Energy Department

Policy Note

2008 – 2009

Tamil Nadu Electricity Board
Tamil Nadu Energy Development Agency
Electrical Inspectorate Department
Tamil Nadu Power Finance and Infrastructure Development

1. TAMIL NADU ELECTRICITY BOARD

The Tamil Nadu Electricity Board is a statutory body formed on 01.07.1957 under the Electricity Supply Act, 1948 and is continuing under Electricity Act, 2003. The main objective of Tamil Nadu Electricity Board is to perform electricity generation, transmission and distribution functions in an effective manner and to supply quality power to its consumers.

The total generating capacity available to Tamil Nadu Electricity Board as on 29.02.2008 is 10122 Mega Watts. This comprises of 5597 MW of TNEB's own generating stations, 1154 MW of Private Sector Power Plants, 2861 MW as Share from Central Sector generating stations, External assistance of 335 MW and others (Captive Power Plants) of 175 MW. Apart from this, a total capacity of 3693 MW is available from Wind Mills in the Private Sector, 451.6 MW from Co-generation plants and 104.85 MW from Bio-mass plants.

The maximum peak demand so far reached is 9076 MW (20.02.2008). The growth of energy

consumption is expected to be of the order of 9% per annum. Energy consumption during 2007-08 upto February 2008 is 60,518 Million Units (MU) with a maximum daily consumption of 191.283 MU during 2007-08.

As on 29.02.2008 there are 1,193 substations, 1.61 lakh Kms. of Extra High Tension / High Tension (EHT/HT) lines, 5.12 lakh Kms. of Low Tension (LT) lines, 1.80 lakh distribution transformers and 192.15 lakh service connections.

I. CAPACITY ADDITION IN GENERATION:

The TNEB has planned to augment its generating capacity by 7808 MW and correspondingly to expand the transmission and distribution system during the XI Plan period (2007-12).

During 2007-08, in the State Sector, Valuthur Additional Gas Turbine Power Project with a capacity of 95 MW is likely to be commissioned in Ramanathapuram District in March 2008.

Under Central Sector, out of two units of 220 MW capacity each from Kaiga Atomic Power Station, Stage II, the first unit has been put on commercial operation on 06.05.2007 and a share of 54 MW is being availed by TNEB.

During 2008-09, under State Sector, the Periyar Vaigai Barrage Projects phase-1 (2 x 2 MW), 2 (2 x 1.25 MW) and phase-4 (2 x 1.25 MW) totaling 9 MW will be commissioned. Under Central Sector, the second unit of 220 MW capacity from the Kaiga Atomic Power Station, Stage II and the first unit of 1000 MW capacity of Kudankulam Atomic Power Project, Stage I, will be commissioned during 2008-2009. A share of 53 MW and 463 MW respectively will be made available to TNEB from the above two projects.

In the State Sector orders for setting up of 600 MW Plant at North Chennai Thermal Power Station has been placed and another 600 MW is proposed to be added at the same place. At Mettur Thermal Power Station tenders for establishment of 500 MW Plant under EPC basis have been called for and orders are likely to be placed before the end of March 2008. Similarly works

for setting up Power Plants of 1000 MW capacity at Tuticorin Thermal Power Station and 500 MW at Ennore Thermal Power Station are at an advanced stage and tenders will be floated soon.

Under Joint Venture route, order for setting up of 2 x 500 MW Power Plant have been placed on EPC basis at North Chennai to be executed by NTECL which is a Joint Venture of TNEB with National Thermal Power Corporation. One more unit of 500 MW is proposed to be added at the same place. The project to set up 1000 MW Plant at Tuticorin by the Joint Venture with Neyveli Lignite Corporation is awaiting clearance from Government of India. Once the clearances are obtained, the Project activities will be commenced. Yet another Joint Venture with M/s.BHEL for setting up 2 x 800 MW Power Plant at Udangudi is planned. The Government of Tamil Nadu has issued orders for permitting the TNEB to enter upon the land earmarked for the project. Detailed Project Report for the Project is under preparation.

The Government have also proposed to add to the Generating capacity in the state by putting up Cogeneration Plants in 15 Co-operative and 2 Public

Sector sugar mills in the State. The TNEB will invest nearly Rs.925 crores over the next two year in this project to create an additional capacity of 185 MW.

The Government of Tamil Nadu is encouraging establishment of coastal thermal power plants under Merchant Power Plant route. Letters of facilitation have been issued to ten firms for establishment of power projects under Merchant Power Plant route for total capacity of 17140 MW. Further more than 10 applications for establishment of merchant power plants for another 15000MW are under the active consideration of the Government.

II. POWER SUPPLY POSITION

The generation from the thermal, hydro and gas stations and wind stations of Tamil Nadu Electricity Board for the past five years is furnished below:-

(in million units)

Sl. No.	Description	2002-03	2003-04	2004-05	2005-06	2006-07	(upto Feb.08)2007-08
I	**Own generation**						
1	Thermal Stations (2970 MW)	21080	20430	20004	18795	21228	19320
2	Hydro Stations (2184MW)	2724	2067	4426	6141	6292	6135
3	Gas Stations (424 MW)	1107	1593	2003	1964	1944	1245
4	Wind stations (19 MW)	18	24	17	15	17	12
	Total (I)	**24929**	**24114**	**26450**	**26915**	**29481**	**26712**
II	**Total**	**214**	**253**	**258**	**298**	**335**	**338**

	purchases	**85**	**84**	**95**	**11**	**57**	**06**
	Gross Generation (I+II)	**464 14**	**494 98**	**523 45**	**567 26**	**630 38**	**605 18**

The performance of Ennore Thermal Power Station has improved after Renovation and Modernization works. The Plant Load Factor which was less than 30% has now been increased to 50% in 2007-08.

The sustained peak demand for the year 2002-03 was 6957 and it has subsequently increased to 7228 MW (2003-04), 7473 MW(2004-05), 8209 MW (2005-06), 8803 MW (2006-07) and during 2007-08 it is 9076 MW. The sustained peak which was increasing by 200 to 300 MW every year has phenomenally increased by 500 to 600 MW for the past two years.

