ENERGY DEPARTMENT

POLICY NOTE

2015-2016

DEMAND NO.14

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ENERGY DEPARTMENT

Introduction

This policy document elaborates programmes and policies of the government towards making Tamil Nadu a power surplus state and meeting the demand of electrical energy commensurate with growth.

The State has successfully managed and systematically overcome the power deficit by early commissioning of new projects and procurement of power through medium and long term power purchase agreements. Due to vigorous efforts of the Government, thermal power stations such as Mettur Thermal Power Station-II, North Chennai Thermal Power Station-II, TANGEDCO-NTPC Joint Venture Thermal Power Station at Vallur and TANGEDCO-NLC Joint Venture at Tuticorin have been

commissioned and are generating power to the grid continuously. In the last 4 years additional power of 6239.5 MW has been added to the grid by commissioning of new power stations in State and Central sector and through medium and long term power purchase agreements. Daily average power supply has been increased from 200 million units to 275 million units. Because of the determined and systematic efforts vigorously pursued by the State Government, the State has bridged the gap between demand and supply.

The following organizations are under the Administrative Control of Energy Department:

I. Tamil Nadu Electricity Board which has been re-organised as,

i) TNEB Limited

ii) Tamil Nadu Generation and Distribution Corporation Limited (TANGEDCO)

iii) Tamil Nadu Transmission Corporation Limited (TANTRANSCO) and

II. Tamil Nadu Energy Development Agency (TEDA)

III. Electrical Inspectorate

IV. Tamil Nadu Power Finance and Infrastructure Development Corporation Limited (TNPFIDC)

TNEB Limited
Tamil Nadu Generation and Distribution Corporation Limited and Tamil Nadu Transmission Corporation Limited

Tamil Nadu Electricity Board (TNEB) was formed on July 1, 1957 under section 54 of the Electricity (Supply) Act 1948 in the State as a integrated utility responsible for power generation, transmission and distribution. The electricity network has since been extended to all villages and towns throughout the State. TNEB was restructured on 01.11.2010 into TNEB Limited; Tamil Nadu Generation and Distribution Corporation Limited (TANGEDCO); and Tamil Nadu Transmission Corporation Limited (TANTRANSCO).

1.1.0 Generation

1.1.1 Power position

The present average demand of power in the State is around 12500-12700 MW. It is expected to go upto 13,800 MW by the end of 2015-16. This demand will be met by generation from existing power stations and power projects to be commissioned in the year 2015-16.

All time high peak demand of 13,775 MW was met by TANGEDCO on 24.06.14 and energy consumption of 303.039 MU was met on 08.07.2015.

1.1.2 Capacity added to the grid in the last four years.

During the last four years **6239.5 MW** of power has been added to the Tamil Nadu's grid through State, Central (share) generating projects and power purchases.

Year	Projects	Capacity/ Share in MW
2011-12	Bhavani Kattalai Barrage-2	30
	Periyar–Vaigai SHEP-2	2.5
	Simhadri stage II Unit 1 (CGS Share)	99.5
	Periyar PH RMU (unit 1, 35 MW to 42 MW)	7
	TOTAL	**139**
2012-13	Simhadri stage II Unit 2 (CGS Share)	99.5
	TANGEDCO-NTPC JV unit 1 (Vallur)	350
	Periyar PH RMU (unit 2, 35 MW to 42 MW)	7
	Bhavani Barrage 2	10
	TOTAL	**466.5**

Year	Projects	Capacity/ Share in MW
2013-14	TANGEDCO-NTPC JV unit 2 (Vallur)	350
	MTPP Stage III	600
	NCTPS Stage II unit 1	600
	Periyar PH RMU (unit 3, 35 MW to 42 MW)	7
	Bhavani Kattalai Barrage 3	30
	Periyar–Vaigai SHEP-3	4
	TOTAL	**1591**
2014-15	NCTPS Stage II unit 2	600
	Kudankulam unit 1	563
	TANGEDCO-NTPC JV unit 3 (Vallur)	350
	TOTAL	**1513**

2015-16	Neyveli TS 2 Expansion (2x250 MW)	271
	TANGEDCO-NLC JV Tuticorin (2x500 MW)	439
	Bhavani Barrage 1	10
	TOTAL	**720**
Power Purchases	Medium Term Open Access	500
	Long Term Open Access	1310
	Total	**1810**
	Grand Total	**6239.5**

1.1.3 Installed capacity

The installed capacity of conventional energy sources of Tamil Nadu Generation and Distribution Corporation Limited is **13941.44** MW as on 31.08.2015 which includes TANGEDCO's Hydro (2298.4 MW), Thermal (4660 MW), Gas Stations (515.88 MW), share from Central Generating

Stations (5509 MW), Private Power Projects (958.16 MW).

The installed capacity of non-conventional energy sources as on 31.08.2015 (infirm power) is 8533.26 MW which includes generation from wind (7470.86 MW), Solar (173.00 MW), Biomass (230.00 MW) and Co-generation plants (659.40 MW).

1.1.4 Status of ongoing projects

1. ETPS Expansion TPP (1 x 660 MW)

The total project cost is Rs.4956 crores. Construction of site office and 33/11 kV sub-station are under progress. The project is expected to be commissioned in 2017-18.

2. Ennore SEZ Thermal Power Project (2 x 660 MW)

The total project cost is Rs.9800 crores. Letter of intent (LoI) for BHEL has been issued on 27.09.2014. TANGEDCO has filed a Special Leave Petition (SLP) in the Honorable Supreme Court to set aside the orders of the Division Bench of the Honorable High Court.

1.1.5 New Projects

Considering the demand-supply projection in the coming years, as announced by Hon'ble Chief Minister of Tamil Nadu for additional capacity of 20,000 MW in "Tamil Nadu Vision 2023", TANGEDCO has initiated action to establish the following new projects.

1. NCTPS Stage-III (1 x 800 MW)

The total project cost is Rs.4800 Crores. Tender has been called for Supply, Erection, and Commissioning of Boiler, Turbine, Generator (BTG) package and allied civil works on Engineering, Procurement and Construction (EPC) basis. Work will be commenced during this year and the project is expected to be commissioned in the year 2019-20.

2. Uppur Thermal Power Project (2 x 800 MW)

The total cost of the project is Rs.12664.76 crores. Tender has been called for supply, erection & commissioning of BTG along with connected civil works. Work will be commenced during this year and the project is expected to be commissioned in 2019-20.

3. Ennore Replacement Thermal Power Project (1 x 660 MW)

The total cost of the project is Rs.3960 crores. Letter of intent issued to the consultant on 16.07.2015 for conducting terrestrial EIA study. The project is expected to be commissioned in the year 2020-21.

4. Udangudi Thermal Power Project – Stage-I (2 x 660 MW)

The total project cost is Rs.10121 crores. After lodging the previous tender for EPC cum Debit Financing contract fresh tender has been called for under EPC. A case is pending at the Hon'ble High court against the tender process. The case will be vigorously pursued and work commenced after obtaining the clearance of the High Court.

5. Udangudi Thermal Power Project Stage–II (2 x 660 MW)

The total cost of the project is Rs.8745 crores. Government of Tamil Nadu accorded approval for establishment of the project on 03.02.2015. 1500 acres of additional lands have been identified adjacent to the existing project site for development of Stage-II & III.

6. Udangudi Thermal Power Project Stage–III (2 x 660 MW)

The total cost of the project is Rs.8745 crores. Government of Tamil Nadu accorded approval for establishment of the project on 03.02.2015. Action is being taken to float the tenders for EIA & Marine study. The project will be commissioned in the year 2020-21.

