ENERGY DEPARTMENT

POLICY NOTE
2026 – 2027

DEMAND No. 14

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Minister for Energy Resources and Law

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Government of Tamil Nadu
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1. INTRODUCTION

எண்ணித் துணிக கருமம் துணிந்த பின்
எண்ணுவம் என்பது இழுக்கு.– [குறள்:467]

"Before starting any task, one should carefully analyze and decide how to complete it successfully. Neglecting this and thinking, 'We can figure it out after we begin the task,' is a serious mistake."

Electricity is the lifeline of modern world, driving progress and shaping every aspect of daily life. It is indispensable for fueling industrial growth, agriculture, healthcare, education and technology, while also ensuring comfort and connectivity in households. From powering heavy industries to charging daily mobile devices, electricity has become essential, serving as the very basic foundation of human advancement. Un-interrupted power supply is

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being maintained in Tamil Nadu, thereby reinforcing reliability and supporting the State's rapid growth and modern lifestyle.

Tamil Nadu's focus on expanding wind, solar, and hydro generation not only reduces carbon emissions but also helps balance environmental concerns and address climate change. As demand continues to rise sharply with industrial growth and the future of mobility shifting towards electricity, strengthening generation, transmission, and distribution systems becomes vital to sustain progress while safeguarding sustainability.

The action plan of this Government focuses on ensuring round-the-clock quality power supply while expanding generation capacity and integrating renewable energy. Targets include significant additions in thermal and hydro power, adoption of underground cable systems to minimize cyclone damage and deployment of

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drone technology for transmission line surveys. The State also aims to solarize government buildings, schools, hospitals, and local bodies, while promoting EV charging infrastructure and ensuring financial stability of utilities.

On the infrastructure side, new Extra High Voltage substations are being established to strengthen the transmission network, alongside schemes to modernize feeders and reduce constraints. Distribution reforms under the revamped scheme, smart metering and replacement of outdated equipment will minimize losses and interruptions, ensuring reliability and efficiency. Best practices such as Internet of Things (IoT) deployment in agriculture, energy efficiency in schools and hospitals, and advanced monitoring dashboards further reinforce Tamil Nadu’s leadership in the power sector.

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As on 01.07.2026, the total installed capacity is about 46,846 MW, comprising 18,498 MW from conventional energy sources (including thermal, gas, central generating stations, power purchases etc.,) and 28,348 MW from renewable energy sources (including hydro, wind, solar, biomass and co-generation).

Tamil Nadu's power sector is driven by a diversified mix of thermal, gas, hydro and renewable sources, ensuring a stable base load while reinforcing the State's leadership in sustainable energy. With renewables such as wind and solar contributing significantly, this balanced portfolio ensures reliable supply, strengthens energy security, and advances long term climate goals, positioning Tamil Nadu as a pioneer in green growth and net zero commitments. Complementing generation, the transmission and distribution system is continually strengthened through new

- As on **01.07.2026** - **18,498 MW** conventional and **28,348 MW** renewable. Renewables are already the larger half.

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substations, transformers, line expansions and underground cabling, alongside measures to address overloading and low voltage issues. Together, these initiatives deliver uninterrupted, high-quality electricity to households, industries and businesses, reinforcing the resilience of Tamil Nadu’s power sector.

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2. ENERGY DEPARTMENT

Energy systems must remain secure, sustainable and resilient with continuous innovation enabling deeper integration of renewable energy, improved efficiency, digital technologies, smart grids and modern transformation methods in fast changing markets. Looking ahead, clean air, environmental protection and inclusive economic growth call for sustained investment and technological progress, especially since renewable sources like wind and solar are variable and demand advanced storage and balancing solutions. Emerging technologies such as energy storage batteries and micro-grids are steadily evolving to address these challenges and will become more accessible in the future, strengthening the foundation of sustainable energy infrastructure.

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The Tamil Nadu Electricity Board (TNEB), established on 1st July 1957, is among the largest integrated power utilities in India, serving a consumer base of 351.73 lakh across the State of Tamil Nadu.

- Among India's largest integrated power utilities, serving **351.73 lakh** consumers.

2.1 Restructuring of TNEB

TNEB Limited has evolved through two major restructurings since its inception. The first restructuring in November 2010 created TANGEDCO (Generation & Distribution) and TANTRANSCO (Transmission) under TNEB Limited as the holding company.

- Created **TANGEDCO** (generation and distribution) and **TANTRANSCO** (transmission) under **TNEB** Limited as holding company.

A second trifurcation, effective 1st April 2024, unbundled TANGEDCO into three distinct entities to sharpen accountability across functional domains.

- Unbundled **TANGEDCO** into three entities - generation, green energy and distribution.

- TNPDCL — Tamil Nadu Power Distribution Corporation Limited (erstwhile TANGEDCO)

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- TNPGCL — Tamil Nadu Power Generation Corporation Limited
- TNGECL — Tamil Nadu Green Energy Corporation Limited

2.2 Organizational Structure of Energy Department

The following organizations are under the administrative purview of Energy Department:

I. TNEB Limited (Holding company) with the following subsidiary companies:
   a) Tamil Nadu Power Generation Corporation Limited
   b) Tamil Nadu Green Energy Corporation Limited
   c) Tamil Nadu Transmission Corporation Limited and
   d) Tamil Nadu Power Distribution Corporation Limited

II. Electrical Inspectorate.

III. Tamil Nadu Electricity Regulatory Commission.

IV. Tamil Nadu Energy Development Agency.

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3. VISION PLANS

Strategic Initiatives for the Power Sector

This Government is committed to provide reliable, affordable, sustainable and consumer-centric electricity services across the State. As part of Vision 2031, the Government has identified several strategic initiatives to strengthen the power sector, improve consumer services, promote renewable energy, support industrial growth, expand electric vehicle infrastructure and modernize the electricity network. These initiatives will be implemented by Tamil Nadu Power Generation Corporation Limited (TNPGCL), Tamil Nadu Power Distribution Corporation Limited (TNPDCL), Tamil Nadu Transmission Corporation Limited (TANTRANSCO), Tamil Nadu Green Energy Corporation Limited (TNGECL) and other stakeholder departments and agencies. The major strategic initiatives include the following:

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1. No Cost Electricity for Domestic Consumers

Fulfilling a key promise made to the people, the Hon'ble Chief Minister, in a historic first act after assuming office, ordered the implementation of the scheme providing no cost electricity up to **200 units** bi-monthly to domestic consumers with bi-monthly consumption of upto 500 units, benefitting about **2.23 crore domestic consumers.** For consumers whose bi-monthly electricity consumption exceeds **500 units** will continue to receive no cost electricity of **100 units** bi-monthly, ensuring that no household is left out of the Government's welfare umbrella.

Consumers using more than 500 units bi-monthly still receive 100 free units; the revision took effect on **10.05.2026**, with the cost borne by Government as tariff subsidy.

This revision, which came into effect from 10.05.2026, stands as a shining testament to the Government's unwavering commitment to easing the financial burden on common households. The entire expenditure is borne by

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the Government through tariff subsidy to TNPDCL, ensuring that the benefit reaches every eligible family.

2. Renewable Energy Development in Southern Tamil Nadu

The Government proposes to promote renewable energy projects in the southern districts having high renewable energy potential, supported by appropriate policy incentives and a dedicated Project Management Unit.

3. Expansion of EV Charging Infrastructure

The Government aims to establish 20,000 electric vehicle charging stations across the State by 2031, with priority corridors connecting major cities.

- The Vision **2031** target across the State, with priority corridors between major cities.

4. Subsidy for EV Charging Facilities in Apartments

A capital subsidy of 50%, subject to a maximum of ₹50,000, is proposed for

- Proposed for **EV** charging facilities in apartment complexes.

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installation of EV charging facilities in apartment complexes.

5. 24×7 Quality Power Supply

The existing loads in the overloaded feeders will be bifurcated to ensure reliable and uninterrupted power supply.

6. Enhanced Rooftop Solar Support

The State will provide additional financial assistance under the PM Surya Ghar: Muft Bijli Yojana Scheme by extending State subsidy over and above the Central Government subsidy to encourage rooftop solar installations.

- The Union rooftop solar scheme launched on **13.02.2024**, targeting **1 crore** households nationally with **MNRE** subsidy.

7. Distribution Sector Reforms

The Government will continue reforms aimed at reducing Aggregate Technical and Commercial (AT&C) losses to 10% through replacement of ageing transformers of the distribution system.

- The distribution reform target, pursued by replacing ageing transformers.

8. Achieving 50% Renewable Energy by 2031

The Government aims to increase the share of renewable energy in the State's power mix to 50% by 2031 through addition of renewable energy capacity and battery energy storage systems.

- The renewable share target in the State's power mix, through added capacity and battery storage.

The Vision 2031 strategic initiatives reflect the Government's commitment to building a reliable, efficient, financially sustainable and environmentally responsible power sector. The successful implementation of these initiatives will improve the quality of electricity supply, promote clean energy, strengthen industrial growth, enhance consumer services and support the long-term economic development of Tamil Nadu.

4. NEW INITIATIVES

After this Government assumed office, several new initiatives have been taken. These initiatives aim to bring more transparency and efficiency in the power sector. They also aim to improve the quality of service to consumers. Key initiatives have been launched in the realms of digital governance, process reforms, consumer support and personnel management. These initiatives are detailed below, subject-wise.

1. Digital Governance and Transparency

A number of digital initiatives have been introduced to improve transparency and accountability in the functioning of the power sector.

- A Daily Power Outage report has been made available in the public domain,

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enabling consumers to access information on power interruptions and enhancing transparency in outage management.

- The Cloud Audit system has been discontinued with effect from 01.06.2026, and the conventional scrutiny process has been restored to facilitate timely processing of payments and avoid procedural delays.

2. Process Reforms

Administrative and operational processes have been streamlined to improve efficiency and service delivery.

- The payment and billing process for contract employees has been rationalised to ensure timely settlement of bills.
- The Human Resource Management System (HRMS) is being upgraded to facilitate online transfer counselling, thereby

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enhancing transparency and efficiency in employee transfers.

- Renewable Energy Zones have been established at Chennai, Tiruchirappalli, Tirunelveli, Coimbatore, and Madurai to provide single-window facilitation and expedite approvals for renewable energy projects.

Single-window facilitation to speed up renewable project approvals.

3. Consumer Support

Consumer grievance redressal mechanisms have been significantly strengthened under this initiative.

- A dedicated Social Media Monitoring Team now functions round the clock to monitor and respond to consumer grievances received through social media platforms.
- A new e-command facility is under proposal to further strengthen consumer support services.

- Ten High Level Monitoring Teams have been deployed for field-level supervision of complaint redressal.
- 125 Fuse-off Call Vehicles were launched on 10.06.2026 to ensure prompt restoration of electricity supply and faster response to consumer complaints.
- Seventy-seven new Fuse-off Call Centres have been sanctioned, in addition to the existing 70 centres, substantially expanding the service network across the State.
- Seven additional Electricity Breakdown Service Teams have been deployed to improve response time during supply interruptions.
- Integration of a WhatsApp Chatbot with the Consumer Complaints Monitoring System (CCMS) is under implementation to provide consumers with a convenient digital interface for grievance registration and tracking.

- With 77 new Fuse-off Call Centres sanctioned on top of the existing 70.

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4. Governance and Institutional Reforms

Several governance measures have been introduced across the four power sector companies to strengthen institutional capacity, transparency and operational efficiency.

- Three-tier Tender Policy Committees have been established in all four companies to oversee Market Analysis and Estimate Validation, Manufacturer Assessment and Cross-Verification, thereby ensuring transparency, competitiveness and cost-effectiveness in procurement.
- Stock Verification Committees comprising 67 teams have been constituted across the four companies to undertake comprehensive verification of stores and inventories.
- Dedicated Research and Development (R&D) Teams have been constituted to promote collaborative research between

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TNEB and Indian Institute of Technology (IIT) Madras, with a focus on innovation and technological advancement. A Memorandum of Understanding (MoU) to formalise this collaboration was signed on 09.07.2026.

- Development of an integrated digital platform for e-Ash allocation and disposal is underway in TNPGCL to improve transparency and efficiency in ash management.

5. Human Resource Management

Several important personnel initiatives have been undertaken to strengthen Human Resource Management and organisational capacity.

- Appointment orders were issued on 24.06.2026 to 383 Assistant Engineers and 18 Assistant Accounts Officers.

- Dedicated R&D teams promote collaborative research with **TNEB**; the MoU was signed on **09.07.2026**.

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- Promotion orders were issued on 06.06.2026 for 300 Assistant Executive Engineers to the post of Executive Engineer and for 117 Assistant Engineers/Junior Engineers Grade-I to the post of Assistant Executive Engineer (Electrical).
- Two Junior Chemists were promoted on 11.06.2026.
- Request transfer orders were issued on 19.06.2026 for 3,440 Gangmen.
- Promotion orders were issued on 31.07.2026 for 700 Assistant Engineers/ Junior Engineers Grade I (Electrical) to the post of Assistant Executive Engineers.
- An Annual Recruitment Chart and an Annual Promotion Chart are being introduced to facilitate systematic manpower planning, enhance transparency in personnel administration and ensure timely career progression.

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5. TAMIL NADU POWER GENERATION CORPORATION LIMITED

Tamil Nadu's power generation relies significantly on both thermal power plants and gas-based plants. Thermal stations, fuelled mainly by coal, contribute the largest share with a combined installed capacity of around 5,120 MW. Gas-based generation, though smaller at about 408.20 MW, plays a stabilizing role during peak demand. Together, these sources provide a firm base load, complementing renewables and ensuring reliable supply across the State.

5.1 Thermal Power Plants

TNPGCL owns six Thermal Power Stations having a total installed capacity of 5,120 MW.

- **TNPGCL**'s thermal fleet, fuelled mainly by coal.

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5.1.1 Tuticorin Thermal Power Station (5 x 210 MW)

- Five units of **210 MW** each - 1,050 **MW**, the largest of the older stations.

Tuticorin Thermal Power Station, located in Tuticorin District, has five (5) units of 210 MW capacity each with a total installed capacity of 1,050 MW.

5.1.2 Mettur Thermal Power Station – I (4 x 210 MW)

Mettur Thermal Power Station–I (MTPS– I), located at Mettur Dam of Salem District, has 4 units of 210 MW each with a total installed capacity of 840 MW.

5.1.3 Mettur Thermal Power Station – II (1 x 600 MW)

Mettur Thermal Power Station–II (MTPS–II), located at Mettur Dam of Salem District, has a single unit of 600 MW installed capacity.

5.1.4 North Chennai Thermal Power Station – I (3 x 210 MW)

North Chennai Thermal Power Station–I (NCTPS – I), located in Thiruvallur District, has 3 units of 210 MW capacity each, with a total installed capacity of 630 MW.

5.1.5 North Chennai Thermal Power Station – II (2 x 600 MW)

North Chennai Thermal Power Station–II (NCTPS – II), located in Tiruvallur District, has 2 units of 600 MW capacity each with a total installed capacity of 1,200 MW.

5.1.6 North Chennai Thermal Power Station – III (1 x 800 MW)

- The newest unit; commercial operation was declared on **24.01.2026**.

North Chennai Thermal Power Station–III (NCTPS – III), located in Tiruvallur District, has 1 unit of 800 MW capacity. The project was completed and the date of commercial operation (COD) was declared on 24.01.2026.

- **NCTPS-III** (1x800 **MW**) declared commercial operation on **24.01.2026** - the newest thermal unit in the State fleet.

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5.2 Gas Turbine Power Stations

Tamil Nadu's gas power plants contribute about 408.20 MW to the State's electricity mix. These stations generate power through gas turbines driven by natural gas or diesel, supplied mainly by M/s. Gas Authority of India Limited (GAIL). Unlike coal based thermal plants, gas units are prized for their quick start-up capability and their role in stabilizing supply during peak demand or grid fluctuations.