The anticipated demand during 2008-09 will be around 9,500 MW. Average daily consumption is expected to be 180 Million Units

The storage position as on 07.03.2008 excluding Mettur is 1218.67 MU which was 1215.45 MU on the same day last year. The Hydro generation during 2006-07 was 6,292 MU. Against the targeted 4,491 MU

from Hydel Stations in 2007-08, 6,135 MU have been generated upto February 2008.

Steps taken to overcome the power shortage

Central Generating Station (CGS) Additional Allocation

The estimated power shortage all over India is about 15%, since there has been slippage in addition to generation capacity throughout India, besides the performance of some nuclear power plants is also poor.

In order to tide over the shortfall, the Hon'ble Chief Minister of Tamil Nadu approached MOP for the additional allocation of power. As a result the Ministry of Power / Govt. of India has allocated 300 MW more from unallocated quantum of Southern Region to TNEB from 26.12.07 for the evening peak hours (i.e. 18:00 Hrs to 22:00 hrs) which was later reduced to 200 MW from 19.01.2008. In addition, TNEB is going ahead with SWAP arrangement for getting power from Punjab, Madhya Pradesh, West Bengal and Jammu & Kashmir which can be returned in July & August. TNEB is purchasing power from other states/traders also.

In this situation, with least inconvenience to the consumers, demand management has been introduced in Tamil Nadu. The peak demand reduction is achieved by demand management measures such as

a) staggering of industrial holidays
b) by using captive sets during peak hours.

III. TRANSMISSION AND DISTRIBUTION IMPROVEMENTS

The outlay for the XI Plan period (2007-12) is Rs. 21,159.14 Crores. The proposed Capital Outlay for 2008-09 is Rs.3460.00 Crores. The break up under various heads is as follows:

Rs. in Crores

Sl. No	Description	XI Plan Outlay	Outlay for
		(2007-12)	2008-09
1	Generation	12497.67	1519.61
2	Renovation & Modernisation	551.47	66.59
3	Transmission & Distribution	7000.00	1707.44
4	Rural Electrification	500.00	163.10
5	Survey & Investigation	610.00	3.26

	TOTAL	21159.14	3460.00

Under Transmission & Distribution network, 75 new substations of various voltage categories and 1400 circuit Kms of EHT lines will be added during 2007-08. During the XI Plan period (2007-2012), it is programmed to establish 300 new substations and erect 4,000 Circuit Kms. of EHT lines.

The Transmission & Distribution loss in TNEB as a whole has been estimated as 18% for the year 2006-07, considering the units generated, units sold and computed agricultural and hut services. TNEB has proposed to undertake measures to reduce the line loss by 1% every year to achieve the target T&D loss of 15% at the end of XI Plan as furnished below:

a) Improvement of HT:LT ratio : 0.5 %

b) Erection of Substations and EHT link lines : 0.3 %

c) Installation of LT fixed capacitors,

strengthening of distribution lines : 0.2%
replacing defective meters, etc.

1. ACCELERATED POWER DEVELOPMENT AND REFORMS PROGRAMME (APDRP)

Government of India has sanctioned 25 schemes for Rs.968.20 Crores in 2002-03 under APDRP in 10th Plan. The Government of India is financing 50% of the scheme cost sanctioned (25% as loan and 25% as grant) and the balance loan of 50% is tied up with REC. Subsequently Ministry of Power withdrew the consultancy charges and the revised scheme cost was fixed at Rs.929.21 Crores. The scheme is in operation in all 6 Corporations, 5 Electricity Distribution Circles and 14 towns. TNEB has spent nearly Rs.800 Crores under the scheme. The schemes are nearing completion and will be closed in 2007-08.

Government of India is formulating the revised APDRP in XI plan aiming to reduce line loss below 15% in urban area and to ensure energy accounting and auditing through Information Technology. The guidelines for funding under revised APDRP are under preparation

by the Ministry of Power/Government of India. The schemes will be posed based on the guidelines.

2. RURAL ELECTRIFICATION CORPORATION ASSISTED SCHEMES

The Rural Electrification Corporation provides loan assistance for line loss reduction schemes over a five year period from 2003-04 onwards. Schemes for line loss reduction have been sanctioned in respect of following Districts:

Sl.No.	Districts	Cost of Scheme
		(Rs. in Crores)
1.	Coimbatore North)	87.86
2.	Trichy (North)	138.92
3.	Dindigul	109.35
4.	Madurai	75.64
	Total	411.77

3. POWER FINANCE CORPORATION ASSISTED SCHEMES

The details of schemes sanctioned by Power Finance Corporation (PFC) are furnished below:

Sl. No	No. of Schemes sanctioned	Sanctioned amount Rs. in Crores	Works to be taken up
1.	21 schemes	260.94	Documents executed and works under progress.
2.	16 schemes	60.20	Establishment of 16 Substations
3.	50 schemes	122.05	Establishment of 22 Substations & Power Transformer capacity enhancements in 39 Substations

4. RAJIV GANDHI GRAMEEN VIDYUTIKARAN YOJANA (RGGVY) SCHEMES

RGGVY Scheme (Rajiv Gandhi Grameen Vidyutikaran Yojana) was launched by the Ministry of Power, Government of India with the objective of creating rural electricity infrastructure for electrification of all the rural households by 2012.

Towards achieving total electrification of households in rural areas sanction for schemes in respect of 26 Districts of Tamil Nadu State for an amount of Rs.447.41 Crores in the first phase (out of schemes

posed for 29 District) has been obtained from Government of India.

Action is being taken to implement the schemes.

IV. GENERAL

1. POWER SUPPLY TO AGRICULTURE, HANDLOOM & POWERLOOM, HORTICULTURE CROPS, LOCAL BODIES, VILLAGE AND TOWN PANCHAYATS.

1. Target for Agriculture services under normal category (free category) services has been increased from 5,000 to 10,000 Nos.
2. 2.4 Lakhs agricultural consumers coming under Self Financing Scheme are also extended free power supply.
3. Free power supply upto 100 units bi- monthly is given to handloom weavers who are having their own work sheds and are engaged in weaving.
4. Similarly free power upto 500 units bi-monthly is given to the power loom weavers who run their own power looms.
5. The tariff rate for the horticulture crops has been reduced from the existing LT Tariff V to LT Tariff III A.

