TAMIL NADU ELECTRICITY BOARD

INTRODUCTION :

The Tamil Nadu Electricity Board is a statutory body formed on 01.07.1957 under the Electricity Supply Act, 1948. 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 installed capacity of Tamil Nadu Electricity Board as on 31.03.2004 is 9299 Mega Watts. This comprises 5381 MW of Tamil Nadu Electricity Board 's own Projects, 1066 MW of Private Sector Projects and 2852 MW of Share from Central Sector Projects. Apart from this, a total capacity of 1342 MW is available from Wind Mills in the Private Sector and 19 MW of power from the Wind Mills of TNEB.

The present maximum peak demand is 7253 MW which was reached on 16.03.2004. The growth of energy consumption is expected to be 5 % per annum. Energy consumption during 2003-04 is 49712 Million Units (MU) with a peak day consumption of 151.609 MU consumed on 23.04.2004.

There are 1044 substations, 1.44 lakh Kms. of Extra High Tension / High Tension (EHT/HT) lines and 4.68 lakh Kms. of Low Tension (LT) lines as on 31.03.2004. Moreover there are 1.54 lakh distribution transformers in service as on 31.03.2004. In Tamil Nadu, there are 163.38 lakh service connections as on 31.03.2004.

II. CAPACITY ADDITION IN GENERATION:

To meet the increase in demand, Tamil Nadu Electricity Board has planned to augment its generating capacity by 1945.5 MW and correspondingly to expand the transmission and distribution system during the X Plan period (2002-07).

During the year 2003-04, under the State Sector, a 101 MW Gas based power project at a cost of Rs.352 Crores has been commissioned on 24.03.2004 at Kuttalam in Nagapattinam District.

Under the Central Sector, from the first two units of 500 MW capacity each commissioned at Talcher Super Thermal Power Station, Stage-II, by National Thermal Power Corporation (NTPC), Tamil Nadu Electricity Board is availing a share of 135 MW from each unit totaling 270 MW.

During the year 2004-05, the increase in generating capacity will be 616 MW (State Sector- 180 MW, Central Sector Share – 270 MW and Private sector-166 MW). In the State Sector, Pykara Ultimate Stage Hydro Electric Project with a capacity of 150 MW at a cost of Rs.383 crores will be commissioned in Nilgiris District. Bhavani Kattalai Barrage-I Hydro Electric Project with a capacity of 30 MW at a cost of Rs. 195 Crores will also be commissioned in 2004-05.

In the Central Sector, Tamil Nadu will get an additional share of 270 MW from Talcher Super Thermal Power Station, Stage-II from the balance two units of 500 MW each.

In the Private Sector, two gas based projects viz. 53 MW at Valantharavi in Ramanathapuram District by M/s.Arkay Energy Ltd. and 113 MW at Karuppur in Thanjavur District by M/s. Aban Power Company will be commissioned during 2004-05.

The Thermal power stations of Tamil Nadu Electricity Board continue to perform well. Mettur, Tuticorin and North Chennai thermal power stations have become eligible for the Gold medal from Government of India for their performance in three consecutive years 2001-02, 2002-03 and 2003-04.

During the financial year 2003-04 also, the Hydro Electric Power generation was adversely affected by the failure of both the South West Monsoon and North East Monsoon and inadequate flows of Cauvery water into Mettur reservoir. The hydel generation during 2003-04 was only 2067 MU. It fell short to the tune of 2120 MU from the 10 year average generation of 4187 MU.

In spite of the low storage in the Hydel reservoirs of the State, the power position in the State is being efficiently handled without

any power cut/ load shedding by maximizing thermal generation, purchasing additional power from Kayankulam Gas based Station and Eastern Region Power Stations and from Independent Power Projects on Merit Order Dispatch and judicious utilization of precious hydel storage by effective load management.

III. POWER SUPPLY POSITION IN 2004-05

The anticipated demand during 2004-05 will be 7662 MW. Average daily consumption is expected to be 135 Million Units. The increased demand will be met from the existing generating capacity and the above proposed capacity additions.

