

## TAMIL NADU ELECTRICITY BOARD

The Tamil Nadu Electricity Board is a body corporate constituted under the Electricity (Supply) Act, 1948 (Central Act 54 of 1948) and authorised to function as 'the State Transmission Utility and a Licensee' under the Notification issued by the Government of Tamil Nadu under clause (a) of Section 172 of the Electricity Act, 2003. The main objectives of Tamil Nadu Electricity Board are to generate, transmit and distribute electricity efficiently and to ensure supply of quality power to its consumers.

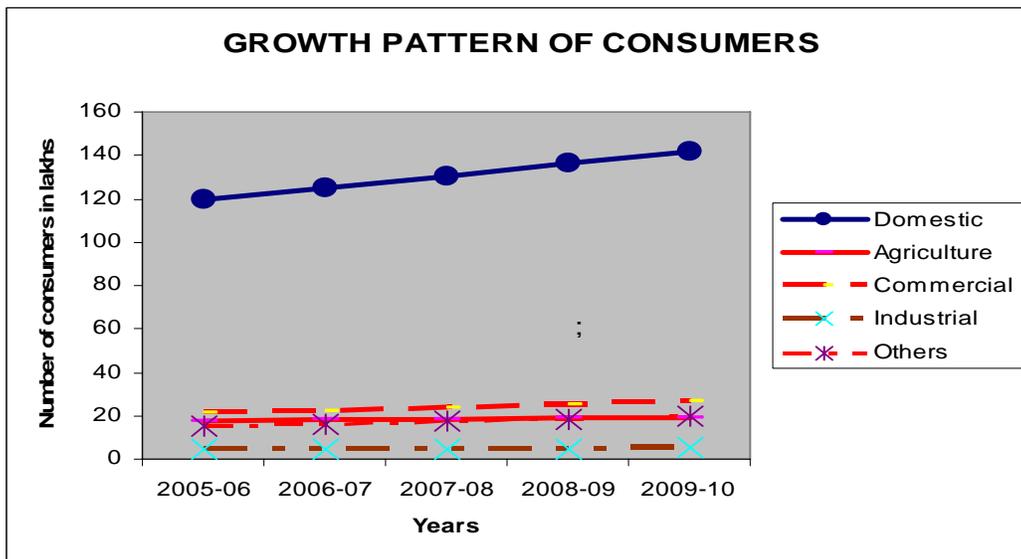
**2.0.** As on 31.03.2010 there are 1345 substations, 1.69 lakh circuit Kms. of Extra High Tension lines/ High Tension lines, 5.38 lakh Kms. of Low Tension (LT) lines, 1.92 lakh distribution transformers and 212.05 lakh service connections. The number of consumers in different categories, presently being served in the state is as follows:-

Domestic	1,41,42,186
Agricultural	19,11,819
Commercial	26,32,141
Industrial	5,09,830
Others	20,08,930
<b>Total</b>	<b>2,12,04,906</b>

:

The growth of consumers from the years 2005-06 to 2009-10 is shown below:-

DESCRIPTION	YEAR – WISE CONSUMERS IN LAKHS				
	2005-2006	2006-2007	2007-2008	2008-2009	2009-2010
DOMESTIC	119.74	125.28	130.64	136.64	141.42
AGRICULTURE	17.68	18.02	18.39	18.73	19.12
COMMERCIAL	21.23	22.27	23.43	24.97	26.32
INDUSTRIAL	4.36	4.51	4.71	4.89	5.10
OTHERS	15.02	15.74	17.16	18.65	20.09
TOTAL	178.03	185.82	194.33	203.88	212.05



**2.1** The total installed generation capacity of Tamil Nadu as on 31.03.2010 is **15,800** Mega Watts as detailed below:

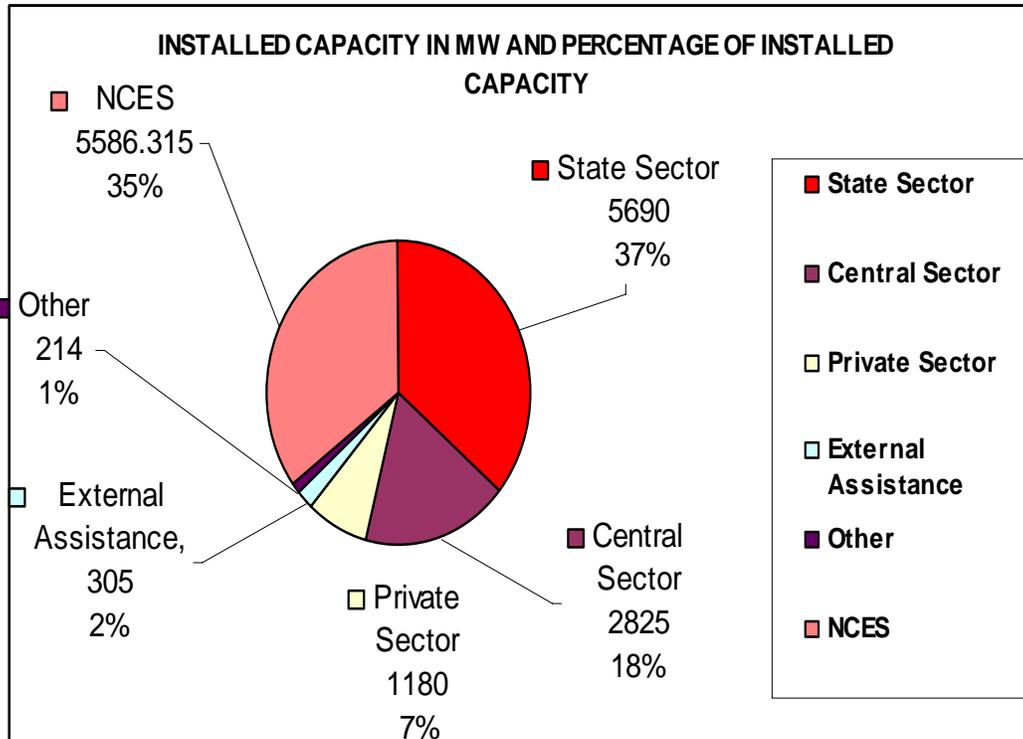
(A) Hydel, Coal, oil based and conventional sources:-

(i) TNEB's own generating stations (Hydel, Thermal, Gas and wind)	: 5690 MW
(ii) Private Sector Power Plants (IPP)	: 1,180 MW
(iii) Share from Central Sector generating stations	: 2,825 MW
(iv) External assistance; and	: 305 MW
(v) Others (Captive Power Plants) (Supply to TNEB)	: 214 MW
<b>TOTAL</b>	<b>: 10214 MW</b>

(B) Renewable or Non-conventional energy sources:-

(i) Wind Mills (Private) (in-firm power)	: 4889.765 MW
(ii) Co-Generation	: 559.5 MW ; and
(iii) Bio-mass	: 137.05 MW
<b>Total (Renewable sources )</b>	<b>: 5586.315 MW</b>
<b>Grand Total</b>	<b>15800.315 MW</b>

(C) There is an increase of 700 MW over last year. Besides the above 851 MW capacity of captive power plants are also available for their own use and sale.



**2.2** The maximum peak demand so far reached during 2009-10 is **10,180MW (on 19.03.2010)**. Highest daily consumption of **223.858 Million Units** was recorded on **11.03.2010**. Total energy consumption during 2009-10 as on 31.03.2010 has been 72987 Million Units.

## **2.3 GREEN ENERGY DEVELOPMENT**

**2.3.1.** Tamil Nadu is blessed with conducive natural metrological and topographical settings for wind energy generation. Three passes namely, Palghat Pass, Shengottah Pass and Aralvoimozhi pass are endowed with heavy wind flows due to the tunneling effect during South West Monsoon.

**2.3.2** The first wind farm of 1.165 MW capacity was erected at Mullaikadu in Tuticorin District, during 1986 in association with Tamil Nadu Energy Development Agency (TEDA) under the aid of Ministry of Non Conventional Energy Sources (MNES), Government of India. Subsequently, various wind farms were erected by TNEB at other places in Kayathar, Muppandal and Puliankulam areas. Similarly, during the year 1993, 8 Nos. of 250 KW Wind mills were erected at Kethanoor in Coimbatore District. In all 120 wind mills were erected by TNEB in between 1986 and 1993 totalling to a capacity of 19.355 MW.

Based on successful functioning of these demonstration wind farms, coupled with conducive environment created by Government a number of private developers have set up wind farms. Total capacity during 2008-09 has reached 4287.740

MW which has since increased to 4889.765 MW in 2009-10. The corresponding energy generated has also increased from 6655.150 MU during 2008-2009 to 8145.508 MU during 2009-2010. The installed capacity of wind generation in the state is 44 percent of the total national installed capacity and is ranked 1st in the country.

### **2.3.3 Solar energy:**

The Government of India have recently announced “Jawaharlal Nehru National Solar Mission” in the first phase of which , generation of 1000 MW of solar power has been proposed. NTPC Vidyut Vyapar Nigam Ltd (NVTN) is to be the nodal agency for entering into power purchase Agreements (PPA) with Solar Power Developers to purchase solar power which will be bundled with the available unallocated Thermal Power of the Government of India & sold to State Power utilities. NVTN will thus undertake the sale of the bundled power to the State Utilities at the rates determined as per CERC regulations.

When NVTN supplies bundled power to state utilities at the rates determined by CERC, those State utilities will be entitled to use the solar part of the bundled power for meeting their Renewable Purchase Obligations (RPO) under the

Electricity Act, 2003. The CERC is to issue appropriate guidelines in this regard shortly.

Government of Tamil Nadu has requested the Union Government, Ministry of New & Renewable Energy, to make necessary arrangements for allocating 200-500 MW to Tamil Nadu out of 1000 MW proposed to be sanctioned in the first phase of National Solar Mission.

## **2.4 GROWTH OF GENERATING CAPACITY:**

In the past 5 years the state witnessed high economic growth and appreciable improvement in the life style and living standards of its people. The peak demand has already grown from 8209 MW during 2005-06 to 10180MW during 2009-10 . Accordingly, the installed Generation Capacity excluding non-conventional power source also has increased from 10031 MW during 2005-06 to 10214 MW .

## **3.0. POWER POSITION:**

**3.1.** The following table indicates the sector wise generation, total purchase and gross generation in the preceding five years.