6. To quicken the process of effecting street light service connections, it has been decided to collect a flat rate of Rs.9500/- per pole from Local Bodies.
7. For Local Bodies, the Belated Payment Surcharge has been reduced from 12% to 6% per annum with effect from 13.03.2007 and the arrears on BPSC have been waived.
8. Similarly, the period of payment of current consumption charges for 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.
9. The tariff rate for Street Lights and water works in Village Panchayats has been reduced from Rs. 3.40 per unit to Rs.3.00 per unit. Similarly, the tariff rate for Town Panchayats has been reduced from Rs.3.40 per unit to Rs.3.30 per unit. The Tariff rates for Corporations and Municipalities have been reduced from Rs. 3.50 per unit to Rs. 3.30 per unit. This is made applicable to TWAD and Chennai Metro Water also.

2. FREE ELECTRICITY FOR HUT SERVICES COMING UNDER FREE COLOUR TV SCHEME.

Providing free colour TV sets to poor families in the State was one of the election manifestos of the present Government. As the first phase of implementation, 30,000 families mostly Tribals in the Nilgiris District were chosen by the Government. Under Phase I of this scheme, electricity supply connections were extended to 4,209 families living in inaccessible hill tracts in Nilgiris mountain area, within a record time of 30 days. TNEB has also provided 374 new service connections in Samathuvapurams. In the second phase of free colour TV distribution service connections have been given to 1,14,209 households and in the third phase, 1,464 new household connections have been given. So far free electricity service connection has been provided to 1,20,256 service connections under this scheme.

3. WASTE LAND DEVELOPMENT PROGRAMME OF HON'BLE CHIEF MINISTER

In order to facilitate cultivation of lands being distributed to landless farmers under the Hon'ble Chief

Minister's Waste Land Development Programme for providing 2 acres of land to landless farmers, free electricity is being extended for cluster of lands. Under this scheme, free electricity has been extended to 74 services in 17 districts. Services are effected on top priority as and when applications are received.

4. COMPUTER BASED POWER FAILURE REDRESSAL CENTRES

Computer based power failure redressal centres are functioning in Chennai, Coimbatore, Madurai, Trichy, Erode, Salem and Tiruppur. It has also been programmed to extend this facility to the District Headquarters at Tirunelveli, Nagercoil and Vellore.

5. COMPUTERISATION OF LT BILLING AND COLLECTION – PROJECT "BEST"

For easy payment of electricity bills by the low-tension supply consumers, TNEB is implementing Project BEST (Billing of Energy Services by TNEB) at a cost of Rs.215 crores. The project has become operational in 615 Urban sections. In the balance 1,805 rural sections it will be completed by March 2008. On

completion of Project BEST, it is expected that anytime anywhere payment of bills will become feasible.

6. FORMATION OF A TRANSMISSION UTILITY

As already stated, addition in state/Central /Joint Venture to the extent of 7808 MW has been planned during 11th plan. In addition the Government has issued facilitation letter to 10 Merchant Power Plants for creating a capacity of 17140 MW in the next 60 months.

For evacuating the power from the above sources, new transmission lines have to be erected, taking into account the likely surplus capacity to be exported to other regions. Huge investment for establishing the EHT line and substations is required and the cost is expected to be around 25,000 crores. Board is not having adequate funds or capacity to generate the funds to take up these works in addition to investment in new generation schemes and hence avenues to tap the financial institutions have to be explored. If a separate transmission corporation is formed then this will facilitate raising finances from public and financial institutions.

Besides as per the provisions of the Electricity Act, 2003, there should be a separate State Utility for Transmission. Hence it has been proposed to form a separate Transmission Utility under the control of the State Government by carving out the transmission lines and substations of 66 KV level and above from the existing Board. As required by law, this will be a State run Utility and the Government does not intend to privatize the TNEB. This State owned Transmission Corporation will be headed by Chairman, Tamil Nadu Electricity Board and the Chief Engineer (Transmission) will be its Managing Director.

2. 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 under the administrative control of Energy Dept.

TEDA has set the following as its main objectives.

- Identification and potential estimation of renewable energy in the State.
- Create awareness on the potential and prospects for use of renewable energy.
- Enhance 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.
- Development and implementation of 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 3834 MW as on 31.3.2007 has now reached 4115 MW as on 29.02.2008 representing about 37% of the country's capacity. About 98% of this capacity has come from the private sector. The major contribution is from Wind which is 3711 MW (50% of the country's capacity). The others are Bagasse based Co-generation 213 MW, Biomass Power 99 MW and small hydro (upto 25 MW) 87 MW. Totally 6570 million units of electricity was generated from the renewables resources in the state during the year 2006-07, which is about 10% of the grid consumption. Tamil Nadu's achievements of 27% in installed capacity and 10% in the units generated as share of renewables resources is way ahead of other States and even the country as a whole, as these were 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 10th Five year Plan period (2002-2007), it has increased from 1000 MW to 3834 MW, which is 27% 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 8%. The addition made during the year 2007-08 is 281 MW as on 29.02.2008.. In the present day context, everyone is most concerned about Global Warming and climate change, 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 being both widely available, though diffuse, 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 Arelvaymozhi pass in Kanniyakumari District and 450 MW in other areas totalling 5500 MW.

There are 41 Wind potential sites in 8 Districts in the State, declared by MNRE, as suitable for Wind Power projects based on the Wind assessment studies carried out by TEDA with the funding assistance of MNRE and the State Government. Wind farms have so far been set up in 26 sites of the above, almost entirely by the private sector, except for 19 MW of Demonstration Wind farms in 8 locations set up during 1986 to 1993, jointly by TEDA and TNEB, but now run and maintained by TNEB. The total installed Capacity of Wind Mills in the State including the 19 MW under public sector is 3475 MW (7349 Machines) as on 31.3.2007. The addition made during the year 2007-08 is 236 MW as on 29.02.2008. The capacity addition made during the 10th Five year Plan (2002-07) is given below:

Year	Installed capacity addition MW	Units of 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
	2618	**13994.030**

The total units generated from wind are 20682 million units (cumulative) as on 31.3.2007 and for the year 2006-07 it was 5269 million units which is 8.5% of Tamil Nadu's grid consumption. In recognition of Tamil Nadu's commendable achievement in Wind power generation, the State was awarded the First prize for Wind power programme (2002-2007). The award was presented during the Silver Jubilee Function of MNRE by Tmt. **PRATIBHA DEVISINGH PATIL**, Hon'ble President of India on 22.11.2007. Further for the first time in the country, a village Panchayat Odanthurai in Coimbatore District, has set up a wind mill of 350 Kw capacity exporting power to grid, which was commissioned on 31.3.2006.