- Valuthur Phase I (**95 MW**), Phase II and Kuttalam (**101 MW**) - all constrained by gas supply.
- Why gas plants matter despite their small share: quick start-up, so they stabilise supply at peak demand or during grid fluctuations.

5.2.1 Valuthur Gas Turbine Power Station–Phase I

The Valuthur Gas Turbine Power Station–Phase I, located in Valuthur in Ramanathapuram district, has an installed capacity of 95 MW. The Unit is generating around 65 MW due to short supply of gas of around 74% of allotted quantity.

5.2.2 Valuthur Gas Turbine Power Station– Phase II

Due to drastic reduction in gas supply, the Unit was kept under standby condition from 20.01.2026 to reduce cost of generation. M/s.GAIL has increased the gas supply and hence the Unit was brought into service on 14.07.2026. Now, the Unit is generating around 35 MW with available gas.

5.2.3 Kuttalam Gas Turbine Power Station

The Installed Capacity of Kuttalam Gas Turbine Power Station located in Kuttalam of Mayiladuthurai District is 101 MW. The Plant is generating around 85 MW with Plant Load Factor (PLF) of about 84%.

5.2.4 Basin Bridge Gas Turbine Power Station

The BBGTPS Units are being operated as synchronous condensers to supply reactive power to Grid for maintaining Grid stability.

Basin Bridge gas units no longer generate - they run as synchronous condensers supplying reactive power for grid stability.

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During 2025-26, BBGTPS has produced 19,70,50,000 KVARh reactive power.

5.3 Coal

5.3.1 Domestic Coal

The requirement of coal for existing TNPGCL's Thermal Power Stations, viz Tuticorin Thermal Power Station (TTPS), Mettur Thermal Power Station-I & II (MTPS-I & II), North Chennai Thermal Power Station – I & II (NCTPS I & II) at 85% Plant Load Factor (PLF) is 223.40 LTPA (Lakh Tonnes Per Annum). Domestic Coal is procured from Mahanadhi Coalfields Ltd (MCL) through Fuel Supply Agreement (FSA) with a linkage of 195.63 LTPA.

- At 85% Plant Load Factor the existing thermal stations need **223.40 lakh** tonnes of coal a year against an **FSA** linkage of 195.63 **LTPA** from Mahanadi Coalfields.

During the financial year 2025-26, the receipt of coal from MCL mines was 158.84 LT i.e. about 81% against the linkage (FSA).

5.3.2 North Chennai Supercritical Thermal Power Project Stage-III (1x800 MW)

This Project is designed to operate with 50% Imported and 50% Domestic Coal. The requirement of domestic coal for North Chennai Super Critical Thermal Power Project is procured from the Singareni Collieries Company Limited (SCCL) through Fuel Supply Agreement-2022 for a quantity of 19.71 LTPA. During the Financial year 2025-26, the receipt of coal from SCCL mines was 6.54 Lakh Tonnes.

- The two supercritical projects, North Chennai Stage-III and Udangudi Stage-I, are designed for a 50:50 imported and domestic coal mix, sourced from Singareni Collieries.

5.3.3Udangudi Supercritical Thermal Power Project Stage-I (2 x 660 MW)

This Project is designed to operate with 50% Imported and 50% Domestic Coal. The requirement of domestic coal for Udangudi Super Critical Thermal Power Project has been arranged from Singareni Collieries Company Limited (SCCL) through Fuel Supply Agreement-2025 for a quantity of 28.86 LTPA. The Coal

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supply was commenced from January 2026 for commissioning activities. During the financial year 2025-26, the receipt of coal from SCCL mines to load port is 1.46 Lakh Tonnes.

5.3.4 Coal Linkage for upcoming Projects

In order to meet the domestic coal requirement for the 1,980 MW Thermal Plants at Ennore SEZ TPP (2x660 MW) and ETPS Expansion TPP (1x660 MW), Ministry of Coal has recommended for grant of Long-Term Linkage from Mahanadhi Coalfields Limited (MCL). For Uppur Thermal Power Project (2x800 MW) Fuel Supply Agreement (FSA) has been signed between TNPGCL and Singareni Collieries Company Limited (SCCL) for a quantity of 39.42 LTPA.

5.4 Mines

Securing of Coal Blocks

In order to meet the Domestic coal requirement of TNPGCL's upcoming Thermal Power Projects, TNPGCL has acquired Sakhigopal-B Kakurhi coal mine from Ministry of Coal (MoC) through commercial auction. TNPGCL has executed the Coal Block Development and Production Agreement (CBDPA) with MoC for the said mine and Allocation order was issued. Open Tender for Exploration of Mine, Preparation of Geological Report and Mining Plan has been floated and is under process.

- **TNPGCL** bought the Sakhigopal-B Kakurhi coal mine at commercial auction from the Ministry of Coal - the State moving from buying coal to mining it.

5.5. Thermal Power Projects

To meet out the growing demand and improve the stability of the grid, the following are the ongoing and upcoming Thermal Projects:

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5.5.1 Ongoing Thermal Power Projects

5.5.1.1 Udangudi Thermal Power Project – Stage I (2x 660 MW)

This Project is situated at Udangudi Village in Tuticorin district. The project cost including Interest During Construction (IDC) is ₹14,571.59 crore. Letter of Award for Main Plant was issued to EPC Contractor M/s. BHEL by December 2017. Letter of Award was issued for establishment of Captive Coal Jetty and Unloading facilities with Pipe conveyor system to EPC Contractor M/s. ITD Cementation India Ltd by February 2018.

- Udangudi Stage-I (2x660 **MW**), **Rs.14,571.59 crore**, is 97.36% complete; Unit I commercial operation was programmed for August **2026**.

Present Status

This project has faced some challenges, like COVID, heavy rains etc., that resulted in delays in the main plant works and the coal jetty construction. Despite the setbacks, construction activities are now progressing at full speed, and

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efforts have been taken to improve manpower mobilization.

The Project is under execution, and the current physical progress is 97.36% and financial progress is 96.20%. Oil Synchronisation in Unit-I was completed on 11.09.2025 and coal firing was completed on 30.01.2026. Date of Commercial Operation (CoD) of Unit I is programmed by August 2026 and Unit II by December 2026.

5.5.1.2 Ennore SEZ Thermal Power Project (2x660 MW)

This project is situated in Tiruvallur District, Vayalur Village, Ennore. The project cost including IDC works out to ₹20,663.65 crore. Work has been awarded for both Boiler Turbine & Generator (BTG) & Balance of Plant (BOP) to EPC Contractor M/s.BHEL.

- Ennore **SEZ** Thermal Power Project (2x660 **MW**) at **Rs.20,663.65 crore** is the costliest project in the note; commissioning is scheduled for **2027**.

Present Status

Progress in the erection of Boiler I & II and auxiliaries has reached 93.99%, while Power house Turbine Generator (TG) I & II and auxiliaries stands at 76.82%. Further, the Water System including (Cooling water, Pre-Treatment Plant (PTP), Reverse Osmosis Demineralization (RODM), Auxiliary Cooling Water (ACW) is at 81.62%, the Sea water System is at 74.51%, the Natural Draft Cooling Tower (NDCT) I & II is at 98.8%, the coal handling system is at 66.25 %, the Ash Handling system is at 58.67% and the Gas Insulated Sub Station (GIS) system has achieved 99.5% completion.

The Coal Pipe Conveyor and Sea Water Pipeline work, which were stayed by the National Green Tribunal (NGT), are to be rerouted as per the Ministry of Environment, Forest and Climate Change (MoEF&CC) approved route. The work started on 25.08.2025. The physical progress

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stands at 75.38% and the financial progress is at 64.05%. Project construction is in progress, with commissioning scheduled for Unit-I in August 2027 and Unit-II in October 2027

5.5.1.3 Uppur Super Critical Thermal Power Project (2x800 MW)

This project is situated in Ramanathapuram District. The project cost including Interest During Construction is ₹12,778 crore. The project was awarded in three packages for a total value of ₹10,566 crore. The Boiler, Turbine & Generator (BTG) Package was awarded to M/s. BHEL, Balance of Plant (BOP) package was awarded to M/s. Reliance and the Sea water intake and outfall system package was awarded to M/s. L&T.

Present Status

The project is placed on hold from 18.03.2021 due to a litigation before the National Green Tribunal. The order of NGT was

- Uppur (2x800 **MW**) has been on hold since **18.03.2021** over an **NGT** case - the **NGT** order was stayed by the Supreme Court on **01.07.2021**, and physical progress stands at 35%.

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stayed by Honorable Supreme Court on 01.07.2021. The overall physical progress of the project currently stands at 35%.

Following a review meeting, directives were issued to analyze and to take necessary steps to revive the Uppur project at Uppur itself or to shift the project to Udangudi.

As instructed in the high level meeting held on 21.07.2026, the key details regarding the 2x800 MW Uppur STPP including its current status have been sent to the Research and Development (R&D) team to explore technical and financial feasibility for the revival of the Uppur Thermal Power Project at Uppur itself or to shift the project to Udangudi.

5.5.1.4 ETPS Expansion Thermal Power Project (1 x 660 MW)

The ETPS Expansion Thermal Power Project has encountered significant challenges over the

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years following the termination of two EPC contractors, M/s. LITL and M/s. BGRESL, due to persistent delays, slow progress and poor performance.

Considering the present energy scenario, it has been envisaged to execute the project under PPP mode. A Purchase order was issued to SBI CAPS, Mumbai, on 02.09.2024 for Engaging Transaction Advisory Services for the preparation of Detailed Feasibility Report (DFR) for the execution of 1x660 MW ETPS Expansion Project from "as is where is basis condition" through PPP mode i.e., Public - Private Partnership mode.

Upon submission of DFR by SBI CAPS, for the selection of PPP partner for the procurement of power through Tariff based competitive bidding from ETPS Expansion Project, TNIDB engaged M/s.SBI CAPS, as Transaction advisor vide letter dated 14.02.2025. M/s.SBI CAPS prepared the bid documents based on Standard

- The **ETPS** Expansion project, after two **EPC** contractors were terminated, is being restructured for execution under Public-Private Partnership with **SBI CAPS** as transaction advisor.

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Bid Documents/Government of India (SBD/GOI) as per the guidance of TNIDB.

Since it was planned to execute the project under PPP mode and bid documents for floating tender were prepared with deviations from MOP guidelines, a Miscellaneous Petition was filed before Hon'ble TNERC for approval. Based on the approval of Hon'ble TNERC and TNPGCL an e-tender was floated for the long-term procurement of power from 1x660 MW ETPS Expansion Project and same is under process.

5.5.2 Upcoming Power Projects

5.5.2.1 Udangudi Thermal Power Project Stage–II (2x660 MW) and Udangudi Thermal Power Project Stage–III (2x660 MW)

Government granted approval for the establishment of Stage II and III each with a capacity of 2X660 MW vide G.O. (4D), No.1, dated 03.02.2015. Subsequently,

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Government accorded administrative sanction for acquisition of 1,500 acres of land vide G.O. (Ms) No.11, dated 23.02.2022. Government has given approval for formation of 6 units of Special Revenue Staff for attending the Land acquisition works and Land acquisition is under progress.

5.5.2.2 Establishment of Coal Based Thermal Power Project in Thoothukudi District

Efforts are being taken to initiate the next steps for 1×600 MW coal based thermal power project in Thoothukudi District.

5.6 Finance

Tamil Nadu Power Generation Corporation Limited plays a significant role in meeting the power generation requirements of Tamil Nadu

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and ensuring uninterrupted power supply across the State. In order to strengthen the financial position of TNPGCL and support its operational and infrastructure requirements, the Government of Tamil Nadu has been continuously extending financial assistance through Government Guarantees for loans availed by the Corporation. These guarantees enable TNPGCL to mobilize funds from financial institutions at competitive interest rates for meeting its capital expenditure and operational commitments.

During the financial year 2025–26, the Government has provided Government Guarantees amounting to ₹ 19,986.56 crore in favour of TNPGCL. The continued support of the Government reflects its commitment towards improving the financial sustainability and operational efficiency of TNPGCL.

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The actual expenditure incurred by TNPGCL has exceeded the expenditure approved by the Hon'ble Tamil Nadu Electricity Regulatory Commission under the Tariff Order, which has resulted in further financial stress on the Corporation. Following the demerger of the company, a Mid-Term Review Petition for financial year 2024–25 has been filed before Hon'ble TNERC seeking approval for additional revenue requirements. Upon approval of the petition, TNPGCL is expected to realize additional revenue, which would help in reducing the losses to a considerable extent.

In order to improve the operational and financial performance of the Corporation, several cost-control measures and revenue augmentation initiatives are being undertaken. Continuous efforts are being made to operate the power plants at maximum efficiency levels to enhance generation and improve revenue

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realization. The Corporation is also strengthening expenditure monitoring and implementing operational reforms to reduce avoidable costs.

The Power Finance Corporation Limited has reduced the rate of interest of loans to 10.25% per annum (the loans which were having more than 10.25% interest rate), resulting in expected annual interest savings of around ₹ 98 crore. The weighted average rate of interest is also reduced to 9.73%. Further, new loans from PFC are being sanctioned at an interest rate reduced from 10.18% to 8.60% per annum. REC Limited has also been requested to reduce the interest rates on its loans, and a favourable response is awaited. Owing to these, the overall weighted average rate of TNPGCL loan has reduced from 9.65% to 9.51%.

The loss incurred by TNPGCL during the financial year 2024–25 stood at ₹2,569.52 crore.

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The loss for the financial year 2025–26 as per supplementary-I works out to ₹ 2,882.95 crore (Provisional). Further, with the commissioning of new power plants during financial year 2026–27, Udangudi and Ennore SEZ, the revenue of TNPGCL is expected to improve substantially, enabling the Corporation to gradually turn around into a profit-making entity in the coming year onwards.

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6. TAMILNADU GREEN ENERGY CORPORATION LIMITED

Tamil Nadu is endowed with substantial renewable energy potential, particularly in solar and wind energy, along with other renewable energy resources. The State currently ranks fourth in India in terms of installed renewable energy capacity and second in installed wind energy capacity.

In alignment with national and global commitments towards climate action and sustainable development, the Government of Tamil Nadu is committed in accelerating the adoption of renewable energy across all sectors. The State has set a target of meeting 50% of its total energy consumption from renewable energy sources by 2031. Further, it aims to achieve a 70% reduction in carbon emissions by 2031 through the implementation of comprehensive clean energy initiatives,

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enhanced energy efficiency measures and the promotion of low-carbon technologies. These initiatives are intended to strengthen energy security, foster sustainable economic growth and contribute significantly to environmental conservation and climate resilience.

6.1 Renewable Energy Sources

Tamil Nadu Green Energy Corporation Limited (TNGECL) has been established to strengthen institutional capacity and accelerate the implementation of renewable energy initiatives. TNGECL serves as the State's dedicated agency for planning, promoting and implementing renewable energy programmes and green energy projects. The key objectives and functions of TNGECL include:

- Increasing the share of renewable energy in the State's total energy consumption to 50 percent by 2031.

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- Promoting large-scale solar and wind power projects across the State.
- Encouraging the installation of rooftop solar photovoltaic systems in residential, commercial, industrial, and institutional sectors.
- Supporting the generation of energy from renewable resources, including bio-energy and other non-conventional energy sources.
- Formulating and implementing a Renewable Energy Hybrid Policy to enhance renewable energy integration and improve grid reliability.
- Optimizing the utilization of existing transmission and distribution infrastructure based on technical feasibility and system efficiency.

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- Facilitating access to affordable and sustainable financing for renewable energy and green infrastructure projects.

Through these strategic initiatives, Tamil Nadu aims to strengthen its leadership in renewable energy, enhance energy security, promote sustainable economic development, create green employment opportunities and contribute significantly to India's climate commitments and the achievement of long-term net-zero objectives.

