - Replacement of 120 Nos. of electromechanically relay by numerical relays.
 - Installation of 45 Nos. of new ACDBs.
 - Overhauling of 105 Nos. of 33 kV and 11 kV VCB and installation of 161 nos. of 33 kV and 11 kV VCB.
 - Installation of 290 Nos. new CT and 33 Nos. of new PT at PSSs.
 - Installation of 33 kV and 11 kV lightening arresters in 239 nos. of PSSs.
 - Augmentation and load balancing of 400 Nos. of overloaded DTRs.
 - Installation of 10 Nos. of new PTR and overhauling of 47 nos. of PTRs.
 - Use of VSAT for linking remote PSS with SCADA.
 - Installation of 55 nos. of battery & battery charger.
6. The consumer with electricity consumption less than 50 (<50) units are 10.606 lakh, which is 56.11% of the total consumer and contributes only 14.68% of the billing revenue amounting to 106 crores.
7. TPSODL has completed Energy Audit of 292 no. of 11 kV feeders by 31st March, 2023.
8. Only 1.77% of DTRs are metered and till now none of the DTR is audited.
9. The AT & C loss has decreased from 32.52% in the FY 2021-22 to 22.08% in FY 2022-23. The billing efficiency (75.03%), collection efficiency (96.9%) is 1.4% less & 14% more than previous FY 2021-22. These are good indicator of performance improvement.
10. The status of outstanding arrear under different category of consumers as on 31.03.2023 is as follows:

STATUS OF ARREAR 2022-2023 (April'22 to March'23)

CATEGORY	Arrears as on 1.04.1999	Arrears as on 1.04.2022	Billing for the period Apr'22-Mar'23	Collection Against				(Rs. In Crores)		
				Current dues Apr'22-Mar'23 against '4'	Arrear during Apr'22-Mar'23 against '3'	Total Collection	Adjustment s	Arrear for the period Apr'22-Mar'23	Arrears as on 31.03.2023	
				5	6	7=5+6		8=4-5	10=3+4-7	
(i) EHT	4		455	458		458			-3	
(ii) HT	57	28	265	270	1	271			-5	22
(iii) LT	110	1183	923	874	47	921			49	1185
TOTAL	171	1211	1642	1601	48	1650			41	1203
(i) Govt & PSU- LT		57	123	141	10	151			-28	29
(ii) Govt & PSU- HT	18	1	49	56	2	58			-9	-8
Total Govt & PSU	18	58	172	197	12	209			-37	21
GRAND TOTAL	189	1269	1814	1799	60	1859			4	1225

11. The Commission reviewed the progress in consumer metering. TPSODL has submitted that presently consumer metering is 98%. Regarding Energy Audit & metering, TPSODL has submitted that out of 131 nos. of 33 kV feeders, 112nos. have OK meter and 71 nos. of 33 kV feeders have been audited. Out of 906 no. of 11 kV feeders, 798 nos. have ok meter and 292 feeders have been audited. Out of 58,732 no. of DTRs, 1044 no. of DTRs are metered and none of DTR has been audited.
12. The failure of Power Transformers (PTs) and burning of Distribution Transformers (DTs) are 5 nos. & 1590 nos. respectively. Grievances received are 933 in FY 2022-23.

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 programme and for better consumer service.
20. The FCC/BSK may be extended to block headquarters in rural areas to provide better consumer service & enhances 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 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 stress 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.