A package of incentives which includes fiscal concessions, custom duty, excise duty exemption and 10 year tax holiday are available for Wind Power projects from Govt. of India. Intra State open access regulations have been notified and preferential tariff orders issued for Wind Power Projects in Tamil Nadu by the Tamil Nadu Electricity Regulatory Commission (TNERC). As per the

revised tariff orders issued in May 2006, the rate is Rs. 2.75 per unit for the projects for which agreements had already been signed and Rs.2.90 per unit where the agreements are to be signed. The wheeling and banking charges remain unchanged at 5% each. The new unit rates have now come into effect as per the TNEB order dt.14.9.2007.

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^2 and above at 30 m/50m level, have been declared by MNRE as potential and viable for commercial projects. Windmills have so far come up in 26 sites. 9 new wind-monitoring stations are under installation through C-WET a Govt. of India undertaking (one completed) in various Districts with 20% cost sanctioned by the State Govt. and balance 80% cost provided by MNRE to C-WET.

Further Micro survey of Wind resource, around select potential stations has been carried out to provide

reliable data to wind farm developers for selecting proper location for Windmills in potential areas. Apart from 19 stations where the study was carried out with MNRE funding, the study was done in 8 more stations by C-WET with State funding. The total potential in the 27 stations as per the above study is 6385 MW.

Apart from MW scale wind mill generators (grid connected), stand alone type generators upto 30 KW rating are also available. 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

Biomass is produced by green plants through photosynthesis using sun light. Biomass contains organic matter which can be converted to energy and replenished by human effort. 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 450 MW is available from Bagasse based Co-generation in sugar mills.

Energy can be produced from biomass through gasification as well as combustion route. In combustion route, biomass is burnt fully to produce steam which in turn is used for power generation through turbines. In gasification process, biomass is burnt partially and converted into producer gas which is used for thermal or electrical applications.

The cumulative installed capacity of grid interactive biomass and bagasse based Co-generation is 474.60 MW as on 29.02.2008 (375.60 MW from Bagasse Co-generation + 99 MW from Biomass Power). In the case of Co-generation projects, the total exportable surplus power, after their own consumption of sugar mills is 213 MW.

In the case of Biomass Power projects, 32 Projects with total capacity of 328 MW, recommended by the standing Committee constituted by the Government under the Chairmanship of CMD / TEDA, are in the various stages, out of which 5 projects (39.7 MW) are likely to be commissioned soon, apart from 7 projects (87 MW) already in operation.

A package of incentives which includes fiscal concessions such as accelerated depreciation, concessional customs duty, excise duty exemption, income tax exemption on projects for 10 years etc are available from Government of India for these power projects. Since December 2006, Capital subsidy in lieu of interest subsidy is being provided by MNRE for grid interactive renewable energy projects (except wind in private sector) through concerned financial institutions, after the project has been successfully commissioned. In the case of bagasse Co-generation, projects in Co-operative / public / Joint Sector sugar mills, 50% of the subsidy amount will be released to the Financial Institutions after sanction of loan and the balance after successful commissioning. As per the Tamil Nadu Electricity Regulatory Commission, 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.

3. POWER GENERATION FROM URBAN AND INDUSTRIAL WASTES

Generation of wastes both in solid and liquid form is associated with industrial and other activities. Civic activities generate solid and liquid wastes while industrial activities mainly generate liquid wastes. Both types of wastes can be used for producing energy through different processes namely Biomethanation and combustion.

Biomethanation is the most preferred route for recovery of energy from Biomass wastes having higher moisture and organic content. Organic wastes segregated from Municipal solid waste, sewage water and other industrial wastes with high levels of Biological oxygen demand (**BOD) /** Chemical oxygen demand (**COD)** can be treated in this method. Combustion technology is used for producing steam from Municipal solid wastes that contain high amount of organic non-bio degradable matter and low moisture content. The steam so produced is used for power generation through conventional turbines. MNRE subsidy is available for all these schemes. Power purchase agreement can also be made with TNEB for export of the power produced. There are 3 projects with total capacity of 4.25 MW in

operation in the State including 250 KW at Koyambedu Vegetable complex.

4. SOLAR POWER GENERATION

In order to promote the use of Solar Energy for producing grid quality power in the country, the Ministry of New and Renewable Energy (MNRE), Government of India, has introduced new policy guidelines in January 2008, whose salient features are given below:

For the first time, generation based incentives would be provided for grid interactive solar power generation. A maximum amount of Rs.12.00 per Kwh would be provided as incentive for electricity generated from solar photovoltaics and Rs.10.00 per Kwh for electricity generated through the solar thermal route and fed to the grid from a power plant of 1 MW capacity and above. This incentive will be provided to the project developers at a fixed rate for a period of ten years for the projects which are commissioned by 31st December 2009. This incentive will be available for all the existing registered companies, Central and State power generation companies and public / private sector photovoltaic power project developers who have set up

or propose to set up a registered company in India. The maximum capacity per project will be 5 MW either through a single project or multiple projects of a minimum Capacity of 1 MW each. Each State may be allowed to set up upto 10 MW under this programme. These projects are to be undertaken on Build, Own and Operate basis.

Based on the above, TEDA has sent a proposal to the State Government, to invite 'Expression of interest' from the interested project developers for putting the grid inter-active solar power plants in Tamil Nadu. The power generated from these plants will be purchased by TNEB at the rate to be decided by the Tamil Nadu Electricity Regulatory Commission.