6.2 Wind Power

With an installed wind energy capacity of 11,686.21 MW (including Central Transmission Utility) as on 01.07.2026, the State ranks second in the country in terms of installed wind power capacity. The State generates about 16,600 million units of wind energy annually, contributing nearly 12% of its total electricity

- Installed wind capacity of **11,686.21 MW** as on **01.07.2026** - second in India, about 16,600 million units a year, nearly 12% of the State's consumption.

consumption and playing a vital role in strengthening its clean energy portfolio.

The State possesses an estimated onshore wind energy potential of approximately 95 GW at a height of 150 metres, providing significant scope for further expansion of wind power generation.

- Onshore wind potential is about 95 **GW** at 150 metres hub height - roughly eight times what is installed.

The Muppandal Wind Farm, located in Tamil Nadu, is one of the world's largest operational onshore wind farms and stands as a landmark in India's renewable energy journey. It exemplifies the State's long-standing commitment to the development and large-scale deployment of wind energy technologies.

- Muppandal is one of the world's largest operational onshore wind farms.

Going forward, the Government promotes the addition of new wind capacity, repowering of ageing wind turbines, modernization of grid infrastructure and integration of advanced forecasting and scheduling mechanisms to

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maximize renewable energy generation and improve grid reliability.

6.2.1 Initiatives to Streamline Wind Power Sector

TNGECL (erstwhile TANGEDCO), under the Tirunelveli NCES Circle, owns four wind farm sites at Kayathar-I, Kayathar-II, Muppandal, and Puliyankulam with 110 WEGs having a total installed capacity of 17.355 MW.

TNGECL's own four wind sites carry 110 ageing turbines totalling just **17.355 MW**; they are to be repowered to **18.75 MW** of wind plus a **16 MW** solar plant as a hybrid.

The Government has proposed to replace the above ageing wind turbines to repower the sites with 18.75 MW of wind capacity and a 16 MW solar plant as a Hybrid Project. Tender is under process for executing the above scheme.

6.3 Solar Power

Solar power complements the State's substantial wind energy capacity, contributing significantly to meet the growing demand for clean and sustainable energy.

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As on 01.07.2026, the total installed solar power capacity of the state is 15,278.74 MW (including grid-connected rooftop solar installations and projects connected through the Central Transmission Utility). The Government is committed to accelerating the adoption of solar energy as part of its strategy to reduce dependence on fossil fuels, enhance energy security and promote sustainable economic growth. The continued expansion of solar capacity is expected to play a vital role in achieving the State's renewable energy and climate objectives.

- Installed solar capacity is **15,278.74 MW** as on **01.07.2026** - now larger than the State's wind capacity.

6.3.1 Battery Energy Storage System (BESS)

The integration of renewable energy into the grid requires frequent ramping up and ramping down of conventional thermal generation poses operational challenges and places additional stress on the grid. To address

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these integration challenges, Energy Storage Systems (ESS) play a vital role in enabling higher renewable energy penetration, enhancing grid reliability and assisting system operators in managing fluctuations in both demand and renewable energy generation.

Recognizing the importance of energy storage, the Ministry of Power, Government of India, has notified a separate Energy Storage Obligation (ESO) under the Renewable Purchase Obligation framework. The prescribed targets are:

- The Energy Storage Obligation rises from 2.0% in **2025-26** to 4.0% by **2029-30** - storage is now a mandate, not an option.

Year	Storage (on Energy basis)
2025-26	2.0%
2026-27	2.5%
2027-28	3.0%
2028-29	3.5%
2029-30	4.0%

These targets underline the critical importance of developing Battery Energy

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Storage Systems (BESS) to ensure grid stability, optimize renewable energy utilization and facilitate Tamil Nadu's transition towards a cleaner and more sustainable energy future.

The following initiatives are aligned with the Government's vision of promoting clean energy, enhancing energy security and ensuring reliable and affordable power supply to consumers throughout the day.

❖ BESS under Viability Gap Funding (VGF)

To strengthen grid reliability and facilitate large-scale renewable energy integration, TNGECL has initiated the establishment of 1,000 MWh (500 MW × 2 hours) Standalone BESS under the State Component of Viability Gap Funding (VGF) on a Build-Own-Operate (BOO) basis. The project comprises six BESS installations at Thennampatty, Anuppankulam, Ottapidaram,

- A 1,000 MWh (**500 MW** x 2 hours) standalone battery system is being set up under Viability Gap Funding on a Build-Own-Operate basis.

Vellalaviduthi, Kayathar and Karaikudi substations of TANTRANSCO with a total capacity of 500 MW / 1,000 MWh. The projects are planned to be commissioned by the end of December 2026.

❖ BESS under Power System Development Fund

TNGECL is further implementing 1,500 MWh (375 MW × 4 hours) Standalone Battery Energy Storage Systems with support from the Power System Development Fund (PSDF). 11 Numbers of TANTRANSCO substations have been identified across the State for the deployment of these systems. The project comprises 11 BESS installations at Thappagundu, Thatchankurichi, Palladam, Alagarkoil, Kamudhi, Karamadai, Anaikadavu, Thiruvarur, Othakalmandapam, Thuvakudy and N. Subbaiahpuram substations of TANTRANSCO across

Tamil Nadu with total capacity of 375 MW/1,500 MWh. The projects are targeted for commissioning by September 2027.

❖ Solar PV Projects Co-located with BESS

To facilitate round-the-clock supply from clean energy and reduce dependence on costly power procurement during non-solar hours, TNGECL is implementing pilot Solar PV projects co-located with BESS under Tariff Based Competitive Bidding.

The projects comprise two installations at Karur and Thiruvarur districts, each with 15 MW Solar PV capacity coupled with 15 MW / 45 MWh Battery Energy Storage Systems, aggregating to 30 MW Solar PV and 90 MWh of storage capacity. Commissioning of the projects has been scheduled for completion by May 2027.

6.3.2 Roof Top Solar In Existing HT & LT Services

The Rooftop Solar Programme encourages the installation of grid-connected Solar Photovoltaic (PV) systems in residential, commercial, industrial, institutional and Government buildings, enabling consumers to generate clean electricity, reduce dependence on conventional power sources and lower electricity costs. The programme is being implemented through the coordinated efforts of the Tamil Nadu Green Energy Corporation Limited (TNGECL), Tamil Nadu Power Distribution Corporation Limited (TNPDCL) and other stakeholders, with support from the Government of India's PM Surya Ghar:Muft Bijli Yojana.

As on 01.07.2026, the cumulative installed rooftop solar capacity in the State, including High Tension (HT) and Low Tension (LT) service connections, stood at 1,746.59 MW. During

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2026–27, an additional 550 MW of rooftop solar capacity is proposed to be added through various initiatives, including the PM Surya Ghar:Muft Bijli Yojana.

The State will continue to promote rooftop solar adoption through enabling regulatory frameworks and consumer-friendly policies. Net Feed-in facility has been extended to all categories of LT consumers, except hut and agricultural service connections. In accordance with TNERC Grid Interactive Solar Inverter Systems (GISS) Order No. 8 of 2021, residential consumers are eligible for Net Metering, while existing Net Feed-in consumers may migrate to the Net Metering mechanism in accordance with the applicable regulations.

The continued expansion of rooftop solar is expected to enhance distributed renewable energy generation, improve energy security, reduce carbon emissions and contribute

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significantly towards achieving the State's target of meeting 50 percent of its energy requirement from renewable sources by 2031.

6.3.3 Roof top solar for Residential Consumers under "PM Surya Ghar: Muft Bijli Yojana"

The solar roof top scheme was launched by Government of India on 13.02.2024 as "PM Surya Ghar:Muft Bijli Yojana Scheme" wherein a target of 1 crore households across the country are to be provided with solar roof top plants in the houses with subsidy from MNRE.

Under the scheme, all residential consumers are eligible to install rooftop solar systems with Central Financial Assistance (CFA) as detailed below:

- ₹ 30,000 per kW for systems up to 2 kW.
- ₹ 78,000 for rooftop solar systems of 3 kW and above.

The subsidy slab under **PM** Surya Ghar.

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6.3.4 Saturation of Government Buildings with Rooftop Solar under PM Surya Ghar Scheme

The Government of India launched the PM Surya Ghar:Muft Bijli Yojana on 29th February 2024 with an outlay of ₹75,021 crore and is to be implemented till 2026-27 to promote rooftop solar capacity and enhance clean energy generation. The scheme envisages saturation of rooftop solar installations on all technically feasible Government buildings and encourages States to undertake similar initiatives.

In line with this objective and to strengthen energy security while advancing the State's renewable energy goals, the Government of Tamil Nadu proposed to utilize vacant rooftop spaces in Government buildings under the Renewable Energy Service Company (RESCO) Model. TNGECL has been designated as the nodal agency for implementation of the

- For rooftop solar implementation - tendering, project management and coordination.

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programme and is responsible for tendering, project management, monitoring and coordination with all stakeholders.

Under the RESCO model, the selected developer will undertake the design, supply, installation, commissioning, operation and maintenance of rooftop solar plants for a period of 25 years. A tender has been floated for the selection of developers for establishing 20 MW of grid-connected rooftop solar projects on Government buildings in Chennai, Chengalpattu, Kanchipuram and Tiruvallur districts. The tender process is presently under progress.

Under the **RESCO** model the developer designs, installs, operates and maintains rooftop solar for 25 years - the building owner invests nothing.

6.4 EV charging station

- TNGECL is implementing a comprehensive programme to accelerate electric mobility in Tamil Nadu through public EV charging infrastructure, digital enablement, private

sector participation and convergence with Government of India schemes.

- As of April 2026, Tamil Nadu has recorded 5.50 lakh registered electric vehicles and 2,425 EV charging stations, indicating rapid growth in EV adoption.
- TNGECL has undertaken feasibility studies for 528 locations across Tamil Nadu under the PM e-Drive Scheme to support development of a State-wide EV charging network.
- Charge Point Operator (CPO)–Landowner Matchmaking Portal has been developed to connect landowners with Charge Point Operators for setting up public charging stations on a revenue-sharing basis.
- A dedicated state EV App "TN EV" to discover, charge and pay the CPO has been developed.
- The TNEV Official Website serves as a comprehensive information hub, providing

- As of April **2026**: **5.50 lakh** registered EVs and 2,425 charging stations; 528 locations studied under the **PM** e-Drive Scheme.
- A State **EV** app '**TN EV**' and a Charge Point Operator-Landowner matchmaking portal let landowners host public chargers on revenue sharing.

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details on government policies, schemes, guidelines and key announcements related to electric vehicles and charging infrastructure development in Tamil Nadu, thereby facilitating easy access to information for the public and various stakeholders.

6.5 Co-generation Plants in Co-operative and Public Sector Sugar mills

To promote renewable energy generation and maximize the utilization of bagasse, a renewable by-product of the sugar industry, the Government of Tamil Nadu is implementing Co-generation Power Projects in Cooperative and Public Sector Sugar Mills across the State.

The scheme envisages the establishment of 12 Co-generation Power Plants comprising 10 Co-operative Sugar Mills and 2 Public Sector Sugar Mills, with a total installed capacity of 183 MW. The projects are being implemented by

- At 10 co-operative and 2 public sector sugar mills, **183 MW** in total, costing **Rs.1,241.15 crore**; 7 plants of **108 MW** are already commissioned.

Bagasse co-generation in 10 cooperative and 2 public sector sugar mills - **183 MW** at **Rs.1,241.15 crore**, of which 108 **MW** is already commissioned.

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the Tamil Nadu Green Energy Corporation Limited (TNGECL) at an estimated project cost of ₹1,241.15 crore.

Out of the 12 projects, 7 Co-generation Power Plants with a total installed capacity of 108 MW have already been commissioned and are supplying renewable energy to the grid through the Tamil Nadu Power Distribution Corporation Limited (TNPDCL).

The remaining projects are at different stages of implementation, with works steadily progressing, and they are expected to be commissioned soon. Upon completion, 75 MW of renewable energy capacity will be added to the State grid, resulting in enhanced utilization of renewable biomass resources, reduced dependence on fossil fuels, improved energy security, and support for the State's clean energy and sustainable development objectives.

6.6 Renewable Purchase Obligation (RPO) by 2030

The Renewable Purchase Obligation (RPO) specifies the minimum percentage of electricity that distribution licensees and other obligated entities must procure from renewable energy sources, with the objective of progressively increasing the share of renewable energy in the overall electricity mix. The Ministry of Power, Government of India, has prescribed the following Renewable Purchase Obligation (RPO) for Tamil Nadu for the Financial Year 2026–27:

Category	RPO Percentage
Wind Renewable Energy	1.97%
Hydro Renewable Energy	1.34%
Distributed Renewable Energy	2.70%
Other Renewable Energy	29.94%
Total Renewable Energy	35.95%

The revised RPO trajectory mandates that the State procure 35.95% of its total electricity consumption from renewable energy sources

- The Renewable Purchase Obligation for **2026-27** is 35.95% in total - wind 1.97%, hydro 1.34%, distributed renewable 2.70% and other renewable 29.94%.

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during FY 2026–27. The obligation encompasses electricity generated from wind, solar, hydro, distributed renewable energy systems and other eligible renewable technologies, thereby supporting India's transition towards a cleaner and more sustainable energy sector.

TNGECL is undertaking all necessary initiatives on a war-footing to facilitate the development of renewable energy projects, strengthen grid integration and ensure compliance with the Renewable Purchase Obligation targets prescribed by the Ministry of Power. These efforts include expeditious implementation of utility-scale solar, wind, Battery Energy Storage Systems (BESS), feeder solarisation and other renewable energy initiatives to meet the State's increasing renewable energy requirements and contribute towards the national clean energy goals.

6.7 Hydro

TNGECL's Hydro wing operates and maintains 47 Hydro Power Stations comprising of 107 machines with the total installed capacity of 2,325.90 MW, spread over four generation circles viz., Erode, Kadamparai, Kundah, and Tirunelveli. Most of these stations are located in forest and hilly regions.

- **2,325.90 MW** across four generation circles - Erode, Kadamparai, Kundah and Tirunelveli.

Hydro generation plays a crucial role in meeting peak-hour demand and in supporting the grid during unexpected outages of coal-based thermal stations or sharp declines in renewable energy generation from wind and solar sources.

6.7.1 Hydro Stations Capacity

S.No.	Type of Power House	No. of Power Houses	Installed Capacity (MW)
1.	Irrigation based Power Houses	29	891.25
2.	Non-Irrigation based Power Houses	17	1,034.65

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S.No.	Type of Power House	No. of Power Houses	Installed Capacity (MW)
3.	Pumped Storage Power House	1	400.00
	Total Installed Capacity	**47**	**2,325.90**

6.7.2 Action Plan for 2026-27

- For the year 2026-27, it is proposed to achieve the Hydro Generation Target of 4,776 MU as fixed by Central Electricity Authority by maintaining Average availability of Hydro stations more than 80%.
- Some of the Hydro Power Houses in Tamil Nadu are old and have been serving beyond their normative life period (normative life period of a hydro power house is 35 years). In order to improve the generation capacity of Hydro stations, the following renovation,

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modernization and up-rating works (RMU) are taken up.

(a) Currently, Renovation, Modernization and Up-rating (RMU) works of Unit-3 (12 to 14 MW) are under progress at Moyar PH and is expected to be completed by November 2026 with additional capacity of 2 MW to the Grid.

(b) Renovation, Modernization and Up-rating (RMU) works of Kodayar PH-I (1x60 MW to 1x70 MW) is expected to be completed during 2026-27 with additional capacity of 10 MW to the Grid.

- Replacement of 3 Nos. of High Pressure Penstocks at Moyar Power House is under progress and expected to be completed by September 2027 for all the 3 units.

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- Refurbishment works of stator core and complete re-insulation of stator coils in Unit-I (100 MW) of Kadamparai Power House (4x100 MW) is under progress. Expected date of completion is March 2027.

- Refurbishment works of Generator by replacement of stator core and stator coils in Unit-III (100 MW) of Kadamparai Power House (4x100 MW) is under progress. Expected date of completion is February 2027.

