

Record Note of Annual Performance Review of TPNODL held on 20.06.2022 at 11:00 AM through video-conferencing in the presence of the Commission

Date of Review : 20th June, 2022

Period of Review : April 2021-March 2022

The performance of TPNODL for the period April 2021 to March 2022 of FY 2021-22 was reviewed by the Commission on 20th June, 2022 at 11:00 AM through video conferencing. Sri Bhaskar Sarkar, CEO TPNODL presented the performance of TPNODL and senior officials of TPNODL were present during the review. Number of safety & operational initiatives taken by TPNODL for improving performance was highlighted during the presentation.

TPNODL was vested with operation of Northern part of distribution system of Odisha on April 2021. The performance of TPNODL as indicated in their presentation with regard to the key performance indicators are summarized below:-

<u>Annual Performance of TPNODL-As on March-2022</u>					
BULK SUPPLY	2018-19	2019-2020	2020-2021	2021-2022	OERC Approval for 2021-22
AVG. DEMAND (MVA)	891.38	844.31	774.98	845.42	1130.000
Energy input (MU)	5,575.78	5439.43	4941.19	5327.04	5880.00
BST & Tr.Charge bill (Cr.)	1,818.67	1774.22	1640.96	1854.83	
SALE TO CONSUMERS (MU)					
EHT	2,179.03	2123.40	1424.98	1676.03	1696.49
HT	431.34	444.50	388.87	503.27	415.60
LT	1,920.55	2154.27	2107.78	2167.71	2688.93
TOTAL	4,530.92	4,722.18	3,921.63	4,347.00	4,801.02
% of LT Sale	42.39%	45.62%	53.75%	49.87%	56.01%
DISTRIBUTION LOSS (%)					
Energy input (MU) EHT	2,179.03	2,123.40	1,424.98	1,676.03	1,696.490
HT(Taking loss as 8 %)	468.85	483.15	422.68	547.03	451.74
LT Purchase Assumed	2,693.67	2,606.25	2,846.04	2,855.67	3,433.23
HT (Assume)	8.00%	8.00%	8.00%	8.00%	8.00%
LT	28.70%	17.34%	25.94%	24.09%	21.68%
HT & LT	30.76%	21.63%	29.00%	26.84%	25.79%
OVERALL	18.74%	13.19%	20.63%	18.40%	18.35%
BILLING EFFECIENCY (%)					
HT	92.00%	92.00%	92.00%	92.00%	92.00%
LT	71.30%	82.66%	74.06%	75.91%	78.32%
HT & LT	69.24%	78.37%	71.00%	73.16%	74.2%
OVERALL	81.26%	86.81%	79.37%	81.60%	81.65%
BILLING TO CONSUMERS					
EHT	1,327.48	1291.09	920.84	1112.38	1061.94
HT	266.78	274.74	252.38	352.45	259.87
LT	760.48	969.88	952.27	1095.31	1223.80
TOTAL	2,354.74	2,535.71	2,125.49	2,560.14	2,545.61
Billing to Govt.Dept & PSU	85.13	85.92	96.48	96.48	
COLLECTION RECEIVED (CR.)					
EHT	1,280.52	1283.50	913.10	1120.48	1051.32
HT	257.71	271.49	266.60	370.35	257.27
LT	677.55	635.33	824.29	920.83	1211.56
TOTAL	2,215.78	2,190.32	2,003.99	2,411.66	2520.15
Collection from Govt.Dept & PSU	88.30	52.42	186.46	186.46	
COLLECTION EFFICIENCY (%)					
EHT	96.46%	99.41%	99.16%	100.73%	99.00%
HT	-3.00%	98.82%	105.63%	105.08%	99.00%
LT	89.10%	65.51%	86.56%	84.07%	99.00%
HT & LT	91.04%	72.86%	90.56%	89.18%	99.00%
OVERALL	94.10%	86.38%	94.28%	94.20%	99.00%
AT & C LOSS (%)					
LT	36.48%	45.85%	35.89%	36.18%	22.46%
HT & LT	36.96%	42.90%	35.70%	34.76%	26.53%
OVERALL	23.53%	25.01%	25.17%	23.13%	19.17%

Commission's Observations:

The Commission reviewed the compliances of the directions given in last performance review meeting. C.E.O., TPNODL apprised the Commission about the compliances made by TPNODL.

