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10. ELECTRICITY

10.1 INSTALLED CAPACITY AND GENERATION OF ELECTRICITY – 2022-23

Sl. No.	Name of power station	Year of operation	Installed Capacity in MW	Generation in MU	Auxiliary Consumption in MU	Net Generation in MU
1	2	3	4	5	6	7
	HYDRO					
1.	Kundah PH.I	1960-64	60.0	271.089	0.738	270.351
2.	Kundah PH.II	1960-64	175.0	742.884	0.737	742.147
3.	Kundah PH.III	1965-78	180.0	463.952	1.816	462.137
4.	Kundah PH.IV	1966-78	100.0	164.615	0.180	164.435
5.	Kundah PH.V	1964-88	40.0	54.320	0.217	54.103
6.	Kundah PH.VI	2000	30.0	44.64	0.26	44.380
7.	Pykara PH	1932- 54	59.2	35.318	0.288	35.030
8.	Moyar PH	1952-53	36.0	129.036	0.483	128.553
9.	Mukurthy Micro	2000	0.7	1.962	0.022	1.939
10.	Pykara Micro	1989	2.0	7.662	0.079	7.582
11.	Maravakandy	1992	0.8	1.188	0.007	1.181
12.	PUSEPH	2005	150.0	463.513	2.807	460.706
13.	Kadamparai	1987 -88	400.0	256.455	2.132	254.323
14.	Punachi PH	1992	2.0	1.628	0.030	1.598
15.	Sholayar PHI	1971	84.0	244.538	0.367	244.171
16.	Sholayar PHII	1971	25.0	53.655	0.206	53.449
17.	Aliyar PH	1970	60.0	168.589	0.755	167.834
18.	Sarkarpathy PH	1966	30.0	117.098	0.116	116.982
19.	Thirumurthy PH	2000	2.0	3.302	0.019	3.283
20.	Aliyar Mini PH	2002	2.5	4.613	0.035	4.578
21.	Amaravathy PH	2006	4.0	10.45	0.04	10.417
22.	Periyar	1958-65	168.0	661.90	1.79	660.114
23.	Suruliyar PH	1978	35.0	0.000	0.136	-0.136
24.	Vaigai Mini PH	1990	6.0	31.152	0.089	31.063

10.1 INSTALLED CAPACITY AND GENERATION OF ELECTRICITY – 2022-23

(Contd.)

Sl. No.	Name of power station	Year of operation	Installed Capacity in MW	Generation in MU	Auxiliary Consumption in MU	Net Generation in MU
1	2	3		5	6	7
25	Kodayar PHI	1971	60.0	221.662	0.386	221.276
26	Kodayar PHII	1971	40.0	70.773	0.232	70.541
27	Perunchani MPH	2005-06	1.3	6.080	0.064	6.016
28	Papanasam PH	1944-1951	32.0	129.542	0.793	128.749
29	Servalar PH	1986	20.0	37.371	0.104	37.267
30	Periyar Vaigai I	2010 - 2016	4.0	9.756	0.183	9.573
31	Periyar Vaigai II		4.0	9.069	0.119	8.950
32	Periyar Vaigai III		2.5	13.926	0.205	13.721
33	Periyar Vaigai IV		2.5	8.577	0.201	8.376
34	Mettur Dam PH	1937-46	50.0	226.84	0.36	226.479
35	Mettur Tunnel PH	1965-66	200.0	797.053	0.598	796.455
36	Barrage PHI	1987-1988	30.0	99.739	0.823	98.916
37	Barrage PHII	1987-88	30.0	94.781	0.807	93.974
38	Barrage PHIII	1987	30.0	88.717	0.942	87.775
39	Barrage PHIV	1988-89	30.0	67.586	0.937	66.650
40	MHPH/B.S	1990	8.0	43.287	0.084	43.203
41	RBC PH	1998	8.0	23.643	0.057	23.586
42	Santhanur MPH	1999	7.5	27.453	0.055	27.398
43	BKB PH I	2006	30.0	86.984	0.593	86.391
44	BKB PH II	2011	30.0	94.532	0.727	93.805
45	BKB PH III	2013	30.0	76.336	0.642	75.693
46	Bavani Barrage 1	2015	10.0	6.823	0.240	6.583
47	Bavani Barrage 2	2015	10.0	0.000	0.070	-0.070
	Total Hydro		2321.90	6174.083	22.556	6151.527
	Thermal					
48	North Chennai TPS	1994-96	630.0	3134.3804	306.177	2828.204
49	Tuticorin TPS	1979-92	1050.0	5717.9220	525.807	5192.115
50	Mettur TPS	1987-90	840.0	5395.7440	474.520	4921.224
51	NCTPS Stage II	2014	1200.0	5440.4360	437.018	5003.418
52	MTPS Stage III	2013	600.0	3000.6940	230.426	2770.268
	Total Thermal		4320	22689.176	1973.948	20715.228
	GAS					
53	Basin Bridge	1996	120.0	1.4697	0.0116	1.458
54	Kovil Kalappal	2001	107.9	169.9143	34.799	135.116
55	Vazhuthur	2003	95.0	708.905	40.858	668.047
56	Valuthur Phase II	2008	92.2	347.178	28.283	318.895
57	Kuttalam	2004	101.0	549.293	38.7826	510.510
58	TNEB (wind Mill+ Solar)			3.442		3.442
	Sub Total		516.08	1780.2021	142.7334	1637.469