- Unit-IV (100 MW) of Kadamparai Power House (4x100 MW) is to be brought back into service after entrusting the work of Refurbishment of Rotor.

- Feasibility study for Renovation, Modernization and Uprating of Kadamparai Power House (4 x 100 MW) is to be taken up.

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6.7.3 Hydro Projects

Hydro Projects are critical towards low-cost power generation in an environment friendly manner. Pumped Storage Projects help to absorb excess power available during Solar hours and discharge during the deficit peak hours.

6.7.3.1 Kollimalai Hydro-Electric Project (1x20 MW)

- 1x20 **MW** in Namakkal district at a cost of **Rs.595.46 crore**.

This conventional Hydro Electric Project is being executed at a cost of ₹595.46 crore in Namakkal district. The project involves the construction of five diversion weirs/fore bay in the Kolli Hills mountain ranges, Power tunnel, penstock and a power station in Puliyancholai village of Trichy district are being carried out for the project.

The construction of 3 Nos weirs completed. Other civil, mechanical, and electrical works are in progress. The project has achieved 94.25% physical progress and 93.57% financial progress

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till date. The project is expected to be commissioned in June 2027.

6.7.3.2 Kundah Pumped Storage Hydro Electric Project (4x125 MW)

- 4x125 **MW** in the Nilgiris at **Rs.3,926.80 crore** - the State's flagship storage project.

Kundah Pumped Storage Hydro Electric Project (4x125 MW) is being developed in the Nilgiris district at a cost of ₹3,926.80 crore.

The 'Porthimund' and 'Avalanche-Emerald' reservoirs owned by the Tamil Nadu Green Energy Corporation Ltd., will be used as the 'Upper' and 'Lower' reservoirs respectively for this project. During times of low power demand, surplus power will be utilised for pumping water through the Plant under construction from the Avalanche - Emerald reservoirs to the Porthimund reservoir. The same water will be used for power generation during peak hour demand. Civil, Mechanical and Electrical works for the project are underway.

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The project work commenced in February 2018. Physical progress of 88.75% and financial Progress of 82.48% have been achieved.

The Project is expected to be commissioned by June 2027.

6.7.3.3 New Pumped Storage Projects

Pumped storage projects of 15 Nos. with a total capacity of 14,500 MW have been envisaged for development and are under various stages.

The pumped storage pipeline under various stages of development.

6.7.3.4 New Small Hydro Projects

Based on the 1st Expression of Interest 3 Nos. of projects are allotted for development and evaluation of proposals with reference to the 2nd Expression of Interest is under progress.

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6.8 Dam Rehabilitation and Improvement Project – II

The Dam Rehabilitation and Improvement Project (DRIP II) is implemented in various States in India with financial assistance from the World Bank. Administrative sanction for executing DRIP works in two phases (DRIP II & III) has been accorded for a value of ₹461 crore.

DRIP works of 27 dams are proposed (period 2021-27) for a value of ₹260 crore out of which works in 15 dams have been completed, the works are under progress in 4 dams and tendering under process for 6 dams. World Bank approval is awaited for 2 works.

6.9 Finance

The Tamil Nadu Green Energy Corporation (TNGECL) an exclusive green energy company was incorporated during the fag end of financial year 2023-24 to promote and augment

- An exclusive green energy company incorporated at the end of **2023-24** for wind, solar, hydro and biomass.

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renewable energy viz., Wind, Solar, Hydro, Bio-Mass etc. The Company obtained Equity Share Capital, Loans and Assets through transfer scheme notified vide G.O.Ms.40 dated 21.04.2025.

Based on the Government of Tamil Nadu notification, the new company-TNGECL's financial balances as on 31.03.2025 are tabulated below:

Sl. No	Description	As on 31.3.2025
1.	Equity share capital (₹ in crore)	2463.83
2.	Non – Current Liabilities including Borrowings (₹ in crore)	6860.56
3.	Non – Current Assets including fixed Assets (₹ in crore)	8047.06

The Revenue to the Company is around ₹1,700 crore sourced mainly through sale of Hydro Power to State Discom TNPDCL, and

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Miscellaneous charges collection from Wind and Solar Developers.

TNGECL continue the role of project manager by floating tenders for Pumped storage, Small Hydro, Battery Storage projects apart from routine solar and wind projects. As a project manager, the company will be getting facilitation charges. Further to augment renewable power, the company obtained Trading license from the Regulator.

With the view to reduce the interest commitments, TNGECL has addressed all its lenders to reduce the rate of interest. One of the major lenders REC has reduced its long term lending rates for Kundah Project to 9.78% and thereby enabling a savings of ₹14.60 crore and in the case of Kolli hills project, the rate of interest reduced to 10.03% resulting a savings of ₹3.92 crore during FY 2026-27.

Apart from the above, other cost cutting measures and new revenue sources are being explored to make TNGECL financially sound.

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7. TAMILNADU TRANSMISSION CORPORATION LIMITED

Introduction

Tamil Nadu's transmission network serves as the backbone of its power sector, ensuring that electricity generated from thermal, hydro, and renewable sources, seamlessly reaches households, industries, and essential services across the State. Structurally, it comprises a robust, layered grid of Extra High Voltage (EHV) substations and transmission lines which transmit power throughout Tamil Nadu and steps down voltage safely and efficiently for regional distribution.

The grid interconnects these transmission lines into a unified system, balancing supply and demand, providing alternate routes during network faults and facilitate the large-scale integration of green energy. Together, the

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transmission network and grid act as the electric highway, delivering reliable, stable and uninterrupted power across the State.

The network is designed to:

- Carry bulk power over long distances from generation hubs to demand centres.
- Maintain grid stability by balancing supply and demand.
- Integrate renewable energy like wind and solar into the main stream grid.
- Support reliability by providing alternate routes and redundancy during faults or outages.

Ultimately, the transmission network acts as Tamil Nadu's energy highway, driving uninterrupted power supply and fueling the State's expanding economic and energy needs.

7.1 Transmission

TANTRANSCO is consistently expanding and upgrading its transmission network at 765 kV,

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400 kV, 230 kV, and 110 kV levels, focusing on critical areas to evacuate power from generating stations and renewable energy sources. This strengthened grid ensures reliable delivery to intra-state load centres and seamless connectivity with inter-state transmission systems.

7.1.1 Transmission Infrastructure in the State

The existing transmission system infrastructure at different Voltage levels as on 31.03.2026 is as follows:

Sl. No.	Voltage Level	Total No. of Substations	Total length of lines in Circuit kms
1.	765 kV	2	906
2.	400 kV	20	5,231
3.	230 kV	118	12,029
4.	110 kV (Grid & Non-Grid)	970	21,515
5.	66 kV	03	83
	Total	**1,113**	**39,764**

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7.1.2 Transmission Infrastructure Development

Establishing 96 Nos. of Substations viz., 1 No. of 765 kV, 6 Nos. of 400 kV, 10 Nos. of 230 kV and 79 Nos. of 110 kV Substations are under execution in various districts of Tamil Nadu to strengthen the 110 kV, 230 kV Transmission networks to provide reliable power supply to the LT, HT and EHT consumers.

a. 765 kV Transmission Network

765 kV own transmission network is being set up mainly for transmission of power especially Green Energy generated from Solar, Wind Farms and Hydro from Southern parts of the State. This network will minimize transmission line losses, carry bulk power to long distances, enhance the Available Transfer Capability, Reliability and develop the Intra-state Transmission system.

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The 765 kV network is being developed from Virudhunagar to North Chennai for carrying out power to long distance across the State to the load centres.

765 kV North Chennai Pooling Station (GIS) is established for evacuating power from newly established NCTPS Stage III. Moreover, this will facilitate evacuation of power from the proposed ETPS Expansion Thermal Power Plant and Ennore Special Economic Zone (SEZ) Thermal Plant.

Virudhunagar 765 kV Substation has been established and back charged at 400 kV level. The intermediate Ariyalur 765 kV Substation has connectivity to the Inter State Transmission System (ISTS) Network at 765 kV Voltage level and has been commissioned.

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Ongoing 765 kV Substation details

Sl.No	Name of the Substation	Transformer capacity in MVA	765 kV EHT lines in Ckms	
			Energized	Under execution /to be taken up
1.	Virudhunagar	2x1500	-	504
2.	Coimbatore	2x1500	-	480
		67.78/99.15 acres of land has been acquired. Balance 33.37 acres of land has been acquired through orders of DRO/Tiruppur on 10.07.2026 under Industrial Purpose Act. It is proposed to be established through Tariff Based Competitive Bidding (TBCB) mode, for which tender is in process.		

b. 400 kV Transmission Network

As on 31.03.2026, TANTRANSCO has a 400 kV transmission system with 20 Nos. of Substations and EHT lines of 5,231 circuit kms across the State for transferring power to load centre and connectivity to Inter State Transmission System.

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The details of works under progress are as below:

Sl. No	Substation Name	District	Present Status
1.	Thervoikandigai	Thiruvallur	Energised at 230 kV level. Work completed and will be energized at 400 kV level.
2.	Guindy Gas Insulated Switchgear (GIS)	Chennai	Completed and charged at 230 kV level. 400 kV associated source line work is under progress.
3.	Tharamani Gas Insulated Switchgear (GIS)	Chennai	230 kV Gas Insulated Switchgear (GIS) has been test charged on 17.03.2023. 400 kV associated source line Ottiyambakkam to Taramani test charged on 22.07.2026.
4.	Edayarpalayam	Coimbatore	Tender floated for the balance works under TBCB.
5.	Parali	Coimbatore	Works are under progress. Forest department has given concurrence to commence the work in the Substation site.

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6.	Samugarenga puram	Tirunelveli	SS: Re-tender to be floated. Associated Lines: Works are under progress.
7.	Ariyalur	Kallakurichi	Work awarded and are under progress.

As numerous Data Centres, Residential and Commercial projects are coming up, load increase is inevitable in Western parts of Chennai city. To cater the above load growth, Ambattur TRB 400 kV Substation is proposed to be established under Tariff Based Competitive Bidding Mode (TBCB) with a capacity of 1,400 MVA. Also, it is proposed to establish Cuddalore 400 kV Substation under Tariff Based Competitive Bidding Mode (TBCB).

c. 230 kV Transmission Network

As on 31.03.2026, TANTRANSCO has established 230 kV transmission system with 118 Nos. of Substations and EHT lines of

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12,029 circuit kms across the State for transferring power to load centre.

Maraimalainagar 230 kV, Kalivelampatty 230 kV, Sathumathurai 230 kV Substation and Nallur 230 kV Substations were energized on 05.04.2026, 13.04.2026, 20.05.2026 and 13.07.2026 respectively.

Works are under progress in the following 230 kV Substations to strengthen the 230 kV network and stability of the 110 kV network.

Sl. No	Substation Name	District	Present Status
1.	Thiruvanmiyur Gas Insulated Switchgear (GIS)	Chennai	Work is under progress
2.	Panjetty	Thiruvallur	
3.	Avadi	Thiruvallur	
4.	Vembakkam	Thiruvannamalai	
5.	Nanguneri	Tirunelveli	
6.	Thumbalapatti	Dindigul	

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Sl. No	Substation Name	District	Present Status
7.	Pallavaram	Chennai	Re-tender to be floated.
8.	Keezhakuppam	Cuddalore	
	Green Energy Corridor II Schemes		
9.	Poolavadi	Tiruppur	Work is under progress. Challenges in execution: RoW issues in erection of Associated Transmission lines.
10.	Muppandal	Kanyakumari	Work is under progress. Challenges in execution: RoW issues in erection of Associated Transmission lines.
11.	Kongalnagaram	Tiruppur	Establishment of Substation work is under progress. To be Retendered for erection of Associated Transmission Lines.

- Phase I used a **Rs.529.31 crore** grant from the National Clean Energy Fund plus a 76 million Euro (**Rs.573.26 crore**) KfW soft loan under Indo-German cooperation.

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7.1.3 Green Energy Corridor

The establishment of Transmission network being taken up under this scheme are to evacuate huge quantum of Renewable Energy (RE) viz., Wind, Solar and Hydro Generating stations to the load centre.

a. Green Energy Corridor – Phase –I

The scheme has been implemented with the grant of ₹529.31 crore under National Clean Energy Fund (NCEF), as soft Loan of 76 Million Euro (₹573.26 crore) from KfW German funding under Indo German Bilateral Co-operation and the balance as Equity by TANTRANSCO.

Sl. No	Name of Package	Status
1.	Thennampatty 400 kV SS	Completed
2.	Thennampatty-Kayathar 400 kV DC Line	
3.	Rasipalayam-Palavadi 400 kV DC Line	

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Sl. No	Name of Package	Status
4.	Erection of 6 Nos. 230 kV Lines	
5.	Augmentation of 230/110 kV Auto Transformer Capacity from 100 MVA to 160 MVA in 5 Nos. Substations	

b. Green Energy Corridor – Phase –II

Establishment of EHT Substations and Transmission Lines to facilitate intra state transmission of Renewable Energy under Green Energy Corridor–II (GEC-II) with funding assistance viz., Grant from MNRE for ₹237.52 crore, soft loan from KfW/Germany for ₹473.12 crore (47% of project cost) and TANTRANSCO Equity for ₹296.00 crore are being executed as detailed below:

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Sl. No	Name of Package	Project cost ₹ in crore	Present Status
1.	Samugarengapuram 400/230-110 kV SS	249.92	Tender lodged and re-tender called for
2.	Associated 400 kV lines of Samugarengapuram SS	208.86	Work is under progress
3.	Associated 230/110 kV lines of Samugarengapuram SS	192.60	
4.	Poolavadi 230/110 kV (Digital) substation	73.95	
5.	Associated 230/110 kV lines of Poolavadi 230 kV SS.	130.00	
6.	Muppandal 230/110 kV Substation	70.97	
7.	Associated 230 kV lines of Muppandal 230 kV SS.	11.00	
8.	Kongalnagaram 230/110 kV Substation	121.54	
9.	Associated 230 kV lines of Kongalnagaram 230 kV SS.	34.00	Tender lodged and is to be re-tendered

7.1.4 Schemes under Chennai–Kanyakumari Industrial Corridor (CKIC) Funded by Asian Development Bank (ADB)

i) Substations and associated Line works

Transmission schemes are implemented under Chennai – Kanyakumari Industrial Corridor at a total estimated cost of ₹4,332.57 crore inclusive of Government support of ₹1,000 crore. Asian Development Bank (ADB) is funding for an amount of 443 Million USD for the project.

Sl. No	Name of Substation	Status
1.	Ottapidaram 400 kV SS	Commissioned on 22.03.2023
2.	Virudhunagar 765 kV SS	765 kV SS back-charged at 400 kV level. Virudhunagar - Coimbatore 765 kV Line work under progress.

ii) Organizational Transformation Study (OTS)

In order to carry out the detailed strategic Management study of TANGEDCO and TANTRANSCO, M/s. Ernst & Young LLP,

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New Delhi was appointed as consultant on 25.10.2021 under Power Sector Investment Project funded by ADB to improve the overall Organisation financial and fiscal performance.

The Task core committee approved the final reports of all the 11 tasks submitted by E&Y under OTS Phase-I. The final reports submitted to Board of TANTRANSCO for approval. Out of which 5 Nos., (i.e., Task 4, 6, 7, 9 and 10) approved by the Board of TANTRANSCO.

The contract amendment to M/s. Ernst & Young LLP (E&Y) for undertaking implementation of OTS Phase-II was issued and work is under progress.

7.1.5 Projects under Tamil Nadu Investment Promotion Programme (TNIPP)

- **TNIPP**-I funded **Rs.195.23 crore** for 6 transmission schemes; Phase II **Rs.481.65 crore** for 15 schemes.