The outlay for the X Plan period (2002-07) is Rs.8000 Crores. The proposed Capital Outlay for 2004-05 is Rs.1793 Crores. The break up under various heads are as follows:

Rs. in Crores

S.No	Description	X Plan Outlay (2002-07)	Outlay for 2004-05
1.	Generation	1212	223
2.	Renovation & Modernisation	364	94
3.	Transmission & Distribution	5914	1105
4.	Rural Electrification	490	93
5.	Survey & Investigation	20	3
6.	Interest During Construction		275
	TOTAL	8000	1793

Under Transmission & Distribution network, it is programmed to add 60 new substations of various voltage categories around 800 Circuit Kms. of EHT lines during the year 2004-05. During the X Plan period, (2002-2003) it is programmed to establish 315 new substations and erect 4000 Circuit Kms. of EHT lines.

IV. SUB-TRANSMISSION AND DISTRIBUTION IMPROVEMENTS

TNEB has evolved improvement schemes in Sub Transmission and Distribution networks for reducing Transmission and Distribution losses during the X Plan period at an estimated cost of Rs.4165 Crores through Accelerated Power Development Reforms Programme funding and also obtaining funds from Financial Institutions

like National Agricultural Bank for Rural Development / Rural Electrification Corporation and is implementing the same. For the year 2002-03 & 2003-04 the details are given below:

1. ACCELERATED POWER DEVELOPMENT AND REFORMS PROGRAMME (APDRP)

25 Sub-Transmission and Distribution Improvement Schemes under Accelerated Power Development and Reform Programme (APDRP) covering four Chennai Metropolitan circles, five Distribution Circles and 19 Urban areas in Nine Distribution circles at a cost of Rs. 977 Crores are under execution. Expenditure upto 31.03.2004 is Rs.355.97 Crores. The above mentioned improvement schemes are listed as follows:

	Cost (Rs. in Crores)
1. Chennai Metropolitan Area	441.0
Distribution Circles	
2. Coimbatore (South)	113.6
3. Pudukkottai	62.5
4. Villupuram	81.9
5. Udumalpet	68.3
6. Chenglepet	52.3
Urban Areas	
7. Coimbatore Metro	23.0
8. Salem Urban	31.1
9. Erode Urban	13.9
10. Tirunelveli Urban	12.1
11. Trichy Metro	19.2
12. Madurai Metro	17.2
13. Kancheepuram	8.6
14. Thiruvallur & Tiruthani	3.3
15. Namakkal	2.8
16. Sankari	9.8
17. Tiruchengode	2.7

18.	Edapady	0.8
19.	Kumarapalayam	1.5
20.	Cuddalore	2.8
21.	Chidambaram	1.5
22.	Virudhachalam	3.2
23.	Panruti	1.7
24.	Nellikuppam	0.8
25.	Kurinchipady	1.4

2. NATIONAL AGRICULTURAL BANK FOR RURAL DEVELOPMENT (NABARD) SCHEMES

NABARD has sanctioned loan assistance for rural electrification works from the Rural Infrastructure Development Fund VII, VIII and IX. Schemes worth of Rs.146.39 Crores have been sanctioned covering 14 Districts. Against this the expenditure upto 31.03.2004 is Rs. 100.24 Crores.

3. RURAL ELECTRIFICATION CORPORATION ASSISTED SCHEMES

Rural Electrification Corporation provides loan assistance for line loss reduction schemes under a five year implementation period. Schemes for line loss reduction have been sanctioned in respect of following Districts:

	Cost (Rs. in Crores)
Coimbatore (North)	87.86
Trichy (North)	131.46

Against this, an expenditure of Rs. 18 Crores has been incurred up to 31.3.04.

Further, Loan assistance is anticipated for the line loss reduction schemes in respect of following Districts from Rural Electrification Corporation(REC):

	Cost (Rs. in Crores)
1. Dindigul	109.34
2. Madurai	75.64

Works have been taken on the above schemes and an expenditure of Rs. 9.8 Crores has been incurred up to 31.3.04.

4. PRIME MINISTERS' GRAMA YOJANA (PMGY)

Schemes for undertaking electrification / load intensification in Tribal habitations located in three districts viz. for Vellore (Rs.20 Crores), Nilgiris (Rs.8 Crores) and Kodaikanal (1.4 Crores) in Dindigul District have been sanctioned and the works have been completed. An expenditure of Rs.28.43 Crores have been incurred upto 31.3.2004. In addition, the following schemes are also under execution as of now:

	Scheme	Expenditure upto 31.03.04 (Rs. in lakhs)
1.	Namakkal District – Phase-I	62.506
2.	Namakkal District – Phase-II	1.123
3.	Salem District	7.010
4.	Villupuram District	12.012
	Total	**82.651**

V. SPECIAL INITIATIVES :

1. Free electricity to Agricultural and Hut consumers

To safeguard the welfare of Public, the Government has ordered free supply of electricity to the agricultural consumers and hut consumers from 1.4.2004 by providing subsidy amounting to Rs. 196 Crores and Rs. 16 Crores per annum respectively. By this, around 15.3 lakhs of agricultural consumers and about 9 lakhs of hut dwellers are benefited. The subsidy will be released to Tamil Nadu Electricity Board on half yearly basis.

