

## **10. ELECTRICITY**

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## 10. ELECTRICITY

### 10.1 INSTALLED CAPACITY AND GENERATION OF ELECTRICITY 2008-09

<i>Power Station</i>	<i>Operation Year of</i>	<i>Installed capacity (M.W) *</i>	<i>Gross Generation M.U **</i>	<i>Auxiliaries Consumption in M.U **</i>	<i>Net Generation in M.U **</i>
<b>HYDRO</b>					
1. Pykara	1954	58.95	60.06	0.40	59.66
2. Pykara Mini Hydel	1989	2.00	6.00	0.08	5.92
3. PUSHEP	2005	150.00	391.76	2.92	388.84
4. Moyar	1953	36.00	132.29	0.50	131.79
5. Maravakandi Micro Hydel	1992	0.75	0.424	0.01	0.41
6. Parsons valley	2000	30.00	41.17	0.19	40.98
7. Kundah – 1	1964	60.00	284.83	0.73	284.10
8. Kundah – 2	1964	175.00	753.86	0.79	753.07
9. Kundah – 3	1978	180.00	439.84	2.32	437.52
10. Kundah – 4	1978	100.00	137.85	0.27	137.58
11. Kundah – 5	1988	40.00	67.82	0.23	67.59
12. Mettur Dam	1946	50.00	90.51	0.26	90.25
13. Mettur Tunnel	1966	200.00	453.35	0.73	452.62
14. LMHEP–Barrage-1	1987	30.00	103.50	0.90	102.60
15. LMHEP–Barrage-2	1988	30.00	102.60	0.78	101.82
16. LMHEP–Barrage-3	1987	30.00	104.35	0.96	103.39
17. LMHEP–Barrage-4	1988	30.00	87.84	0.84	87.00
18. Bhavani Kattalai PH-1	2006	30.00	99.07	0.66	98.41
19. Bhavanisagar RBC	1988	8.00	33.24	0.15	33.09
20. Bhavani Sagar Small	1990	8.00	44.88	0.14	44.74
21. Poonachi Micro	1992	2.00	0.209	0.02	0.189
22. Sathanur Micro	1999	7.50	12.91	0.04	12.87
23. Mukurthy Mini	2000	0.70	1.73	0.05	1.68
24. Thirumoothy Mini	2000	1.95	5.94	0.02	5.92
25. Lower Aliyar	2002	2.50	10.96	0.05	10.91
26. Amaravathy	2006	4.00	7.48	0.14	7.34
27. Perunchani Mini	2006	1.30	2.46	0.01	2.45
28. Periyar	1965	140.00	453.42	1.46	451.96
29. Vaigai Small Hydel	1990	6.00	23.92	0.15	23.77