Phase – I

Under TNIPP–I, the Government of Tamil Nadu has funded ₹195.23 crore for 6 transmission schemes against a total project

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cost of ₹216.39 crore, with TANTRANSCO contributing the balance ₹21.16 crore as equity. Thiruverkadu 230 kV SS, Omega Industrial Estate 230 kV SS, Omega Industrial Estate 110 kV SS, TNSCB Perumbakkam 110 kV SS and Thirumangalam South 110 kV SS have been completed. For the Munusami Salai 110 kV SS, the contract was terminated and a fresh tender is to be floated to complete the remaining works.

Phase – II

Government has funded ₹481.65 crore for the execution of 15 transmission schemes. Among 15 schemes, 11 schemes namely, Thuvakudi 230 kV SS, Singadivakkam 110 kV SS, Eliambedu 110 kV SS, Thirumani 110 kV SS, Denkanikottai 110 kV SS, Papparambakkam 110 kV SS, Kunjalam 110 kV SS, Mangadu 110 kV SS, Pulianthope 110 kV SS,

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Pallikaranai 110 kV SS, and Maduravoyal (GIS) 110 kV SS have been completed.

Works at the Avadi 230/110 kV and Panjetty 230/110 kV Substations are under progress.

Major works at the Thiruvanmiyur GIS 230 kV Substation have been completed. The 230 kV bus was successfully energized on 04.03.2026 and transformer energised on 23.07.2026. The remaining 33 kV works will be taken up through a fresh tender.

For the associated 230 kV and 110 kV lines of Thuvakudi 230 kV Substation, overhead to underground conversion has been proposed due to RoW issues.

7.1.6 Power Evacuation Lines envisaged for the Generation Projects

To evacuate the power generated in the generating plants it is necessary to develop the EHT line network to transfer power to the load

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centre. The following are the major schemes under implementation with fund assistance from the financial institutions viz., Power Finance Corporation (PFC), Rural Electrification Corporation (REC) – Domestic Funding Agencies.

Sl. No.	Name of the Project	Line Connectivity	Cost of the Line (₹ in crore)
1.	Ennore SEZ TPP (Thermal)	400 kV DC line (31.98 ckm) from Ennore SEZ Project to 765/400 kV North Chennai Pooling station.	169.00
2.	ETPS Expansion TPP (Thermal)	400 kV DC line (5.50 ckm) from Ennore Expansion Project to 765/400 kV North Chennai Pooling station.	36.00
3.	Udangudi TPP-Stage-I (Thermal)	400 kV DC line (140 ckm Upto Common Point) from Udangudi project to Virudhunagar 765/400 kV SS – to be re-tendered.	276.86
4.	Kundah Pumped Storage HEP (Hydro)	230 kV feeders (99.46 ckm) from Kundah Pumped Storage Generating Station switchyard to Parali	114.26

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Sl. No.	Name of the Project	Line Connectivity	Cost of the Line (₹ in crore)
		400/230 kV SS work under progress.	
5.	Sillahalla pumped storage (Hydro)	400 kV DC line (36 ckm) from Sillahalla Pumped Storage Generating Station switchyard to Parali 400 kV SS. Work to be taken up.	196.76

7.2 System Operation

The operation wing is responsible for operating and maintaining Extra High Voltage (EHV) transmission elements. Its core duty is to align with generation capacity additions, evacuate power efficiently and ensure a reliable supply at all times to distribution networks. In doing so, it judiciously meets the rapidly growing demand across all categories of consumers.

The Operation Wing undertakes the responsibility of operating and maintaining substations and transmission lines across

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Tamil Nadu. To carry out these functions effectively, 11 dedicated operation circles are in place, ensuring reliable performance and uninterrupted service throughout the State.

7.2.1 EHV Overhead Transmission lines Hotline Wing

Maintenance and breakdown activities on the EHT networks are handled by the line maintenance teams, which require temporary supply interruptions. Such interruptions, though necessary, can affect consumer satisfaction and may result in revenue loss if not managed efficiently.

To avoid supply interruptions, maintenance on live lines is carried out by the Hotline Wing. Specially trained personnel stationed at Chennai, Tiruvalam, Coimbatore, Trichy and Madurai undertake these works keeping the power supply continuous. This approach avoid supply

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interruptions while ensuring both reliability and efficiency.

7.2.2 EHV Underground Cable Network

The 400 kV, 230 kV and 110 kV EHV Underground cable network exist for a length of 571.26 km in the thickly populated Chennai city where there is no possibility for erection of towers.

TANTRANSCO faces challenges in maintaining the EHV underground cable network due to frequent damages caused by works of other departments such as CMWSSB, GCC, BSNL, Highways, and CMRL. To safeguard the system, two cable protection teams, patrol 230 kV routes during night hours. Further, administrative approval has been accorded for forming a dedicated subdivision to ensure effective maintenance, uninterrupted supply, and swift restoration of faulty cables.

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7.2.3 GIS Wing

Given the challenges in acquiring land for new outdoor substations in Chennai, Gas Insulated Substations (GIS) have been established to operate with minimum space. To support maintenance activities, two dedicated GIS subdivisions at Korattur and Guindy are functioning effectively.

At present, 36 GIS substations are in service and maintenance works in GIS substations are carried out by TANTRANSCO GIS wing.

7.2.4 Alternate source for substations

In Tamil Nadu, 60 Nos. of 110 kV substations having single source have been identified for providing second source in order to avoid supply interruption to the consumer and for 9 numbers of SS, works have been completed.

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7.3 State Load Despatch Centre (SLDC)

The State Load Despatch Centre (SLDC) serves as the nerve centre of Tamil Nadu's electricity grid. Supported by three Sub-LDCs at Chennai, Erode and Madurai, it ensures efficient grid control and coordination. Its primary functions include maintaining grid parameters within the limits prescribed by the Indian Electricity Grid Code (IEGC), such as frequency between 49.90 and 50.05 Hz and drawal deviations within ±250 MW. SLDC plays a balancing role by matching load with available generation in real time, supervising grid operations and exercising control over the intra-state transmission system to guarantee reliability and stability.

- The Indian Electricity Grid Code band the State Load Despatch Centre must hold, with drawal deviation within ±**250 MW**.

TN grid experiences five distinct demand peaks, namely, morning peak, solar peak, evening peak, lighting peak and AC night peak. At present, the solar and evening peaks are

largely met through renewable energy sources such as wind and solar, supplemented by other generators. However, shortages are often encountered during the morning, lighting, and AC peaks, particularly in the months of February to May. After meeting the demand with available sources viz., thermal, hydro, IPP, CPP, Co-gen, Biomass, Central Generating Stations (CGS) share, Long term open Access (LTOA), Medium term open Access (MTOA) and renewable energy sources, the shortage in demand is met through short term tie ups such as Day Ahead Market (DAM), Day Ahead Contingency (DAC) Market, Long duration contract (LDC) and Real Time Market (RTM).

All critical feeders are monitored and decisions taken to avoid overloading due to tripping of feeders. Emergency Line clears are decided and given in the real time to minimise the interruptions.

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The Renewable Energy Management Centre (REMC) undertakes wind and solar power forecasting on both day ahead and intraday basis, using inhouse forecasting tools as well as inputs from Qualified Coordinating Agency (QCAs). These forecasts enable SLDC to seamlessly integrate renewable energy generation into the grid, ensuring stability and reliability.

- Forecasts wind and solar output day-ahead and intraday, using in-house tools and Qualified Coordinating Agencies.

The Commercial Operation Wing is responsible for granting grid connectivity approvals to generators. It also issues and renews open access approvals for both generators and consumers on a monthly basis. For open access transactions through Power Exchanges, approvals are processed via the National Open Access Registry (NOAR) portal.

The Intra state Deviation Settlement Mechanism (DSM) was implemented based on Hon'ble TNERC's directives from 01.04.2024.

- Implemented from **01.04.2024** on **TNERC**'s directions, covering both conventional and renewable generators.

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The DSM for both conventional (State owned Thermal, Gas, Co-gen, Biomass & Private CPP, IPP) and Renewable energy generators (Wind and Solar) is computed and published in the SLDC website. Under the above DSM Regulations, all the generators are brought under the ambit of Scheduling their power in Day-ahead and Intra-day basis in order to maintain the Grid Discipline, Grid Security and Stability.

The Cyber Security wing of the SLDC maintains the Grid Operation Information Technology (IT) and Operational Technology (OT) infra-structure. Periodical Vulnerability penetration tests are also being carried out to ensure cyber safety and security.

The power supply position in terms of Demand vs Supply is being reviewed daily and the contingency if any, due to outage of units and variation in wind and solar generation is

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analysed in detail. The peak demand is met out by maximizing all available sources and optimizing the power purchase from the day ahead and real time market.

Challenges faced in grid management are thermal outages, CGS share outages, sudden reduction of LTOA, variation in renewable energy sources, low hydro resources, MUST RUN status for RE power etc. The unexpected changes in the climatic conditions impact the demand and availability of generating sources. Inspite of all these challenges, un-interrupted power supply is maintained 24x7 in Tamil Nadu.

Performance

All-time maximum demand so far reached is 21,724 MW on 14.07.2026 and Maximum per day consumption reached is 475.447 MU on 17.07.2026. Chennai maximum demand so far reached is 5,014 MW on 10.06.2026.

- With maximum daily consumption of 475.447 **MU** on **17.07.2026**. Chennai peaked at **5,014 MW** on **10.06.2026**.

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Record all-time high wind generation was achieved of 6,682 MW on 01.08.2026 and highest per day generation in energy terms was recorded of 142.43 MU on 01.08.2026. An all time high solar generation of 7,919 MW on 25.07.2026 and highest generation in a day of 60.44 MU was realised on 06.07.2026.

- Record wind generation, with 142.43 **MU** in a single day.
- Record solar generation; the highest daily solar energy was 60.44 **MU** on **06.07.2026**.

7.4 Finance

TANTRANSCO is availing financial assistance from various financial institutions viz., Rural Electrification Corporation (REC), Power Finance Corporation (PFC), National bank for Agriculture and Rural Development for Agriculture (NABARD), Housing and Urban Development Corporation (HUDCO), PTC Financial Services and Bank of Baroda etc., for executing certain Transmission Projects.

In order to improve the financial position of TANTRANSCO, various measures are being taken

to control the expenses which include savings on interest on loans.

Government is providing equity share capital assistance for Chennai-Kanyakumari Industrial Corridor (CKIC) Project.

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8. TAMIL NADU POWER DISTRIBUTION CORPORATION LIMITED

The electricity distribution network in Tamil Nadu forms the crucial last-mile link between the power system and consumers. It is the segment that directly interfaces with households, businesses, industries, and agriculture ensuring that electricity generated and transmitted across the State is delivered reliably and efficiently.

The network is spread across both urban and rural areas, with substations, transformers and feeder lines working together to maintain uninterrupted supply. In cities, advanced solutions like Gas Insulated Substations are adopted to overcome space constraints, while in rural and hilly regions, conventional infrastructure ensures connectivity even in challenging terrains.

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Beyond infrastructure, the distribution system also plays a vital role in customer service, handling new connections, billing, collection and grievance redressal. It is continuously evolving with modern practices such as renewable energy integration, smart metering and digital platforms, making it not just a delivery mechanism but a service-oriented framework that supports State's economic and social growth.

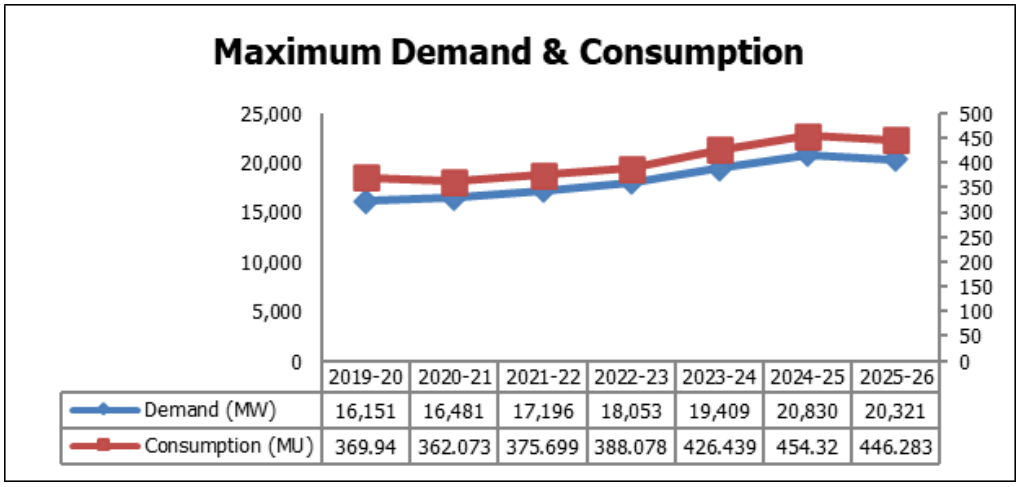
8.1 Distribution Infrastructure

TNPDCL serves about 3.52 crore consumers of various categories. The power demand of the State and maximum per day energy consumption are increasing every year and are shown below:

The distribution company's consumer base.

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Year	Demand		Maximum consumption	
	MW	Date	MU	Date
2019-20	16,151	03.04.19	369.940	12.04.19
2020-21	16,481	26.03.21	362.073	26.03.21
2021-22	17,196	29.03.22	375.699	29.03.22
2022-23	18,053	16.03.23	388.078	29.04.22
2023-24	19,409	22.03.24	426.439	29.03.24
2024-25	20,830	02.05.24	454.320	30.04.24
2025-26	20,321	27.03.26	446.283	25.04.25



To meet the growing load demand, Tamil Nadu's infrastructure is being systematically strengthened through multiple schemes. This includes the establishment of new substations, installation of distribution transformers and expansion of HT and LT lines.

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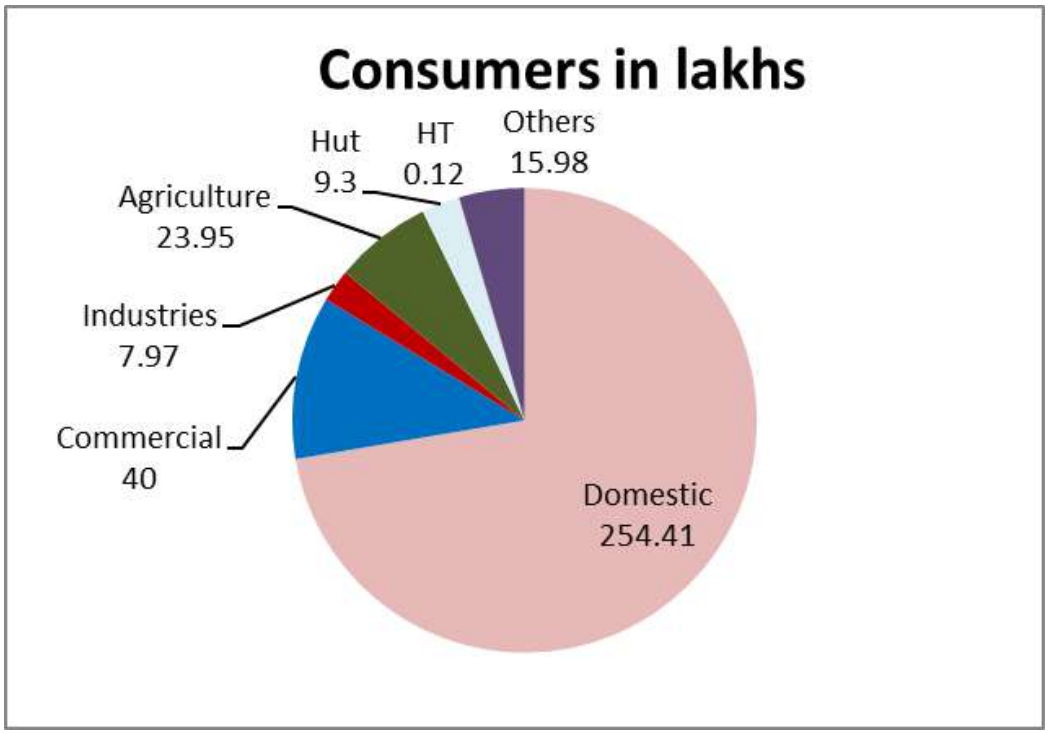
In addition, initiatives such as the conversion of overhead lines into underground cables to minimize interruption and the erection of additional distribution transformers in low voltage areas are being carried out. Together, these measures aim to deliver uninterrupted, high quality and reliable electricity supply to consumers across the State.