2. Subsidised tariff for domestic consumers

In the interest of Public of State of Tamil Nadu, this Government have decided to reduce the electricity tariff for domestic consumers with effect from 16.06.2004 as detailed below:

a) Electricity tariff for monthly consumption upto 50 units.

Monthly Electricity consumption (units)	Present rate fixed by the TNERC (Rs. per unit)	Revised rate (Rs. per unit)	No. of beneficiaries
0-25	1.10	0.65	Around 60 lakhs
26-50	1.30	0.75	

b) Electricity tariff for monthly consumption above 50 units.

Monthly Electricity consumption (units)	Present rate fixed by the TNERC (Rs. per unit)	Revised rate (Rs. per unit)	No. of beneficiaries
0-25	1.10	0.75	Around 57 lakhs
26-50	1.30	0.85	
51-100	2.60	1.50	
101-300	3.50	2.20	
above 300	4.75	3.05	

The Government will pay an amount of Rs. 910 Crs. for a full year towards subsidy for reduced tariff rates. The subsidy will be released to TNEB in monthly instalments.

3. Cancellation of conditions insisting Planning Permission and Completion Certificate while effecting service connections.

The Government has ordered cancelling the conditions of insisting Planning Permission and Completion Certificate for getting power connection and thereby made it easy to get power connection quickly to around six lakhs of prospective consumers every year.

ELECTRICAL INSPECTORATE DEPARTMENT

Introduction and Administration :

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

The Electrical Inspectorate Department was created in September,1961 as separate Department with Chief Electrical Inspector as its Head of the Department. After the formation of Energy Secretariat Department on 1.8.93, it 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).
2) Tamil Nadu Lifts Act, 1997 and Tamil Nadu Lifts Rules 1997.
3) Duties specified in Tamil Nadu Cinemas (Regulation) Rules 1957, in respect of Electrical installation of Cinema Houses.
4) Functions as Member of Technical Committee Bureau of Indian Standards, which makes Indian standard 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) Rule, 1957.

FUNCTIONS UNDER THE INDIAN ELECTRICITY RULES 1956 : -

1) Approval of High and Extra-High Voltage Electrical installations and periodical inspections of Generating Companies, Tamil Nadu Electricity Board and High Tension consumers under Rule 46 of Indian Electricity Rules 1956.

2) On receipt of intimation of all electrical accidents in the generation, transmission, supply and use of energy, inspection of the accident spot and preparation of reports as per Rule 44A of Indian Electricity Rules, 1956.

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

This Act has come into force on and from 16.6.2003 repealing the existing Tamil Nadu Electricity (Taxation on consumption) Act 1962 and Tamil Nadu Electricity Duty Act, 1939.

As per the Act: -

a. 10 paise tax per unit on self-generated consumption of electrical energy.

b. Levying 5 percent tax of the net charge on Electricity sold by the Tamil Nadu Electricity Board or by any other licensee.

c. Following categories of consumers are exempted from the levy of the above tax : -
   1) For Government consumption
   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 agriculture purpose.

STANDARDS LABORATORY AND MOBILE LABORATORIES :-

There is a Government Electrical Standards Laboratory at Guindy, Chennai. There are mobile Electrical testing Laboratories in Chennai, Salem, Thirunelveli, Madurai and Trichy.

TAMIL NADU ENERGY DEVELOPMENT AGENCY

INTRODUCTION :

Tamil Nadu Energy Development Agency (TEDA) an undertaking of the Tamil Nadu Government was set up in 1985, to develop and promote renewable energy sources in Tamil Nadu. With a view to encourage the public to use alternative sources of energy, the Agency is implementing various schemes with the assistance of Government of Tamil Nadu and Government of India. As a result of various efforts taken, the use of renewable energy has increased considerably in Tamil Nadu. Total installed capacity of power in this State from renewable sources (excluding Hydro power) as on 31.03.2004 is 1648 MW, which is 18 % of the total grid capacity of TNEB, whereas the respective All India average is 4.5% only. Thus, Tamil Nadu continues to be No.: **1** State in the country in power generation from renewable energy sources.