(in million units)

Sl. No.	Description	2004-05	2005-06	2006-07	2007-08	2008-09	2009-10
I	<b>TNEB's own generation</b>						
1.	Thermal Stations (2970 MW)	20004	18795	21228	21355	21023	19883
2.	Hydro Stations (2184MW)	4426	6141	6292	6455	5386	5640
3.	Gas Stations (424 MW)	2003	1964	1944	1419	2564	2327
4.	Wind Stations (17.55 MW)	17	15	17	12	10	12
	<b>Total (I)</b>	<b>26450</b>	<b>26915</b>	<b>29481</b>	<b>29241</b>	<b>28983</b>	<b>27862</b>
II	<b>Total purchases</b>						
	a) CGS	18853	20682	20689	21269	19898	21389
	b) WIND	2426	3430	5252	6055	6645	8351
	c) OTHERS	4616	5699	8267	9501	10865	15385
	Total (II)	25895	29811	34208	36825	37408	45125
	<b>Gross Generation (I+II)</b>	<b>52345</b>	<b>56726</b>	<b>63689</b>	<b>66066</b>	<b>66391</b>	<b>72987</b>

### **3.2 PROJECTED DEMAND AND AVAILABILITY**

#### **3.2.1 Power Scenario from March 2010 to May 2010**

The availability Vs Lighting peak demand and the deficit for the month of March 2010 to May 2010 are given below:

**in MW**

<b>Month</b>	<b>March – 10</b>	<b>April – 10</b>	<b>May – 10</b>
Avg. Demand	10900	11100	11200
Avg. Availability	7700	7730	8100
Relief Due to R&C Measures	1000	1000	1000
Purchase + Swap receipt	1825	2052	1912
Deficit	-375	-318	-188

The deficit is proposed to be met by purchasing power from Private Power producers & also through power exchanges on a day to day basis.

#### **3.2.2 Power scenario from June 2010 to May 2011**

The availability Vs demand and the deficit during peak hours (18Hrs to 22 Hrs)

in MW

Month	Jun - 10	July -10	Aug -10	Sep -10	Oct -10	Nov -10
Avg. Demand	10850	10860	10500	10650	10990	9850
Avg. Availability	9160	9130	9040	8500	7940	7250
Deficit	-1690	-1730	-1460	-2150	-3050	-2600

in MW

Month	Dec -10	Jan -11	Feb -11	Mar -11	Apr -11	May - 11
Avg. Demand	10770	11080	11160	11580	11760	11840
Avg. Availability	8150	7650	9150	9050	9400	10270
Deficit	-2620	-3430	-2010	-2530	-2360	-1570

The deficit varies from 1400MW to 3400MW

The availability Vs demand and the deficit during Day time  
(6.00 to 18.00 Hrs)

in MW

Month	Jun - 10	July -10	Aug -10	Sep -10	Oct -10	Nov -10
Avg. Demand	10300	10300	9980	10130	9890	8880
Avg. Availability	8580	8400	8290	7780	6780	6400
Deficit	-1720	-1900	-1690	-2350	-3110	-2480

in MW

Month	Dec -10	Jan -11	Feb -11	Mar -11	Apr -11	May - 11
Avg. Demand	9150	11080	11160	11580	11160	11840
Avg. Availability	7290	7450	8940	8740	9200	10160
Deficit	-1860	-3630	-2220	-2840	-1960	-1680

The deficit varies from 1700MW to 3600 MW

The availability Vs demand and the deficit during Off-peak hours ( 22.00-6.00Hrs)

in MW

Month	Jun - 10	July -10	Aug -10	Sep -10	Oct -10	Nov -10
Avg. Demand	9220	9230	8720	9170	9010	7400
Avg. Availability	8300	8400	8150	7830	6880	6200
Deficit	-920	-830	-570	-1340	-2130	-1200

in MW

Month	Dec -10	Jan -11	Feb -11	Mar -11	Apr -11	May - 11
Avg. Demand	7540	8300	8930	9840	10580	10650
Avg. Availability	7090	7220	8420	8290	9200	10010
Deficit	-450	-1080	-510	-1550	-1380	-640

The deficit varies from 500MW to 2100 MW

### **3.2.3 REASONS FOR THE POWER SHORTAGE:**

Reduced generation from Atomic power Stations at Kalpakkam & Kaiga and Neyveli expansion projects and delay in the commissioning of Kudankulam Atomic Power Plant are some of the chief reasons attributable to the power shortage during 2009-10. TNEB was thus forced to impose certain

restrictive measures to limit the demand matching with the availability.

#### **4.0 STEPS TAKEN TO MITIGATE THE POWER SHORTAGE:**

##### **4.1 DEMAND SIDE MANAGEMENT:**

Considering the present scenario, some of the Restriction and Control Measures in vogue from 28.3.2010 are:

- Demand and Energy cut of 30% for both High Tension Industrial and Commercial consumers.
- Evening peak hour restrictions:  
The High Tension industrial consumers draw power from the grid during evening peak hours (18.00 Hrs. to 22.00 Hrs.) and utilise not more than 5% for lighting and security purposes.
- For agriculture three phase supply given for 9 hours. The agriculturists may operate their pump sets for 9 hours ie., 6 hours during day time and 3 hours during night time.
- Town and district headquarters feeders divided into 4 groups and supply interruption (load shedding) will be done not exceeding 3 hours in day time in rotation. (Except Chennai city and sub-urban areas)

- Consequently rural area will be provided with supply for 21 Hours in a day.

The relief realized from the HT Industrial consumers not availing of power during peak hours from the grid except for their lighting and security purposes is considered as 1000 MW.

The relief realized with these R & C Measures during the day time (inclusive of load shedding) would be around 1600 MW.

The relief realized with these R & C Measures during the off peak hours would be around 200 MW.

#### **4.2 PRESENT POWER SUPPLY :-**

- The storage in Hydel reservoirs as on 31.03.10 was 883.716 MU as against 733.6 MU on the same day last year. The available water thus is being utilized most judiciously to meet the summer and peak demands;
- To meet the deficit power is also being procured from the market to the tune of 2000 MW to 2500 MW. Out of the above, 490 MW to 740 MW is being procured from the Captive Power Plants within the state.

- TNEB is also procuring power depending upon the availability, through power exchanges on 'day ahead' basis.
- Generators within Tamil Nadu are being allowed to sell power to HT consumers through intra- state open access. Presently this is to the tune of 120 MW.
- High Tension Industries also have been permitted to procure power both through inter-state and intra-state open access.
- Depending upon the availability of power in the market, action is being taken to procure additional power to bridge the gaps whenever called for.

## **5.0 CAPACITY ADDITION**

**5.1** The projected demand as per 17<sup>th</sup> Electrical Power Survey for the years 2010-11, 2011-12, 2012- 13 is furnished below:

Years	Projected demand in MW
2010-11	12860
2011-12	14224
2012-13	15517

**5.2** In order to meet the ever-increasing gap between demand and supply several capacity addition projects are being implemented/ have been proposed during coming years. The details of the projects envisaged during 2010-11 to 2013-14 and the scheduled dates / months of commissioning are given in the tables below:-

**Proposed capacity addition during 2010-11**

<b>Sl. No</b>	<b>Project Name</b>	<b>Type</b>	<b>Capacity / Share in MW</b>	<b>Expected Month of commissioning</b>
<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
(i)	Kaiga Atomic Power Station	Nuclear Central	36	May - 2010
(ii)	Periyar vaigai SHEP –I,II,IV, Bhavani Barrage- II	Hydro(State)	19	June 2010(unit1), NOV 2010 (Units 2&4), Dec-2010 (BB2)
(iii)	Neyveli TS-II Expansion Unit – I&II (2x250MW)	Thermal (share) (Central)	325	June 2010 for unit 1, July 2010 for unit2
(iv)	Kudankulam Atomic Power Station Unit –1&2 (2x1000 MW)	Nuclear (share) (Central)	925	Sept. 2010 for unit 1 Mar. 2011 for unit 2
(v)	Simhadhri Stage – II (2x500 MW)	Thermal (Share) (Central)	95	Dec 2010 (unit3)
	<b>Sub Total</b>		<b>1400</b>	

**Proposed capacity addition during 2011-12**

<b>Sl.No</b>	<b>Project Name</b>	<b>Type</b>	<b>Capacity / Share in MW</b>	<b>Expected Month of commissioning</b>
<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
(i)	Periyar Vaigai SHEP – III, BB-I, BKB-II & III	Hydro (State)	74	April –2011 (PV-3), May -2011(BKB II), June-2011(BKB-III) May-2011(BB-1)
(ii)	North Chennai TPS Stage – II UNIT1 (1x600 MW)	Thermal (State)	600	May -2011 (Date of Commissioning) Feb. 2011 (Date of Synchronisation) (Unit – I)
(iii)	Simhadhri Stage – II (2x500 MW)	Thermal (Share) (Central)	95	May – 2011 (Unit IV)
(iv)	Mettur TPS Stage – III (1x600 MW)	Thermal (State)	600	Apr – 2011 (Date of Synchronisation) July – 2011 (Date of Commissioning)
(v)	Modification of Sugar Mills	Thermal (State)	183	July – 2011
(vi)	NTPC –TNEB at Vallur Stage –I (2x500 MW)	Joint Venture (share)	750	<u>Unit -I</u> Aug-2011 (Date of Synchronisation) Oct. -2011 (Date of Commissioning) <u>Unit -II</u> Oct-2011 (Date of Synchronisation) Dec. 2011 (Date of Commissioning)
(vii)	NCTPS Stage -2 Unit 2 (600 MW)	Thermal (State)	600	Aug-2011 (Unit -2) (Date of Synchronisation) Nov.2011 (Date of Commissioning)
(viii)	NLC-TNEB at Tuticorin Unit – 1 (1x500 MW)	Joint Venture (share)	247	January– 2012 (Date of Synchronisation) March – 2012 (Date of Commissioning)
(ix)	PFBR Kalpakkam (2x250 MW)	Nuclear (Share) (Central)	167	March – 2012
	<b>Total</b>		<b>3316 MW</b>	

## Proposed capacity addition during 2012-13 & 2013-14

Sl. No	Project Name	Type	Capacity / Share in MW	Expected Month of commissioning
1	2	3	4	5
<b>2012-2013</b>				
(i)	NTPC - TNEB at Vallur Stage – II (1x500 MW)	Joint Venture (share)	375	Sep. -2012 (Unit –3) (Date of Synchronisation) Nov. -2012 (Date of Commissioning)
(ii)	NLC-TNEB at Tuticorin Unit – II (1x500 MW)	Joint Venture (share)	247	June 2012 (Date of Synchronisation) Aug. 2012 (Date of Commissioning)
(iii)	TNEB-BHEL at Udangudi Unit – I (1x800 MW)	Joint Venture (share)	600	Jan – 2013 (Date of Synchronisation) March – 2013 (Date of Commissioning)
<b>Total (2012-13)</b>			<b>1222</b>	
<b>2013-14</b>				
(i)	TNEB –BHEL at Udangudi Unit- II (1x800 MW)	Joint Venture (share)	600	July – 2013 (Date of Synchronisation) Sep. – 2013 (Date of Commissioning)
(ii)	Krishnapatnam/AP, 4000 MW (5x800 MW)	Thermal Share (Central)	160	September – 2013 (Unit – 1)
(iii)	ETPS Annexe (1x600 MW)	Thermal (State)	600	September – 2013
(iv)	Kudigi STPS Stage – 2 (2400 MW) (3x800MW)	Thermal Share (Central)	500	2013-14, Allocation requested
<b>Total</b>			<b>1860</b>	

## **6.0 CURRENT STATUS AND PROGRESS OF MAJOR GENERATION PROJECTS IN THE STATE :**

With a view to expeditiously bridge the gaps between the demand and supply, the Government have already initiated several measures for augmentation of generation capacity. Current status and the progress of the projects which are expected to be commissioned in the near future are as below:-

### **I) STATE-OWNED PROJECTS:**

#### **i) A) North Chennai Thermal Power Station (unit 1- 600 MW):**

The cost of the project is Rs 2475 crores. The work was awarded to M/s BHEL and commenced on 18.2.2008. The project is expected to be Synchronised by February 2011 and commissioned by May 2011. The boiler erection, Turbine- Generator column erection etc., are presently under construction and all the activities are as per schedule.