1. The Sale of energy, distribution loss, Billing & Collection efficiency and AT & C loss relating to business operation of TPNODL for FY 2020-21 and FY 2021-22 are as follows:-

	As on 31.03.2021	As on 31.03.2022	Increase/ Decrease	(↑↓)
EHT Sale (MU)	1424.984	1676.025	251.041	↑
HT Sale (MU)	388.865	503.265	114.4	↑
LT Sale (MU)	2107.784	2167.708	59.924	↑
Distribution Loss	20.63%	18.40%	2.23%	↓
Billing Efficiency	79.37%	81.60%	2.23%	↑
Collection Efficiency	94.28%	94.20%	0.08%	↓
AT & C Loss	25.17%	23.13%	2.04%	↓

From the above table it is observed that there is increase in sale by 251.041 MU (+17.61%), 114.4 MU (+29.4%) & 59.924 MU (+2.84%) for EHT, HT & LT category of consumers respectively compared to previous year.

2. Focus on safety aspect, long term load flow study for strengthening of distribution network, energy audit, blue tooth metering for lift irrigation points in inaccessible locations, GIS mapping of consumers, structured maintenance & other operational and technical initiatives have been taken by TPNODL for improving performance of DISCOM.
3. TPNODL has submitted that 80,950 number of consumers have been added during FY2021-22 and the total number of consumers as on 31.03.2022 is 20,89,083.
4. The AT & C loss has decreased to 23.13% in the FY 2021-22 (against 25.17% in previous FY 2020-21) which is a good indicator of performance improvement. The collection efficiency (94.20%) is more or less similar to previous FY 2020-21.
5. The status of outstanding arrear under different category of consumers as on 31.03.2022 is as follows:

STATUS OF ARREAR							
(Rs. in Crs.)							
Category	Arrears as on 31.03.2021	Billing for the period (Apr-21 to Mar-22)	Collection against current dues (Apr-21 to Mar-22) against '3'	Collection against arrear during (Apr-21 to Mar-22) against '2'	Total collection	Arrear for the period (Apr-21 to Mar-22)	Arrear as on 31-03-2022
1	2	3	4	5	6=4+5	7=3-4	8=2-5+7
EHT	454.55	1112.38	1089.36	31.12	1120.48	23.02	446.45
HT	78.46	307.11	306.20	17.42	323.62	0.90	61.95
LT	1900.27	973.04	675.71	136.52	812.23	297.33	2061.08
Govt & PSU HT	19.87	45.34	44.81	1.92	46.73	0.53	18.49
Govt & PSU LT	30.39	122.27	104.10	4.50	108.60	18.17	44.06
Total of above	2483.55	2560.14	2220.19	191.47	2411.66	339.95	2632.03

6. The SAIFI and SAIDI of divisions under TPNODL are 681 and 456 respectively.
7. Metering Status of TPNODL is as follows:

Particulars	As on 31.03.2021			As on 31.03.2022			Increase / Decrease		
	1Phase	3Phase	Total	1Phase	3Phase	Total	1Phase	3Phase	Total
Total Consumer (Nos)	19,57,036	51,097	20,08,133	20,54,308	34,775	20,89,083	97,272	-16,322	80,950
OK Meter (Nos)	16,77,828	40,116	17,17,944	17,06,574	31,127	17,37,701	28,746	-8,989	19,757
Defective Meter (Nos)	1,79,653	5,383	1,85,036	2,71,740	1,319	2,73,059	92,087	-4,064	88,023
Without Meter (Nos)	99,555	5,598	1,05,153	75,994	2,329	78,323	-23,561	-3,269	-26,830
% of OK Meter to Total Meter	90%	88%	90%	86%	96%	86%	-4%	8%	-4%
% of OK Meter to Total Consumer	86%	79%	86%	83%	90%	83%	-3%	11%	-3%
Nos of 3Ph consumer reduced due to transfer of Irrigation 1Ph consumer from 3Ph binder to 1Ph binder.									