Renewable energy sources :

The important renewable energy sources are as follows :

(i) Wind energy, (ii) Solar energy,

(iii) Biomass and other forms of bio energy (iv) Tidal energy,

(v) Fuel cell, (vi) Ocean - Thermal energy, (vii) Geo-thermal.

Among the above mentioned sources, the first three renewable energy sources, namely, Wind, Solar & Bio energy are being harnessed in a big way in India and in Tamil Nadu, while the other sources have not yet reached a stage of commercial exploitation.

Renewable energy under Hon'ble Chief Minister's

15 point programme :

The promotion of renewable energy has received a great boost under Hon'ble Chief Minister's 15 point programme under the 15th point as follows :

Under point 15 (vii), the Government has made the use of solar water heating mandatory for certain types of new buildings in all Corporations including Chennai and other urban areas/towns in this State, as per G.O.Ms.No.112, Municipal Administration and Water Supply (MA-I) Dept, dt.16.8.2002 and G.O.Ms.No.277, Housing and Urban Development (UDI) Dept, dt.14.11.2002 covering Chennai Metropolitan areas.

Under Point 15 (ix):

(a) Government has taken up electrification of remote habitations not connected to the grid, through Solar Photo Voltaic Systems.

(b) As per Government's policy to promote biomass based power projects TEDA has recommended 37 biomass based power projects for a capacity of 249 MW upto 31.3.2004 for issue of consent by TNEB.

(c) The Government is also encouraging local bodies by sanctioning 3387 Solar Photo Voltaic street lights for 2003-04. Industries are also being encouraged to install biomass gasifiers for thermal and electrical requirements and 11 projects have been sanctioned upto 31.3.2004 and will be taken up for implementation.

The details of various schemes implemented by TEDA in its efforts to promote renewable energy are explained below:

I. WIND ENERGY:

1. (a) Wind Assessment Studies and Demonstration Wind Farms:

Wind Assessment studies were conducted to identify places having wind speed of more than 18 kmph. Based on the study, Demonstration wind farms for a total capacity of 19 MW were set up in Tamil Nadu over a period of time following which the first private sector wind farm in the country was established in Tamil Nadu during 1990.

(b) Growth in Investment from Private Sector:

As per the Wind Assessment studies in 67 sites, 40 stations were declared as suitable for wind power projects of which, 19 sites have

been developed mostly through private sector investment for a total installed capacity of 1361 MW as on 31.03.2004 which is more than 50% of the installed capacity in the country. In the last about 3 years alone, 548 MW, has been added including 371 MW added during 2003-2004.

(c) Sale of power to TNEB:

The investors, who generate electricity from the wind farms, can sell the power so produced to TNEB @ Rs.2.70 per unit or use the same for captive consumption in their industries subject to certain terms and conditions.

(d) Wheeling and Banking facilities :

Industries Investing in Wind Mills for captive power can avail of wheeling facilities for use in other places in the State on payment of 5% as wheeling charges to TNEB. Further, they can avail of banking facilities by which the power generated during a few months can be used throughout the financial year on payment of additional charges at 5% to Tamil Nadu Electricity Board.

2. Wind mill water pumping :

Small windmills are installed in places where wind speed is less than 18 kmph and are used for lifting water from open wells or borewells. Since inception, 875 windmills have been installed till March 2004, with financial assistance from State Government and Government of India. Tamil Nadu Energy Development Agency will obtain central financial assistance upto 50% of the cost for windmill water pumping systems of 1 HP capacity from Ministry of Non-conventional Energy Sources.

3. Aero generators :

Electricity can be generated by small wind generators called aero generators, and stored in batteries, which can in turn be used for lighting and other electrical purposes. As a pilot project, aero generators have been installed in **three** places in Kancheepuram,

Tirunelveli and Kanyakumari districts with central financial assistance. Tamil Nadu Energy Development Agency will obtain assistance from Ministry of Non-conventional Energy Sources, Government of India at 50 to 75% of the cost subject to eligibility of the beneficiaries.

II. SOLAR ENERGY:

Solar energy can be harnessed in two ways namely (i) for producing electricity meant for lighting and other electrical applications and (ii) for making hot water or for drying agricultural produce and processing industrial products and for cooking purposes.