#### **B) North Chennai Thermal Power Station (unit 2- 600 MW):**

The cost of the project is Rs 2175 crores. This work also has been awarded to M/s BHEL and commenced on 16.8.2008. The project is expected to be Synchronised by August 2011 and commissioned by November 2011. The boiler erection and

Turbine- Generator column erection are under progress with the overall execution being as per schedule.

**ii) Mettur Thermal Power Station (1 unit of 600 MW)**

The cost of the project is Rs.3100.06 crores .The work was awarded to M/s BGR Energy Systems Ltd and commenced on 25.6.08. The project is expected to be synchronised by April 2011 and commissioned by July 2011. Drum lifting has been carried out and erection of the Turbine generator column is under progress. The project implementation is as per schedule.

**II) JOINT VENTURE PROJECTS:**

**(i) 1500 MW (3 x 500 MW) thermal power project Joint venture with National Thermal Power Corporation at Vallur in Thiruvallur District :**

Total cost of the project is Rs 8000 crores. Works commenced on 13.8.07 for units 1&2 and on 28.7.09 for unit 3. Main plant works for all three units have been awarded to BHEL. Boiler erection works have been completed and turbine erection works in respect of units 1 and 2 are presently under execution. In respect of unit 3, the main plant package has been awarded to M/s BHEL and hence these works are being carried out simultaneously. The expected dates of

synchronisation for units 1,2&3 are August 2011, October 2011 and September 2012 respectively and the corresponding expected dates of commissioning are October 2011, December 2011 and November 2012 respectively.

**(ii) 1000 MW (2x500MW) Thermal Power Plant at Tuticorin Joint venture with Neyveli Lignite Corporation :**

Contract for the main plant packages were awarded to M/s BHEL on 28.1.2009. Tender packages for major works have also been awarded. Total Cost of the project is Rs 4909.54 crores. Mobilisation and preliminary works required for the project that commenced on 13.05.2008 and are in progress. The unit 1 is expected to be synchronized by January 2012 and commissioned by March 2012. Unit 2 is expected to be synchronized by June 2012 and commissioned by August 2012.

**(iii) 1600 MW (2 x 800 MW) coal based thermal power plant at Udangudi in Tuticorin District – Joint venture with M/s BHEL :**

To harness the benefits of 'super-critical technology' a 2 x 800 MW coal based thermal power plant at Udangudi in Tuticorin District has been proposed. Government of Tamilnadu has accorded approval for alienation of poromboke

lands for the project. Site activities for preliminary works and for obtaining statutory clearances for commencement of the project are underway. The estimated cost of the project will be around Rs 8700 crores.

### **III) CO-GENERATION AND MODERNISATION OF SUGAR MILLS:**

Contract agreements have been signed for execution of co-generation plants in 10 co-operative sugar mills and 2 Nos public sector sugar mills alongwith modernization for a total capacity of 183 MW at a capital cost of Rs1125.63 crores. Works are to begin shortly and are expected to be completed by July 2011.

### **IV. STATUS OF FUTURE PROJECTS:**

#### **i) Ennore Annexe Thermal Power station of 600 MW capacity:**

Preparation of tender specifications is under progress. All statutory clearances have been obtained and the project has reached an advanced stage of planning. Contracts for the consultancy have also been awarded.

**ii) 2x800 MW Thermal Power Project at Kattupalli of Tiruvallur district:**

Preparation of Pre-Feasibility report has been completed and Consultancy contract awarded for conducting Environment Impact Assessment study. Matter will be placed for clearance before the empowered Committee of Ministry of Environment and Forests once the study is complete.

**iii) Cheyyur Ultra Mega power project of 4000 MW:**

Government of Tamil Nadu have approved an UMPP project at Cheyyur with an estimated amount of Rs 18,000.00 crore and conveyed its decision to Central Electricity Authority/ Government Of India. A special purpose vehicle M/s Coastal Tamilnadu Power Ltd has been formed by Power Finance Corporation of India – Nodal agency for the project; which has already submitted requisition for acquisition of lands and port area to Government of Tamilnadu. Tamilnadu Maritime Board has also approved the development of captive port at Cheyyur.

**V) MERCHANT POWER PLANTS:**

As Tamil Nadu has an advantage of having a large coastline, many private promoters have shown interest to set up Thermal stations using imported coal as fuel termed as 'Merchant

Power Plants'. These Merchant Power Plants may approach TNEB for grid connectivity, since as per section 7 of the Electricity Act 2003, a generating station may be established, operated and maintained without obtaining a license under the Act. These projects could thereafter tie up sale of power in accordance with the provisions of the Electricity Act 2003 and the Tariff Policy 2006. Accordingly, TNEB will arrange for intrastate power evacuation arrangements whereas interstate transmission of power shall be arranged by Power Grid Corporation of India Limited, the Central Transmission Utility.

## **7.0 CONSULTANCY SERVICES OFFERED BY T.N.E.B**

### **7.1. INDIA BASED NEUTRINO OBSERVATORY PROJECT:**

India based Neutrino observatory (INO) project, a prestigious Scientific research project proposed at a cost of Rs.900 crores is proposed to be located in Bodi West hills, Pottipuram village, Theni district. Tamil Nadu was selected for this project because the rock in Tamil Nadu hills is of the best quality.

This project is funded by Dept. of Atomic Energy & Dept. of Science & Technology/Government of India and supported by 25 leading scientific research institutions in India. The research is basically on "Neutrinos", mass less particles and it is a pure Physics research.

As this fully air-conditioned massive research laboratory is to be located under-ground and is to be housed similar to

TNEB's under ground hydro-electric station at Pykara, approachable through a tunnel of 2 km length, and also as TNEB has executed 36 tunnels of about 105 Km length so far, the preparation of detailed project report on INO project was entrusted to TNEB on cost basis.

TNEB is the consultant and Nodal agency for this project formulation and facilitator in tying up all the requisite infrastructures for these underground laboratories and over ground residential quarters, office and guest house etc. At any point of time, about 100 Scientists will work in the under ground laboratories.

Due to setting up of this ultra modern scientific research laboratory in Theni district and research centre subsequently, the scientific research in the colleges of Madurai and Theni district will get a boost.

## **8.0 ALLOTMENT OF CAPTIVE COAL MINES:**

**8.1** As of now, TNEB needs about **15 Million Tonnes** of coal annually for generating power from its four thermal power stations with a total installed capacity of 2970 MW, out of which around **13 Million Tonnes of coal** is being supplied by Government of India. Therefore as advised by Gol to meet the shortfall in supply, about 2 Million tonnes of coal per

annum is being imported. In addition, as a permanent measure to meet the ever-existing shortfall in the supply of indigenous coal, it was felt necessary to go in for acquisition of captive coal mines. Accordingly upon request made to Gol, TNEB has been allotted two coal blocks viz., **Gare pelma sector II coal block** in the state of Chattisgarh alongwith the Maharashtra State Mining Corporation and **Mandakini B coal block** in the state of Orissa alongwith Orissa, Assam & Megalaya State Mining Corporations.

## **8.2. Gare pelma sector II coal block:**

A Joint venture company “ Mahatamil Collieries Ltd” (MTCL) has since been incorporated jointly by TNEB and Maharashtra State Mining Corporation Limited (MSMCL) for development of the Gare pelma sector II coal block in Chattisgarh State and also putting up a pit head power plant of about 2000 MW. The total reserves of the block are about 768 Million tonnes wherein TNEB’s share is approximately 593 Million tonnes and MSMCL’s share is about 175 Million tonnes. The Joint venture company has applied for the prospective license. The prospective license has to be obtained for the area of allotted block to be explored. The MTCL has entered into an Agreement with Minerals

Exploration Corporation Limited (MECL) a Government of India public sector undertaking under the Ministry of Mines on 11.3.2010 for the work of detailed exploration of the Gare pelma sector II coal block and preparation of mining plan at a cost of Rs 37.10 crores. The detailed exploration is likely to be completed within a period of 2 years and 4 months. TNEB's share of coal from the mine will be around 10 Million tonnes per annum. As the development of the mine is at the initial stage, production in the mine is likely to commence only from Dec 2014. Considering the huge expenditure in transportation and logistical issues involved in transportation of coal from the Gare pelma sector II coal block, it is proposed to install a pithead power generating station using the coal received from this mine. The MTCL Board has decided to call for a tender for selection of Mining cum Developing Operator for the exploitation of coal as well as selecting a power developer for the utilization of TNEB's share of coal from the Gare pelma sector II coal block. Action is being taken in this regard and the notice inviting tender will be published shortly.

### **8.3 Mandakini B coal block:**

A Joint Venture Company "Mandakini B Coal Corporation Limited" (MCCL) has been formed between Orissa Mining Corporation Limited, TNEB, Meghalaya Mineral Development

Corporation Limited & Assam Mineral Development Corporation Limited for development of Mandakini B coal block allotted jointly by Ministry of coal. The total reserves of the block are 1200 Million tonnes wherein TNEB's share is 300 Million tonnes. The MCCL has applied for the prospective license. The prospective license has to be obtained for the area of allotted block to be explored. For obtaining prospective license the MCCL should obtain forest clearance from Ministry Of Environment and Forests. The MCCL has issued the work order on 30.01.10 to Central Mine Planning & Design Institute Limited (CMPDIL), Ranchi, another Central Power Sector Undertaking under the Ministry Of Coal, on nomination basis at a cost of Rs. 80 crores for the work of detailed exploration, preparation of geological report and other planning services which are likely to be completed within 27 months from the commencement of the exploration at site.

The share of coal from the mine will be around 2.5 to 3 Million tonnes per annum. As the development of this mine also is at the initial stages the mine production is likely to commence from July 2014. The mined coal to be received from the Mandakini B coal Block will be utilized for Ennore Thermal Power Project Annex 1x600MW/Udangudi Power

Corporation Ltd/ shortfall for the existing Thermal Power Stations.