Further, in order to know about the recent developments in the field of Solar Power Generation, the State Government has deputed the Chairman and Managing Director of Tamil Nadu Energy Development Agency and also a Senior Engineer from TNEB, who is now on deputation, as General Manager in Tamil Nadu Energy Development Agency, to visit Spain and

Germany, where a number of such power plants are in operation. The officials, besides visiting some of these plants, will hold discussions with the Government agencies and other firms there about the possibility of any joint ventures with them by the State Government / TNEB for setting up of Solar Power Generation projects in Tamil Nadu.

II. STAND ALONE RENEWABLE ENERGY SYSTEMS

The one great advantage of Renewable energy is that it can be generated wherever it is required with locally available sources such as Solar, Wind, Biomass etc. It thus reduces the burden on the centralized generation systems in the grid involving long transmission with consequent losses. TEDA encourages installation of these systems by the industries, institutions and local bodies with subsidy provided by the Government of India (MNRE) or the State Government or both. A brief outline on the various systems available is given below:

1. 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.

1.1 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 geycer and can save upto 1500 units of electricity a year. It pays back the cost in 3 to 5 years, after which hot water is available almost free of cost during the remaining life span of the systems, which is about 15 – 20 years. Any higher capacity systems 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 and one does not have to operate any part of the system.

In view of its inherent advantages, the State Government had made the use of Solar Water heating system mandatory in certain types of new buildings in the State in the year 2002, by amending the building bylaws.

The Government of India (MNRE) is providing soft loan @ 2% to domestic users, 3% to institutional users not availing accelerated depreciation and 5% to industrial / commercial users availing depreciation through IREDA and Public / Private sector banks etc. Capital subsidy equivalent to upfront interest subsidy @ RS.1100/- per sq.m of Collector area will be available to registered institutions and Rs.825/- per sq.m. of Collector area to registered Commercial establishments that do not avail soft loans.

The State Government had also earlier provided subsidy to domestic and institutional users for installing the Solar Water heating systems. But now, it has been restricted to providing 100% cost for installation in Government institutions. Every year, a few Government

Hostels / Hospitals have been provided with these systems. For the year 2007-08, the State Government has sanctioned Rs.10.00 ,lakhs for installing systems of total Capacity of 5000 LPD in Government Hostels / Hospital buildings. Apart from this, at the instance of Hon'ble Minister for Electricity, and as per the announcement made in the Legislative assembly, installing of Solar Water heating systems in the residences of Ministers, High Court Judges, State Guest House, MLA's Hostel, MLA's Quarters and special houses for IAS & IPS Officers at Government Estate has been proposed at an approximate cost of Rs.2.00 Crores. As on 31.3.2007 of Solar Water Heating System have been installed in 61 Government buildings, 3522 residences for domestic purposes and 440 industries / Institutions for commercial purposes under various subsidy schemes

1.2 SOLAR AIR HEATING SYSTEMS

In the Solar Air Heating system or Solar dryer also, the sun's heat energy is used to heat the air which is made to blow over the materials to be dried. A raise in ambient air temperature of 30 to 40^{o}C can be obtained

and the usage of conventional fuels such as firewood, coal etc can thus be reduced to the extent of 25%. The Solar Air Heating systems are being used in processing of tea leaves, fruits, vegetables and drying of grains etc and the same has been extended to drying of fish, cloth, salt, spices, leather etc. The uniform heating obtained through the use of Solar Air Heating systems, improves the quality of the dried items.

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.

The State Government also had provided subsidy for installation of 32 systems with a total Collector area of 498 sq.m in the years 2003-04 and 2005-06 when the Government of India subsidy was not available. Totally 46 systems with a total Collector area of 4575 sq.m have been installed under subsidy schemes.

1.3 SOLAR COOKER

A Solar Cooker is a device that uses heat energy from the sun to cook food. 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 2 to 3 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, so it can be used even in non-shine hours. It can save upto 4 LPG cylinders a year. However food cannot be fried in the box solar cooker. There is no Government subsidy for this type of Solar Cooker. However, 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. The State Government also sanctioned an amount of Rs. 2.40 lakhs for providing 40 Nos. Solar Dish Cookers at

full cost to Noon Meal Centre / Hostels during the year in 2006-07. The same was allotted to the Most Backward Class and Denotified Communities Welfare Department Student Hostels.

Solar steam cooking system are also available which can be installed where boilers are used for steam generation and the food cooked for thousands of persons. Such a system installed in Tirupathy temple is working well.

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 reduce the recurring Electricity charges.

The Government of India (MNRE) allotted to Tamil Nadu in 2006-07, 4000 Nos. SPV Home lighting systems and 900 SPV Street lighting systems which have been allotted to various districts through District Collectors for implementation under the subsidy scheme. No allotment has been made for the year 2007-08, pending finalisation of XI Five Year Plan proposals by the Government of India. Totally 5647 Nos. SPV Street lights, 1236 SPV Home lights and 285 SPV pumps have been installed in the State under the subsidy scheme.

Under Part-II scheme for 2007-08, the State Government has sanctioned Rs.10.00 lakhs for providing 5 Nos. Solar Operated Vaccine Refrigerators @ Rs.2.00 lakhs to Primary Health Centres in remote areas to make available the essential Vaccines and life saving medicines to the needy people. The scheme is under implementation.

2.2 ELECTRIFICATION OF REMOTE HABITATIONS

Tamil Nadu has achieved total electrification of villages long time ago. But there are still a few remote habitations in forest areas which could not be electrified due to problems of long distance, forest clearance etc. Based on the list of habitations furnished by TNEB, which might not be electrified through grid, the Government of India (MNRE) sanctioned the RVE phase-I programme for electrification of 150 remote habitations using Solar lighting systems. The cost of which including 5 years maintenance is to be shared by the Central and State Governments. The work has been completed in March 2007 by providing 5190 Nos. SPV Home lighting and 283 SPV Street lighting systems in 128 habitations in 12 Districts at a total cost of Rs.8.25 crores. Some of the other habitations were subsequently electrified by TNEB.

Further under Phase-II, it is proposed to take up electrification of another 74 habitations in 6 Districts, after obtaining sanction of Government of India (MNRE). When this scheme is implemented, Tamil Nadu will achieve the distinction of completing electrification of all

unelectrified remote habitations in Tamil Nadu as identified by TNEB.