7. Cheyyur Ultra Mega Power Project (5 x 800 MW)

The project cost is Rs. 25,970 crores. This is an ultra mega project and the project is being developed by Government of India with private sector participation through Power Finance Corporation. Tamil Nadu will get 1600 MW power from the project as its share. Environmental clearance has been received for the project on 30.09.2013. Standard bidding document is being revised by the Central Government and Central Government is directly handling the subject.

8. Kadaladi Thermal Power Project, Ramanathapuram (4000 MW)

As announced by Hon'ble Chief Minister of Tamil Nadu for establishment of 4000 MW Kadaladi Thermal Power Project at

Ramanathapuram, the preliminary works have commenced.

9. Kundah pumped storage hydro-electric project - (4 x 125 MW)

The total cost of the project is Rs.1819 crores. All the statutory clearances required for the project have been obtained. This project is proposed to be executed in 3 phases.

Phase-I works are proposed to be executed in 3 Packages for which Standing Committee has approved the specifications of Package I and Package II and action is being taken to float the tenders.

Construction of Access Tunnel for a length of 500m under Phase-I has been completed. Tender for the balance 500m is finalised and the works will be taken up shortly. Tunneling work for Cable Tunnel for

a length of 470m has been completed. Balance works are under progress.

10. Sillahalla Pumped Storage HEP (2000 MW)

In-principle approval has been accorded by GoTN vide G.O. Ms. No.87, dt.11.9.2014 to execute the project at a total cost of Rs.7000 Crores.

Construction of Sillahalla Dam

Field Survey and Soil exploration works have been completed. Appointment of a Consultant for "Preparation of Detailed Project Report (DPR) and tender documents" is under process. DPR will be prepared and based on that next course of action will be pursued.

1.1.6 Coal

TANGEDCO has signed Fuel Supply Agreement (FSA) with coal companies for a quantity of 13.50 Million Tonnes per Annum (MTPA) for supply of coal to the existing thermal power stations (capacity 2970 MW). TANGEDCO has also executed 2 more new FSAs for these new units at Mettur and North Chennai (capacity 1800 MW) for a quantity of 6.945 MTPA.

TANGEDCO is constantly in dialogue with coal companies, Coal India Limited, Ministry of Coal and Ministry of Power for supply of coal as per the FSA's to the thermal power stations of TANGEDCO.

Coal requirement for the ongoing and upcoming Thermal Power Projects works out to 23.5 Million Tonnes per annum (approximately). Based on this, TANGEDCO applied for the following two coal blocks to

the Ministry of Coal, Government of India on 27.02.15.

i) Gare pelma sector – II in Chhattisgarh (768 Million Tonnes)

ii) Mahanadi and Machchakata in Odisha (1200 Million Tonnes) (480+720)

Meanwhile as requested by the Hon'ble Chief Minister of Tamil Nadu, the Ministry of Coal has intimated that Chandrabila coal block in Odisha which has a reserve capacity of 550 Million Tonnes will be allocated to Tamil Nadu. The allotment order for Chandrabila Coal block from the Govt. of India is awaited.

The Ministry of Coal has also allocated the Deocha Pachami coal block which has coal reserves of 2102 Million Tonnes in Birbhum district, West Bengal to following seven State Government / State Government Companies:

i. West Bengal Power Development Corporation Ltd.,

ii. Bihar State Power Generation Corporation Ltd.,

iii. Satluj Jal Vidyut Nigam Limited (SJVNL),

iv. Karnataka Power Corporation Ltd.,

v. Tamil Nadu Generation and Distribution Corporation Ltd.,

vi. Punjab State Power Corporation Ltd.,

vii. Uttar Pradesh Rajya Vidyut Utpadan Nigam Ltd.

TANGEDCO's share is 171 Million Tonnes out of the total reserves of 2102 Million Tonnes of coal. The joint venture agreement was signed between these seven companies on 07.01.2015. As per the notification of the Ministry of Coal, the process of forming joint venture company between above said companies to develop

the Deocha Pachami coal block is under process.

1.1.7 Performance of existing thermal power stations

Though the existing thermal power stations have served more than 20 years, yet due to proper maintenance the PLF of 83.42%, 84.71% and 77.21% is achieved by TTPS, MTPS and NCTPS respectively during 2014-15.

1.1.8 Co-Generation projects

TANGEDCO has taken up establishment of 12 Co-generation Plants with the capacity of 183 MW in Co-operative and Public Sector Sugar mills along with Sugar mill Modernization in Tamil Nadu at a total Cost of Rs.1,241.15 crores. These projects are

likely to be commissioned during the year 2015-16.

1.1.9 Solar power

Tamil Nadu State Solar Energy policy had been announced by Hon'ble Chief Minister of Tamil Nadu on 20.10.2012. In the policy it is proposed to establish solar power plants for a capacity of 3000 MW before December 2015.

Based on the policy directive, the Hon'ble TNERC has issued order on 'Comprehensive Tariff order on solar power', dated 12.09.2014 fixing solar preferential tariff of Rs.7.01 per unit without Accelerated Depreciation (AD) benefit and Rs.6.28 per unit with AD benefit for Solar Photo Voltaic (SPV) plants.

Progress in Preferential tariff scheme

1. Registered applications – 152 Nos. - 3873.5 MW
2. Power Purchase Agreement (PPA) executed – 43 Nos. – 1214MW
3. Solar power plants commissioned – 18 MW (6 Nos.)

The total installed capacity of solar power plants in the State is 173 MW (including 20 MW - Roof top solar plants).

1.2.0 Transmission

TANTRANSCO developed transmission infrastructure to effectively evacuate power from the existing and new power generating stations.

After this Government has assumed charge, 234 substations have been commissioned upto 31.08.2015 at an

amount of Rs.3506.59 crores to provide reliable power supply for the consumers.

1.2.1 Transmission schemes for wind power evacuation

Phase-I Transmission system

Development of a backbone network consisting of 2 new 400 kV substations and 1495 circuit kms of 400 kV Lines has been taken up. The network will connect Kayathar (New SS) – Karaikudi (existing PGCIL SS) – Pugalur (existing PGCIL SS) – Kalivanthapattu (existing PGCIL SS) - Sholinganallur (New SS - Ottiyambakkam) for effectively transmitting power across the State. Out of the above Kayathar 400 kV substation and 400 KV line work of 1436 Ckm have been completed and connected with the Grid. Sholinganallur (Ottiyambakkam) 400 kV SS work and

Kalivanthapattu to Ottiyambakkam 400 kV line work are under progress and are expected to be completed by 2015-16.

Phase-II Transmission System

For evacuation of wind energy a separate corridor with 3 nos. of 400 kV substations at Thappagundu, Anikadavu and Rasipalayam along with the associated 400 kV lines of 830 circuit km to be connected to the 400 kV substation at Dharmapuri (Palavady) has been taken up at an estimated cost of Rs.1306.25 crores and work is under progress. This transmission system is expected to be commissioned during 2015-16.

1.2.2 Inter State Power Evacuation

For effective utilization of inter-state power, establishment of 400 kV substation at

Tiruvalam along with associated transmission lines from Tiruvalam to Mettur Thermal Power Station - Stage-III and Alamathy 400 kV substation with a length of 696 circuit kms of transmission lines at an estimated cost of Rs.993.43 crores has been completed and tied with grid.