## **9.0. TRANSMISSION AND DISTRIBUTION IMPROVEMENTS**

**9.1.** Some of the main objectives of improvements in Transmission & Distribution networks are :

- a) To ensure quality power to consumers;
- b) To reduce Transmission & Distribution losses;
- c) To establish stable network for supply of power; and
- d) To fully meet the load growth.

**9.2** Under Transmission & Distribution network, 78 substations of various voltage categories and 1509 circuit Kms of Extra High Tension lines with an investment of Rs. 554.01crores have been added during 2009-10 .

**9.3** The Transmission & Distribution losses in TNEB as a whole have been estimated at 18% during the year 2009-10 also, considering the units generated, units sold out and by computing the consumption of agricultural and hut services. The aggregate Technical & Commercial (AT &C) losses in TNEB however have been estimated to be around 19.3.% for the same period, considering the units generated, the units sold and the revenue realized. TNEB has therefore proposed

to undertake the following improvement measures to gradually reduce the Transmission & Distribution losses so as to achieve the targeted reduction in AT&C loss to below 15% by the end of XI Plan:-

- a) To bring in improvements in the High Tension:Low Tension ratio by introducing high voltage distribution system with small capacity transformers;
- b) Erection of new substations and Extra High Tension link lines; and
- c) Installation of Low Tension fixed capacitors, strengthening of distribution lines, replacing defective meters, etc.,

#### **10.0 FLAGSHIP PROGRAMMES:**

Government of Tamil Nadu have been implementing the following Flagship programmes of the Government of India:-

##### **A: RESTRUCTURED ACCELERATED POWER DEVELOPMENT AND REFORMS PROGRAMME (RAPDRP):**

The focus of the programme shall be on reduction of Transmission losses and establishment of reliable and automated system for collection of base line data required for energy accounting using information technology; and

நி: ஸிகியிமிசுதி நிகழிஞ்சிபிமி நிஸிகிவிணிணிழி  
சுதிமிஞ்சிஹிஜிமிரிசிகிழி சீளியிகிழிகி  
(ஸிநிநிசுதிசீ) வ்சிபிணிவிணிவ்சி:

ஜிலீம் யீவ்சீநீவ்ரூ வ்சீயீ மீலீம் வ்ரீலீமீனீம் வீவ 100%  
மீறீமீநீம் சுதீவீயீவீநீணீம் வீவீசீ வ்சீயீ ஸ்வீறீறீணீரீம் ணீஸீபீ  
சுதீவ்ரூசுதீணீரீ லீவ்சீவ்ரூவீலீவ்சீறீபீவ.

## **10.1. RESTRUCTURED ACCELERATED POWER DEVELOPMENT AND REFORMS PROGRAMME (RAPDRP)**

**10.1.1** The Ministry of Power/Gol have launched the Restructured APDRP scheme under the 11<sup>th</sup> five year plan. The objectives of the Restructured APDRP Scheme are to provide quality and reliable power supply to the consumers and to bring down the AT&C losses below 15%. To achieve these objectives, MoP, Gol insist on a holistic -improvement of measuring systems on priority and to strengthen the distribution systems. The project area will be the towns and cities with a population of more than 30,000 as per 2001 census. In addition, rural areas with heavy loads requiring feeder segregation could also be included in the project areas.

**10.1.2** The project will be taken up in two parts where -

**PART– A** will include the projects for establishment of baseline data and Information Technology applications for

energy accounting /auditing and Information Technology based consumer service centres; and

**PART- B** will include regular distribution strengthening and improvement projects.

Ministry of power, Government of India have sanctioned Detailed Project Reports (DPRs) submitted by TNEB in respect of all the eligible 110 towns for an amount of Rs.417 Crores and have also released an amount of Rs.119.25 Crores as advance for implementing the scheme under **PART- A**.

**10.1.3** Under the project initially the Government of India will provide 100 percent funds for Part-A and 25 % funds for Part-B projects. The entire amount of loan and interest for Part-A projects will be converted into grant once the establishment of the required baseline data system has been achieved and verified by an independent agency appointed by Government of India.

**10.1.4** During 2010-11, TNEB has proposed to avail the balance amount of the entire Rs.417.00 Crores under part A of RAPDRP scheme for preparing the baseline data for the

project areas covering consumer indexing, GIS mapping, metering of Distribution Transformers and feeders and Automatic Data Logging for all Distribution Transformers and feeders and Asset mapping in respect of all the 110 cities and towns qualifying under the project.

**10.1.5 PART B:** Ministry of Power has given certain definite guidelines for submission of Detailed Project Reports for Part B schemes and accordingly TNEB has submitted 22 DPRs out of which 10 DPRs have been sanctioned for an amount of Rs 103.91 crores and proposes to submit the remaining DPRs also by 31.5.2010. The Ministry of Power has released an amount of Rs. 15.59 crores as advance.

**10.1.6.** Under capacity building programme, training for the Class C and D staff of TNEB in the RAPDRP activities has already commenced on 27.1.2010. As per the scheme of things Power Finance Corporation will reimburse the entire training expenditure to TNEB.

**10.1.7.** On execution of the improvement works contemplated in the restructured APDRP schemes, the AT&C losses are expected to be reduced considerably in the project areas.

Implementation of IT enabled services under the scheme, is also likely to improve consumer satisfaction considerably.

11.0 ஸிகியமிக்கி நிகழிடுபிமி நிஸிகிவிணிணிழி  
காதிமிடுசீஹிஜிமிரிசிகிஸிகிழி சீஸியிகிழிகி (ஸிநிநிசுதிசீ)  
ஷிசிபிணிவிணிஷி

**11.1.** Towards achieving the goal of total electrification of households in the rural areas the Ministry of Power, Government of India have launched a scheme named RGGVY Scheme (Rajiv Gandhi Grameen Vidyutikaran Yojana) with the objective of creating Rural Electricity Infrastructure for completing the electrification of all the rural households by 2012.

**11.2** Sanction for schemes in respect of 26 districts of Tamil Nadu for an amount of Rs.447.41 Crores in the first phase (out of the schemes posed for 29 districts) has been obtained from Government of India and implementation of the scheme is under process through turnkey contract awarded to M/s. TANSI. The works envisaged under this scheme will cover installation of 11,284 Nos.16/25 KVA Distribution Transformers and 45,911 KMs of HT & LT lines for providing access to electricity to all the 16,92,235 Nos. Rural households including 5,24,569 Nos that are Below Poverty

Line (BPL) in the state, which presently do not have electricity connections. This scheme once implemented will not only enhance the coverage of rural households to 95.28% but also substantially increase the per capita average annual consumption level to more than 1000 units which is the National goal to be achieved by the end of 11<sup>th</sup> Five year plan. The scheme was formally launched on 10.02.2009 by the Hon'ble Minister for Electricity. Due to the effecting of hut services and implementation of Colour TV Programme of the state government from the date of sending the proposals for sanction (2/2006) to the date of actual sanction (3/2008), the no. of un-electrified Below Poverty Line House Holds has however got reduced to 3.22 lakhs as against 5.24 lakhs sanctioned. In view of the above reduction, the no. of Distribution transformers and lines to be installed also gets reduced to 10,538 Nos and 14,000 Kms respectively. Out of 3.22 lakhs, about 2.17 lakh BPL service connections have already been effected upto 31.03.10 and it is planned to complete the entire remaining connections also by 31.5.2010.

## **12.0 SOCIAL OBLIGATORY SERVICES:**

### **12.1 AGRICULTURAL AND ALLIED SERVICES:**

Government of Tamil Nadu have fixed a target of 40,000 nos. for 2009-10 towards energization of Agricultural pumpsets under various categories as below:

<b>Sl.No.</b>	<b>Category</b>	<b>Target</b>
1.	Normal	16700
2.	Jeevandhara SC/ST	220
3.	Jeevandhara Non SC/ST	190
4.	RSFS (Revised Self Financing Schemes)	
	Rs. 10,000/-	3700
	Rs. 25,000/-	15000
	Rs. 50,000/-	4000
5.	TAHDCO (Free Agriculture Land Purchase Scheme for SC/ST women beneficiaries)	190
	<b>TOTAL</b>	<b>40000</b>

Against the Normal category of 16700 pumpsets, Board is effecting free agricultural service connections to the following Government schemes on priority.

**a) Waste Land Development Programme of Hon'ble Chief Minister:**

In order to facilitate cultivation of 2 Acres of land being distributed to landless farmers under the Hon'ble Chief Minister's Waste Land Development Programme, free electricity is being extended for clusters. During 2009-10, free electricity has been extended to 44 such clusters benefiting

308 families and 398.03 acres of dry lands under this scheme.

**b) Fast Track Supply Scheme:**

Under this scheme, 622 nos. agricultural services were effected to Adi Dravidars on priority, during 2009-10, based on the list furnished by TAHDCO. For this scheme TAHDCO remits an amount of Rs. 10000/- per service connection to TNEB.

**c) Special Priority service to BC, MBC and DC Community:**

Under this scheme, based on the lists given by the District Collectors 156 services were effected during 2009-10.

**d) 150 nos Special Priority service:**

Under this scheme every year 150 nos free agricultural services are being provided to Physically challenged persons, Widows, Ex-Service-men, Schedule Tribes and Inter-caste married people on priority.

**12.2. HANDLOOM AND POWER LOOM SERVICES:**

- a) Free power supply upto 100 units bi- monthly is given to handloom weavers who have their own work sheds and are engaged in weaving.
- b) Similarly, free power upto 500 units bi-monthly is being given to the power loom weavers who run their own power looms.

### **12.3. HORTICULTURE SERVICES:**

The tariff for the horticulture crops has been reduced from the existing LT Tariff V to LT Tariff III A-1 for services with connected load below 10 HP and LT Tariff III B for services with connected load of more than 10 HP.

### **12.4 LOCAL BODIES SERVICES - STEPS TAKEN BY TNEB:**

- a) To speed up the process of effecting street lights service connections in Local Bodies, TNEB collects from Local Bodies a flat rate of Rs.9,500/- per pole .
- b) The Belated Payment Surcharge for Local Bodies has been reduced from 12% to 6% per annum with effect from 13.3.2007. Similarly BPSC (belated payment surcharge) arrears of Rs.31.41 Crores as on 13.3.2007 due from the Local Bodies were also waived by TNEB.