10.1 INSTALLED CAPACITY AND GENERATION OF ELECTRICITY – 2022-23 (Contd.)

Sl. No.	Name of power station	Year of operation	Installed Capacity in MW	Generation in MU	Auxiliary Consumption in MU	Net Generation in MU
1	2	3	4	5	6	7
	Central Sector - Purchases		(TNEB SHARE)			
59	NNTPP	2019	654.90	4490.642		
60	Neyveli TPS 1-Expansion	2003	209.50	1437.361		
61	Neyveli TPS 2	1986-93	626.50	2951.526		
62	MAPS	1983-85	331.70	1084.622		
63	KAPS	2000-11	230.20	1724.473		
64	Ramagundam Stage 1 & 2	1984-91	537.20	2757.352		
65	Ramagundam Stage 3	2005	134.30	679.021		
66	ER Power		35	181.100		
67	Talcher Stage- 2	2003-05	502.40	3599.493		
68	Simhadri Stage- 2	2011&12	213.10	1103.133		
69	Vallur NTECL	2012-15	1069.80	6527.014		
70	Kudankulam NPCIL	2014-17	1138	7569.221		
71	Neyveli TPS-2 Expansion	2015	249.50	885.183		
72	NLC TamilNadu Power Ltd (NTPL)	2015	417.70	2047.218		
73	Kudgi	2017	378.30	1325.810		
74	Barh I (ER)		94.10	464.944		
75	Barh II (ER)		110.90	676.104		
76	Mtps 2 (KBUNL) (ER)		96.50	620.164		
77	Bgtpp (Bongaigaon) (NER)		140.40	705.721		
78	Solar bundled NVVN Power from NTPC stations			27.948		
79	Deviation Settlement Mechanism (inter state+intra-state)			-562.528		
80	Sub Total		7170	40295.521		
	Private Sector- Purchases					
81	PPN Power Generating Company Pvt. Ltd.	2001	330.5	69.107	6.551	62.556
82	TAQA Neyveli Power Company Pvt. Ltd.	2002	250.0	1217.297	97.24	1120.057
83	SEPC Power Private Ltd.(COD: 30.11.21)	2021	525	922.437	75.801	846.636
	Sub total		1105.5	2208.841	179.592	2029.249

**10.1 INSTALLED CAPACITY AND GENERATION OF ELECTRICITY – 2022-23
(Contd.)**

Sl. No.	Name of power station	Year of operation	Installed Capacity in MW	Generation in MU	Auxiliary Consumption in MU	Net Generation in MU
1	2	3	4	5	6	7
84	CPP direct		223.80	0.336		
85	CPP Purchase through traders			0		
86	Co-Generation**		523.80	422.37		
87	WIND MILL (Pvt)		8739.01	13281.126		
88	Bio-mass		164.84	2.418		
89	Solar (Pvt)		6539.23	9292.938		
90	REMC(SECI)		330	679.813		
91	Trading Purchase (Bilateral)			4062.710		
92	Trading Purchase (Exchange)			2002.276		
93	Trading Purchase (Case 1 bidding)*		3082	15267.611		
94	Swap receipt			1136.827		
95	Swap return / Swap Banking/ Sale			-1047.972		
96	Total Wheeling quantum by HT			3120.359		
97	Power sale to other states by TANGEDCO			-439.172		
98	Power sale to other states by Pvt Generators			-706.443		
99	TNEB Generation towards Interstate Sale			439.172		
100	CPP Power injected towards Interstate Sale			706.443		
	Total Installed capacity (firm) in MW		18739.28	121189.043		
	Total Installed capacity in MW (infirm) *		16296.88			
	Power Demand					
(i)	Instantaneous Demand met in MW		17318			
(ii)	Sustained Demand met in MW		18053			