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. They can be utilised for thermal and electrical applications. The required biomass yield can be obtained from energy plantations grown on wastelands. Further all types of agricultural wastes viz Rice husk, Coconut shells, briquettes of various agricultural residues, maize crops branches and twigs of plants are the possible fuel stocks for the Gasifier.

Government of India (MNRE) Provides subsidy for these gasifiers as below:

Industries / Institutions		
Thermal	:	Rs.2.00 lakhs / 300 KWe
Electrical Dual Fuel	:	Rs.2.50 lakhs / 100 KWe
100% Gas engine	:	Rs.15.00 lakhs / 100 KWe (educational Institution) Rs:10.00 lakhs / 100 KWe

		(Commercial / Industries purpose)
Gasifier installed under MNRE / State subsidy		
Industries / Institution	:	2670 KWe (Thermal) 2140 KWe (Electricity)
Village Panchayat (Small Capacity)	:	634 KWe (65 Nos.)

4.0 BIOGAS PLANT

Biogas is a flammable gas and is used as fuel. It is technically possible and economically feasible to generate biogas from cattle dung, agro waste, Kitchen waste, sugarcane, pressmud etc. and also human waste. It is the most appropriate option for meeting the growing energy needs in rural areas. It is a clean and convenient fuel for cooking and lighting in households and also for power generation in KW scale.

The Government of India (MNRE) subsidy is available for installation of Biogas plant upto Rs. 5.00 lakhs / project or 20% of the project cost. MNRE has sanctioned 2 Nos. biogas based power generation systems, one of 10 KW capacity and another 5 KW

capacity to be installed in Coimbatore and Salem Districts respectively by self Help Groups. The power generated will be utilized for electrification of tribal areas.

The State Government also provided subsidy at 30% of cost for installation of Toilet linked Biogas plants in institutions and Women sanitary complexes in Panchayats. Totally 20 Nos. in institutions and 41 Nos. in Panchayats were installed during 2003-04 and 2004-05 through the DRDA.

MICRO WATER TURBINES

Small hydro power projects upto 25 MW capacity has been brought under the purview of MNRE, Government of India due to their benefits particularly concerning the environment and their ability to produce power in remote areas. They are economically viable and have a relatively short gestation period. TNEB is dealing with these projects in the State along with the large hydro projects.

Micro Turbines in KW range are now available indigenously which can be installed in small canals, streams, river systems located in remote places to generate power for captive use. This will encourage small entrepreneurs to set up manufacturing / processing units providing livelihood and economic development for the local people. Hence the State Government sanctioned Rs.10.00 lakhs @ 2.00 lakhs per system for installation of 5 Nos. 5 KW micro turbine, in suitable Village Panchayat during 2007-2008. The scheme is under implementation.

III. OTHER SCHEMES

1. VILLAGE ENERGY SECURITY PLAN

The Government of India (MNRE), introduced this scheme with the objective of meeting the total energy needs of unelectrified and remote hamlets using locally available Renewable energy sources. In Tamil Nadu, 4 hamlets in Krishnagiri, Dharmapuri and Dindigul Districts have been selected for implementation as test projects, through the District Forest Officers, for which 90% cost (Rs.49.54 lakhs) is provided by MNRE and the balance by the State Government. The work in Periakallupalli and Jodugarai in Krishnagiri District, Karapadi in Dharmapuri District have been completed. The work in Thenmalai in Dindigul District is nearing completion. The scheme involves collection of pungam seeds from adjoining forest areas, production of oil and use of the same as Biofuel for generation of electricity to supply power to the hamlets apart from construction of biogas plants to produce biogas to meet other energy needs, thereby achieving total energy security. MNRE has now selected 5 more hamlets in Tamil Nadu for implementation, under World Bank funded scheme.

2. MODIFIED INTEGRATED RURAL ENERGY PROGRAMME

The integrated Rural Energy Programme (IREP) which was earlier implemented in 21 blocks only was revamped by MNRE and extended to all the rural Districts in a State. The State Government has in 2005-06 approved the implementation in 14 Districts only with the sanction of Rs.145.00 lakhs mainly for scheme cost. The matching contribution of Rs.145.00 lakhs was also provided by MNRE towards staff and administrative expenses. The scheme involves the preparations of Detailed energy plans in selected 3 cluster of villages in each District by the District IREP Cell (in DRDA Office) with the assistance of local technical institutions as DTBU under the guidance of State level IREP Cell (in TEDA Office) and a Technical Institution as STBU. The scheme is under implementation now.

3. 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 make them enthusiastic in their further development for easy applications in the day-to-day life of the people.

Rajiv Gandhi Renewable Energy Day on 20th August is also being celebrated in all the Districts and at the State level, with rallies contest for students, cultural programmes, planting of sapling of Biofuel crops etc. On the occasion a booklet 'Global War(n)ming' compiled by TEDA was released. Its Tamil Version was earlier released on 22.4.2007, the "Earth Day".

4. RENEWABLE ENERGY PARK

Renewable Energy Parks are being set up in various institutions to create awareness among public on the uses of Renewable energy devices. Government of

India (MNRE) provides subsidy at 75% cost of equipments for the first District level park and 50% for the second park in the same District. So far, 19 Energy Parks are functioning in 18 Districts. Further parks sanctioned by MNRE could not be set up due to certain conditions imposed by MNRE in its implementation. MNRE has been requested to revise the same.

Further a State Level Energy Park is being set up at Tamil Nadu Science and Technology Centre, Kotturpuram in Chennai with 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.

5. ENERGY CONSERVATION

Energy efficiency and conservation has become the most essential steps to be taken wherever the energy use is involved, in the present context of Global Warming and the need to reduce green house gas emissions caused by the increasing use of fossil fuels. The State Government has sanctioned an amount of Rs.6.5 lakhs towards replacement of 1000 Nos. Conventional Tube lights in the Street lights in local bodies by the Compact

Fluorescent lamps (CFLs) which consume atleast 60% less energy than the tube lights during the year 2007-08. The scheme will be extended to more Panchayats in the coming years.