- c) The period for payment of Current Consumption charges by Local Bodies has been extended from 20 days from the date of demand to 60 days from the date of demand with effect from 13.03.2007.
- d) The tariff rate per unit for street lights and water supply schemes has been reduced from Rs.3.40 to Rs.3.00 in Village Panchayats, Rs.3.40 to Rs.3.30 in Town Panchayats and Rs.3.50 to Rs.3.30 in Municipalities and Corporations with effect from 13.3.2007. This has been made applicable to Tamilnadu Water supply And Drainage and Chennai Metropolitan Water Supply and Sewerage Board also.
- e) Total category-wise new street light services effected during 2009-10 are as below:

<b>Sl. No.</b>	<b>NAME OF THE SCHEME</b>	<b>SERVICE EFFECTED DURING 2009-10.</b>
		<b>IN NOS.</b>
1.	POOLED ASSIGNED REVENUE	287
2.	ANAITHU GRAMA ANNA MARUMALARCHI THITTAM (AGAMT)	24351
3.	MEMBER LEGISLATIVE ASSEMBLY CONSTITUENCY DEVELOPMENT SCHEME (MLACDS)	2874





(Rs. in Crores)

Sl.No	Description	XI Plan Outlay
		<b>2007-2012</b>
1.	Generation including investment in JV	12497.67
2.	Renovation & Modernization	551.47
3.	Transmission & Distribution	7000.00
4.	Rural Electrification	500.00
5.	Survey & Investigation & Computerization & IDC	610.00
	<b>Total</b>	<b>21159.14</b>

## YEAR WISE BREAK UP FOR THE XI PLAN PERIOD

Rupees in Crores

Category	2007-08	2008-09	2009-10	2010-11	2011-12	
	Actual Expenditure	Actual Expenditure	Actual Expenditure	Tentative outlay	Tentative outlay	<b>Total outlay</b>
(1)	(2)	(3)	(4)	(5)	(6)	(7) (2+3+4+5+6)
Generation including investment in JV	773.39	530.67	1905.17	3994.83	3824.19	11028.25
Renovation & Modernisation	27.44	25.16	40.33	194.67	136.47	424.07
Transmission & Distribution	1342.84	1590.58	1141.20	1858.80	2316.02	8249.44
Rural Electrification	149.10	145.34	232.57	37.00	30.43	594.44
Survey & Investigation & Computerization & IDC	228.50	279.40	297.57	40.00	17.27	862.94
<b>Total</b>	<b>2521.27</b>	<b>2571.15</b>	<b>3617.04</b>	<b>6125.30</b>	<b>6324.38</b>	<b>21159.14</b>

## 14.0 FINANCIAL POSITION

Sl.No	Description	2007-08 Actuals	2008-09 Pre-actuals	2009-10 Revised Estimate
(Rupees in Crores)				
1.0	Revenue from sale of power and others	16051.41	15705.83	17955.54
1.1	Government Subsidy	1457.02	1831.61*	2193.55**
<b>1.2</b>	<b>Total Revenue receipts</b>	<b>17508.43</b>	<b>17537.44</b>	<b>20149.09</b>
2.0	Expenditure			
2.1	Power Purchase	12195.09	14337.48	16810.90
2.2	Generation Cost	3678.01	4693.19	4108.25
2.3	Employee Cost	2155.86	2420.56	3085.18
2.4	Other Expenses	3172.87	3218.15	4025.58
<b>2.5</b>	<b>Total Revenue Expenses</b>	<b>21201.83</b>	<b>24669.38</b>	<b>28029.91</b>
<b>3.0</b>	<b>Revenue Deficit (-)</b>	<b>3693.40</b>	<b>7131.94</b>	<b>7880.80</b>
<b>4.0</b>	<b>Capital Expenditure</b>	<b>2521.272</b>	<b>2571.15</b>	<b>3617.04</b>

\* Including Hydro swing subsidy of Rs.250 Crores

\*\* Including Hydro swing subsidy of Rs.125 Crores

The number of Domestic Consumers in the state is going up by 4 to 6 lakhs each year resulting in higher demand

for power. Consequently, TNEB also has to purchase power from the market at times at higher costs to meet the demand, which has ultimately contributed to the high gaps in overall income and expenditure.

## **15.0 SERVICE DELIVERY AND CONSUMER SATISFACTION:**

With a view to achieve higher level of consumer satisfaction, following initiatives have been taken:

### **15.1. COMPUTER BASED POWER FAILURE REDRESSAL CENTRES**

“ Computer based power failure redressal centres” are functioning in Chennai, Coimbatore, Madurai, Trichy, Erode, Salem , Tiruppur, Tirunelveli, Nagercoil , Karur, Kanchipuram and Vellore. ‘A Centralised Common customer care centre’ will be provided at Chennai under the Restructured APDRP in the XI plan period during 2009-12, on establishment of which, the customers of TNEB from all over the state will be able to have the access to the above centre for redressal of their Grievances such as fuse off call, name transfer, bill related matters etc.,

**15.2. Data Centre** : Under RAPDRP scheme one 'Main Data centre at Chennai' and another 'Disaster Recovery Data Centre at Madurai' are proposed for storage, recovery and retrieval & management of data.

## **16. COLLECTION OF ELECTRICITY BILLS**

**16.1** Collection of Electricity bills through '**Any Time Payment Machine**' is available in 4 locations of Chennai City with effect from 01.04.2008. Using this, the consumers can pay their current consumption charges throughout the month and the system is available for the entire 24 hours.

**16.2 'Online payment'** of current consumption charges of Chennai Region consumers has become effective from 15.09.2008 through AXIS Bank payment gateway & Axis Bank Netbanking. Subsequently other payment gateways through ICICI Bank and four more Netbanking facilities through Indian Bank, ICICI Bank, Indian Overseas Bank and City Union Banks were added. The consumers of Chennai can now pay their current consumption charges throughout the month by internet from their homes by using their credit / debit cards. The address of the website is [www.tneb.in](http://www.tneb.in) .

These are proposed to be extended to the remaining part of the state also during the year 2010-11.

Collection of Electricity Bills of Chennai Region through '**Post Offices**' has also been launched through Anna Nagar and Anna Road Post Offices on 01.03.2010. After this arrangement stabilizes this facility shall also be extended to 100 Post offices of Chennai city initially and later on throughout the state through 1139 Post Office branches that are computerized and interlinked with the main data centre of Indian Posts.

### **16.3 All day assessment and collection**

"All day assessment and collection" of Current consumption charges was initially introduced in Anna Salai as a "pilot" project. It was further implemented in Mylapore, KK.Nagar, Anna Nagar and Perambur divisions with effect from February 1<sup>st</sup> onwards. This shall be extended throughout the state after the system settles down.

## **17.0 ENERGY CONSERVATION ACTIVITIES:**

### **17.1 Domestic Sector:**

- The Ministry of Power, Gol with the Bureau of Energy Efficiency (BEE) have launched the Bachat Lamp Yojana (BLY) Scheme for replacing the incandescent

bulbs with Compact Fluorescent Lamps (CFLs) in domestic sector.

- TNEB has given consent to participate in the BLY scheme and is also in the process of finalizing the expressions of interest for engaging the CFL manufacturer/Trader.
- With the implementation of this scheme, a reduction in peak load demand of about 600 – 800 MW could be expected to be achieved in Tamil Nadu.

## **17.2 Industrial Sector**

### **17.2.1 Mandatory Energy Audit for Designated Consumers**

- The State Designated Agency (SDA), i.e., Tamil Nadu Electrical Inspectorate is in the process of notifying the Designated consumers for energy audit in Tamil Nadu.
- So far, SDA have identified about 100 designated consumers for whom the Bureau of Energy Efficiency would be sending the notice for taking up the mandatory energy audit.

- TNEB's Thermal and Gas Turbine Stations are also among the Designated consumers. TNEB is taking steps to conduct energy audit for the same.

### **17.2.2 Energy audit for Non Designated Consumers**

- TNEB has requested the Government to initiate steps for making energy audit mandatory for non-designated HT industrial and commercial establishments as followed in Gujarat and Kerala states.
- TNEB has requested the HT services with sanctioned demand between 500 KVA and 700 KVA to take up energy audit voluntarily.

### **17.3 AGRICULTURAL SECTOR:**

- The Govt. of Tamil Nadu is implementing the scheme of replacing the existing pumpsets with ISI energy efficient pumpsets in the agricultural sector by providing subsidy through the Agricultural Engineering Dept.
- As per G.O.Ms.No. 256, dt. 16.11.09, the Govt. have sanctioned a sum of Rs.10 crores for the year 2009-2010 for replacement of 9,600 nos. old inefficient pumpsets with energy efficient pumpsets.

- TNEB has requested the Agricultural Engg. Dept to replace all the pumpsets proposed to be replaced in co-ordination with TNEB in order to monitor and assess the energy savings.
- The Bureau of Energy Efficiency (BEE) ,GOI are also in the process of developing Programme of Activities (POA) for the Clean Development Mechanism based replacement of existing old and inefficient pump sets with BEE star rated pump sets for implementation throughout the country. On registration of the Programme of Activities (POA), TNEB may also participate in the above programme.

The Government of Tamil Nadu has also stipulated certain guidelines for achieving energy conservation in all the Govt. buildings and offices including that of Local bodies and public sector undertakings by reducing the energy consumption by 10% within a month and 20% within 6 months. The same is being monitored by Tamil Nadu Electricity Board.

## **18.0. RESTRUCTURING OF TNEB:**

**18.1** In G.O. Ms. No. 114, dated 08.10.2008, Government of Tamil Nadu have accorded in- principle approval for the re-organisation of TNEB by way of establishment of a holding company, by the name TNEB Ltd and two subsidiary companies, namely Tamil Nadu Transmission Corporation Ltd (TANTRANSCO) and Tamil Nadu Generation and Distribution Corporation Ltd (TANGEDCO) with the stipulation that the aforementioned companies shall be fully owned by Government. The Govt. have also constituted a Steering Committee to finalise the transfer scheme for the re-organisation of Board under section 131 of the Electricity Act 2003.

As ordered in the G.O.Ms.No.38, dated 21.05.2009, Tamil Nadu Transmission Corporation Ltd (TANTRANSCO) has been incorporated on 15.06.2009 and the Certificate of commencement of business obtained on 11.12.2009. Subsequently, TANTRANSCO was inaugurated by Hon'ble Chief Minister of Tamil Nadu on 14.12.2009. The orders for appointment of Board of Directors for the TANTRANSCO have been issued by the Govt. on 11.12.2009 and Directors also have assumed office on the same day. Director/Operation has also assumed office on 8.4.2010. Pending finalization of

provisional transfer scheme TANTRANSCO started functioning with zero balance sheet with effect from 14.1.2010

So also in G.O. Ms. No.94, dated 16.11.2009, the Government of Tamil Nadu have permitted to register the Tamil Nadu Generation and Distribution Corporation Ltd (TANGEDCO) and TNEB Ltd. Accordingly TANGEDCO and TNEB Ltd were incorporated on 01.12.2009. The certificate of commencement of business have been obtained for TNEB Ltd on 12.3.2010 and TANGEDCO on 16.3.2010. The orders for appointment of Board of Directors for TNEB Ltd and TANGEDCO have been issued by Govt. on 5.4.2010.

The draft transfer scheme also is under preparation.