Dream Dare Win  
www.jeywin.com

\* M.W = Mega Watt

\*\* M.U. = Million Unit

**10.1 INSTALLED CAPACITY AND GENERATION OF ELECTRICITY 2008-09 (Contd.)**

<i>Power Station</i>	<i>Operation Year of</i>	<i>Installed capacity (M.W) *</i>	<i>Gross Generation M.U **</i>	<i>Auxiliaries Consumption in M.U **</i>	<i>Net Generation in M.U **</i>
<b>HYDRO (Contd.)</b>					
30. Suruliyar	1986	35.00	100.30	0.41	99.89
31. Papanasam	1951	32.00	137.69	0.81	136.88
32. Servalar	1987	20.00	34.59	0.08	34.51
33. Sarkarpathy	1966	30.00	128.71	0.08	128.63
34. Aliyar	1970	60.00	152.64	0.42	152.22
35. Kadamparai	1988	400.00	294.47	2.70	291.77
36. Sholayar-1	1971	70.00	235.56	0.48	235.08
37. Sholayar-2	1971	25.00	65.78	0.23	65.55
38. Kodayar-1	1971	60.00	191.54	0.51	191.03
39. Kodayar-2	1971	40.00	89.99	0.51	89.48
<b>Total Hydro</b>		<b>2186.65</b>	<b>5385.543</b>	<b>22.03</b>	<b>5363.513</b>
<b>THERMAL</b>					
40. Ennore TPS	1970	450.00	7850.33	282.48	7567.85
41. North Chennai TPS	1994	630.00	1938.329	414.05	1524.279
42. Thoothukudi TPS	1979-1991	1050.00	6458.961	623.19	5835.771
43. Mettur TPS	1990	840.00	4775.092	522.32	4252.772
<b>Total Thermal</b>		<b>2970.00</b>	<b>21022.712</b>	<b>1842.04</b>	<b>19180.672</b>
<b>GAS</b>					
44. Basin Bridge	1996	120.00	179.40	2.84	176.56
45. Kovil Kalappal	2001	107.88	707.74	46.80	660.94
46. Vazhuthur I & II	2003	187.00	953.23	56.11	897.12
47. Kuttralam	2004	101.00	724.09	43.22	680.87
<b>Total</b>		<b>515.88</b>	<b>2564.46</b>	<b>148.17</b>	<b>2415.49</b>
48. Wind Mill	-	-	10.000	-	10.000

**10.1 INSTALLED CAPACITY AND GENERATION OF ELECTRICITY 2008-09 (Contd.)**

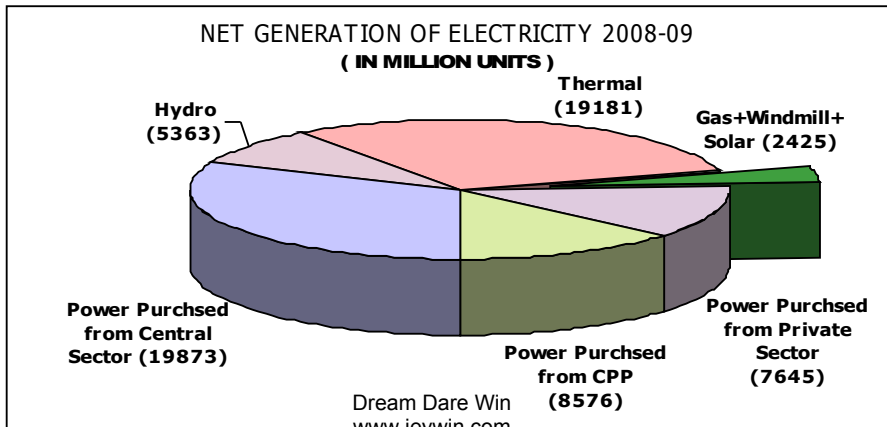
<i>Power Station</i>	<i>Year of Operation</i>	<i>Installed capacity (M.W) *</i>	<i>Gross Generation M.U **</i>	<i>Net Generation M.U **</i>
<b>CENTRAL SECTOR – PURCHASES</b>				
49. Neyveli TPS 1	1962	475	2810.00	2810.00
50. Neyveli TPS 1-Expansion	2003	226	1527.00	1527.00
51. Neyveli TPS 2	1986	466	2551.00	2551.00
52. MAPS Nuclear	1983	330	903.00	903.00
53. Kaiga Nuclear (Karnataka)	2000	171	613.00	613.00
54. Ramagundam STPS (A.P)	1984	527	4130.00	4130.00
55. Ramagundam STPS (A.P) U7	2005	132	1030.00	1030.00
56. ER Power	-	125	818.00	818.00
57. Talcher St-2	-	498	3484.00	3484.00
58. NTPC Kayamkulam ( TNEB)	-	180	1049.00	1049.00
59. UI Energy	-	-	958.00	958.00
<b>Sub Total</b>	-	<b>2825.00</b>	<b>19873.00</b>	<b>19873.00</b>
<b>PRIVATE SECTOR : PURCHASES</b>				
60. GMR	-	196	1362.00	1362.00
61. Samalpatty	-	105.66	691.00	691.00
62. Madurai Power Corpn. Ltd	-	106	663.00	663.00
63. Pillai Perumal Nallur	-	330.50	2147.00	2147.00
64. STCMS	-	250	1638.00	1638.00
65. Aban	-	120	806.00	806.00
66. Penna	-	71.6	338.00	338.00