Salient Features of Distribution Network

The details of Distribution network are given below:

Distribution Network	
33/11 kV Substations	797 Nos.
High Tension Lines	2,11,948 km
Distribution Transformers	4,47,603 Nos.
Low Tension Lines	6,66,429 km
Consumers	3,51,72,861 Nos.

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8.2 Consumer Service

Consumer satisfaction is ensured by providing quality and uninterrupted power supply.

8.2.1 LT New Service connections are effected within a day/ three days

An online application filing system is available for both HT and LT category of supply. To encourage industrial growth and

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entrepreneur's investment in the State, the process of applying only through the online platform is implemented and process was simplified.

8.2.2 CEIG Safety Related

CEIG (Chief Electrical Inspector to Government) certificate has been relaxed for extension of LT supply to the multi-storeyed building thereby Tamil Nadu Power Distribution Corporation Limited (TNPDCL) is effecting service to the consumers quickly.

8.2.3 Consumer Grievance Redressal Forum (CGRF)

Tamil Nadu Power Distribution Corporation Ltd (TNPDCL) is ensuring smooth functioning of Consumer Grievance Redressal Forum (CGRF) in 45 Distribution Circles. Online facility for filing CGRF petitions is available. Action is taken on the petitions received then and there.

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8.2.4 Ease of Doing Business

Towards Industrial growth and encouraging entrepreneurs in Tamil Nadu, Tamil Nadu Power Distribution Corporation Ltd's contribution is significant by issuing approvals immediately for extension of supply.

Towards Industrial growth, Tamil Nadu Power Distribution Corporation Ltd (TNPDCL) works in tandem with other departments such as Guidance and MSME Department in issuing clearance immediately for the applications received through Single Window Portal (SWP).

Name Transfer of Service Connection request made through Registration Department (Inspector General of Registration - IGR) was effected immediately without insisting other documents.

Tamil Nadu Power Distribution Corporation Ltd., tirelessly making efforts in simplifying the

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procedures in effecting of supply under Ease of Doing Business (EoDB) and Business Reform Action Plan (BRAP).

8.2.5 SMS to consumers

SMS communication to consumers plays a vital role in ensuring transparency, timely updates, and improved service delivery. It covers every stage of interaction, from billing and reminders for payments, outages, applications and complaint resolution, thereby strengthening consumer confidence and satisfaction.

- **Bill intimation SMS** after assessment entry by the assessor – 13.5 crore per year
- **Payment confirmation SMS** through collection counters and digital modes – 13.33 crore per year
- **Reminder SMS** sent three days prior to the due date – 6.5 crore per year

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- **Outage intimation SMS** for scheduled maintenance and fault tripping – 14.6 crore per year
- **Application status SMS** to applicants at various stages – 2.25 crore per year
- **Complaint status SMS** to consumers – 0.7 crore per year

Altogether, about 57 crore SMS are being sent annually, reflecting the scale of consumer-centric communication undertaken.

8.3 Resource Adequacy Study

In accordance with the Tamil Nadu Electricity Regulatory Commission (Framework for Resource Adequacy) Regulations, 2025, (notified on 20.06.2025), TNPDCL has initiated a comprehensive Resource Adequacy (RA) Study to ensure the availability of adequate generation resources for meeting the projected electricity demand reliably in a cost-effective manner. With the increasing share of renewable energy (RE),

which is seasonal and intermittent in nature, it has become essential to accurately assess the demand–supply balance in the grid.

To facilitate the Resource Adequacy exercise, Purchase Orders have been placed for the procurement of software tool. The software is being designed to generate robust demand projections by considering historical consumption patterns, sector-wise demand growth, weather parameters, economic parameters, Government policies, energy efficiency measures and emerging demand drivers such as electric vehicles, data centers, green hydrogen and roof top solar installations in compliance with the provisions of the TNERC Resource Adequacy Regulations 2025.

The study considers conventional and renewable energy sources, energy storage systems, power procurement options, retirement of ageing generating stations and operational

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constraints to determine the optimal least-cost resource mix.

The outcome of the study will provide a scientific and data-driven basis for long-term power procurement planning, generation capacity augmentation and investment decisions enabling TNPDCL to ensure a reliable and uninterrupted power supply to the consumers. The study will also facilitate the assessment of generation capacity required to be tied up through long-term, medium-term and short-term procurement arrangements.

8.4 Power Purchase

8.4.1 Long Term Power Purchase

Tamil Nadu Power Distribution Corporation Limited had executed 11 long term Power Purchase Agreements (PPAs) for procurement of 3,330 MW power for fifteen years from 2013.

- Eleven long-term power purchase agreements - **2,158 MW** inter-state and **1,172 MW** intra-state.

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Out of 3,330 MW, 2,158 MW is from inter-state generators and 1,172 MW from intra-state generators. Out of 2,158 MW from inter-state generators, 1,658 MW is being received. One of the interstate generators stopped supplying power of 500 MW. In case of intra-state generators, the entire 1,172 MW is being received.

Bundled (Solar+Thermal) Power Purchase

Power Sale Agreement (PSA) has been executed for purchase of bundled power of 10 MW (5 MW from Solar & 5 MW from Thermal) for a period of 25 years on long term basis from various sources.

8.4.2. Medium Term Power Purchase

TNPDCL had executed Power Supply Agreement (PSA) for supply of 102 MW Round The Clock (RTC) power for a period of five years from 15.12.2022 to 14.12.2027.

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Further, TNPDCL has executed 11 Nos of MTOA APPs (Agreement for Procurement of Power) to supply 1,580 MW RTC power from 01.02.2026 to 31.01.2031. The supply has commenced from 01.02.2026.

Also, TNPDCL has executed 2 Nos Medium Term Open Access (MTOA) APPs to supply for 618 MW RTC Power from the generators located in the Tamil Nadu State periphery for a period of five years from 01.04.2026 to 31.03.2031. The supply has commenced from 01.04.2026.

8.4.3. Short Term Power Purchase

Under short term tender, TNPDCL procured the following to meet out the summer demands of 2026.

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Short Term Open Access (STOA)				
Sl. No	**Month**	**RTC in MW**	**Peak hours (18-24 hrs) in MW**	**Final quantum during peak hours (18-24 hrs) in MW**
1.	Feb-26	420	269	689
2.	Mar-26	862	568	1,430
3.	Apr-26	627	376	1,003
4.	May-26	567	340	907

8.4.4. Swap power arrangement

The swap power arrangement shall be energy to energy transaction between two utilities without monetary considerations.

Under swap arrangements,

- TNPDCL has received upto 4,450 MW from other utility during various hours from 06.01.2026 to 30.04.2026 and return of power by TNPDCL from 01.07.2026 to 30.09.2026.

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- TNPDCL has received 100 MW of RTC power from trader from 01.03.2026 to 15.04.2026 and return of power by TNPDCL from 01.07.2026 to 31.08.2026.
- TNPDCL has received 50 MW of power for 10 hrs (17:00 to 3:00) from trader from 01.03.2026 to 15.04.2026 and return of power by TNPDCL from 15.06.2026 to 31.08.2026.

8.4.5 Power Purchase from Pumped Storage Plant

TNPDCL had executed Pumped Storage Purchase Agreement (PSPA), on 05.06.2026 for Procurement of 500 MW power from existing grid connected Pumped Storage Plant for a period of four years from 08.06.2026 to 07.06.2030.

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8.5 Infrastructure Development

In order to improve the distribution network, works are under progress for 25 Nos. of 33/11 kV substations. The substations are planned to be commissioned by this year 2026-27.

8.6 Revamped Distribution Sector Scheme (RDSS)

The Revamped Distribution Sector Scheme (RDSS) is being implemented by the Tamil Nadu Power Distribution Corporation Limited (TNPDCL) with the objective of reducing Aggregate Technical and Commercial (AT&C) losses, bridging the gap between the Average Cost of Supply (ACS) and Average Revenue Realisation (ARR), strengthening the financial sustainability and operational efficiency of the power distribution sector and improving the quality and reliability of power supply to consumers.

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Under the RDSS Scheme, approval has been accorded for Loss Reduction Works at an estimated cost of ₹8,929.86 crore.

- Approved for loss reduction works under the Revamped Distribution Sector Scheme (**RDSS**).

8.6.1 Loss Reduction Works

- The loss reduction works have been proposed to strengthen the distribution infrastructure, minimize power interruptions, address low-voltage issues, and reduce distribution losses, thereby ensuring the supply of quality and reliable electricity to consumers.
- As per the guidelines of the Ministry of Power and M/s.REC, contracts have been awarded in 44 packages covering 41 Distribution Circles across 35 districts for carrying out the following loss reduction works:

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Sl. No.	Particulars	Unit	Quantity	Amount (₹ in crore)
1.	Agricultural Feeder Segregation	Feeders	1,685	6,227.81
2.	Installation of High Voltage Distribution System (HVDS)	Feeders	273	1,592.67
3.	Conversion of clustered Distribution Transformers into individual HVDS Transformers	Nos.	13,892	1,069.92
4.	Replacement of old 33 kV conductors	km	542.08	39.46
			Total	**8,929.86**

The works are under progress in all the districts. Further, the Ministry of Power, Government of India, has extended the sunset period of the Revamped Distribution Sector Scheme (RDSS) upto 31.03.2028.

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8.6.2 Smart Metering

In TNPDCL, Installation of Smart Metering is proposed for the following:

- Accuracy and reliability: reduce the error and billing disputes
- Efficiency: Enable real time data collection, speed up billing
- Theft and Tamper detection: Instant Alerts, Prevents Revenue Loss
- Data Insights: Enhances forecasting, Enable maintenance
- Customer Convenience: Timely billing without physical visits

In order to speed up the implementation of smart metering for Govt/Local body buildings,

- M/s.PFCCL has been appointed as a Project Implementing Agency (PIA) to start with immediate implementation of 1.25 lakhs of Smart meters under RDSS for Govt/Local body buildings covering the 7 districts of Tamil Nadu viz., Chennai,

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Chengalpattu, Kanchipuram, Tiruvallur, Cuddalore, Villupuram and Tiruvannamalai. M/s.PFCCL has identified the Advanced Metering Infrastructure Service Provider (AMISP) for implementation of 1.25 lakhs of Smart meters for Govt/Local body buildings. A letter of acceptance was issued to M/s.PFCCL on 01.06.2026.

- M/s.PFCCL has been appointed as a Project Implementing Agency (PIA) to start with immediate implementation of remaining 5.45 lakhs of Smart meters under RDSS for Govt/Local body buildings covering 34 circles (31 Districts) of TNPDCL. A letter of Intent was issued to M/s.PFCCL on 30.05.2026.

8.6.3 Implementation of LTCT billing automation project

Out of 65,000 Nos LTCT service connections in TNPDCL, around 34,000 Nos. of LTCT services

are provided with Smart meters. Communication has been established in around 28,000 Nos. of LTCT smart meters and Billing automation has been completed for 23,840 Nos. of LTCT service connections.

8.7 Conversion of existing 11 kV outdoor structures into 11 kV RMU

Tamil Nadu Power Distribution Corporation Limited has proposed to convert 310 Nos. of existing 11 kV outdoor structures into 11 kV Ring Main Unit (RMU) in Chennai at an estimated cost of ₹51.18 crore from Chennai Metropolitan Development Authority fund.

Turnkey contract has been awarded for Supply, Erection, Testing and Commissioning of 310 Nos. of RMUs in Chennai North and Central Electricity Distribution Circles (EDC) of Chennai Region to M/s. Trans Global Power Ltd., Chennai. Out of 310 Nos. of RMUs, 201 Nos. of RMUs have been supplied by the contractor.

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Foundation works have been completed for 119 Nos. and 67 Nos. of RMUs have been erected and out of which 63 Nos. RMUs have been commissioned.

8.8 Agricultural service connections

In order to improve and enhance farmers' livelihood by enabling them to increase the Agricultural production, Agricultural service connections are being provided under the following categories:

- Normal,
- Revised Self Finance Scheme,
- Fast Track TATKAL Self Financing Scheme,
- Government Schemes.

As on 31.3.2026, 23.95 lakhs LT and 63 Nos HT agricultural service connections are available.

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8.9 Conversion of Overhead line into Underground Cable in the Temple Car Streets

As lakhs of devotees gather from different regions during the temple car festival, it is proposed to prevent electrical accidents and ensure uninterrupted power supply to the public by converting overhead lines into underground cables along the temple car streets of the most significant temples.

UG cable laying works have been taken up in 37 temple car Streets at an estimated cost of ₹120.76 crore. Works have been completed in 15 Nos. of temple car streets. Works are under progress for 14 temples. For 7 temples, tendering works are under process and for 1 temple, it is planned to execute under DCW.

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8.10 Conversion of Overhead lines to Underground cables in coastal areas of Cuddalore and Nagapattinam towns

TNPDCL has proposed to take up the conversion works of Overhead lines to Underground cables in the coastal areas of Cuddalore and Nagapattinam towns which are frequently affected by natural calamities.

The Detailed Project Reports for the above scheme for a total length of 3,958 km at an estimated cost of ₹630.86 crore have been submitted to the Commissionerate of Revenue Administration, Government seeking funding assistance under National Disaster Mitigation Fund (NDMF) on 24.12.2025. After obtaining financial sanction, works will be taken up.

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Sl. No	Name of the town	Areas covered	Route length of HT & LT lines (km)	Project Cost (₹. in crore)
1.	Cuddalore	Cuddalore town, Vandipalayam, Manjakuppam, Thiruppapuliyur, Bus stand, Cuddalore Collector office, Major hospitals etc.	1,717.25	323.96
2.	Nagapattinam	Nagapattinam town, Nagore, Collector office, Government Hospital, Velippalayam, Thonithurai etc.	2,240.58	306.90
		TOTAL	**3,957.83**	**630.86**

8.11 Action plan to save wild animals in forest area due to electrocution

Most of the Districts (32 out of 38) in the State have Electrical Network in the Forest area. Around 1,509 km of HT and 1,255 km of LT lines have been erected in the permitted routes of

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Forest Department and are existing for quite a long time.

The movement of wild animals predominantly Elephants from Forest Area to the nearby villages have been increased in the recent past and at times the animals meddling with Electrical Network causes electrocution.

To avoid such incidents and to save wild animals from electrocution, the following measures are practiced by TNPDCL.

Extensive Joint inspection with the Forest Department officials and TNPDCL are carried out every fortnight in elephant path area and the following rectification works have been carried out:

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Sl. No	Name of work	Unit	Total No. of works carried out
1.	Raising/Heightening of the existing poles at identified locations.	Nos.	528
2.	Removal of low sag by re-sagging the lines	Loc.	1,948
3.	Insertion of new poles in the long span lines to minimize sagging.	Nos.	2,346
4.	Providing spikes or barbed wires around poles to avoid them being pushed by elephants.	Nos.	1,510
5.	Replacement of damaged Poles	Nos.	538
6.	Setting right leaned poles	Nos.	201
7.	Provision of guarding arrangement	Nos.	134
8.	Tree branches clearance	Nos.	1224
9.	Provision of coping of poles	Nos.	110
10.	Checking the condition of stay sets and renewal of stay sets wherever required	Nos.	362
11.	Providing AB cable and silicon insulated sleeves around bare overhead conductors	km	102.562
	Total		**9,004**

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Silicon insulated sleeves are provided around the bare HT and LT overhead conductors in vulnerable locations of elephant path area and coconut grooves on pilot basis. 154.90 km (HT) and 15.00 km (LT) sleeves have been provided around the bare conductors.