The MOP, Government of India have agreed for the continuance of TNEB as 'State Transmission Utility and Licensee' under the provisions of the Electricity Act, 2003 for a further period of three months upto 15.06.2010.

## **19.0 WELFARE OF TNEB EMPLOYEES:**

### **19.1 Wage Revision**

On constitution of the wage revision committee, discussions were held between the committee and Union/Associations. Finally, the Hon'ble Minister for Electricity

met the representatives of various Unions on 09.11.2009 and made the announcements agreeable to both the parties for effecting the wage revision with effect from 1.12.2007, according to which the rates of Dearness Allowance, House Rent Allowance and City Compensatory Allowances were to be followed as allowed by the Government of Tamil Nadu as was done hitherto. The Special Pays and Allowances allowed in quantum also have been doubled with effect from 01.09.2009. While the minimum benefit allowed for workmen is Rs.1,450/-, the maximum benefit reaches Rs.5,020/-. For Officers, the minimum benefit will be Rs.5,010/- while the maximum benefit will go up to Rs.19,510/-. The average increase for workload was about 27%. Similarly, the recent orders of the Government to their pensioners have been implemented to the pensioners of the Board as well. So also the arrears on account of pay revision for the periods from 01.12.2007 to 30.11.2009 are payable in three equal instalments, first instalment given in December 2009, second instalment payable in April 2010 and the third instalment in April 2011. The period of settlement will be for a period of four years with effect from 01.12.2007.

Subsequently, a settlement under section 12(3) of the Industrial Disputes Act, 1947 was also secured before the

Commissioner of Labour/Chennai on 18.11.2009. Accordingly, orders have been issued by the Board and the scheme implemented.

The financial implication to the Board due to the above revision of wages will be Rs.52.03 Crores per month or Rs.624.40 Crores per annum. The commitment on arrears will be Rs.1,148.25 Crores.

### **19.2 Direct Recruitment of Employees:**

During the Current year upto 31.01.2010, 1100 Technical Assistants, 1811 Assessors (Grade – II), 4620 Mazdoors and 154 Helpers-Cum-meter readers have been recruited through direct recruitment.

### **20.0 Revision of Tariff :**

The Board has recently submitted a Tariff revision petition before the Tamil Nadu Electricity Regulatory Commission which is necessary to ensure its financial viability.

The current tariff proposal is a small step forward in the direction of correcting the tariff imbalances affecting the Board and making it at least partially financially viable. While submitting the tariff revision petition utmost care has been taken to spare the agriculture and other needy and weaker section of the society from increase in tariff. No tariff hike is

proposed for Low Tension Domestic consumers consuming upto 200 units bi-monthly, hut dwellers, places of worship, Street lights & public water supply, Power loom weavers and Agriculture. Similarly in the High Tension consumer side Places of worship, lift irrigation and the state of Pondicherry have been spared from the proposed tariff hike.

Very meagre tariff hike say 50 paise to one rupee/unit has been proposed for LT domestic consumers consuming more than 200 units bi-monthly (i.e. 201-400 units-- 50 paise, 401-600 units--75 paise, above 600 units -- Rs1.00) The proposed tariff hike for defence, police and railway colonies by Rs.1.50/unit, Cinema theatre, Cinema studios by Rs.0.60/unit, private colleges by Rs.1.60/unit, cottage & tiny industries for more than 1500 units bi-monthly by Rs.0.40/unit, industries consuming more than 1500 units bi-monthly by Rs.0.30/unit, Commercial service consuming more than 200 units bi-monthly by Rs.0.70/unit and temporary supply by Rs.3.50/unit.

Similarly in the High Tension consumer side, the proposed tariff hike in industries by Rs.0.50/unit, Recognised Educational Institutions by Rs.0.69/unit, Commercial establishments by Rs.0.79/unit.

The proposed hike in tariff is very meager and reasonable which will offset only a part of deficit.

The Tamil Nadu Electricity Regulatory Commission has conducted public hearings on the tariff petition filed by TNEB, in Chennai (30.3.2010), Madurai (8.4.2010), Coimbatore (13.4.2010) and Tiruchy (15.4.2010).

During this public hearing all the suggestions received from the public Association and other Industries etc. will be examined. Then the Commission will take a suitable decision on the tariff hike as proposed by TNEB.

## **Tamil Nadu Energy Development Agency**

The Tamil Nadu Energy Development Agency (TEDA) is a Nodal Agency of the Ministry of New and Renewable Energy (MNRE), Government of India for the promotion of Renewable Energy schemes in the State. It has been registered as a society under the Societies Registration Act and is functioning since 1985. It is functioning under the administrative control of Energy Department.

Tamil Nadu Energy Development Agency has set the following as its main objectives.

- Identifying and estimating the potential for renewable energy in the State.
- Creating awareness on the potential and prospects by use of renewable energy.
- Enhancing renewable energy contribution in the overall energy mix in the State Grid.
- Abatement of Green house gas emissions caused from increasing use of conventional fuels by promoting the use of renewable energy / stand alone systems to combat Global Warming.

- Developing and implementing sustainable energy security policy towards attaining energy independence in small villages.

The installed capacity of power generation in Tamil Nadu from the Renewable Energy sources, which was **4790 MW** as on **31.3.2009** has now reached **5445.95 MW** as on 31.3.2010 representing about 33% of the country's renewable energy installed capacity. The major contribution is from Wind which is **4889 MW** as on **31.3.2010**, (approx 44% of the country's capacity). About **99.6%** of this capacity has come from the private sector. The others are Bagasse based Co-generation **330 MW**, Biomass Power **137.05 MW** and small hydro **89.2 MW**. Totally **9562.85** million units of electricity was generated from the renewable energy sources in the state during the year 2009-10, which is about **13.12%** of the grid consumption. Tamil Nadu's achievement of **13.12%** in the units generated as share of renewable sources is way ahead of other States and even the country as a whole, as these are the targets set to be achieved by 2012 and beyond.

## **I. GRID INTERACTIVE POWER GENERATION**

Tamil Nadu has been in the forefront, in producing power from the Renewable Energy sources such as Wind,

Biomass etc. and feeding to the Grid supplementing the conventional power. During the 10<sup>th</sup> Five year Plan period (2002-2007), it was increased from 1000 MW to 3834 MW and **presently it is 5449.95 MW** which is **36%** of the TNEB's grid capacity, much higher than the target of **10%** set by the Government of India to be achieved by 2012. The percentage at the all India level is at present only **10%**. The addition made during the year 2009-10 is **686** MW. In the present day context, everyone is most concerned about Global Warming and climate change. Hence it is commendable that the State of Tamil Nadu has achieved such a high percentage of Renewable share in the Grid Power on par with other Developed Countries of the World.

## **1. WIND POWER**

Wind has considerable potential as a global clean energy source and producing no pollution during power generation. Tamil Nadu is endowed with three lengthy mountain ranges on the Western side with potential of 1650 MW in Palghat pass in Coimbatore District, 1300 MW in Shengottai pass in Tirunelveli District and 2100 MW in Aralvoimozhi pass in Kanniyakumari District and 450 MW in other areas totaling 5500 MW.

The total installed Capacity of Wind Mills in the State including 19 MW under public sector is **4889** MW as on **31.03.2010**. The capacity addition made during the year 2009-10 is 602 MW. The installed capacity during the 10<sup>th</sup> Five year Plan (2002-07) and the **three** years under XI<sup>th</sup> Five year Plan are given below:-

Year	Installed capacity addition in MW	Electricity generated in million units (MU)
2002-03	133	1305.703
2003-04	371	1714.475
2004-05	679	2260.732
2005-06	858	3444.281
2006-07	577	5268.840
2007-08	381	6092.369
2008-09	431	6655.150
2009-10	602	8145.5
(upto 31.03.2010)		

During the year 2009-10, 8145.5 million units have been generated from wind which is 11.20% of Tamil Nadu's grid consumption. The TNERC has issued orders enhancing the rates from Rs.2.90 to Rs.3.39 per unit, effective from

1.04.2009. The wheeling and banking charges remain unchanged at 5%.

Wind resource assessment studies were carried out in 69 Wind prone Zones by setting up Wind monitoring stations since 1986, out of which 41 sites having annual mean wind speed of 18 KM per hour and above and annual mean Wind power density of 150/200 W/m<sup>2</sup> and above at 30 m / 50 m level, have been declared by MNRE as potential and viable for commercial projects. Wind mills have so far come up in 26 sites. 9 new wind monitoring stations have been installed through C-WET, a Govt. of India undertaking in various Districts with 20% cost sanctioned by the State Govt. and balance 80% cost provided by MNRE to C-WET. They are under study with data being collected every month.

Wind mills can also be used directly for pumping water for drinking purposes or minor irrigation. MNRE subsidy is available for installation of these systems.

## **2. BIOMASS POWER**

The estimated power generation potential from surplus Biomass in Tamil Nadu is 487 MW as per the District level study carried out by Anna University with MNRE funding.

Another 600 MW is available from Bagasse based Co-generation in sugar mills including both private and public sector sugarmills.

The cumulative installed capacity of grid interactive biomass and bagasse based Co-generation is 696.95 MW as on 31.3.2010 (559.90 MW from Bagasse Co-generation 137.05 MW from Biomass Power including waste to energy projects). In the case of Co-generation projects, the total exportable surplus power, after their own consumption, is around 330 MW. During 2009-10, 4 private sugar mills had commissioned co-generation plant to a capacity of 93.8 MW.

In the meanwhile TNEB is taking all efforts to establish co-gen plants in 14 Co-operative and public sector sugar mills in Tamil Nadu, by arranging for funds through Power Finance Corporation (PFC), including modernizing the plant. The total capacity of such projects is around 213 MW.

In respect of biomass based power projects during 2009-10, 3 projects to a capacity of 27.5 MW have been added one each in Virudhunagar, Tiruvannamalai and Krishnagiri District.

Originally the total installed capacity of biomass power project was 141.7 MW in the State. Out of which, two projects viz. one in Ramnad District (18 MW) and one in Thoothukudi District (20MW) have opted for 100% coal, instead of Biomass and had already cancelled the PPA executed with TNEB. Therefore the total No. of projects under Biomass power category is 14, with a capacity of 131.20 MW including three No. projects commissioned during this year.

MNRE had sanctioned 90 lakhs during the year 2009-10 as Central Financial Assistance towards establishment of 500 KW Biomass gasifier with 100% producer gas engine, to be connected to Grid. The project is being implemented by M/s. Sri Sastha Energy Private Limited, Arcot Taluk, Vellore District and first instalment of Rs.63 lakhs was released. The plant is expected to be commissioned during 2010-2011.