**10.1 INSTALLED CAPACITY AND GENERATION OF ELECTRICITY 2008-09 (Concl.)**

<b>Power Station</b>	<b>Operation Year of</b>	<b>Installed capacity (M.W) *</b>	<b>Gross Generation M.U **</b>	<b>Auxiliaries Consumption M.U **</b>	<b>Net Generation M.U **</b>
<b>CPP</b>					
67. TCPL	-	214.00	829.00	-	829.00
68. Hi-tec	-				
69. CPCL (Manali)	-				
70. Other CPPS	-	182.00	-	-	-
71. Co-Generation***	-	466.00	932.00	-	932.00
72. Wind Mill + Solar (Pvt.)***	-	4287.00	6645.00	-	6645.00
73. Bio-mass***	-	109.00	170.00	-	170.00
Sale		-	-574.80		
74. Purchases	-	-	1864.00	-	1864.00
<b>Power Demand</b>					
(i) Instantaneous Demand					9567 MW /
(ii) Sustained Demand					9459 MW /

\*\*\* Not included in installed capacity

Source : The Chief Engineer Planning, Tamil Nadu Electricity Board, Chennai-2



### 10.2 LENGTH OF EHT/HT LINES, DISTRIBUTION TRANSFORMERS AND EHT/HT SUB STATIONS 2008-09

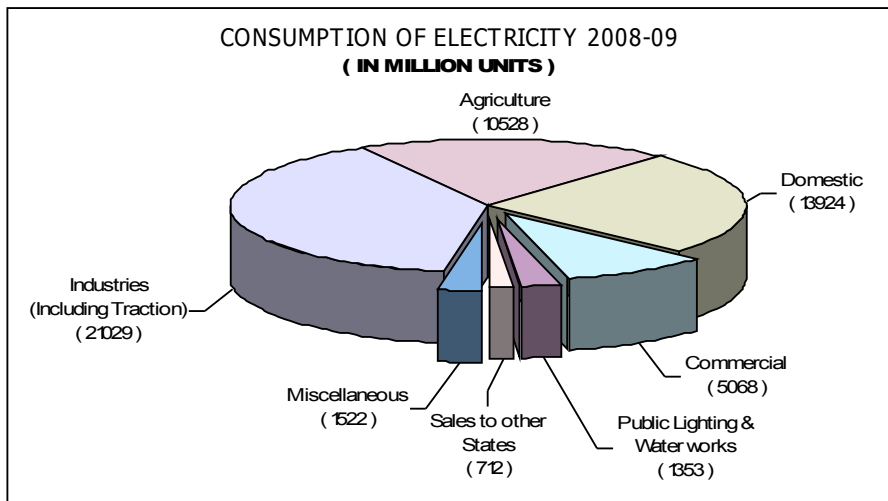
<i>Item</i>	<i>Units</i>	<i>Achievement</i>
Length of E.H.T. & HT Lines existing	CKT.Kms	1.64 lakh Ckt. Kms.
Length of L.T.Lines existing	Kms	5.26 Lakh Kms.
Distribution Transformers existing	Nos.	1,86,638
E.H.T. Sub-stations(existing)	Nos.	85
H.T. Sub-stations (existing)	Nos.	1174