The Commission reviewed the progress in consumer metering. C.E.O., TPNODL informed that 100% metering will be completed by September 2022. Regarding Energy Audit & metering, TPNODL submitted that all 33 kV feeders (98 nos.) are metered and 77 nos. of 33 kV feeders have been audited. Out of 797 nos. of 11 kV feeders, 545 feeders have been metered and audited. Out of 72,323 nos. of DTRs, 2208 DTRs are metered and 455 numbers of DTRs have been audited 246 nos. out of 524 nos. of PTs have been metered.

8. C.E.O., TPNODL informed that the Collection efficiency reduced due to cyclone Yash, impact of 2nd and 3rd wave of Corona and shifting to new MBC system.
9. In response to the query raised by Commission about the decrease in 11 kV feeder metering compared to last year, TPNODL informed that due to removal of non functional meters from the System, the percentage of healthy meters decreased.
10. The failure of Power Transformers (PTs) (27 nos.) burning of Distribution Transformers (DTs) (2533 nos.), no. of interruptions in 33 kV feeders (7856 nos.) have gone up. However, the no. of interruptions in 11 kV feeders (339516 nos.) and grievances received through CHP (388 nos.) have come down. These are good signs of improvement in performance over previous FY 2020-21.

Directives of the Commission:

1. The Commission directs to provide the following information:
 - (a) Measures being taken to reduce AT&C loss.
 - (b) Actual HT loss based on energy audit
 - (c) Status of printing of electric Bill in Odia and English language
 - (d) Action taken to ensure that Bills are generated on monthly basis.
 - (e) The steps being taken to optimize capital investment and creation of assets.
 - (f) Availability of power supply (in hours/per day)
 - (g) The initiative taken for creation of EV charging station.

- (h) No. of net metering connections for prosumers of RE and steps being taken to facilitate & assist consumers interested for availing net metering/ gross metering/ GNM/ VNM facility for promoting renewable generation in the State.
- (i) The details relating to the Other Misc. shown under cash inflow for the FY 2021-22.
- (j) The details regarding Capex funding in relation to Equity contribution and debt for the FY 2021-22.
- (k) The details of cumulative Capex expenditure capitalized till date for FY 2021-22 as per Vesting order.
- (l) The initiatives being taken to reduce failure of PTs, burning of DTs, no. of interruptions in 33 kV feeders.
2. Details of Present load & energy requirement are to be submitted in following suggested format:

Name of Circle/ Division	Description	Load in MW (Avg. load & Peak load)	Energy requirement in MU
Name of Circle			
Name of Division	1. Name of Sub-Division: (a) Total No. of 33/11kV substations: (b) Average Distance Between Substations: (c) Requirement of 33/11kV substations based on Standardisation of substation MVA capacity (indicate standard substation MVA capacity) (d) Total No. of 11/0.4kV substations: (e) Average Distance Between Substations: (f) Requirement of 11/0.4kV substations based on Standardisation of substation MVA capacity (indicate standard substation MVA capacity)		
	2. Name of Sub-Division: (a) Total No. of 33/11kV substations: (b) Average Distance Between Substations: (c) Requirement of 33/11kV substations based on Standardisation of substation MVA capacity (indicate standard substation MVA capacity) (d) Total No. of 11/0.4kV substations: (e) Average Distance Between Substations: (f) Requirement of 11/0.4kV substations based on Standardisation of substation MVA capacity (indicate standard substation MVA capacity)		
Average Load of DISCOM:			
Peak Load of DISCOM (Time & Month):			

3. The present status and action plan in stages for 100% metering (with smart meters having prepayment feature) for all category of consumers, Power Transformers (PTs), Distribution Transformers (DTs), feeders/lines in each Division and time frame for implementation matching with guideline & time line of Ministry of Power, Govt. of India. A suggested format with typical example is given below:

Sl. No.	Name of Division (Circle & District)	No. of existing meters	No. of meters already replaced with smart meters in terms of % of total requirement	Target (in %) for 100% installation of smart meters for Industrial consumers, Govt. establishment, other types of consumers, etc.					Action Required/ Action being taken
				22-23	23-24	24-25	25-26	26-27	
1	A (Circle: Cuttack & Dist. Cuttack)	33kV: (a) PTs: (b) Lines/feeders: (c) HT Consumers: (d) Total: 11kV: (a) DTs: (b) Lines/feeders: (c) LT Consumers (Industrial, Govt. Establishment, Other type Consumers): (d) Total:	Nil (%)	10%	30%	50%	75%	100%	

4. The present status and action plan in stages for 100% agricultural feeder separation indicating time frame for implementation. A suggested format with typical example is given below:

Sl. No.	Name of Sub-Division/Section (Division, Circle & District)	No. of agriculture feeders	No. of Agricultural feeders already separated in terms of % of total Agricultural feeders	Target (in %) for 100% segregation of Agriculture feeder					Action Required/ Action being taken
				22-23	23-24	24-25	25-26	26-27	
1	A	33 kV: 11 kV: 0.4 kV:	10%	30%	60%	100%			Identification of Agriculture feeder is in process

5. The present status and the action plan in the stages for 100% distribution asset mapping and consumer indexing/mapping (GIS mapping) indicating the Sub-Division/Section (Division,

Circle & District) and time frame for implementation. A suggested format with typical example is given below:

Sl. No.	Name of Sub-Division/Section (Division, Circle & District)	Present status of implementation of Distribution Asset (substations & lines) mapping		Target (in %) for 100% Asset mapping				
		No. of lines and substations	Coverage (in %)	22-23	23-24	24-25	25-26	26-27
1	A	<u>33kV:</u> (a) No. of lines: 10 (b) No. of PSS:5 <u>11kV:</u> (a) No. of lines: 10 (b) No. of DSS: 5	Nil Nil	10 30	40 70	70 100	100%	

Sl.No.	Name of Sub-Division/Section (Division, Circle & District)	Present status of implementation of consumer mapping & indexing		Target (in %) for 100% consumer mapping & indexing				
		Type of consumer (Industrial/ Commercial/ Domestic/ Others)	Coverage (in %)	22-23	23-24	24-25	25-26	26-27
1	A	Ind – Comm – Dom – Other -	Nil Nil Nil Nil	20% 10% 10% 10%	60% 40% 40% 30%	100% 70% 60% 50%	100% 80% 70%	100% 100%

6. The list of diagnostic tools available in different circles for Condition Based Maintenance (CBM) of distribution assets and requirement of additional diagnostic tools for catering to all Divisions in the area of the operation of the DISCOMs.
7. Progress in the direction of implementation of 100% protection system for over head lines, cables & transformers (PT/DT) on HV & LV side etc; 100% SCADA & Automation system, AMI covering peak management, outage management, etc, creation of Central Control Centre and measures for cyber security, etc giving the implementation schedule.
8. Steps being taken to improve billing and collection efficiency by resolving billing related issues covering generation of bill with monthly billing cycle as per OERC supply code, bi-lingual bills (English/Odia), resolution of bill related issues of consumers, collection of outstanding dues, establishment of consumers service/call centre, etc.

9. Steps being taken for safety of human being and equipment – Covering earthing; fencing; cradling; protection of transformers (PT&DT) & lines/cables; Personal Protection Equipment (PPE); maintenance of minimum electrical safety clearance.
(Indicate name of substation /line where required action has been taken)
10. The Status of availability of Trolley mounted sub-station and transformer for use under contingency situation/natural calamities for early restoration of Power Supply.
11. The status of normal maintenance spares and spares/material bank for meeting natural calamities, particularly cyclone.
(Indicate strategic location identified with list of items/materials)
12. To conduct energy audit of 33 kV & 11 kV feeders, PTs, DTs in stages (starting with 33 kV feeders, PTs) and to find out actual HT loss and find out the reason of high HT loss specifically at Basta, Jajpur town and Kuakhia area.