1.2.3 JICA Assistance

Under the Official Development Assistance (ODA) Loan of JICA, funding assistance amounting Rs.3572.93 crores for establishing 5 nos. 400 kV substations and 14 Nos. 230 kV substations along with the associated transmission lines have been sanctioned. Out of the five 400 kV substations, work are under progress at Sholinganallur, Karamadai and Manali substations and tenders are to be called for Korattur and Guindy substations. Out of

fourteen 230 kV substations, Alandur substation has been test charged. Works are under progress in respect of Ambattur 3rd Main Road, Poiyur, Kumbakonam, Kinnimangalam, Raja Annamalaipuram, Karuvallur, Central (CMRL), Purisai, Tiruppur and Shenbagapudhur, substations. Tendering is under process for TNEB Head Quarters, Kanchipuram and Savasapuram substations.

1.2.4 Other Schemes proposed in Chennai area

In order to evacuate power generated in Gummidipoondi and North Chennai area, 2 nos. of 400 kV substations are proposed. One at Thervoikandigai in which substation work is under progress and another one at Pulianthoppe (GIS).

Further, three more 230 kV substations are proposed to be established at Thiruverkadu, Mambalam and Porur.

Work is under progress for Thiruverkadu. Tenders are being finalised for Mambalam and tender floated for Porur substation.

1.2.5 Solar power evacuation

In order to evacuate the solar power generation in the southern parts of the State, works are under progress to establish 400 kV SS at Kamudhi, 230 kV SS at Muthuramalingapuram and the associated lines.

1.2.6 Additional Transmission Schemes for evacuation of renewable energy

In order to evacuate the huge quantum of the Renewable Energy (RE), TANTRANSCO

has taken up establishment of a vast network of high capacity transmission lines in the State for Rs.6000 Crores. Ministry of New and Renewable Energy (MNRE) has sanctioned assistance for Rs.1593 Crores and KfW agreement has been signed between MoF/GoI and KfW (German Development Bank).

The schemes under KfW funding have been taken up in five packages. Work is under progress for two packages and other packages are under tendering stage.

1.2.7 Power evacuation scheme from new thermal power projects in North Chennai area

As announced by Honorable Chief Minister of Tamil Nadu, to evacuate the power generated from the ongoing new thermal power projects in Ennore and North

Chennai, a 765/400 kV Pooling station at North Chennai at a cost of Rs.2335 Crores has been proposed. Further to effectively distribute the power sourced from other States a new 765/400 kV substation at Ariyalur in Villupuram District at a cost of Rs.2121.45 Crores and to strengthen the Coimbatore, Salem and Mettur network a new 765/400 kV substation at Coimbatore District at a cost of Rs.2335 Crores has been proposed.

1.2.8 Long term power purchases

The Central Electricity Regulatory Commission (CERC) in its order on 16.02.2015 has prescribed guidelines for allocation of corridor for supply of power under long term agreements to the Southern Region. Tamil Nadu Generation and Distribution Corporation Limited had

executed long term agreements for procurement of 3330 MW power for fifteen years from 2014.

Out of 3330 MW, agreement has been executed for 2158 MW from inter-state generators and 1172 MW from intra-state generators.

Out of 2158 MW for which agreement executed from inter-state generators, 678 MW is being received and the balance 1480 MW will be received before March 2016.

Similarly, out of 1172 MW for which agreement executed from intra-state generators, 632 MW is being received and the balance 540 MW will be received before March 2016.

1.2.9 Distribution

During the year 2014-15, 28 nos. 33 kV substations have been erected at a

cost of Rs.113.88 crores, 7478 kms of LT lines and 2428 kms of HT lines have been energized. TANGEDCO had also effected service connections to 8.58 lakhs new consumers in the year 2014-15.

During 2015-16, 13 nos. 33 kV substations have been erected at a cost of Rs.35.21 crores, upto August 2015, 3499 kms of LT lines and 1204 kms of HT lines have been energized upto July 2015. TANGEDCO had also effected service connections to 2.64 lakhs new consumers upto July 2015.

After this Government has assumed charge, 41.03 lakhs new connections have been given, upto 31.07.2015.

Categorywise total number of consumers being served in the State by TANGEDCO as on 31.03.15 is as follows:

Sl.No.	Category	Numbers in Lakhs
	HT Services	0.08
	LT Services	
1	Domestic	188.43
2	Commercial	27.93
3	Industries	5.83
4	Agriculture	20.46
5	Huts	11.45
6	Others	10.49
	Total	**264.67**

1.3.0 Strengthening of Distribution network

TANGEDCO has taken various measures to strengthen the distribution infrastructure.

1.3.1 Re-conductoring

TANGEDCO has planned to replace the existing aged HT/LT lines at an estimated cost of Rs.1054.22 crores in a phased manner. Works are under progress.

1.3.2 Conversion of overhead lines into underground cables

TANGEDCO has proposed to convert HT and LT overhead lines into HT and LT underground cables in cyclone prone coastal towns of Cuddalore, Nagapattinam and Velankanni in a phased manner. To implement this scheme, loan of Rs.360 crores has been sanctioned by the World Bank.

Preliminary works are being carried out for conversion of existing HT and LT overhead lines into underground cables in

Cuddalore, Nagapattinam and Velankanni Towns.

1.3.3 Rural Electrification

The Government of India has launched a centrally sponsored scheme, "Rajiv Gandhi Grameen Vidyutikaran Yojana (RGGVY) on 18.3.2005 with the goal of extension of electricity infrastructure to all un-electrified villages/un-electrified hamlets in order to provide access to electricity to all the households. The scheme is funded by Government of India through M/s. Rural Electrification Corporation Ltd., New Delhi.

The RGGVY works in 26 districts were completed. Further REC has accorded sanction for the implementation of the RGGVY scheme in balance 3 districts viz., Nilgiris, Tirunelveli and Dharmapuri districts

under phase II for a total cost of Rs.37.27 crores.

For implementation of Rural Electrification Scheme (RGGVY Scheme) in Tirunelveli, Nilgiris and Dharmapuri district on turnkey basis, Letters of award (LOA) have been issued and works are under progress.

1.3.4 Strengthening of distribution network through R-APDRP

The objectives of the Scheme are to provide quality and reliable power supply to the consumers and to bring down the AT&C losses below 15%. The project is taken up in two parts.

Part-A

An amount of Rs.417 Crores has been sanctioned in June 2009 towards

implementation of Information Technology in 110 towns and Rs.182.17 Crores has been sanctioned for Supervisory Control and Data Acquisition / Distribution Management System (SCADA/DMS) in 7 towns. Works related to automatic meter reading (AMR) for 48,264 Distribution Transformers and 2970 HT services have been completed. GIS Survey by ITIA is under progress for consumer indexing of 77.07 Lakhs consumers and mapping of all the assets of TANGEDCO is expected to be completed by October-2015.

R-APDRP Part-A (IT) has been implemented in 64 towns out of 110 towns. Balance 46 towns are proposed to be made "Go-Live" progressively in phases before March-2016.

Further under Part–A SCADA/DMS Control Centre equipments have been

commissioned in all 7 towns viz. Chennai, Madurai, Salem, Coimbatore, Tiruppur, Tirunelveli & Trichy. Installation & commissioning of SCADA equipments and DMS will be completed by December-2015.

Part-B

The works are under progress for erection of new substations, re-conductoring of lines at 11/22 kV level, works related to load bifurcation, feeder segregation, HVDS, RMUs, APFC panels, sectionalizers, installation of capacitor banks and consumer meter replacement etc., in order to reduce the AT&C losses to the target level of 15% in the eligible project towns (with AT&C losses of above 15%). Projects for 100 towns in Tamil Nadu for a total value of Rs.3445.10 Crores have been sanctioned.