1. Solar Photovoltaic system

(a) Solar photovoltaic devices

Solar photovoltaic (PV) devices for meeting the needs of home lighting, office lighting and street lighting are promoted in the State under scheme with 50% subsidy from Ministry of Non-conventional Energy Sources. During 2003-04, MNES have sanctioned subsidy for 500 SPV home lights and 3387 SPV Street lights mostly for local bodies. It is proposed to extend this scheme to cover more local bodies during 2004-05 as well.

(b) Electrification of remote habitations:

As per Government's objective of electrifying all the habitations in the State by 2005, the Government has approved a scheme for electrification of 152 remote habitations, not connected to grid, under phase-I using solar PV systems. The revised estimated cost of the scheme is Rs.8.15 crore. This has since been sanctioned by Ministry of Non-conventional Energy Sources with central financial assistance upto 90% of the cost. Balance 10% cost will be borne by the State Government. Maintenance cost is to be borne by the beneficiaries. Further, Tamil Nadu Energy Development Agency took up detailed survey of the remaining un-electrified habitations and has submitted proposals to Ministry of Non-conventional Energy Sources to cover them.

(c) SPV water pumps :

Electricity produced from solar energy can be used for running motor pumps upto 2 HP for minor irrigation or drinking water supply. MNES, which provided subsidy upto 40% of the cost, has since revised to about 30% with effect from 1.1.2004, subject to a maximum of Rs.2 lakhs per system. Soft loan upto 90% of the unsubsidized cost of the pumps at 5% interest may be availed from Indian Renewable Energy Development Agency through Financial Intermediaries approved by it.

The State Government sanctioned Rs.1.95 lakhs under Part II Scheme for 2003-04 towards additional subsidy for installing SPV water pumps in the State. In addition, a pilot project for installing of SPV water pumping system in Cauvery Delta areas to harness the ground water potential for cultivation is also under consideration of the Government.

2. Solar Thermal Energy

(a) Solar water heating system:

The scheme for installation of solar water heating system using solar thermal energy for purposes of bathing in houses, lodges and hospitals and washing utensils / equipment has been implemented in Tamil Nadu, with subsidy from Government of India. After the discontinuance of subsidy by Government of India in 1993, the State Government continues the subsidy for the scheme. For the year 2003-04, the Government sanctioned an amount of Rs.11.94 lakhs as subsidy for this scheme. Further as mentioned earlier the Government issued orders making the use of Solar Water Heating Systems mandatory for certain types of new buildings in the urban areas.

(b) Solar air heating system :

The technology for using solar thermal energy for drying grains, tea, fruits, leather, etc was first developed and used in Tamil Nadu. It has become viable for certain types of drying and air heating

applications. To encourage its use further, the Government of Tamil Nadu sanctioned an amount of Rs.4.61 lakhs for providing subsidy for drying of various products, for a total extent of 440 m² during 2003-04. The installations are expected to be completed soon.

(c) Solar cookers :

Box type solar cooker is meant for cooking for 4 to 5 persons, using solar thermal energy thereby saving conventional fuel like fire wood or gas. The central subsidy has been discontinued since 1995-96. It is now promoted through soft loan scheme of Banks. But, dish type cookers using solar thermal energy for 10 to 15 persons and steam cooking for large scale cooking received central subsidy upto 50% of cost. During 2003-04, solar steam cooking system has been sanctioned by MNES with subsidy of Rs.15.47 lakhs for Agasthiar Sanmargha Charitable Trust at Thuraiyur.

III. BIOMASS AND OTHER BIO ENERGY SYSTEMS:

The scheme for producing gas and electricity from biomass and other bio waste to and meet the energy requirements of industries or for export to grid are being implemented in Tamil Nadu. The details are given below:

1. Cogeneration:

The scheme for producing steam from bagasse in sugar mills and generating electricity for export of surplus power to TNEB and using the low pressure steam after power generation for process has been successfully implemented in Tamil Nadu. With a total installed capacity of 274.6 MW as on 31.3.2004, Tamil Nadu is leading in the country. It represents about 40% of total installed capacity in the country. The capacity addition of 132 MW during the last 3 years is quite impressive.

2. Biomass based power generation :

The Government of Tamil Nadu has been encouraging new projects for power generation using wood and other agro residues and wastes. A power plant of 12 MW capacity is in operation at

Palayaseevaram in Kancheepuram district and TNEB has also issued consent for six new biomass based power plants for a total capacity of 64.5 MW.