*- Not included In Installed Capacity

**-. Sl No.86-90 included in infirm

**10.2 LENGTH OF EHT/HT LINES, DISTRIBUTION TRANSFORMERS
AND EHT/HT SUB STATIONS 2022-23**

<i>Item</i>	<i>Units</i>	<i>Energised as on 31.03.2023</i>
Length of E.H.T Lines existing	Lakh Circuit Kms	0.37
Length of HT Lines existing	Lakh Kms	1.97
Length of L.T. Lines existing	Lakh Kms	6.31
Distribution Transformers existing	Nos.	388982
E.H.T. & H.T Sub-stations (existing)	Nos.	1855

*Source: Chief Engineer (Planning),
Tamil Nadu Generation and Distribution Corporation Ltd, Chennai-2*

10.3 CONSUMPTION OF ELECTRICITY 2022-23

<i>Category</i>	<i>Consumption (M.U.)</i>	<i>Percentage of Consumption</i>
Industries (including Traction)	40881.796	39.48
Agriculture	14173.82	13.69
Domestic	30602.014	29.55
Commercial	11479.097	11.09
Public Lighting & Water Works	2506.762	2.42
Sales to Licensees	8.973	0.01
Sales to other states		
Miscellaneous	3894.818	3.76
TOTAL	103547.280	100

*Source: The Chief Engineer (Planning),
Tamil Nadu Generation and Distribution Corporation Ltd, Chennai-2*







10.4 CONSUMERS AND CONNECTED LOAD

TARIFF	CONSUMERS	As on 31-03-2023	
		Consumers (in lakhs)	Connected Load (MW)
I	H.T. Supply (Including sale to traders)	10,983	10,222.02
II	LT Supply		
1.	Domestic+ Domestic Common Supply +L T Bulk supply to Railways & Defence Colonies	2,38,61,586	47,859.97
2.	Public Lighting & Water Supply	8,09,388	3,020.92
3.	Industries	7,69,832	11,006.48
4.	Agriculture	23,35,558	13,208.77
5.	Huts	9,44,939	122.22
6.	Recognized Educational Institutions & Private Educational Institutions	96,347	617.93
7.	Commercial	37,04,336	13,118.15
8.	Others	5,82,989	1,456.66
	TOTAL	33115958	1,00,633.12

Source: The Chief Engineer (Planning),
Tamil Nadu Generation and Distribution Corporation Ltd, Chennai-2

10.5 RURAL ELECTRIFICATION BY DISTRICTS 2022-23
(in Nos.)

Name of the Districts		Habitations			No. of Pumpsets energized during the year 2022-23
		Existing	Electrified	Un Electrified	
1		2	3	4	6
1.	Ariyalur	710	710	0	910
2.	Chengalpattu	2158	2158	0	562
3.	Chennai	0	0	0	0
4.	Coimbatore	1200	1200	0	2460
5.	Cuddalore	2403	2403	0	871
6.	Dharmapuri	2835	2835	0	5400
7.	Dindigul	3083	3083	0	1833
8.	Erode	3199	3199	0	2661
9.	Kallakurichi	1202	1202	0	2224
10.	Kancheepuram	1354	1354	0	223
11.	Kanniyakumari	1155	1155	0	26
12.	Karur	2179	2179	0	643
13.	Krishnagiri	3983	3983	0	4801
14.	Madurai	1946	1945	1	859
15.	Mayiladuthurai	2054	2054	0	597
16.	Nagapattinam				65
17.	Namakkal	2520	2520	0	2609
18.	The Nilgiris	1282	1282	0	90
19.	Perambalur	314	314	0	335
20.	Pudukkottai	4062	4062	0	1793
21.	Ramanathapuram	2306	2306	0	213
22.	Ranipet	1593	1593	0	765
23.	Salem	5109	5109	0	2640
24.	Sivagangai	2723	2723	0	881
25.	Tenkasi	1000	1000	0	277
26.	Thanjavur	2260	2260	0	2434
27.	Theni	607	607	0	1077
28.	Thiruvallur	3862	3862	0	932
29.	Tiruvannamalai	4267	4267	0	1107
30.	Thiruvarur	1704	1704	0	620
31.	Tirunelveli	1337	1337	0	192
32.	Tirupathur	2394	2394	0	1301
33.	Tiruppur	2455	2455	0	4361
34.	Tiruchirappalli	2210	2210	0	1837
35.	Thoothukudi	1761	1761	0	261
36.	Vellore	2122	2122	0	633
37.	Viluppuram	2285	2285	0	1630
38.	Virudhunagar	1760	1760	0	464
TOTAL		79394	79393	1	50587