So far, works have been completed in 7 towns and for 86 towns it will be completed by June 2016. Contract has been awarded for remaining 4 towns. For the balance 3 towns, LOA will be issued shortly.

1.3.5 Integrated Power Development Scheme (IPDS)

Integrated Power Development Scheme (IPDS), funded by Ministry of Power/Government of India, is implemented with the following objectives.

(i) 24x7 Power supply for all

(ii) Reduction of AT&C Losses

(iii) Electrification of all urban households

The works approved by the Monitoring Committee are to be executed with the funding as under:

Sl.No.	Category	% of funding
I	Upfront grant by MoP/GoI	60%
II	Lending from Financial Institutions (FIs)	30% (of which 50% may be for successful achieve ment of milestones stipulated)
III	Utility own fund	10%

In this regard, Detailed Project Reports for 522 towns for a value of Rs.1561.31 crores have been prepared and submitted to the Power Finance Corporation on 24.07.2015. Sanction has been accorded for 20 DPRs for a value of Rs.814.57 crores on 06.08.2015 and 17 DPRs for a value of Rs.746.74 crores on 02.09.2015, totaling to an amount of Rs.1561.31 crores.

1.3.6 Deendayal Upadhyaya Gram Jyoti Yojana (DDUGJY)

Government of India has launched Deendayal Upadhyaya Gram Jyoti Yojana (DDUGJY) for the rural areas with following components:

a. Strengthening and augmentation of sub-transmission & distribution (ST&D).

b. Rural electrification

Ministry of Power, Government of India has approved Rs.924.12 Crores under the above scheme.

1.3.7 Energy conservation measures

1. Prevention of Energy Theft

TANGEDCO has formed 40 teams of Ex-servicemen, 17 Enforcement Squads and one flying squad for inspection and detection of theft of energy in Electricity Distribution

Circles. During the year 2014-15 upto March 2015, Ex-servicemen teams have detected 14,701 cases of power theft and have levied Rs.22.84 crores towards provisional assessment and compounding charges. Similarly during the year 2014-15, Enforcement Squads have detected 3,833 cases of theft of energy and have levied Rs.27.06 Crores towards provisional assessment and compounding charges. Intelligence wing has also been formed to study and analyze electronic data from meters to detect theft of energy in HT consumers. The Intelligence wing has so far detected 82 cases and levied penalties for Rs.95.33 lakhs.

During the year 2015-16 upto July 2015, Ex-servicemen teams have detected 4615 cases of power theft and have levied Rs.7.09 crores towards provisional

assessment and compounding charges. Similarly during the year 2015-16 upto July 2015, the Enforcement Squads have detected 1317 cases of theft of energy and have levied Rs.9.57 Crores towards provisional assessment and compounding charges. The Intelligence wing has also been formed to study and analyze electronic data from meters to detect theft of energy in HT consumers. The Intelligence wing has detected 88 cases of theft of energy during the year 2015-2016 upto July 2015 and levied penalties for Rs.63.73 lakhs towards provisional assessment and compounding charges.

2. Energy conservation measures (Awareness Generation)

The "Energy Conservation Day and Week" is being celebrated every year during

December 14-20. As a promotional measure, slogan on Energy conservation "SAVE ELECTRICITY" is being sent as SMS to about 1.7 Crore consumers along with SMS on payment of current consumption (CC) charges.

Training wing of TANGEDCO also emphasizes the need of Energy Conservation and also popularising the use of energy efficient lighting and star rated equipments in all training programmes / workshops / seminars.

The program of Energy conservation awareness to school students has been started throughout the State from October 2014. So far (upto July 2015) about 6.71 lakh students have been enlightened on energy conservation.

Seminar/talk/lecture on Energy Conservation for disseminating the

knowledge and the latest technical knowhow is being taken up for central government sectors, micro/small/medium enterprises, private/public sector, MNC companies and Higher educational institutions.

1.3.8 Consumer Friendly Measures

TANGEDCO is taking all efforts to simplify payment of electricity bills. The bill collection system is fully computerized. Online payment facility is also made available through 18 Banks.

The facility for accepting the current consumption charges from consumers by post offices has been strengthened. In addition to the existing 1978 post offices, 544 new post offices have been recently added to the network.

TANGEDCO has provided the facility to pay the Electricity Bill through the Bank

Counters of Tamil Nadu Mercantile Bank (TMB), City Union Bank (CUB) and Lakshmi Vilas Bank (LVB).

TANGEDCO is also providing facility of LT Current Consumption charges collection through Urban Common Service Centres in the Chennai city from 02.05.2014 and through Tamil Nadu Arasu Cable TV Corporation from 02.02.2015. At present, about 40 lakh LT consumers are using these alternative modes of payment. The High Tension consumers are also provided with facility of paying their electricity bills through National Electronic Funds Transfer / Real Time Gross Settlement (NEFT/RTGS). About 2000 HT consumers are paying using RTGS.

TANGEDCO has introduced the facility to register grievances online with the Consumer Grievance Redressal Forum of the concerned circle.

1.3.9 Call centres

Call centres for redressal of grievance on power failure are functioning at Chennai, Coimbatore, Madurai, Trichy, Erode, Tirunelveli, Nagercoil, Salem, Vellore, Kanchipuram, Karur and Tiruppur. Consumers can register their complaints by dialing 1912. A fully computerized Customer Care Centre for the entire TANGEDCO has been envisaged under R-APDRP scheme and is proposed to be established shortly. In the Proposed Customer Care Centre, it has been planned to introduce additional facilities such as redressal of billing complaints, metering complaints, register of applications for new service connection, status enquiry of the pending applications etc.

1.4.0 Finance

The Government of Tamil Nadu in the past four years, has extended various financial assistances to TNEB to the extent of Rs.39,374 crores, by way of Tariff Subsidy, Equity share capital, Govt loans, etc. In order to improve the financial position of TNEB, the GoTN has approved a Financial Restructuring Plan to take over loans of Rs.6353.49 crores being 50% of short term liabilities. The repayment of principal and interest (Rs.578 crores per annum) is also undertaken by GoTN. Out of the loans to be takenover, a sum of Rs.1000 crores of loans has been takenover during 2014-15 and also repaid to banks. Further, the GoTN has also provided Government Guarantee of Rs.50,650 Crores, for implementation of Financial Restructuring Plan and also for availing additional loans.

The Government of Tamil Nadu has sanctioned the following financial assistance to TNEB in Budget Estimate 2015-16.

Sl. No.	Assistances	B.E. 2015-16 (Rs in crores)
1	Tariff Subsidy	7136.78
2	Equity Share Capital assistance	2000.00
3	Transmission System Improvement Loans & Grants	854.32
4	Loans to TNEB	1000.00
5	Hydel Swing Subsidy	125.00
6	Taken over of Bonds under FRP	2000.00
7	Interest on Bonds of TANGEDCO taken over under FRP	470.00
	Total	**13586.10**

Out of the above, the Government of Tamil Nadu has released a sum of Rs.1500 crores of Equity share capital and Rs.3586.10 crores of Tariff subsidy, upto 14th September 2015. The GoTN is also planned to takeover TANGEDCO's FRP Bonds of Rs.1000 crores during Sep'15. In the current financial year 2015-16, the half yearly interest charges of Rs.235.35 crores on the loans taken over has been paid to Banks.