Moulded Case Circuit Breakers (MCCB) are being provided in the Distribution Transformers located in elephant corridor area to prevent electrocution in the instance of snapping of conductor and so far MCCBs have been provided for 408 DTs out of 2,359 DTs.

In order to avoid electrocution to elephants and other wild animals by extending electricity for illegal fencing, the forest department has issued the Tamil Nadu Power Fences Rules vide G.O.No.104 (Environment, Climate Change and Forest Department) dated 03.07.2023 for standardizing of power fencing. Based on the

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above G.O. joint inspection is carried out by TNPDCL along with forest department towards erection of standard fencing.

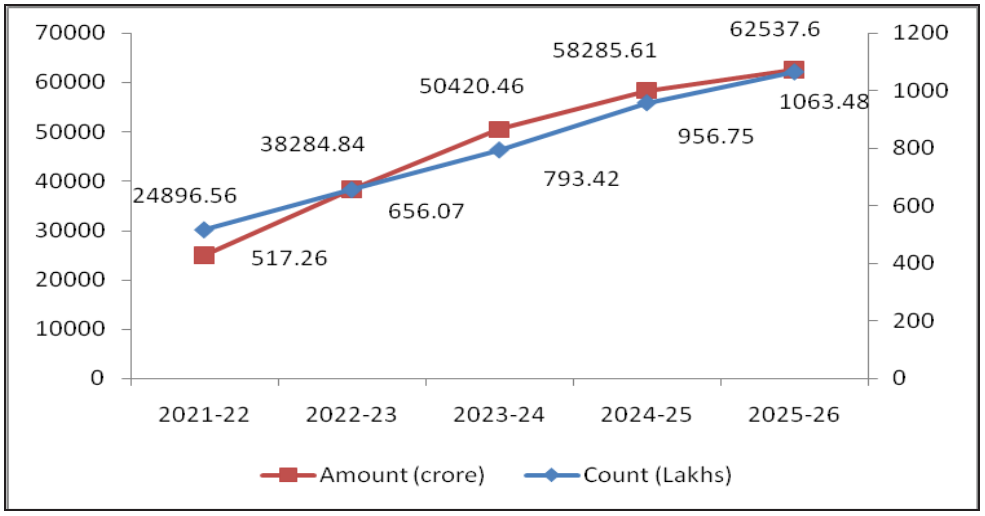
District Level Committee have been formed comprising Forest, Revenue, Agriculture, TNPDCL and one public representative to identify the erection of illegal electrical fencing in forest area and joint inspections are conducted periodically.

8.12 Digital Transactions

Consumers can pay LT CC charges digitally through the TNPDCL online portal, mobile app (Net Banking, Credit/Debit & RuPay Cards, UPI/QR code), E-Seva Centres of Government, BBPS platforms (GPay, PhonePe, Paytm, BHIM, etc.), selected bank counters, and via NEFT/RTGS. Digital payments are growing at 10–15% annually and about 87% of TNPDCL's

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total collections are now made through digital mode, ensuring convenience and transparency.



8.13 Human Resources

As on 01.05.2026, the total sanctioned strength across the four TNEB entities is 1,40,635 posts. This covers TNPDCL, TANTRANSCO, TNPGCL and TNGECL.

S. No.	Name of The Company	Total Post	Utilized	Vacant
1.	Tamil Nadu Power Distribution	1,10,960	57,385	53,575

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S. No.	Name of The Company	Total Post	Utilized	Vacant
	Corporation Limited			
2.	Tamil Nadu Transmission Corporation Limited	17,187	9,336	7,851
3.	Tamil Nadu Power Generation Corporation Limited	8,912	5,837	3,075
4.	Tamil Nadu Green Energy Corporation Limited	3,576	2,156	1,420
	TOTAL	**1,40,635**	**74,714**	**65,921**

Of this, only 74,714 posts are currently filled. This leaves 65,921 vacant posts. The vacancies stand at 46.9%.

Sustained annual recruitment is essential for going forward. This must be supported by a

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structured promotion policy. Together, these steps will help restore adequate manpower. They will also improve delivery service. Over the next five years, they will strengthen the operational efficiency of all four TNEB entities.

8.14 Energy conservation measures

The Energy Conservation Act, 2001 provides for the legal framework, institutional arrangements and regulatory mechanisms at the Central and State levels to promote energy efficiency in India. The Bureau of Energy Efficiency (BEE) is the statutory body under the Ministry of Power, Government of India that facilitates and coordinates energy efficiency initiatives at the central level.

Tamil Nadu Power Distribution Corporation Limited (erstwhile TANGEDCO) has been designated as State Designated Agency (SDA) vide G.O. (Ms). No.76, Energy Department

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dated 04.10.2019 to enforce the provisions of the Energy Conservation Act 2001 in the State of Tamil Nadu.

A. Mandatory Schemes

- Perform, Achieve and Trade (PAT) Scheme
- Energy Conservation and Sustainable Building Code (ECSBC) and Eco Niwas Samhita (ENS)

B. Other Schemes

- Energy Conservation Day / Week Celebrations and awareness creation
- Implementation of State Energy Efficiency Action Plan (SEEAP)
- Energy efficiency measures in Government establishments
- State Energy Efficiency Research and Outreach Programme
- Implementation of Internet of Things (IoT) based Irrigation Automation

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- Testing of BEE Star Labelled Appliances and Market Surveillance activities
- Establishment of Energy Clubs

8.15 Sustainable Development Goals (SDG)

The Sustainable Development Goals (SDGs) are a set of 17 global goals adopted by the United Nations in 2015 under the 2030 Agenda for Sustainable Development to achieve a better and more sustainable future for all. India is committed to achieving the SDGs through various national programmes and policies, with NITI Aayog coordinating and monitoring progress across the country.

Tamil Nadu has aligned its development initiatives with the SDGs by focusing on sustainable energy, climate action, healthcare, education, social welfare and economic growth. Through outcome based planning and effective implementation, Tamil Nadu continues to

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contribute towards achieving sustainable and inclusive development.

Goal 7, which pertains to TNEB Limited, aims to “Ensure access to affordable, reliable, sustainable and modern energy for all.” The other related goals are Goal 1, Goal 8, Goal 9, Goal 12, and Goal 13. For Goal 7, the associated Working Group is “Working Group 5 – Innovation, Industrialization and Sustainable Development”, and the Nodal Department is the Industries, Investment Promotion and Commerce Department.

The key targets under Goal 7 are:

- 7.1: Ensuring access to affordable, reliable, and modern energy services.
- 7.2: Substantially increasing the share of renewable energy in the energy mix.
- 7.3: Doubling the global rate of improvement in energy efficiency.

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Indicators have been identified for the above targets, and continuous efforts are being undertaken to achieve the desired outcomes.

The important schemes and initiatives contributing towards achieving the Goal 7 targets include RDDS schemes, Pumped Storage Hydro Projects, repowering of wind turbines, and solar energy initiatives such as Battery Energy Storage Systems (BESS), PM Surya Ghar:Muft Bijli Yojana, rooftop solar projects and other renewable energy programmes.

8.16 Prevention of Energy Theft

43 teams of Ex-servicemen, 21 Enforcement Squads, 1 number Intelligence Wing and 1 number flying squad have been formed for inspection and detection of theft of energy in Electricity Distribution Circles.

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8.17 Finance

Tamil Nadu Generation and Distribution Corporation Limited (TANGEDCO) has been restructured vide G.O. No. 6 and 7 Energy Department dated 24.01.2024 etc., by demerging the thermal energy and renewable energy generation businesses into separate legal entities, Tamil Nadu Power Generation Corporation Limited (TNPGCL); Tamil Nadu Green Energy Corporation Limited (TNGECL) respectively. Pursuant to this demerger, erstwhile TANGEDCO has been renamed as TNPDCL, to look after power distribution activities. All the utilities are under the Holding company, TNEB Limited.

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9. ELECTRICAL INSPECTORATE

Introduction

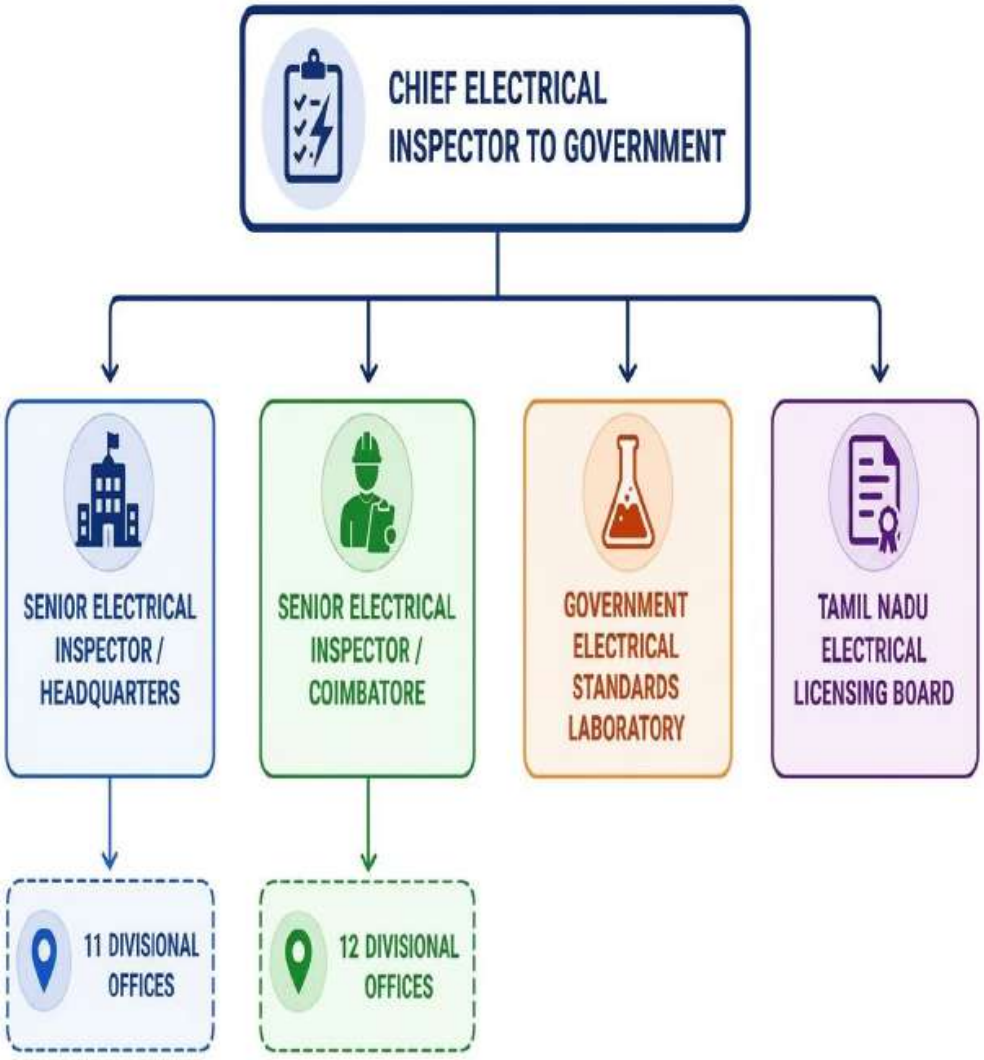
The Electrical Inspectorate, functioning under the Energy Department is one of the oldest government organizations, serving the public since the enactment of the Indian Electricity Act, 1910.

The department plays an important role for ensuring safety of life and property from electrical hazards by enforcing safety provisions stipulated in the national electricity laws and relevant standards prescribed by the Bureau of Indian Standards (BIS).

In addition to this, the Electrical Inspectorate is entrusted with enforcing safety provisions for lifts, escalators and cinemas as well as the assessment and collection of electricity tax in accordance with the applicable State laws.

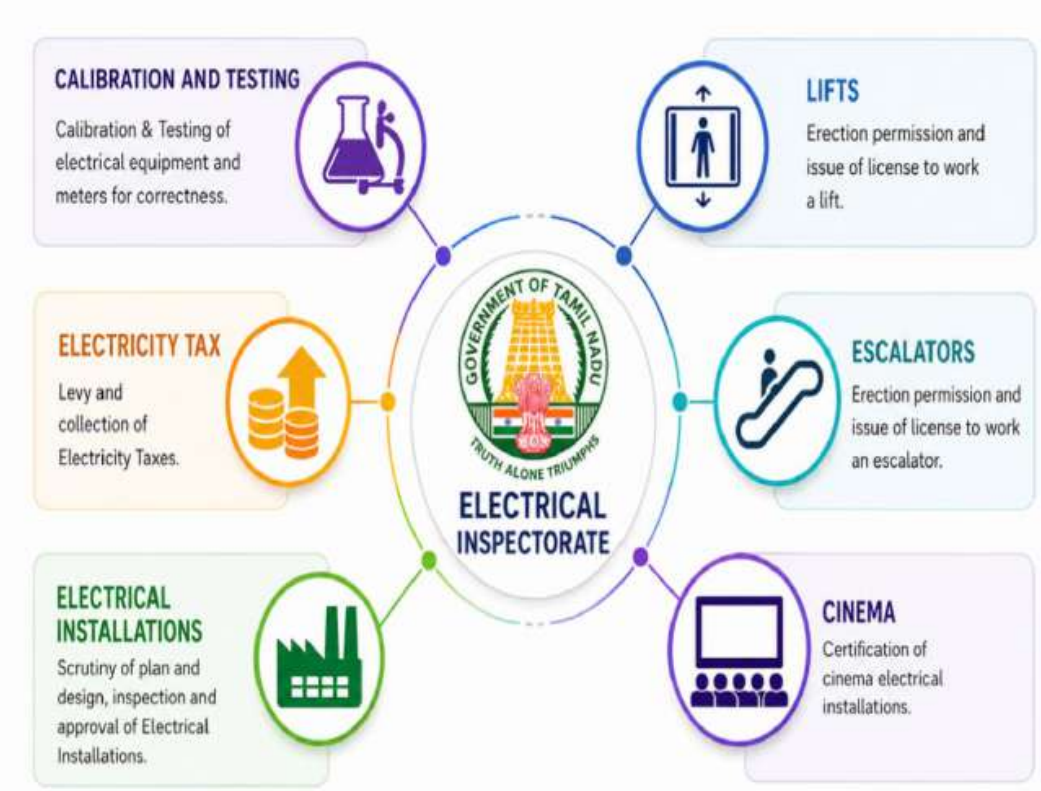
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9.1 Organization Chart of Electrical Inspectorate



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9.2 Services Rendered by Electrical Inspectorate



9.3 Statutory powers, Statutory functions and executive functions

9.3.1 Statutory powers of Electrical Inspectorate

i. Enforcing safety regulations under the Electricity Act, 2003

- The Electrical Inspectorate enforces safety regulations under it, inspecting installations above 650V.

- Inspecting and approving solar/wind energy units, substations, high-voltage electrical installations (above 650V), Independent and Captive Power Plants.
- Conducting biennial inspections of electrical installations above 650V.
- Investigating electrical accidents and recommending preventive measures to avoid recurrence of such accidents.

ii. Enforcing the Tamil Nadu Lifts and Escalators Act and Rules, 1997.

Under this Act and Rules, the Electrical Inspectorate performs the following functions.

- Issuance of Erection Permission for Lifts and Escalators through Auto-Generation.
- Issuance of Licences for working the Lifts and Escalators through Auto-Generation.

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- First inspection, Periodical Inspection (once in Five years) and Renewal of Licences for working the Lifts and Escalators through Auto Generation of licence.
- Issuance and renewal of Authorization for Companies carrying out erection, maintenance, inspection and testing of Lifts and Escalators.

The periodicity of statutory inspection and licence renewal for lifts and escalators.

iii. Enforcing the electrical safety regulations under the Tamil Nadu Cinemas (Regulation) Rules, 1957.

Under this Rules, Electrical Inspectorate undertakes the following functions:

- Approval of drawings for the electrical installations of cinema theatre premises.