6. BATTERY OPERATED VEHICLES

Use of Battery Operated Vehicles is another option to conserve petroleum products and control pollution due to Vehicular emission. These Vehicles run without Petrol, make no noise and are pollution free. They are ideally suited for taking the public for short distances in places like Zoo etc. The Government of India (MNRE) provides subsidy upto 33% of the cost of the vehicle for use by Institutions and other Public organization. In order to further encourage their use, the State Government sanctioned an amount of Rs.10.00 lakhs as additional State subsidy for 2 Nos. 16 seater Van to Vandalur Zoo during the year 2007-08.

7. EVALUATION STUDIES

The State Government has sanctioned an amount of Rs.5.00 lakhs for carrying out a study and collect datas on private wind mills installed in the State and their Performance during the year 2007-08.

Another Rs.8.00 lakhs has also been sanctioned for carrying out the performance evaluation study of the Renewable energy devices installed with Government subsidy. They are, the SPV Street lights, SPV Home lights, Solar Water Heating systems, Solar Air Heating systems and Toilet linked biogas plants installed during the period from 2002-03 to 2005-06.

8. RESEARCH & DEVELOPMENT PROJECTS

TEDA 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 from co-generation in sugar mills.

9. WESTERN GHAT DEVELOPEMNT PROGRAMME

Under the Western Ghat Development Programme (WGDP),the Government has sanctioned an amount of Rs.29.70 lakhs for installation of 99 Nos. Solar PV Street lights in 3 Districts viz Coimbatore, Kanniyakumari and Theni Districts during the year 2007-08.

10. SPECIAL ECONOMIC ZONE

TEDA is facilitating the setting up of Special Economic Zone (SEZ) in Tamil Nadu, for the manufacture of Renewable energy devices, with the approval of Government of India. The State Government

has signed an MoU on 14.7.2007 with the private promoters for setting up this Special Economic Zone first of this kind in the World, exclusively for Renewable Energy Projects in Chengleput Taluk, Kancheepuram District.

The Special Economic Zone is expected to attract over 40 manufacturers in the areas of biomass boilers, gasifiers, digesters, special gas engines, solar photovoltaic products / systems, solar thermal systems, wind turbines, hydro turbines and direct carbon fuel cells. An investment of over Rs.2300 Crores is expected from the participants with employment opportunities to 5000 people directly and 10000 people indirectly.

IV. NEW SCHEMES UNDER PART-II FOR 2008-09

The Government has proposed to sanction a total outlay of Rs.75.40 lakhs for implementation of the following new schemes during 2008-09.

S. No.	New schemes under Part-II for 2008-09		Total outlay proposed for 2008-09 (Rs. in lakhs)
i)	Solar Powered Vaccine	:	10.00

	Refrigerators (5 Nos.)		
ii)	Solar Home lights for Group homes (100 Nos.)	:	15.00
iii)	Installation of Aero Generators in local bodies (5 x 1 KW)	:	12.50
iv)	Solar Water Heating systems in Govt. Hospitals / Hostels (10000 LPD)	:	20.00
v)	Micro Water Turbines (5 x 5 KW)	:	10.00
vi)	Purchase of Testing equipments for Renewable energy devices	:	3.90
vii)	Training Programme on Renewable Energy	:	4.00
	Total	**:**	**75.40**

3. ELECTRICAL INSPECTORATE DEPARTMENT

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 Distribution Act, 1948, the Electricity Regulatory Commission Act, 1998. The said Electricity Act, 2003, has come into force with effect from 10th June 2003.

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

FUNCTIONS

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

1. Carrying out inspections and other services under Indian Electricity Rules, 1956, till regulations are

made under the Electricity Act, 2003 (Act 36 of 2003) which has come into force on 10th June 2003.

2. Tamil Nadu Lift Act, 1997 and Tamil Nadu Lift Rules, 1997. For implementing Lift Act and Rules Government have taken various steps by giving advertisement in dailies.

3. Duties specified in Tamil Nadu Cinema (Regulation) Rules, 1957, in respect of Electrical Installation of Cinema Houses.

4. Functioning as Member of Technical Committee Bureau of Indian Standards, which make Indian Standards Specifications in Electro Technical Field.

5. The Chief Electrical Inspector to Government has to function as Ex-Officio President of the Tamil Nadu Electrical Licensing Board constituted under Rule 45 of the Indian Electricity Rules, 1956.

6. The Chief Electrical Inspector to Government has to function as the Ex-Officio President of the Government Board of Examiners for Cinema Operators constituted under Tamil Nadu Cinema (Regulation) Rules, 1957.

7. Energy is an essential input for social and economic development. This ever-increasing energy requirement is mostly met from the burning of more fossil fuel.

Energy Efficiency means availability of more resources. It offers a number of benefits, including improved use of national resources, reduced energy imports, improved balance of trade, conservation of foreign exchange, reduced capital requirement for new energy production facilities, and reduced environmental pollution from energy use and production.

In order to achieve this, Government of India has notified the Energy Conservation Act, 2001. As per powers conferred under Section 15(d) of the Act, 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).

The Government of Tamil Nadu perceives Energy Efficiency Measures (EEM) as the feasible option to reduce CO_2 emission, which is the major contribution for global warming.

State Energy Conservation Fund has been constituted by the Government in 2007 for the implementation of schemes on energy efficiency measures by the State Designated Agency.

The Government of India and the Government of Tamil Nadu have accorded sanction and allocated funds in order to implement various Energy Conservation measures in the State of Tamil Nadu for the financial year 2007-2008.

Based on the above, the following schemes are undertaken by the Tamil Nadu State Designated Agency.

- a) Conducting awareness programmes for the public through visual and print Media.

  b) Conducting training programme for officials of SDA and other Government Departments.
- Conducting energy audit in Government buildings and implementing Energy Efficiency measures.
- Establishment of Internet platform for interaction with other State SDAs and BEE.
- a) Date Bank creation among the BEE certified energy manager, energy auditors, energy intensive designated consumers.

  b) Conducting refresher course and training on energy data filing for the above categorizes.