Source: Chief Engineer Planning, Tamil Nadu Electricity Board, Chennai-2

### 10.3 CONSUMPTION OF ELECTRICITY 2008-09

<i>Category</i>	<i>Consumption (M.U.)</i>	<i>Percentage of Consumption</i>
Industries (including Traction)	21,029	39.30
Agriculture	10,528	19.68
Domestic	13,294	24.85
Commercial	5,068	9.47
Public Lighting & Water works	1,353	2.52
Sales of Licensees Sales to other States	712	1.34
Miscellaneous	1,522	2.84
<b>TOTAL</b>	<b>53,506</b>	<b>100.00</b>

Source: The Chief Engineer Planning, Tamil Nadu Electricity Board, Chennai-2



## 10.4 CONSUMERS AND CONNECTED LOAD

Category	As on 31-03-2009	
	Consumer (Nos.)	Connected Load (MW)
I H.T. Supply	6,975	5,599
II L.T. Supply		
1. Domestic	1,36,64,219	15,599
2. a) Public Lighting	2,60,072	225
b) Water Supply	1,56,856	570
3. Industry	4,81,743	7,331
4. Agriculture	18,72,734	7,583
5. Huts	12,53,291	56
6. Education etc.,	1,12,027	252
7. Commercial	24,96,594	4,400
8. Others	83,088	98
<b>TOTAL</b>	<b>2,03,87,599</b>	<b>41,713</b>

Source: Chief Engineer Planning, TNEB, Chennai-2

## 10.5 RURAL ELECTRIFICATION BY DISTRICTS 2008-09

(in Nos.)

<i>District</i>	<i>Hamlets</i>		<i>Adi Dravidar Colonies Electrified</i>
	<i>Existing</i>	<i>Electrified</i>	
<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>
1. Chennai	0	0	0
2. Kancheepuram+ Chengalpattu	2448	2448	2201
3. Thiruvallur			
4. Cuddalore	1861	1861	2358
5. Villupuram			
6. Vellore+ Thirupathur	2222	2222	1796
7. Thiruvannamalai			
8. Salem	4589	4589	1521
9. Namakkal			
10. Dharmapuri	3581	3581	1049
11. Krishnagiri			
12. Erode	6038	6038	2997
13. Coimbatore			
14. The Nilgiris	852	852	89
15. Tiruchirappalli	4261	4261	2013
16. Karur			
17. Perambalur			
18. Ariyalur	3866	3866	6664
19. Thanjavur			
20. Nagapattinam			
21. Thiruvarur	2415	2415	1062
22. Pudukottai			
23. Madurai	4744	4744	1734
24. Theni			
25. Dindigul			
26. Ramanathapuram	5034	5034	1518
27. Virudhunagar			
28. Sivagangai			
29. Tirunelveli	3716	3716	1377
30. Thoothukudi			
31. Kanyakumari	2490	2490	388
<b>STATE</b>	<b>48117</b>	<b>48117</b>	<b>26764</b>

**10.5 RURAL ELECTRIFICATION BY DISTRICTS 2008-09 (Concl.)**

( In Nos )

<b>ELECTRICITY DISTRIBUTION CIRCLE</b>	<b>No. of pumpsets energised during the year 2008-09</b>	<b>Pumpsets Energised As on 31.3.2009</b>	<b>Huts Electrified as on 31.3.2009</b>
<i>1</i>	<i>5</i>	<i>6</i>	<i>7</i>
1. Coimbatore	1887	121223	50860
2. Chennai	0	1	0
3. Cuddalore	1170	66567	72973
4. Dharmapuri	2323	103560	40215
5. Kancheepuram	942	69881	29643
6. Dindigul	1682	87630	36161
7. Erode	1497	129968	41908
8. Kanyakumari	148	6997	7368
9. Karur	537	42498	21725
10. Krishnagiri	2349	6859	28151
11. Madurai	693	48634	61043
12. Nagapattinam	321	25108	55131
13. Namakkal	1072	77217	25134
14. Nilgiris	34	1221	14285
15. Pudukkottai	918	51089	53595
16. Perambalur	604	50410	50112
17. Ramanathapuram	113	8189	16541
18. Salem	2190	117756	57317
19. Sivagangai	699	21679	38527
20. Thanjavur	821	57428	62341
21. Theni	493	34580	15431
22. Tirunelveli	1686	75254	25249
23. Tiruvarur	264	20622	35326
24. Tiruvannamalai	3571	164180	74908
25. Tiruvallur	802	45989	48717
26. Trichy	1200	80625	73565
27. Tuticorin	305	29073	20118
28. Vellore	1825	129788	37047
29. Villupuram	4208	161964	129351
30. Virudhunagar	261	36214	30266
31. Ariyalur	530	530	283
<b>TOTAL</b>	<b>35145</b>	<b>1872734</b>	<b>1253291</b>