As per the Tamil Nadu Electricity Regulatory Commission's tariff orders issued in May 2006, the rate for purchase of power by TNEB is Rs.3.15 per unit with concessional wheeling charge of 3% for distance upto 25 KM and 6% for distance beyond 25 KM. TNERC subsequently revised the tariff and issued orders dated 27.04.2009 to

enhance the same to Rs.4.50 for new projects and to around Rs.4.18 for old projects.

## **II. SOLAR POWER GENERATION**

### **(i) Generation Based Incentive Scheme**

Under Generation Based Incentive Scheme of MNRE 6 MW (5MW+1MW) capacity private power projects are under implementation.

### **(ii) Jawaharlal Nehru National Solar Mission**

Govt. of India has recently launched Jawaharlal Nehru National Solar Mission with the objective to establish India as a Global leader in Solar Energy by creating policy conditions for its diffusion across the country. The Mission will adopt 3 phase approach for deployment of Grid connected solar power generation as well as distributed and de-centralized off grid applications for the country as below:

<b>Sl. No.</b>	<b>Application segment</b>	<b>Target for Phase I (2010-13)</b>	<b>Target for Phase 2 (2013-17)</b>	<b>Target for Phase 3 (2017-22)</b>
1.	Solar collectors	7 million sq.meters	15 million sq. meters	20 million sq.meters
2.	Off grid solar applications	200 MW	1000 MW	2000 MW
3.	Utility grid power, including roof top	1,000-2000 MW	4000-10,000 MW	20000MW

The Mission also envisages the provision of Special Incentive Package for manufacture of various components for Solar systems. Initiatives will be taken by TEDA to promote solar energy in Tamil Nadu in line with the solar Mission as and when a clear-cut plan of action has been laid out by MNRE, Government of India.

### **(iii) SOLAR THERMAL SYSTEMS**

Solar thermal systems harness the heat energy from the sun, through Solar thermal collectors using specially coated black metal plates and use the same for heating of water or air. Solar Water heating system, Solar air heating system / dryer and Solar Cookers are some of the best examples of Solar Thermal systems in use.

#### **(iv) Solar Water Heating System**

A Solar Water Heater is a device that uses heat energy of the sun to provide hot water for various applications such as bathing, Washing, Cleaning etc in homes as well as Hotels, Hospitals and other industries where hot water is required. A domestic Solar Water Heater, with a Capacity of 100 LPD (liters per day), is sufficient for a family of 4 or 5 members. It can easily replace a 2 KW electric geyser and can save upto 1500 units of electricity a year. It pays back the

cost in 3 to 4 years, after which hot water is available almost free of cost during the remaining life span of the system, which is about 15 – 20 years. Any higher capacity system as required can be installed in multiples of 100 LPD. The only condition is a shadow free open space is required at the ground or terrace. About 3 sq.m space is, required for 100 LPD system. It works automatically.

Every year, a few Government Hostels / Hospitals have been provided with these systems. Solar Water Heating Systems have been installed in 76 Government buildings, 3522 residences for domestic purposes and 440 industries / Institutions for commercial purposes under various subsidy schemes. For the year 2009-10, Rs.43.00 lakhs has been sanctioned under Part-II scheme for installation in Government Hospitals etc. with a total capacity of 14,000 LPD. Re-tender has been floated fixing due date of opening of tender as 29.4.2010.

### **(v) SOLAR WATER HEATING SYSTEM FOR VVIP'S RESIDENCES**

Government of Tamil Nadu had sanctioned Rs.2.14 crores for installation of Solar Water Heating Systems at the residences of VVIP's. The systems had already been installed at the residences of Honourable Ministers, Judges, VIP Quarters and A & B Blocks of MLA quarters. Installation work is under progress in C & D blocks of MLA quarters.

### **(vi) SOLAR AIR HEATING SYSTEMS**

The Government of India (MNRE) is providing subsidy for installation of Solar Air Heating system at 50% of the cost of the system, subject to a maximum of Rs.2500/- per sq.m of Collector area for non-profit making institutions & organisations and 35% of the cost subject to a maximum of Rs,1750/- per sq.m. of collector area for commercial and industrial users.

### **(vii) SOLAR COOKER**

Two types of Solar Cookers are available viz box type and dish type. A box type Solar Cooker, suitable for a family of 4 or 5, can cook food in **3 to 4** hours. The Cooker has to be kept outside in the Sun, and can cook upto 4 items at a

time. It is available with electrical backup and so it can be used even non-shine hours. It can save upto 4 LPG cylinders, a year. However, food cannot be fried in the box type solar cooker. Under arrangements made by the Government of India (MNRE), interest free loan is available for the bulk users through IREDA and some of the banks.

A dish Solar Cooker can cook food in lesser time than a box cooker. It can be used even for preparing chappaties and for frying. It can however, be used to cook only one item at a time. The Government of India (MNRE) subsidy is available upto 30% of the cost.

Solar steam cooking systems are also available which can be installed where boilers are used for steam generation and the food can be cooked for thousands of persons. One solar steam cooking system with 1100 Sq. m. dish area, has been installed at an educational institution in Chennai. The Government of India (MNRE) has sanctioned Rs.55.00 lakhs as subsidy @ Rs.5000/- per sq.m. for this solar cooking systems, out of the project cost of 110.00 lakhs.

## **2.0 SOLAR PHOTOVOLTAIC SYSTEMS**

Solar energy is converted into electricity through solar photovoltaic (SPV) Cells / modules and utilized to operate various electrical appliances.

### **2.1 SPV DEVICES**

SPV devices can be used for meeting the needs of home lighting, office lighting and Street lighting and promoted in the State under Government of India (MNRE) scheme with subsidy upto 50% of the cost. Local bodies in rural and urban areas can avail this subsidy and thus reduce the recurring Electricity charges. Totally 5732 Nos. SPV Street lights, 2076 SPV Home lights and **285** SPV pumps have been installed in the State under the subsidy scheme.

### **2.2 ELECTRIFICATION OF REMOTE HABITATIONS**

Based on the list of habitations furnished by TNEB, which could not be electrified through grid power on account of their location in or near forest area, TEDA had undertaken their electrification using Solar Home lights and Street lights. Under Phase-I, 128 habitations in 12 Districts were electrified

at a total cost of Rs.8.25 crores shared between the Central and State Government. Electrification of 30 habitations in 5 Districts Under Phase-II, is being carried out during 2009-10

### **3.0 BIOMASS GASIFIERS**

Biomass gasification is basically conversion of solid biomass such as wood, wood waste, agricultural residues etc., into a combustible gas mixture normally called producer gas. Further all types of agricultural wastes viz Rice husk, Coconut shells, briquettes of various agricultural residues, maize crop branches and twigs of plants are the possible fuel stocks for the Gasifier.

A biomass gasifier of 11KW capacity had also been commissioned during the year 2009-2010 at Bharathi Community Centre Trust, Vilathikulam, Thoothukudi District. The total CFA of Rs.1.65 lakhs had been sanctioned by MNRE and released to the beneficiary.

A 1.16 MW Biomass Thermal Gasifier system had been installed at Auro Food (P) Ltd., Vannur Taluk, Villupuram for meeting the thermal applications towards heating ovens for Biscuits production as a replacement of furnace oil. Wood

chips and coconut shells are used as primary fuels and biomass briquettes as supplementary fuel for biomass gasifier operation. MNRE, GOI, has provided subsidy to a tune of Rs.7.72 lakhs for the said plant.

#### **4.0 BIOGAS PLANTS**

A 12000m<sup>3</sup> capacity Bio - methanation Plant based on Sago Industrial effluent waste for meeting thermal applications, has been commissioned at M/s. Spac Tapioca Products India Ltd., Ponnachi Village, Bhavani Taluk, Erode District. The Ministry of New and Renewable Energy, Government of India, has provided subsidy to a tune of Rs.43.60 lakhs for the said plant.

2 Nos. Cow dung based biogas plants of capacity 35m<sup>3</sup> and 65m<sup>3</sup> each have been installed at Thalinji Hamlet, Coimbatore District, Tamil Nadu. The power generated from the biogas engine is utilized for the following purpose.

- 1) 1 No. CFL lighting in each of the 100 Nos. houses.
- 2) 28 Nos. Street Lighting System.
- 3) Powering TV sets.

Apart from power generation, biogas pipeline connections have been extended to all the houses for cooking / heating applications. The Ministry of New and Renewable Energy, Government of India has provided subsidy to a tune of Rs.2.00 lakhs for the said plants.

Similarly TEDA had taken efforts to create awareness among small sago manufacturing units in and around Salem District. TEDA had even conducted various meetings /seminars in Salem during this year. As a result, 6 Nos. application received from such small developers had been recommended to MNRE. Out of which sanction had already been obtained for 3 Nos. with total CFA of around Rs.30.00 lakhs and sanction is awaited for balance 3 Nos. proposals. It had also been estimated that around 50 to 60 such proposals would be recommended during 2010-11. With respect to Government of Tamil Nadu project, TEDA had already received a sum of Rs.36.00 lakhs under part-II scheme (2009-2010) towards establishment of 6 Nos. Biogas plants in Government colleges / Hostels for producing biogas from Kitchen / Human wastes, towards replacement of LPG in their Hotel. The work is under progress towards execution of their projects.

### **III. OTHER SCHEMES**

#### **1. PUBLICITY AND AWARENESS PROGRAMMES**

TEDA has been organizing Seminars and exhibitions to extend the use of Renewable energy and promote energy conservation among industries, local bodies and other Institutions. Consequently many Panchayats, made aware of the benefits of Solar Street lights, Home lights, Biomass gasifiers and biogas plants are keen to install them and reduce their recurring current charges. Further Energy Clubs have been formed in 120 Engineering Colleges, which help in making the students aware of the benefits of Renewable Energy and motivate them in developing useful units that use renewable energy.

Rajiv Gandhi Renewable Energy Day on 20<sup>th</sup> August is being celebrated in all the Districts and at the State level, with rallies, contest for students, cultural programmes etc. 2 Nos. Mobile exhibition van fitted with exhibition of Non Conventional Energy Sources devices are sent to various places for creating awareness and publicity.

The District Advisory Committee (DAC) on Renewable energy in every district, creates awareness about various Renewable energy devices and systems.

## **2. RENEWABLE ENERGY PARK**

A State Level Energy Park is being set up at Tamil Nadu Science and Technology Centre, Kotturpuram in Chennai with CFA of Rs.89.00 lakhs provided by MNRE towards the cost of the equipments and Rs.52.00 lakhs provided by the State Government for civil works. TEDA had already released 50% of Govt. of India share amounting to Rs.44.5 lakhs and 100% of Govt. of Tamil Nadu share amounting to Rs.52.00 lakhs to Tamil Nadu Science & Technology Centre. The work will be completed by June 2010. The balance amount of GOI share would be obtained from MNRE on completion of the park by Tamil Nadu Science and Technology Centre.