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TAMIL NADU ENERGY DEVELOPMENT AGENCY

Tamil Nadu Energy Development Agency (TEDA), formed in 1985, is the designated State Nodal Agency for channelizing central financial assistance from Ministry of New and Renewable Energy (MNRE) and to assist in Renewable Energy Policy formulation. It also facilitates various Government departments to implement renewable energy schemes through technical support, product identification, bid process management and capacity building.

Tamil Nadu is an undisputed leader in renewable energy in India. The total renewable energy installed capacity as on 31.08.2015 is 8533.26 MW, which is 23.29% of the Country's renewables capacity. The installed capacity of renewable energy in Mega Watt term is 36.96% of the total

installed capacity of the State. In terms of energy generation, 14.07% comes from Renewable energy in the State. This is significantly higher than the contribution of renewable energy in the country, which is 9.28%.

Installed capacity of renewable energy

Sl. No.	Renewable Energy Type	Installed Capacity (MW) as on 31-08-2015
1	Wind	7470.86
2	Bagasse cogeneration	659.40
3	Bio Mass Power	230.00
4	Solar	173.00
	TOTAL	8533.26

Wind constitutes the highest component of the renewable energy in Tamil Nadu. The installed capacity of the wind mills in the State is the highest in India and 10th largest in the World. The State is second in the country in terms of installed capacity of cogeneration based power plants.

2.0 Tamil Nadu Solar Energy Policy 2012

The objective of the policy is to encourage public participation in promotion and use of solar energy. The Hon'ble Chief Minister's vision is to make use of Solar energy a people's movement as was done earlier in the case of rain water harvesting. This is proposed to be achieved by encouraging grid tied solar roof top systems on Government and private buildings.

Large capacity addition is proposed through solar power generation by use of

power purchase agreements and Renewable Energy Certificate (REC) mechanism. Net-metering has been permitted in the State, for domestic and commercial consumers. Net-metering means that consumers are only charged net of electricity from grid and solar energy fed to the grid.

2.1 Chief Minister's Solar Powered Green Houses Scheme

This is India's largest scheme for installation of Solar Roof top panels for self consumption. Under the scheme, a sum of Rs.180 Crore is earmarked annually for provision of solar powered Home Lighting systems. Installation and commissioning has been completed in 1,41,571 houses.

2.2 Energisation of Street lights through solar power

The Solar Street lights Scheme for rural areas launched in 2011-12 envisages conversion of 1,00,000 streetlights to solar powered energy efficient street lights by 2015-2016. Under the scheme, a sum of Rs.52.50 crore is being provided every year for converting 20,000 street lights into Solar powered street lights through centralized solar plants of 500-600 Watts capacity. The installed lights are monitored continuously through Remote Monitoring Units.

2.3 Chief Minister's Solar Roof Top Capital Incentive Scheme for Domestic Consumers

Under Chief Minister's Solar Rooftop Capital Incentive scheme, incentive of Rs.20,000/- is extended towards installation

of Grid tied Battery-less Solar Photo Voltaic Rooftop plants of 1 kW capacity to domestic consumers of TANGEDCO. The Generated solar power can be consumed within the house or fed into the grid through net metering arrangement. This incentive is in addition to the MNRE subsidy available for such solar plants.

2.4 Financial Assistance available for Renewable Energy schemes

Following schemes with incentives are available for encouraging solar photo voltaic generation. Projects involving solar roof top plants of cumulative energy capacity of 29.22 MW with financial assistance of Rs.116.42 crore have been sanctioned in last three years.

Sl. No.	Name of the Scheme	Available Financial Assistance/ Subsidy
1	(a) Solar Photo Voltaic (SPV) Water Pumping System - DC pumps Up to 2 HP >2 HP to 5 HP	 Rs.43,200/HP Rs.40,500/HP
	(b) SPV Water Pumping System - AC pumps Up to 2 HP >2 HP to 5 HP >5 HP to 10 HP	 Rs.37,800/HP Rs.32,400/HP Rs.28,800/HP
2	SPV Power Plants (with battery bank @ 9.6 Vah/Wp) Up to 300 Wp >300 Wp to 10 kWp >10 kWp to 100 kWp	 Rs.75/Wp Rs.45/Wp Rs.39/Wp
3	SPV Power Plants (Without Battery)	

	Up to 500 kWp		Rs.24/Wp	
4	Micro Grid Up to 10 kWp		Rs.105/Wp	
5	Mini Grid >10 to 500 kWp		Rs.90/Wp	
6	Street Lights through SPV power Plant Up to 100 kWp		Rs.75/Wp	
7	Solar lighting systems, Street lights, Home lights	CFL	Up to 74 Wp	Rs.75/Wp
		LED	Up to 40 Wp	Rs.120/Wp

The capital subsidy is applicable on the system cost inclusive of installation, commissioning, transportation, insurance, cost of 5 year maintenance and taxes.

a) Off-Grid Solar Thermal Application

Financial assistance is available for various off-grid solar thermal applications for converting solar energy to heat energy. This

is widely used in commercial and industrial drying and other applications. Financial assistance has been released for 8540 systems (including domestic systems) to the tune of Rs.10.24 crores in the last 3 years.

Sl. No.	Name of the Scheme	Available Financial Assistance/Subsidy
1	Flat Plate Collectors with air as the working fluid	Rs.2400/ sq. m
2	Solar collector system for direct heating applications	Rs.3600/ sq. m
3	Concentrator with manual tracking	Rs.2100/ sq. m
4	Non- imaging concentrators	Rs.3600/ sq. m
5	Concentrator with single axis tracking	Rs.5400/ sq. m
6	Concentrator with double axis tracking	Rs.6000/ sq. m

b) Bio-mass based projects

Financial assistance is also available for electricity generation through solid biomass such as wood, wood waste, agricultural residue. Financial assistance for 15 projects for Rs.16.58 crores has been released in last three years for the following categories of the projects.

Sl. No	Name of the Scheme	Available Financial Assistance/Subsidy
1	Bio-mass power projects	Rs.20 lakh x (CMW) Maximum support of Rs.1.50 Crore/Project
2	Bagasse Co-generation by Private sugar mills	Rs.15 lakh x (CMW) Maximum support of Rs.1.50 Crore/Project
3	Bagasse Co-generation projects by cooperative/ public sector sugar mills	40 bar & above - Rs.40 lakhs/MW of surplus power
		60 bar & above - Rs.50 lakhs/MW of surplus power
		80 bar & above -

		Rs.60 lakhs/MW of surplus power (maximum support Rs.6.00 crore per project)
4	Distributed/Off grid power projects in rural areas and grid connected power projects with 100% producer gas engines or biomass based combustion projects	Rs.15000 / KWe
5	Biomass gasifier projects for Distributed/Off grid for Rural Areas and grid connected power projects for ensuring regular availability of biomass, provision of	Rs.1.50 lakh per 50 kW

	collection, processing and storage and operation & maintenance including compulsory AMC for 5 years after the guarantee period.	
6	Biogas based Power Generation systems under Biogas power (Off-Grid)	For 3-20 kW ($25m^3$Plant Capacity)- Rs.40,000 per kW
		>20kW up to 100kW (Any combination of above plants or approved alternate capacity/ Design) Rs.35,000 per kW
		>100kW upto 250 kW (Any combination of above plants or approved alternate capacity / Design)- Rs.30,000 per kW
7	Energy from Urban Industrial and Agricutural Wastes/Residues	