- Providing infrasture facilities to the SDA on IT & software for implementing energy conservation

- Observing National Energy Conservation day on 14th December

- Survey of widely used energy consuming consumer appliances such as flouresent lamps, Air conditioners, Refrigerators, distribution transformers etc., throughout the State of Tamilnadu.

The Government will ensure suitable measures for intensifying the above activities in the forth coming financial year 2008-2009.

FUNCTIONS UNDER THE INDIAN ELECTRICITY RULES, 1956

1. 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.

2. Periodical inspection of High Tension installation of High Tension Consumers under Rule 46 of Indian Electricity Rules, 1956.

3. Periodical inspection of supplier's High and Extra High Voltage Installations, under Rule 46 of Indian Electricity Rules, 1956.

4. Receipt of intimation of all electrical accidents under Rule 44A of Indian Electricity Rules, 1956, in connection with the generation, transmission, supply or use of energy, inspection of the accident spot and preparation of report.

TAMIL NADU TAX ON CONSUMPTION OR SALE OF ELECTRICITY ACT & RULES, 2003

This Act has come into force on and from 16.06.2003, 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 net energy charges.

B. **Exemptions:**

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

1. For consumption by any Governments

2. Railway Administration

3. Any Local Authority

4. Energy sold by Tamil Nadu Electricity Board or any other licensees for the use of domestic, huts and agricultural purposes.

5. Energy sold for the consumption of developers of Special Economic Zones, Industrial Units and other establishments within Special Economic Zones.

6. 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.

AMENDMENTS

1. The Tamil Nadu Tax on Consumption or Sale of Electricity Act, 2003 (Act 12 of 2003) has been amended by Tamil Nadu Tax on Consumption or Sale of Electricity (Amendment) Act, 2007 (Act 38 of 2007) as follows:

(i) Clause 2A has been inserted after clause (2) of Section 2, defining “Maximum Demand charge”;

(ii) Section 2(7) has been substituted by the definition of “consumption charge”;

(iii) Sections 2(8) and 2(12) have been deleted;

(iv) The expression “net charge” occurring in clause (a) and (b) of sub section (1) of Section 3 has been substituted by the expression “consumption charge”.

(v) The expression “energy charges” occurring in sub section (1) of Section 6 has been substituted by the expression “consumption charges”.

(vi) Section 20(1) has also been amended by substituting the proviso by “provided that, unless a different intention appears, such repeal shall not affect”.

2. The Tamil Nadu Tax on Consumption or Sale of Electricity Act, 2003 (Act 12 of 2003), has been further amended by Tamil Nadu Tax on Consumption or Sale of Electricity (Amendment) Act, 2008 (Act 5 of 2008) by inserting sub sections (2) and (3) to Section 14 of the Act, for providing powers to Government to issue notification exempting or reducing the rate in respect of the electricity tax payable under the Act, on the consumption of electricity for own use by any generating company and also to cancel any notifications so issued.

STANDARDS LABORATORY AND MOBILE LABORATORIES

There is a Government Electrical Standards Laboratory at Guindy, Chennai. There are mobile Electrical Testing Laboratories in Chennai, Salem, Tirunelveli, and Standard Electrical Testing Laboratory are in Madurai, Coimbatore and Trichy.

New Scheme under Part-II for the 2008-2009

The Government has proposed to sanction a total outlay of Rs.13.30 lakhs for the implementation of the following new scheme during 2008-2009.

Sl. No.	Name of the scheme	Total outlay proposed for 2008-2009 (Rupees in Lakhs)
1.	Extension of e-governance solutions to all District offices of Electrical Inspectorate.	13.30

4. TAMIL NADU POWER FINANCE AND INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED

The Tamil Nadu Power Finance and Infrastructure Development Corporation Limited (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 the 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, Power Fin'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 1991-1992 to Rs.2,579.75 crores as on 07.03.2008 and the number of deposits from 816 in 1991-1992 to 2,64,220 deposits as on 07.03.2008.

The Corporation touched yet another milestone on 7.3.2008 when its net cumulative deposits in a single year touched a new high of Rs.478.79 crore. It is likely to close the year ending March 2008 with Rs.500 crore in net deposits. The highest achieved earlier was Rs. 325.94 crore in the year 2004-2005.

Tamil Nadu Power Finance is offering the following interest rates for deposits with effect from 7.5.2007.

Period	Rate % per annum
12 Months	9.00
24 Months	9.50
36,48 & 60 months	10.00

Besides, Tamil Nadu 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.

I. FINANCIAL ASSISTANCE

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. 7,806.49 crores and the net loan outstanding from TNEB is Rs. 3080.32 crores as on 07/03/2008. In addition to the above, a sum of Rs.69.70 crores has been provided to other Corporations like Poompuhar Shipping Corporation Limited, Tamil Nadu Industrial Investment Corporation Limited, Tamil Nadu Industrial Development Corporation Limited etc. The Corporation achieved a record net assistance of Rs.635.81 Crores to TNEB during the current year surpassing the previous highest of Rs.330.49 Crores in the year 2004-2005.

MANAGEMENT OF GOVERNMENT SCHEMES:

A sum of Rs.309.66 crores (as on 07.03.2008) benefiting 2,03,308 children has been received as

deposit under the "Sivagami Ammaiyar Ninaivu Penn Kulanthaigal Padukappu Thittam".

A sum of Rs.25.51 crores has been received covering 10202 temples as deposit under "Oru Kala Pooja" Scheme.

A sum of Rs.3.75 crores (as on 07.03.2008) has been received under the scheme for providing assistance to students of schools who have lost their income earning parents or incapacitated in accidents.

A sum of Rs. 8.15 crores has been received for providing assistance to 241 orphan 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 twelve years since 1995-1996. Upto 2006-07, the Corporation has paid dividend totalling Rs.47.62 crores to the Government of Tamil Nadu.

FUTURE PLANS:

1. Mobilise a sum of Rs.300 crores as net deposits from public and institutions in the financial year 2008-09.

2. Provide financial assistance to the tune of Rs.1200 crores for power and infrastructure projects to be implemented by TNEB in the year 2008-09.

3. Provide financial assistance to the tune of Rs.50 crores to other institutions during the year.

ARCOT N. VEERASWAMI
MINISTER FOR ELECTRICITY