## **3. BATTERY OPERATED VEHICLES**

5 Nos. Battery operated vehicle have been purchased by the Chief Conservator of forests and Director, Aringar Anna

Zoological Park, Vandalur, Chennai. The Govt. of Tamil Nadu has provided State subsidy to a tune of Rs.10.00 lakhs for the said programme.

#### **4. RESEARCH & DEVELOPMENT PROJECTS**

Tamil Nadu Energy Development Agency has taken up the following R&D Projects, jointly with Anna University, at a total cost of Rs.40.00 lakhs shared equally by the State Government and Anna University:

i) Development of Solar Cooker based on Thermal Storage system for Cooking during night / early morning

ii) Design and development of Energy efficient building using Solar Passive Architecture.

iii) Design and development of Bagasse drying unit using waste heat.

The works in respect of items (i) and (ii) are completed and reports awaited. Item (iii) is expected to be completed shortly.

## NEW SCHEMES UNDER PART-II SCHEME FOR 2010-2011

<b>SL. No.</b>	<b>New schemes under Part-II for 2010-2011</b>	<b>Total outlay proposed for 2010-2011 (Rs. in lakhs)</b>
1.	Installation of 575 nos. Home lighting systems & 100 nos. street lighting systems in rural areas where grid power is unavailable.	<b>45.00</b>
		<hr/> <b>45.00</b> <hr/>

# ELECTRICAL INSPECTORATE DEPARTMENT

## **1. INTRODUCTION & ADMINISTRATION**

Electricity is a subject included in the concurrent list of Constitution of India. Electricity Act, 2003 (Act 36 of 2003) has been made repealing the enactments of Indian Electricity Act, 1910, Electricity (Supply) Act, 1948, the Electricity Regulatory Commission Act, 1998. The said Electricity Act, 2003, has come into force with effect from 10th June 2003.

The Electrical Inspectorate Department with Chief Electrical Inspector to Government, as Head was created in September 1961. Electrical Inspectorate has come under the administrative control of the Energy Department, after the formation of Energy Department at Secretariat on 1.8.93.

## **2. FUNCTIONS AND DUTIES**

The Electrical Inspectorate Department is entrusted with the following duties and functions:-

- a. Carrying out scrutiny of Electrical drawings and inspections and other services under Indian Electricity

Rules, 1956, till regulations are made under the Electricity Act, 2003 (Act 36 of 2003).

- i. Approval of High and Extra-High Voltage electrical installations of Generating Companies, Tamil Nadu Electricity Board and High Tension consumers under Rule 63 of Indian Electricity Rules, 1956.
  - ii. Periodical inspection of High Tension installation of High Tension Consumers under Rule 46 of Indian Electricity Rules, 1956.
  - iii. Periodical inspection of supplier's High and Extra High Voltage Installations, under Rule 46 of Indian Electricity Rules, 1956.
  - iv. Review of all electrical accidents under Rule 44A of Indian Electricity Rules, 1956, in connection with the generation, transmission, supply or use of energy, and suggesting remedial measures.
- b. As per Tamil Nadu Lift Act, 1997 and Tamil Nadu Lift Rules, 1997, regularising all the lifts erected before 1997, and carrying out of inspection of new lifts and issuing licence.
- c. Duties specified in Tamil Nadu Cinema (Regulation) Rules, 1957, in respect of Electrical Installation of Cinema Theatres.

- d. Functioning as Member of Technical Committee Bureau of Indian Standards, which make Indian Standards Specifications in Electro Technical Field.
- e. The Chief Electrical Inspector to Government functions as Ex-Officio President of the Tamil Nadu Electrical Licensing Board constituted under Rule 45 of the Indian Electricity Rules, 1956.
- f. The Chief Electrical Inspector to Government functions as the Ex-Officio President of the Government Board of Examiners for Cinema Operators constituted under Tamil Nadu Cinema (Regulation) Rules, 1957.
- g. Also as per powers conferred under Section 15(d) of the Energy Conservation Act, 2001, Government of Tamil Nadu has already notified The Electrical Inspectorate as the “Designated Agency” to co-ordinate, regulate and enforce the provisions of the Energy Conservation Act, 2001 (Central Act 62/2001).

### **3. IMPLEMENTATION OF ENERGY EFFICIENCY MEASURES:**

The Bureau of Energy Efficiency, under the Ministry of Power, Government of India have allocated funds in order to implement various Energy Conservation measures in the State of Tamil Nadu for the financial year 2010-2011. Based on the above, the following schemes are proposed to be carried out by the Tamil Nadu State Designated Agency, during the year 2010-2011.

#### Demonstration Projects (Ongoing Projects)

- Development of Small Enterprise Clusters among lime kiln manufacturing units in Tirunelveli District at an expenditure of 45.7 lakhs.
- Energy efficient pumping system at underground Sewage pumping station, Alandur at an expenditure of Rs. 17 lakhs.
- Under the LED village campaign scheme, the existing incandescent lamps in the rural house holds and street lights will be replaced by energy efficient LED lamps at an expenditure of Rs. 15 lakhs to cover 200 to 250 beneficiaries.

#### **4. DUTIES UNDER TAMIL NADU TAX ON CONSUMPTION OR SALE OF ELECTRICITY ACT & RULES, 2003**

This Act has come into force on and from 16.6.03, repealing the existing Tamil Nadu Electricity (Taxation on Consumption) Act, 1962 and Tamil Nadu Electricity Duty Act, 1939.

- a. Tax rates under this Act:
  - i) Self generated consumption of electrical energy is ten paise per unit.
  - ii) On sale of energy by Tamil Nadu Electricity Board or any other licensee 5% on the consumption charge.

Exemptions:

Following categories of consumers are exempted from the levy of the above tax.

- i) For consumption by any Governments
- ii) Railway Administration
- iii) Any Local Authority
- iv) Energy sold by Tamil Nadu Electricity Board or any other licensees for the use of domestic, huts and agricultural purposes.

- v) Energy sold for the consumption of developers of Special Economic Zones, Industrial Units and other establishments within Special Economic Zones.
- vi) Energy sold for the consumption of first new Industrial units set up in Tamil Nadu for a period of 3/4/5 years, depending upon the amount invested in eligible fixed assets from the date of first invoice.

## **5. STANDARDS LABORATORY AND MOBILE LABORATORIES**

The Government Electrical Standards Laboratory attached to the Head Quarters office caters to the need of calibrating the energy standards maintained by the Electricity Boards from various States of the Country. The licensed electrical Contractors' instruments and testing of electrical installations at the consumer's premises are also undertaken for the benefit of the end user. There are mobile Electrical Testing Laboratories in Chennai, Salem, Tirunelveli and Standard Electrical Testing Laboratories are in Madurai, Coimbatore and Trichy.

New Scheme under Part-II for 2010-2011

The Government has proposed to sanction a total outlay of Rs.55.00 lakhs for the implementation of the following new schemes during 2010-11.

Sl. No.	Name of the Scheme	Total outlay proposed for 2010-11 (Rupees in Lakhs)
i.	Improvement of Government Electrical Standards Laboratory	10.00
ii.	Improvement of Testing facilities at the Government Electrical Standards Laboratory – Procurement of Multi function Electrical Tester Calibrator.	45.00

## **TAMIL NADU POWER FINANCE AND INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED**

The Tamil Nadu Power Finance and Infrastructure Development Corporation Limited (TN Power Finance) was incorporated on 27.06.1991. The Corporation is registered with Reserve Bank of India as a Non Banking Finance Company. The objective of the Corporation is to mobilize funds for the Power Sector in Tamil Nadu, particularly for the schemes relating to generation, transmission and distribution network of the Tamil Nadu Electricity Board. The authorized share capital of the Corporation is Rs.50 crores and the Paid up Share Capital as on date is Rs.22 Crores.

### **FIXED DEPOSITS:**

Concern and care for the customers and consistent profits have considerably expanded the deposit base over the last decade besides leaving an indelible imprint in the minds of investors. Due to the failure of many private Non Banking Finance Companies which lured investors with exorbitant interest rates in the past, the investors have reposed faith in Tamil Nadu Power Finance and Infrastructure Development

Corporation Limited. Coupled with this fact, Powerfin's offer of 1% interest more than the nationalized banks has resulted in the substantial growth of deposit base from Rs.2.09 crores in 1991-92 to Rs.4,766.00 crores as on 31.03.2010 and the number of deposits from 816 in 1991-92 to 4,15,211 deposits as on 31.03.2010.

During the financial year 2009-10, the net deposit amount received was Rs.1188.72 crores.

TN Power Finance is offering the following interest rates for deposits with effect from 20.07.2009.

INDIVIDUAL (S)		INSTITUTION (S)	
Period	Rate % per annum	Period	Rate % per annum
12 Months	7.75	12 Months	7.50
24 Months	8.25	24 Months	7.50
36, 48 & 60 Months	8.75	36, 48 & 60 Months	7.75

Besides, TN Power Finance is offering additional interest @ 0.25% per annum for 12 months and 24 months and 0.50% per annum for 36, 48 and 60 months on deposits made by Senior Citizens who have completed 58 years.

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The funds mobilized by Power Finance are being utilized to finance TNEB for its generation / transmission / distribution and other activities. The total financial assistance provided to TNEB since inception is Rs. 12,585.22 crores and the net loan outstanding from TNEB is Rs. 5,361.89 crores as on 31.03.2010. The Corporation achieved a record net assistance of Rs.1226.03 Crores to TNEB during the current year up to 31.03.2010 surpassing the previous highest of Rs.1086.38 Crores in the year 2008-2009.

#### **MANAGEMENT OF GOVERNMENT SCHEMES :**

A sum of Rs.448.47 crores (as on 31.03.2010) benefiting 2,94,484 children has been received as deposit under the "Sivagami Ammayar Ninaivu Penn Kuzhanthaigal Paadukaappu Thittam".

A sum of Rs.25.89 crores (as on 31.03.2010) has been received covering 10357 temples under "Oru Kala Pooja" Scheme.

A sum of Rs.8.25 crores (as on 31.03.2010) has been received under the scheme for providing assistance to students of schools who have lost their income earning parents in accidents.

A sum of Rs. 5.59 crores (as on 31.03.2010) has been received for providing assistance to 171 orphaned children and adolescent, unmarried girls affected by Tsunami.

#### **PROFITABILITY & DIVIDEND:**

The Corporation has been making profit consistently since its inception in 1991. It is also declaring dividend at 20% on its Paid up Share Capital continuously for the past years since 1995 - 96. So far, the Corporation has paid dividend totaling Rs.56.42 crores to the Government of Tamil Nadu.

## **FUTURE PLANS:**

1. Mobilise a sum of Rs. 700 crores as net deposits from public and institutions in the financial year 2010-11.
2. Provide financial assistance of Rs.2400 crores for power and infrastructure projects to be implemented by TNEB in the year 2010-11.

**ARCOT N. VEERASWAMI  
MINISTER FOR ELECTRICITY**



# PHOTOGRAPHS