10.5 RURAL ELECTRIFICATION BY DISTRICTS 2022-23(Contd.)

(In Nos)

<i>Name of the Districts</i>		<i>Agricultural Pumpsets Energized as on 31.3.2023</i>	<i>Huts Electrified as on 31.3.2023</i>
<i>1</i>			
1.	Ariyalur	21755	18283
2.	Chengalpattu	48228	20628
3.	Chennai	16	9
4.	Coimbatore	94651	22147
5.	Cuddalore	76983	91939
6.	Dharmapuri	91025	21666
7.	Dindigul	108250	24351
8.	Erode	114716	22431
9.	Kallakurichi	85861	58833
10.	Kancheepuram	23943	19006
11.	Kanniyakumari	8399	2394
12.	Karur	53650	12737
13.	Krishnagiri	73998	21326
14.	Madurai	57436	19918
15.	Mayiladuthurai	26799	34443
16.	Nagapattinam	2669	19456
17.	Namakkal	104581	22847
18.	The Nilgiris	1984	11642
19.	Perambalur	44154	13248
20.	Pudukkottai	67474	48000
21.	Ramanathapuram	10213	2066
22.	Ranipet	58348	26682
23.	Salem	142037	41948
24.	Sivagangai	30583	4084
25.	Tenkasi	52732	4212
26.	Thanjavur	73607	38156
27.	Theni	42707	3541
28.	Thiruvallur	55583	35180
29.	Tiruvannamalai	194328	50496
30.	Thiruvarur	24029	38672
31.	Tirunelveli	36712	3856
32.	Tirupathur	46539	19418
33.	Tiruppur	120613	20118
34.	Tiruchirappalli	94649	44270
35.	Thoothukudi	32016	5264
36.	Vellore	48087	20826
37.	Viluppuram	125108	71822
38.	Virudhunagar	41095	9024
	TOTAL	2335558	944939

10.5 RURAL ELECTRIFICATION BY DISTRICTS 2022-23(Contd.)

(In Nos)

<i>Name of the Districts</i>		<i>AD colonies electrified</i>
<i>1</i>		<i>2</i>
1.	Kancheepuram	2201
2.	Thiruvallur	
3.	Chengalpattu	
4.	Coimbatore	2997
5.	Erode	
6.	Tiruppur	
7.	Dharmapuri	1049
8.	Krishnagiri	
9.	Kanniyakumari	388
10.	Chennai	0
11.	Madurai	1734
12.	Theni	
13.	Dindigul	
14.	The Nilgiris	87
15.	Vellore	1796
16.	Tiruvannamalai	
17.	Ranipet	
18.	Tirupathur	1062
19.	Pudukkottai	
20.	Ramanathapuram	
21.	Sivagangai	1518
22.	Virudhunagar	
23.	Salem	1521
24.	Namakkal	
25.	Cuddalore	
26.	Viluppuram	2358
27.	Kallakurichi	
28.	Thanjavur	6671
29.	Nagapattinam	
30.	Thiruvarur	
31.	Mayiladuthurai	2004
32.	Tiruchirappalli	
33.	Perambalur	
34.	Karur	1378
35.	Ariyalur	
36.	Thoothukudi	
37.	Tirunelveli	1378
38.	Tenkasi	
	TOTAL	26764

*Source: The Chief Engineer Planning,
Tamil Nadu Generation and Distribution Corporation Ltd, Chennai-2*