Further, based on the taluk level biomass assessment studies conducted in Tamil Nadu, the Government decided to promote new biomass based power projects. Accordingly, TEDA called for applications from the entrepreneurs with the help of TIDCO and in response 109 applications were received of which 31 applications have been selected and recommended to TNEB for issue of consent to set up new power projects for a total capacity of 200 MW. Subsequently 6 applications for 49 MW have also been recommended to TNEB for issue of consent.

In addition, District wise biomass assessment studies are in progress in the State with the assistance of MNES, which has since been completed, and the draft report is under preparation. The final report would provide information regarding power generation potential from biomass based on which Government will encourage more power generation projects.

3. Biomass Gasifiers:

MNES, Government of India has introduced a new scheme for installation of biomass gasifier systems to meet thermal and electrical energy required by the industries or other organisations. Tamil Nadu Energy Development Agency encourages industries to install gasifier systems under the scheme, which provides 10% of the cost for thermal application and 50% of the cost for electrical applications using 100% producer gas engines. During 2003-04, Ministry of Non-conventional Energy Sources has sanctioned 3 gasifiers for thermal uses and 8 gasifiers for electrical uses for a capacity of 3290 KW. Village panchayats are also encouraged to install gasifiers to produce power for water pumping and the scheme will be implemented in the current year.

4. Nightsoil based biogas plants :

Biogas plants have been installed in large numbers in Tamil Nadu. Based on the pilot schemes implemented in Kolathur (Salem) Perundurai (Erode) and Periyakulam (Theni), a scheme to assist Government and other institutions for installing nightsoil based biogas plants in various districts was sanctioned for the year 2003-04 with an allocation of Rs.43.5 lakhs for grant of subsidy at 33% of the cost. The scheme is under implementation in various institutions including integrated sanitation complexes in the villages. The Government has decided to continue the scheme for the year 2004-05 too with subsidy for plants of 10 cum capacity.

IV. USE OF RENEWABLE ENERGY IN LOCAL BODIES.

1. Solar PV Street lights

During the last two years, solar PV street lights have been installed in several local bodies especially in Pudukkottai, Coimbatore, Kanyakumari districts availing central financial assistance upto 50% of the cost from MNES. The local bodies are greatly benefited by way of saving in current consumption charges. During 2003-04, MNES have sanctioned central subsidy of Rs.3.08 crores for 3387 street lights based on special project report submitted by TEDA. The project covers 508 Panchayats in 28 districts and 6 Municipal corporations in the State. It has been proposed to extend the scheme to cover more local bodies in various districts during 2004-05 with assistance and support from the Rural Development Dept.

2. SPV power pumps for drinking water supply

Solar PV pumps are used for drinking water supply in rural areas by lifting water from shallow or borewells. This reduces the burden on the local bodies by way of savings in the monthly current consumption charges payable to Electricity Board. It is also used in remote areas for water pumping where grid power supply is not available. During 2003-04, a few SPV water pumps are taken up on pilot basis in select

Panchayats for providing drinking water supply with assistance from MNES and help of Rural Development Dept. Based on the success, the scheme will be extended to more areas during 2004-05.

3. Biomass gasifiers

In places where biomass such as wood, wood waste, agricultural residues etc are available, gasifiers can be installed to generate electricity for water pumping during day time and street lighting at night. Considerable saving in fuel cost can be achieved since the cost of producing electricity from gasifier is relatively lesser at about Rs.2.50 only per unit. During 2003-04 the Government of India sanctioned subsidy for 3 gasifiers for local bodies. It is proposed to instal such gasifiers of 9 KW capacity by availing subsidy from MNES and support from Rural Development Department during 2004-05.

Traditional cremation requires about 300 to 400 Kg. of wood per body, whereas the improved crematoria require about 150 to 200 kg of wood only. Modifed biomass gasifier can be used for cremation, which will also respect the customs and sentiments of the people besides maintaining the surroundings neat, and clean and realizing substantial savings.

4. Nightsoil based biogas plants

Biogas is a clean, cheap and convenient fuel with 55 to 60% methane. The methane gas can be produced from cattle dung, nightsoil, vegetable wastes etc, through a process called anerobic (absence of air) digestion. The biogas so generated can be used for cooking, lighting and operating small capacity motors to pump water. The residual slurry from biogas plants is enriched organic manure. During 2003-04, TEDA has given subsidy for 14 nightsoil based biogas plants in local bodies. It is proposed to install more nightsoil based biogas plants in integrated sanitary complexes in select Panchayats in districts during 2004-05 with the help of Rural Development Department.