(i)	Power generation from Municipal Solid Waste	Rs.2.00 crore/MW (Maximum Rs.10 crore/project)
(ii)	Power generation from biogas at Sewage Treatment Plant or through biomethanation of Urban and Agricultural Waste/ Residues	Rs.2.00 crore/MW or Bio CNG from 12000 m^3 biogas/day (Maximum Rs.5.00 crore /project)
iii)	Biogas generation from Urban, Industrial and Agricultural Wastes/Residues	Rs.0.50 crore/MWeq (12000 m^3 biogas/day with maximum of Rs.5.00 crore/project)
(iv)	Power Generation from Biogas (engine/ gas turbine route)and production of bio-CNG for filling into gas cylinders	Rs.1.00 crore/MW or bio CNG from 12000 m^3 biogas (Maximum Rs.5.00 crore/project)

(v)	Power Generation from Biogas Solid Industrial, Agricultural Wastes/Residues excluding bagasse through Boiler + Steam Turbine Configuration	Rs.0.20 crore/MW (Maximum Rs.1.00 crore /project)

c) Small Wind Energy and Hybrid systems

Financial assistance is also available for Small Wind Energy and Hybrid Systems which is to promote use of renewable energy in water pumping wind mills and aerogenerators (wind-solar hybrid systems which generate electricity).

Sl. No.	Name of the Scheme	Available Financial Assistance/ Subsidy
1	Small Wind Energy & Hybrid Systems (Aerogenerators/Wind - Solar Hybrid systems)	Rs.1,00,000/- per kW (for community users only)
Watermills		
Sl. No.	**Name of the Scheme**	**Available Financial Assistance/ Subsidy**
1	Development/Up-gradation of Watermills	1. Mechanical output only- Rs.50,000/- per Watermill 2. a) Electrical output (up to 5 kW) – Rs.1,50,000/- per Watermill (or) b) Both mechanical and electrical output (up to 5 kW) -

		Rs.1,50,000/- per Watermill
2	Micro Hydel Projects (up to 100 kW capacity)	Rs.1,25,000/- per kW

Note: A minimum contribution of 10% of project cost should be met by the beneficiaries or project owners.

Water mills numbering 90 with a financial assistance of Rs.0.99 Crores have been sanctioned in the last three years. Sanction has been accorded for the installation and commissioning of 20 Nos. of Wind-Solar Hybrid Systems with total capacity of 954 kW in the State under Small Wind Energy Hybrid Systems programme at a cost of Rs.17.96 Crores with subsidy of 9.54 Crores.

d) Unnat Chulha Abhiyan (UCA) Programme

Financial assistance is also available for use of biomass cookstoves providing cleaner cooking energy solutions in rural, semi-urban and urban areas using biomass as fuel for cooking.

Eligibility Criteria	Projects	Available Financial Assistance/ Subsidy
Family sized /domestic cook-stoves/earthen cookstoves	1. Natural draft (including earthen chulhas with metal combustion chambers)	upto 50% of cost of cookstove with maximum ceiling of Rs.400
	2. Natural draft (including earthen chulhas	upto 40% of cost of cookstove with maximum

	with metal combustion chambers	ceiling of Rs.300
	3. Forced draft	Rs.450 per cookstove
Community Cook-stoves for MDM Kitchens, Anganwadis, Tribal/SC/Backward hostels, government and forest rest houses etc.,	1. Natural draft	upto 50% of cost of cookstove with maximum ceiling of Rs.2500
	2. Natural draft	upto 40% of cost of cookstove with maximum ceiling of Rs.2000
	3. Forced draft	Rs.3000 per cookstove

2.5 Solar Projects in Government Buildings

In line with the Solar Energy Policy announced by the Hon'ble Chief Minister of

Tamil Nadu, several government departments have taken initiative to provide roof top solar installations. Installations with total capcity of 897.63 kW have been completed on various government buildings.

2.6 Solar Projects under Viability Gap Funding (VGF)

Solar Energy Corporation of India (SECI) has been designated as the nodal agency for implementation of MNRE schemes for developing grid connected solar generating capacity through Viability Gap Funding (VGF) mode in the Country. Under this scheme, Tamil Nadu has asked for Solar projects of 2000 MW capacity to be set up in the State.

2.7 Innovation Schemes

Constant endeavor is being made to encourage new and innovative schemes. A Memorandum of Understanding has been signed between Indian Institute of Technology, Madras and TEDA in this regard.

A software to design a Solar Photo Voltaic power plant of capacity ranging from 300 Wp to 100 kWp has been designed and developed by TEDA for the benefit of new entrepreneurs and technicians and uploaded in the website www.teda.in.

2.8 Electrification of un-electrified remote habitations in Tamil Nadu

In order to ensure electrification of left over remote habitations in the State, lighting through solar energy will be provided to 5787 households in remaining 115 un-electrified remote habitations of 12 districts

viz., Theni, Tiruvannamalai, Salem, Erode, The Nilgiris, Dindigul, Madurai, Kanniyakumari, Tirunelveli, Dharmapuri, Vellore and Coimbatore at an estimated cost of Rs.8.68 Crores.

2.9 Solar Photovoltaic Roof Top system in all Government/Local Body buildings

The Government has made mandatory installation of Solar Photo Voltaic Roof Tops in all the new Government buildings with area exceeding 20,000 square feet.

2.10 Solar Powered Pumping system

A scheme for the provision of Solar agriculture pumps with 80% of the cost as subsidy and 20% contribution from the beneficiaries, is being implemented by Agriculture Engineering Department. Tamil Nadu Energy Development Agency provides

technical support and acts as a nodal agency for availing Central Financial Assistance for the project.

2.11 International Renewable Energy Conference (RENERGY)

RENERGY (An exhibition of International significance on Renewable Energy) is an annual event since the year 2012 & has emerged as the largest & the most prestigious Renewable Energy event in the Country. RENERGY 2014 attracted 200 exhibitors, 2000 conference delegates and 15000 quality business visitors. RENERGY 2015 was conducted by the Tamil Nadu Energy Development Agency along with the Global Investors Meet on 9-10th September, 2015 at Chennai Trade Centre.

2.12 Highest Renewable Energy Capacity Addition in the Country

Tamil Nadu was felicitated with an award by Hon'ble Prime Minister of India during RE-INVEST event in New Delhi, for being one of the best performing states in renewable power capacity addition. The award was received by the Hon'ble Minister for Electricity, Prohibition and Excise on 15th February, 2015.

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ELECTRICAL INSPECTORATE DEPARTMENT

The Electrical Inspectorate is responsible for ensuring compliance of the safety provisions in electrical installations and has also been entrusted with licensing of Lifts, testing of electrical instruments, levying and collection of Electricity Tax and promoting energy conservation.

3.0 Services Rendered by the Department

The following services are rendered by this department at the State, Regional and District level offices:

i. Scrutiny of plan and design, inspection and approval for the High Voltage, Extra High Voltage electrical installations and Multistoried buildings observing the provision of Central

Electricity Authority (Measures relating to Safety and Electric Supply) Regulations, 2010.

ii. Calibration & Testing of electrical equipments and meters for correctness.

iii. Co-ordinating, regulating and enforcing the provisions of the Energy Conservation Act, 2001 (Central Act 52/2001) in the capacity of State Designated Agency for energy conservation.

iv. Levying and collection of tax on consumption as well as sale of electrical energy under the Tamil Nadu Tax on Consumption or Sale of Electricity Act, 2003.

v. Licensing of the lifts under the provisions of Tamil Nadu Lifts Act, 1997.

vi. Certification of electrical fitness to cinema buildings as per Tamil Nadu Cinema (Regulation) Rules, 1957.

vii. Licensing for Electrical Contractors and certification for qualified electrical personnel through the Tamil Nadu Electrical Licensing Board attached to this department.