10.6 TAMIL NADU ELECTRICITY BOARD - CAPITAL BUDGET AT A GLANCE
(Rs. in Crores)

<i>Details</i>	<i>Actual Expenditure during 2022-23 (RE)</i>	<i>Approved Outlay for 2022-23</i>
1. Generation (Including investment in Joint Venture)	4572.47	4692.84
2. Rénovation & modernisation	12.96	55.19
3. Transmission & Distribution	6096.18	6072.10
4. Rural Electrification	280.15	356.56
5. Survey & Investigation	0.00	0.00
6. Interest during Construction	5172.12	5586.36
TOTAL	16133.88	16763.05

*Source: The Chief Engineer (Planning),
Tamil Nadu Generation and Distribution Corporation Ltd, Chennai-2*

10.7 APPROVED AND ONGOING THERMAL & HYDRO SCHEMES

(Rs. in Crores)

Name of the Projects	Original Sanctioned Cost / Price level	Latest Estimate cost / Price level	Expenditure Upto 31.03.2023
ETPS Expansion Thermal Power Project (1 x660 MW)	4956 (2013)	6380.81 (2019)	714.03
Ennore SEZ Thermal Power Project (2 x660 MW)	9800 (2014)	9800 (2024)	8271.93
North Chennai Thermal Power Project Stage III (1 x800 MW)	6376 (2016)	10158 (2024)	7846.36
Uppur Thermal Power Project (2 x800 MW)	12778 (2016)	--	2567.46
Udangudi Thermal Power Project Stage I (2 x660 MW)	13076.705 (2017-18)	13076.705 (2017-18)	7922.198
Udangudi Thermal Power Project Stage II (2 x660 MW)	Yet not be sanctioned	-	0.3343
Udangudi Thermal Power Project Stage III (2 x660 MW)	Yet not be sanctioned	-	
Kundah Pumped Storage Hydro Electric Project (4x125 MW)	1831.29 (2014)	3522.49 Revised cost approval of TANGEDCO is under process (2019-20)	1405
Kollimalai Hydro Electric Project (1 x20 MW)	338.79 (2013-14)	591.20 Revised cost approval of TANGEDCO is under process (2024-25)	373.99
Upper Bhavani Pumped Storage Hydro Electric Project (4x250 MW)	3905 (2021-22)	-	Given to NTECL for development under JVs per G.O.(Ms.) No.33,dt. 11.03.2024

NOTE:1.North Chennai Thermal Power Project Stage III (1X800 MV)-Plant Commissioned on 07.03.2024.

2.ETPS Expansion Thermal Power Project (1x660 MW)-The Contract terminated due to poor performance of the EPC contractor on 27.02.2024.

3.Uppur Thermal Power Project (2x800 MW)-project put on hold from 18.03.2021. All The Documents Related To The Uppur Thermal Power Project have been handed over to Mr.Arvind Subramanian ,Economic advisory committee as directed by TANGEDCO Board on 19.11.22 committees final report is awaited.

10.8 TIME SERIES DATA – DEVELOPMENT OF ENERGY IN TAMIL NADU

<i>Year</i>	<i>Installed capacity (MW)</i>	<i>TANGEDCO Generation (MU)</i>	<i>Purchases (MU)</i>	<i>Per Capita Consumption (KWH)</i>
2006-07	10098	29481	34208	960
2007-08	10122	29241	37608	1000
2008-09	10214	28983	38093	1000
2009-10	10214	27860	45027	1080
2010-11	10237	25639	50433	1040
2011-12	10364	27942	48592	1065
2012-13	10515	25301	49571	1011
2013-14	11884	31276	58517	1196
2014-15	13231	34569	59559	1228
2015-16	17976	34709	64982	1280
2016-17	18733	29223	76505	1340
2017-18	18747	27873	78954	1389
2018-19	18300	33328	80462	1467
2019-20*	16035	28244	85985	1515
2020-21*	16219	22667	84397	1464
2021-22	16652	27369	90192	1593
2022-23	16417	30644	91691	1640

**-As per the CEA memorandum dated 08.03.2019, Hydro generation has been considered as renewable energy resource and has been deleted from conventional sources.*

Source : The Chief Engineer (Planning),

Tamil Nadu Generation and Distribution Corporation Ltd, Chennai-2