Source: The Chief Engineer Planning, T.N.E.B, Chennai-2

**10.6 TAMIL NADU ELECTRICITY BOARD - CAPITAL BUDGET AT A GLANCE**

(Rs. in Crores)

<i>Details</i>	<i>Tenth Five Year Plan (2002-07) Outlay</i>	<i>Actual Expenditure during 2008-09</i>	<i>Approved Outlay for 2009-10</i>
1. Generation ( Including investment in Joint Venture )	761.85	709.99	2800
2. Renovation & modernisation	223.43	25.16	100
3. Transmission & Distribution	4636.91	1814.01	1400
4. Rural Electrification	639.14	145.34	100
5. Survey & Investigation	10.16	} 261.37	120
6. Interest during Construction	1134.26		
<b>TOTAL</b>	<b>7405.75</b>	<b>2955.87</b>	<b>4520</b>

Source: The Chief Engineer (Planning), Tamil Nadu Electricity Board, Chennai-2

**10.7 APPROVED AND ON GOING SCHEMES AS ON 1-4-2009**

(Rs. in Crores)

<i>Name of the Scheme</i>	<i>Original Sanctioned cost</i>	<i>Latest Estimate cost</i>	<i>Expenditure (31.3.2008 to- 31.3.2009)</i>
1. Bhavani Kattalai Barrage II HEP	99.15	400.59	50.07
2. Bhavani Kattalai Barrage III HEP	97.14	396.59	38.61
3. Periyar – Vaigai I to IV	18.83	133.88	29.77
4. NCTPS – Stage – II	5814.04	5814.04	219.13
5. CTPS – Stage – III	3550.00	3550.00	33.61
6. Bhavani Barrage	265.00	265.00	17.17

Source : The Chief Engineer Planning, T.N.E.B. Chennai-2

**10.8 TIME SERIES DATA – DEVELOPMENT OF ENERGY IN TAMIL NADU**

<b>Year</b>	<b>Installed capacity (MW)</b>	<b>Annual Gross Generation (MU)</b>	<b>Purchases (MU)</b>	<b>Per capita Consumption (KWH)</b>
<b>2000-01</b>	<b>7513</b>	<b>25147</b>	<b>16617</b>	<b>510</b>
<b>2001-02</b>	<b>7924</b>	<b>25562</b>	<b>18358</b>	<b>708</b>
<b>2002-03</b>	<b>8268</b>	<b>24929</b>	<b>21263</b>	<b>740</b>
<b>2003-04</b>	<b>9319</b>	<b>24114</b>	<b>25384</b>	<b>780</b>
<b>2004-05</b>	<b>9531</b>	<b>26450</b>	<b>25895</b>	<b>815</b>
<b>2005-06</b>	<b>10031</b>	<b>26915</b>	<b>29091</b>	<b>860</b>
<b>2006-07</b>	<b>10098</b>	<b>29481</b>	<b>33357</b>	<b>960</b>
<b>2007-08</b>	<b>10122</b>	<b>66848</b>	<b>37607</b>	<b>1000</b>
<b>2008-09</b>	<b>10214</b>	<b>66966</b>	<b>37984</b>	<b>1000</b>

**Source: The Chief Engineer Planning, Tamil Nadu Electricity Board, Chennai-2**