3.1 Performance & Revenue receipts

The performance of the Department during 2014-15 as on June 2015 is as follows:

Sl. No.	Services rendered by this department	No of installations
(a)	Issued licence for erection of new lifts	3115
(b)	Renewal of licence for the existing lifts	10835
(c)	Issue of permission for energisation of	2044

	new electrical installations and Additions / Alterations of equipment in the existing installations	
(d)	Statutory inspections of High Tension installations	4982
(e)	Certification of electrical fitness to cinema buildings	732
(f)	Scrutiny of drawing proposal for the new Electrical Installations and Additions / Alterations of equipment in the existing installations	2102
(g)	Testing and calibrations of electrical meters	5801

The department mobilized Rs.11.15 crores of revenue from its inspection and other services. It collected Rs.95.76 crores of

electrical tax from various generators supplying electricity to consumers other than Tamil Nadu Electricity Generation and Distribution Company as on May 2015.

3.2 Testing and Calibration

In order to undertake testing and calibration of electrical equipments, meters and instruments, facilities are available at the Government Electrical Standards Laboratory attached to the Head Quarters office of the Electrical Inspectorate. The laboratory receives energy meters and other electrical instruments from various State Electricity Boards in our country for calibrating upto 1000 ppm accuracy. This laboratory has been accredited by NABL from October, 2013 for undertaking calibration with 270 ppm accuracy level. This facility thus is able to offer services as per the

international standards. It is one of the few laboratories in the Country with calibration facility of such a level of accuracy.

3.3 Energy Conservation

(i) Energy Conservation Building Code (ECBC)

The Energy Conservation Building Code (ECBC) launched by Ministry of Power, Government of India is a model document listing out mandatory requirement of energy efficiency in the building sector, besides prescribing minimum energy efficiency standards for design and construction of commercial buildings. As per powers conferred under clause 15(a) of the Energy Conservation Act, 2001 State Government has already taken adequate steps to amend the energy conservation building code. Accordingly, the Government of Tamil Nadu

has constituted a technical committee for evolving technical guide lines for adoption of ECBC by local bodies. The committee has prepared a draft ECBC document to suit local climate conditions.

(ii) Waste Heat Recovery Policy for the State and Sector Specific Energy Savings Plan for the State

The Bureau of Energy Efficiency (BEE), under the Ministry of Power, Government of India supports the activities related to the Energy Conservation, under the scheme "Contribution to State Energy Conservation Fund (SECF) by the Bureau of Energy Efficiency" to carryout waste heat recovery projects. Accordingly, Electrical Inspectorate has prepared waste heat recovery policy. Sector specific energy savings plan for the

State is under preparation by the Electrical Inspectorate.

(iii) Demonstration Project on Energy Efficiency at NKM building, Tamil Nadu Secretariat, Chennai-9 and Ezhilagam Main Building, Chepauk, Chennai-5

In order to promote Energy Efficiency in office buildings, implementation of Energy Efficiency Measures at Namakkal Kavingnar Maaligai, Secretariat and Ezhilagam Main Building, Chepauk have been undertaken. The project involves replacement of Air conditioners and ceiling fans by star labelled ones and conventional tube lamps by energy efficient T5 fittings so that an energy saving of about 20% is achieved.

3.4 Electrical Licensing Board

Statutory provisions under regulation 29 of Central Electricity Authority (Measures relating to Safety and Electric Supply) Regulations, 2010 stipulates that all the electrical installation works can only be carried out by the licensed contractors and workmen. The Electrical Licensing board under the Electrical Inspectorate has been designated as competent authority to issue license to the electrical contractors and to grant certificate of competency to wiremen and supervisors in order to ensure that all the electrical works are handled by licensed contractors and certified personnel. The electrical contractor's license are classified as ESA, EA, ESB and EB grade depending upon the competency in handling High voltage. So for 7,323 contractors have been issued various types of license and 81,567

work men have been issued with competency certificates as on July 2015.

3.5 Improvement in service delivery of the Electrical Inspectorate

On line lift licensing and electricity tax filing:

The development of software through ELCOT for the on line lift licensing system is completed. The system will simplify lift licensing system. This will benefit of the owners of the lifts at residential apartments, commercial complexes and office buildings.

The development of software through ELCOT for the on line filing of returns of electricity tax is also completed.

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TAMIL NADU POWER FINANCE AND INFRASTRUCTUR DEVELOPMENT CORPORATION LIMITED, CHENNAI - 35

Tamil Nadu Power Finance and Infrastructure Development Corporation Limited (TNPFIDC) was incorporated on 27.06.1991 as a Non Banking Finance Company to fund infrastructural projects undertaken by the Tamil Nadu Electricity Board. The Company mobilizes funds for lending, to schemes relating to Generation, Transmission and Distribution infrastructure of TANGEDCO and TANTRANSCO. TNPFIDC is classified as a Public Financial Institution by the Ministry of Company Affairs, Government of India. The authorized and paid-up share capital of the Company is Rs.90 crores.

4.0 Fixed Deposits

TNPFIDC mobilize funds from individuals as well as institutional investors. There is a steady increase in depositor base of the Company. This is perhaps the result of confidence of depositors reinforced by consistent profitability of the Company. During the year (from 1.4.2014 to 31.3.2015), the Company mobilized a sum of Rs.1,436.21 crores as net cumulative deposits. The net deposits during the year (from 01.04.2014 to 31.3.2015) has grown at a growth rate of 14.73%. It has gone up from Rs.9,751.06 crores at the beginning of the year to Rs.11,187.27 crores as on 31.3.2015. This includes deposits mobilized from public, institutional deposits and the State Government Schemes. Out of the total deposits of Rs.11,187.27 crores, the contribution from the individual investors is

Rs.2,732.14 crores and the balance amount of Rs.8,455.13 is from institutional investors and State Government Schemes.

4.1 Deposits of the State Government Schemes

The funds allotted for various Government Schemes are invested in TNPFIDC. Under the Cash Incentive Scheme, the School Education Department has deposited a sum of Rs.313.10 crores, Rs.353.56 crores, Rs.381.00 crores and Rs.381.00 crores in the year 2011-2012, 2012-2013, 2013-2014 and 2014-2015 respectively to prevent dropout of students in the Schools. Under this scheme, school going students in government and government-aided schools get an incentive of Rs.1500/- per student per year for completing class 10^{th} and 11^{th} and

Rs.2,000/- for appearing in class 12th examination. The money is deposited with TNPFIDC and after appearing in class 12th examination, the incentive along with interest of Rs.6027/- per student is transferred to the bank accounts of the students. In the last three years, cash incentives of Rs.607 Crores have been paid to 14,40,059 students.

Further, a sum of Rs.25.50 Crores has been deposited by the School Education Department in another Scheme to provide financial assistance at the rate of Rs.50,000/- per student studying from 1st standard to 12th standard in Government and Government Aided Schools, whose bread-winning parent died or permanently incapacitated in an accident.

As per the Chief Minister's Girl Child Protection Scheme a sum of Rs.22,200/- for

one girl child under scheme-I and a sum of Rs.15,200/-each for two girl children under Scheme-II is deposited in the name of the child. An incentive of Rs.1800/- is to be given per child on completion of 5th year upto 20th year of deposit for her educational purposes. Under Girl Child Protection Scheme, a sum of Rs.947.54 Crores has been deposited by the Social Welfare department till 31.3.2015.