V. OTHER SCHEMES:

1. Power generation from Waste:

Schemes for producing gas and electricity from tapioca / sago waste water, poultry litter and vegetable wastes are under implementation in Tamil Nadu. They are : (i) Project for producing gas and electricity from tapioca waste water in Pappireddipatty (Dharmapuri district) has been completed and the trial is in progress. (ii) Scheme for power generation from poultry waste in Namakkal district is to be completed and commissioned shortly. (iii) The Government of India have sanctioned financial assistance for a project to generate electricity from the vegetable wastes available in Koyambedu Wholesale Vegetable Market, Chennai which has been taken up by Chennai Metropolitan Development Authority during 2003-04 and is expected to be completed during the current year.

2. Battery Operated Vehicles :

The vehicles running on batteries have been developed and are in use, which help control pollution by reducing obnoxious emissions from petrol and diesel vehicles. The eligible institutions/ organisations using these vehicles are given subsidy upto 33% of the cost of vehicles from Govt of India. These vehicles can be used in wild life sanctuaries, tourist centres, hospitals, etc. to reduce pollution. In Tamil Nadu subsidy has been provided so far to 27 vans and 2 auto rickshaws.

3. Wind Resource assessment and Micro survey programme :

The Government of Tamil Nadu sanctioned Rs.5.00 lakhs for micro survey study in 2 Wind monitoring stations areas in the State to compile accurate and reliable data to enable the promoters select most suitable sites and achieve optimum production of power. TEDA has taken action to set up 2 new wind monitoring stations with funding from both State and Central Government and are expected to be installed soon.

4. Publicity and awareness programmes:

Tamil Nadu Energy Development Agency has been organising seminars and exhibitions propagating the use of renewable energy and energy conservation by the local bodies, non-Governmental organisation industries and other institutions besides taking part in programmes organised by other agencies. During 2003-2004 it organized such seminars in 15 Districts and the balance will be covered during 2004-2005.

5. Modified IREP

The Government of India (MNES) has modified the Integrated Rural Energy Programme (IREP) to cover all the rural areas, excluding notified municipal areas. The scheme provides for setting up State level cell at Tamil Nadu Energy Development Agency and one at each District under the District Rural Development Agency (DRDA). The programme will focus on select clusters of villages with 100% coverage to promote efficient use of traditional energy sources there and supplement the same by suitable non-conventional energy devices.

Local panchayats will be involved in the preparation of village energy plans, implementation, repair and maintenance of energy systems and devices, etc. Training facilities will also be arranged for the nominees of Panchayats. The Government of India provides Rs.5.0 lakh for the State cell and Rs.10.0 lakh for each district cell subject to matching grant by the State Government towards the cost of implementing the scheme. The scheme has also been approved by State Government and will be implemented from 2004-05.

6. Policy on Renewable energy

TEDA is formulating a new Renewable Energy Policy, which will be finalised in consultation with various stakeholders and in the light of provisions contained in the Electricity Act 2003. The Government will

take necessary action to announce a new Renewable Energy Policy to attract investment in renewable energy projects and to promote the use in various sectors.

VI. New Schemes for 2004-05 :

1. Schemes proposed under Part II.

The Government has proposed to take up the following new schemes at an outlay of Rs.102.00 lakhs during 2004-05 through TEDA.

S.No.	Scheme	Total outlay proposed to 2004-05 (Rs. in lakhs)
(i)	20 KW Bio-mass gasifier for Power Generation for Water Pumping / Street lights (14 nos.)	12.00
(ii)	Biomass gasifier (20 KW) for Noon Meal Centres, Schools with more than 500 students.	7.50
(iii)	State Level Energy Park at Chennai.	25.00
(iv)	Solar Water Heating Systems in Government /Quasi Government / Other Institutions.	15.00
(v)	Supply of Solar Educational kits to Government Higher Secondary Schools.	7.00
(vi)	Wind monitoring stations and Micro surveys	9.50
(vii)	Night soil based biogas plants.	20.00
(viii)	Preparation of Detailed Project Report for sustainable energy security system by Anna University.	4.00
(ix)	Provision of Conference Hall with necessary facilities in the office of Tamil Nadu Energy Development Agency.	2.00
	Total	Rs.102.00 lakhs

2. Hill Areas Development Programme

Tamil Nadu Energy Development Agency is also taking up the following schemes during 2004-05 under Hill Areas Development Programme (HADP) at an outlay of Rs.54.0 lakhs.