Under the "Oru Kala Pooja" scheme, a sum of Rs.1,00,000/- is deposited for each temple. The interest accrued is paid to the temple for performing one pooja daily in the temple. The Hindu Religious and Charitable Endowments Department has deposited Rs.110.34 crores for 11,413 temples under this Scheme.

4.2 Rate of Interest

TNPFIDC offers an interest rate of 9.25% for deposits for one year, 9.50% for deposits for 2 years and 10% for deposits with a tenure up to 5 years. The Corporation offers an additional interest of 0.25% p.a. for 12 months & 24 months and 0.50% p.a. for 36, 48 & 60 months on deposits made by senior citizens, aged 58 years and above.

4.3 Financial Assistance to TANGEDCO

TNPFIDC lends only to TANGEDCO for financing their infrastructural projects. From the inception till the year 2014-15 (upto 31.3.2015), a total sum of Rs.36,371.39 crores has been sanctioned as gross financial assistance to TANGEDCO by way of hire purchase, lease and term loan. During the year 2014-15 (upto 31.3.2015), Rs.5689.00 crores has been provided as financial

assistance to TANGEDCO. The net loan outstanding from TANGEDCO as on 31.3.2015 is Rs 14,759.38 crores.

4.4 Financial Performance

TNPFIDC has the unique distinction of generating profit since inception. The total revenue of the company during the year 2014-15 (up to 31.3.2015) is Rs.1,591.94 Crores. The net worth of the Corporation has increased to Rs.738.77 Crores (upto 31.3.2015) compared to that of Rs.633.51 Crores at the end of the previous financial year. The Corporation has so far accumulated a net profit of Rs.778.79 Crores. The gross profit and profit after tax for the year 2014-15 (upto 31.3.2015) are Rs.148.75 crores and Rs.105.78 Crores respectively. The Corporation had declared dividend regularly from the year 1995-96

and the total of Rs.86.42 Crores has been paid as dividend to the Government. Action is being taken by TNPFIDC to enhance the services provided to the depositors, by fully utilizing the Information Technology solutions.

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Conclusion

The state has successfully managed the power deficit prevailing in May 2011 despite substantial increase in demand. In last four years, 6239.5 MW of additional power is flowing into the grid. The State is poised to become power surplus again.

The State has also taken an ambitious plan of infrastructure improvement in transmission and distribution sector. Considerable progress has been made by the State in implementing the projects identified in Vision Document 2023. Department is continuously striving to complete the projects within the time limit fixed by the Hon'ble Chief Minister.

The State has a unique position as the leader in renewable energy in the country. So far this position was achieved by 7470.86 MW of wind energy installations. Now the

State has made considerable progress in popularizing use of solar power. Under the preferential tariff rate, applications for a combined capacity of 3864.5 MW solar photo voltaic installation have been registered by TANGEDCO. Power purchase agreements are being signed based on availability of evacuation instrument. The State is promoting distributed installation of solar power to ensure the generated power is consumed in immediate vicinity to reduce T&D loss. Thus investment in transmission infrastructure is optimized.

The programmes and policies in this note have been designed to meet the challenges faced by the power sector. Accessibility, availability and affordability of power for all is the goal of the department. The department is constantly striving

towards provision of facilities to achieve these goals.

NATHAM R.VISWANATHAN
Minister for Electricity, Prohibition and Excise

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Hon'ble Chief Minister of Tamil Nadu inaugurated 58 substations on 29.05.2015 through video conferencing

Anthiyur 230/110 kV substation, Erode District

Coimbatore 230/110 kV Substation, Coimbatore District

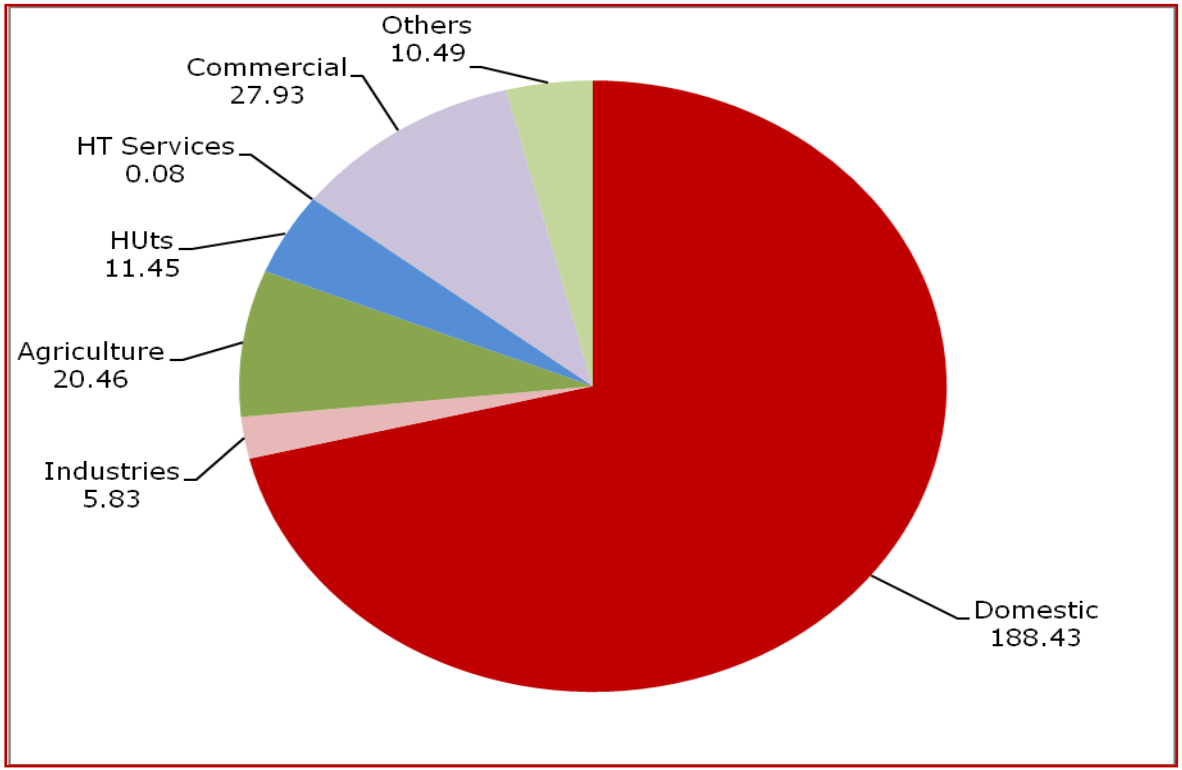
Tiruvalam 400 kV substation, Vellore District

Alandur 230/110 - 33 kV GIS substation, Chennai

TANGEDCO-NTPC Joint Venture Project at Vallur, Unit 3 (3x500 MW)

TANGEDCO-NLC JV Project at Tuticorin (2x500 MW)

ETPS Expansion Thermal Power Project (1x660 MW)



Consumers as on 31.03.2015 (264.67 Lakhs)

Hon’ble Chief Minister’s Solar Powered Green House in Cuddalore District

Hon'ble Prime Minister of India felicitated Tamil Nadu with an award for being one of the best performing states in renewable power capacity addition, during RE-INVEST event held in New Delhi. The award was received by the Hon'ble Minister for Electricity, Prohibition and Excise, Government of Tamil Nadu on 15th February 2015.