S.No.	Schemes	Rs. in lakhs
(i)	Solar water heating system for Government / aided institutions 6x1000 LPD or 12x500 LPD	10.00
(ii)	75 SPV street lighting system for local bodies.	15.00
(iii)	Four Solar Photo Voltaic pumping system for water supply in sanitary complexes.	10.00
(iv)	Setting up of Energy park at Government Polytechnic, Ooty.	5.00
(v)	Two Nightsoil based biogas plants of 10 m^3 capacity in Government / aided Institutions for water pumping during day time and street lighting at night.	4.00
(vi)	Installation of solar air heating systems for drying Tea leaves in the cooperative Tea factory.	10.00
	TOTAL	Rs.54.00 lakhs

3. Western Ghats Development Programme

Tamil Nadu Energy Development Agency proposed to take up the setting up bio-mass gasifier (Electrical) for Power Generation for drinking water supply and street lighting in local bodies (16.00 lakhs) and for Solar Photo Voltaic pumps for drinking water supply to local bodies (Rs.10.00 lakhs) and for provision of Solar Photo Voltaic street lights (Rs.16.00 lakhs) during 20004-2005 under Western Ghats Development programme at a total outlay of Rs.42.00 lakhs.

TAMIL NADU POWER FINANCE AND INFRASTRUCTURE DEVELOPMENT CORPORATION LTD.

INTRODUCTION :

The Tamil Nadu Power Finance and Infrastructure Development Corporation Limited (Power Finance) has been established as per the orders of the Government of Tamil Nadu vide its G.O.Ms.No.47 (PWD), dt.9.1.1991. The Corporation started functioning on 27.6.1991. The Corporation is registered with Reserve Bank of India as a Non Banking Finance Company. The main objective of the Corporation is to mobilise funds for the Power Sector in Tamil Nadu, particularly the schemes for generation, transmission and distribution of power by Tamil Nadu Electricity Board. The authorised share capital of the Corporation is Rs.50 crores and the Paid up Share Capital 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. This has resulted in the substantial growth of the deposit base from Rs.2.09 crores in 1991-92 to Rs.1475 crores as on 31.03.2004 and the number of deposits from 816 in 1991-92 to 98,250 deposits as on 31.03.2004. The deposits for the last two years 2002-2003 & 2003-2004, have been in the order of Rs.198 crores and Rs.316 crores respectively and thus a total of Rs.514 crores has been mobilised during the two years. The corresponding figures for number of deposits for these years are 12325 and 10020 respectively.

FINANCIAL ASSISTANCE :

All the funds mobilised by Power Finance are being utilised to finance Tamil Nadu Electricity Board for its generation / transmission / distribution activities. During 2003-2004, the Corporation has financed a sum of Rs.680 crores to Tamil Nadu Electricity Board by way of hire

purchase and long term loan. The total financial assistance provided to Tamil Nadu Electricity Board since inception is Rs.3739 crores and the net loan outstanding from Tamil Nadu Electricity Board is Rs.1811 crores as on 31.3.2004. In the last two years (2002-2003 & 2003-2004), Rs.448 crores has been provided as net financial assistance to Tamil Nadu Electricity Board. Apart from this, a sum of Rs.15 crores has been provided as financial assistance to M/s. Poompuhar Shipping Corporation Limited during the year 2003-2004.

GIRL CHILD PROTECTION SCHEME, 2001:

A sum of Rs.30.47 crores has been received as deposit under the "Girl Child Protection Scheme", which was introduced by the Hon'ble Chief Minister of Tamil Nadu, benefiting 19,975 girl children.

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 eight years since 1995-96. The Corporation is expected to earn a profit (net profit after tax) of Rs.24.00 crores during 2003-2004.

FUTURE PLANS:

1. Payment of interest through Electronic Clearing System in the cities of Trichy, Madurai, Tirunelveli, Coimbatore, Erode and Salem in addition to Chennai and upcountry locations
2. Conduct of Depositors' Camps to have a wider reach at Kolkota, Ahmedabad, Pune, Andaman & Nicobar Islands, etc.
3. Extend financial assistance to other Government institutions and other infrastructure projects.

D.JAYAKUMAR
MINISTER FOR LAW, INFORMATION TECHNOLOGY AND ELECTRICITY