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- Inspection of all cinema theatres and the subsequent issuance of electrical certificates.
- Annual inspections of cinema theatre.
- Issuance and renewal of licences for Digital Projection Technicians.

iv. Assessment, levy and collection of electricity tax under the Tamil Nadu Tax on Consumption or Sale of Electricity Act and Rules, 2003.

The rates of electricity taxes for sale or consumption of electricity:

Sl. No	Category	Rate of Tax	Tax collected by Department
1.	Sale of Electricity by Licensee (TNPDCL) to consumers	5% on the Consumption Charge	Tamil Nadu Power Distribution Corporation Limited
2.	Sale of surplus electricity by Captive Power Plant (CPP) or sale of	5% on the Consumption	Electrical Inspectorate

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Sl. No	Category	Rate of Tax	Tax collected by Department
	electricity by Independent Power Plant (IPP) to third parties.	Charge	
3.	Consumption of Electricity from Captive Generating Plants including standby Generators (DG sets) for Own Use and consumption of electricity through Indian Energy Exchange (IEX) purchase	10 paise per unit of electricity consumed	Tamil Nadu Power Distribution Corporation Limited and Electrical Inspectorate

Electricity tax Exemption Categories

1. Electricity sold to the Government, Local Authority and the Railway Administration.

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2. Electricity sold for agricultural purposes and hut service connections.
3. Electricity sold to Domestic consumers by Licensee (TNPDCL).
4. Electricity sold to the TNPDCL.
5. Exemptions granted under the various policies of the Government, such as,
    i. Tamil Nadu New Industrial Policy, 2021
    ii. Tamil Nadu Electronics Hardware Manufacturing Policy, 2020
    iii. Tamil Nadu E-Vehicle Policy, 2019
    iv. Tamil Nadu Data Centre Policy, 2021
    v. Tamil Nadu Aerospace & Defence Industrial Policy, 2019
    vi. Tamil Nadu Footwear & Leather Product Policy, 2022
    vii. Special Economic Zone – SEZ, etc.,

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9.3.2 Statutory Functions of Electrical Inspectorate

Inspection and certification of temporary electrical installations that are set up for VVIP visits such as the Hon'ble President, Hon'ble Vice President, Hon'ble Prime Minister, Hon'ble Governor, Hon'ble Chief Minister, as well as other public functions where large public gathering is expected.

9.3.3 Executive Functions of Chief Electrical Inspector to Government

i. Testing and calibration through the Government Electrical Standards Laboratory.

ii. Ex-Officio President of the Tamil Nadu Electrical Licensing Board.

iii. Member of the Electro-technical Division of the Bureau of Indian Standards.

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iv. Member of the Power and Telecommunication Coordination Committee.

9.4 Testing and calibration activities of the Government Electrical Standards Laboratory

GESL is accredited by National Accreditation Board for Testing and Calibration Laboratories (NABL) for the compliance of ISO/IEC 17025:2017 in its calibration activities (Certificate No: CC-3520, valid from 25-04-2025 to 24-04-2029).

The following testing and calibration facilities are available at the Government Electrical Standards Laboratory:

i. Calibration of electrical measuring instruments such as energy meters, voltmeters, ammeters, insulation resistance testers, earth resistance

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testers, phase sequence indicators and other related instruments.

ii. High-Voltage testing of electrical equipment including transformers, circuit breakers and other associated electrical apparatus.

9.5 Functions of The Tamil Nadu Electrical Licensing Board

1. All electrical installation works must be carried out by licensed contractors and competency certificate holders as per the provisions of the Central Electricity Authority (Measures relating to Safety and Electric Supply) Regulations, 2023.
2. The Electrical Licensing board with the Chief Electrical Inspector to Government as the Ex-Officio President has been designated as competent authority to issue licence to the electrical contractors and to grant certificate of competency to wiremen and supervisors.

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3. The Board issues the following electrical contractor's licences and competency certificates based on the competency in handling voltage levels.

Sl. No.	Grade of the electrical contractor / competency certificates	Voltage level and scope of work
1.	Electrical contractor Super "A" (ESA)	Electrical Installations of all voltage level
2.	Electrical contractor "A" (EA)	All Electrical Installations of voltage upto 33kV
3.	Electrical contractor Super "B" (ESB)	All Electrical Installations of voltage upto 650V
4.	Electrical contractor "B" (EB)	LT consumer (upto 650V) installations with a maximum connected load of 50kW and generators upto 63kVA
5.	Supervisory Competency Certificate	To operate and carry out the electrical installation work at all voltage level

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Sl. No.	Grade of the electrical contractor / competency certificates	Voltage level and scope of work
6.	Wireman Competency Certificate	To operate and carry out the electrical installation work of voltage up to 650V.
7.	Wireman Helper Competency Certificate	Assisting Wireman Competency Certificate holder
8.	Power Generating Station Operation and Maintenance Competency Certificate	Can work in the power generating Station Operation and Maintenance

9.6 Prevention of Electrical Accidents and Safety Awareness

The Department is entrusted with the responsibility of promoting electrical safety, preventing electrical accidents, investigation of electrical accidents, creating public awareness on electrical safety and enforcement of preventive measures.

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i. Investigation of Electrical Accidents

The Department conducts technical investigations into electrical accidents to ascertain their causes and circumstances. Based on the findings, appropriate remedial measures and recommendations are issued to electricity suppliers, consumers and other stakeholders to prevent the recurrence of similar incidents.

ii. Public Awareness and Safety Promotion

To enhance public awareness on electrical safety, the Department regularly disseminates electrical safety guidelines through newspapers, television, Short Message Service (SMS) and other media platforms. Special safety advisories are also issued to the field offices of Tamil Nadu Power Distribution Corporation Limited (TNPDCL), particularly during monsoon

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seasons when the risk of electrical accidents is comparatively higher.

iii. Preventive Measures for Avoidance of Electrical Accidents

The Department recommends the following safety measures to minimize electrical hazards and ensure the protection of life and property:

a) Installation of electric shock protection and life-saving devices such as Residual Current Circuit Breakers (RCCB), Residual Current Circuit Breakers with Over current Protection (RCBO) or Residual Current Devices (RCD) in all electrical installations, particularly in residential buildings.

b) Provision of properly earthed cradle guarding for overhead electrical lines at road crossings, public places and inhabited areas.

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c) Maintenance of statutory safety clearances from overhead power lines during the construction of buildings and other structures.

d) Avoidance of operating electrical switches, appliances or equipment with wet hands.

e) Staying away from locations where power lines have fallen and maintaining a safe distance from exposed electrical cables, electric poles, pillar boxes, transformers and other electrical installations.

f) Ensuring the safety and serviceability of electrical installations through periodic testing by licensed electrical contractors to verify insulation resistance levels and the effectiveness of earthing systems.

g) Conducting periodic training programmes for TNPDCL personnel on electrical safety practices, emergency

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response procedures and Cardiopulmonary Resuscitation (CPR) techniques.

Through these initiatives, the Department strives to enhance electrical safety awareness, reduce electrical accidents, safeguard human life and property across the State.

9.7 New Initiatives Under the Vetri Thamizhagam Vision Plan

- Under the Vetri Solar Mission, MSMEs installing rooftop solar systems in their establishments will be granted 100% electricity tax exemption for five years. In this regard, this department will take necessary steps to issue notification by the Government exempting 100% electricity tax for five years for eligible MSME consumers.

- MSMEs installing rooftop solar get 100% electricity tax exemption for five years.

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- The applications for electrical safety approvals of EV charging stations availing HT supply will be processed through online in a transparent and prompt manner by this department to achieve the mission of establishing 20,000 numbers of EV Charging stations by 2031.
- The applications for electrical safety approvals for HT renewable power plants will be processed through online in a transparent and time bound manner by this department to ensure that 50% of Tamil Nadu's energy consumption is met through the renewable energy sources by 2031.

9.8 E-Governance

All services of this department are rendered through online to promote transparency in governance. Further the following on-going

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project activities are under progress with the Tami Nadu e-Governance Agency (TNeGA)

- Revamping of the existing Electrical Inspectorate portal to create a modern, user-centric and fully digitized platform.
- Development of single mobile application for all users (Department users and citizens).
- Integration with various department, Services including single window service.

Currently the vendor has been on-boarded and the development of software is under progress. The new portal will be launched at the earliest.

The Department's website (https://www.tnei.tn.gov.in) provides citizens with access to all the information which features an easy-to-use content management system.

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9.9 Ease of Doing Business, Ease of Living and Business Reforms Action Plan

The services of the Electrical Inspectorate are delivered digitally to the citizens and businesses without physical touch point. Further as part of the Business Reforms Action Plan (BRAP 2026, DBRAP 2025 and De-Regulation Phase-II) identification of archaic laws, simplification and Digitization of services and forms, Elimination of Redundancy and Decriminalization in the Act and Rules, and identification of services for complete e-service delivery etc., are being implemented.

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10. TAMIL NADU ELECTRICITY REGULATORY COMMISSION

Introduction

The Government of Tamil Nadu constituted the Tamil Nadu Electricity Regulatory Commission (TNERC) vide G.O.Ms.No.58, Energy (A1) Department, dated 17th March 1999 in accordance with section 17(1) of the Electricity Regulatory Commissions Act, 1998 (Central Act, 14 of 1998), which has since been repealed by section 185(1) of the Electricity Act, 2003 (Central Act, 36 of 2003). However, the Tamil Nadu Electricity Regulatory Commission established under the said repealed Central Act, 14 of 1998 continues to be the State Electricity Regulatory Commission by virtue of the first proviso to sub-section (1) of section 82 of the Electricity Act, 2003 (Central Act, 36 of 2003).

- **TNERC**, created under the **1998** Central Act, survives by the first proviso to section 82(1) of the Electricity **Act 2003**.

The Commission is empowered to make Regulations for the conduct of its proceedings

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and discharge of its functions. As per section 95 of Electricity Act, 2003, all proceedings before the Commission are deemed to be judicial proceedings within the meaning of sections 229 and 267 of the Bharatiya Nyaya Sanhita,2023 (BNS). The same provision declares that the Commission is deemed to be a Civil Court for the purposes of sections 384 and 385 of the Bharatiya Nagarik Suraksha Sanhita, 2023.

Section 105 of the Electricity Act, 2003 stipulates that the State Commission shall prepare once in every year an annual report giving a summary of its activities during the previous year and forward it to the State Government. The Annual Report shall be laid before the State Legislature.

- Under section 95, **TNERC** proceedings fall within sections 229 and 267 of the Bharatiya Nyaya Sanhita **2023**, and it is a Civil Court for sections 384 and 385 of the **BNSS 2023**.

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10.1 Functions of the Commission

As per section 86 of the Electricity Act, 2003, the Commission shall discharge the following functions, namely:

Sets out the Commission's functions; it is guided by the National Electricity Policy, National Electricity Plan and tariff policy under section 3(2).

1. (a) Determine the tariff for generation, supply, transmission and wheeling of electricity, wholesale, bulk or retail, as the case may be, within the State:

Provided that where open access has been permitted to a category of consumers under section 42, the Commission shall determine only the wheeling charges and surcharge thereon, if any, for the said category of consumers;

(b) Regulate electricity purchase and procurement process of distribution licensees including the price at which

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electricity shall be procured from the generating companies or licensees or from other sources through agreements for purchase of power for distribution and supply within the State;

(c) Facilitate intra-state transmission and wheeling of electricity;

(d) Issue license to persons seeking to act as transmission licensees, distribution licensees and electricity traders with respect to their operations within the State;

(e) Promote cogeneration and generation of electricity from renewable sources of energy by providing suitable measures for connectivity with the grid and sale of electricity to any person, and also specify, for purchase of electricity from such sources, a percentage of the total

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consumption of electricity in the area of a distribution licensee;

(f) Adjudicate upon disputes between the licensees, and generating companies and to refer any dispute for arbitration;

(g) Levy fee for the purposes of this Act;

(h) Specify State Grid Code consistent with the Grid Code specified under clause (h) of sub-section (1) of section 79;

(i) Specify or enforce standards with respect to quality, continuity and reliability of service by licensees;

(j) Fix the trading margin in the intra-State trading of electricity, if considered, necessary; and

(k) Discharge such other functions as may be assigned to it under this Act.

2. The Commission shall advise the State Government on all or any of the following matters, namely:

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(a) Promotion of competition, efficiency and economy in activities of the electricity industry;

(b) Promotion of investment in electricity industry;

(c) Re-organisation and restructuring of electricity industry in the State;

(d) Matters concerning generation, transmission, distribution and trading of electricity or any other matter referred to the State Commission by that Government.

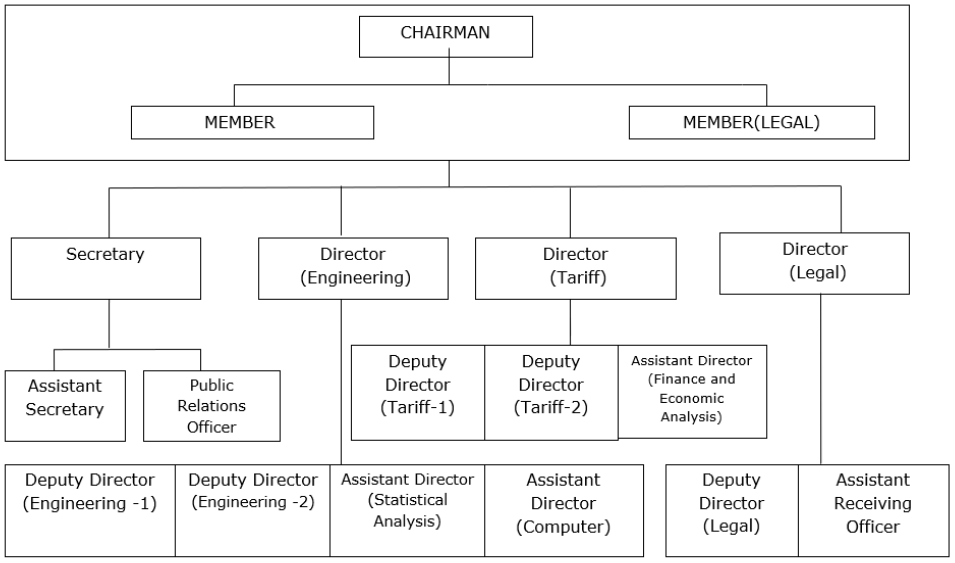
3. The Commission shall ensure transparency while exercising its powers and discharging its functions.

4. In discharge of its functions the Commission shall be guided by the National Electricity Policy, National Electricity Plan and tariff policy published under section 3(2) of the Electricity Act, 2003.

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10.2 Organisation chart

The Organisation chart of TNERC as follows.



10.3 Electricity Ombudsman

The Tamil Nadu Electricity Regulatory Commission framed regulations for consumer Grievance Redressal Forum and Electricity Ombudsman vide notification No. TNERC/CGRF and EO/6/1 dated 8-1-2004 and the same was gazetted in the Tamil Nadu Government Gazette vide Part VI- Section 2 Supplement

- Regulations notified on 8-1-**2004** and gazetted 18-02-**2004**; a consumer may approach the Ombudsman under section 42(6) where a grievance is not redressed.

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dated 18-02-2004. As per Section 42(6) of the said Act, any consumer who is aggrieved by non-redressal of his grievances under section 42(5), may make a representation for the redressal of his grievance to an authority to be known as Ombudsman to be appointed/ designated by the State Commission. As per Sec. 42(7) of the said Act, the Ombudsman shall settle the grievances of the electricity consumers within such time and in such manner as may be specified by the Commission. The Tamil Nadu Electricity Regulatory Commission has established the office of the Electricity Ombudsman and is functioning in the premises of the Commission. A website named www.tnerc.tn.gov.in disseminates information to the public about the proceedings before the Ombudsman.

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11. TAMIL NADU ENERGY DEVELOPMENT AGENCY

Introduction

Tamil Nadu Energy Development Agency (TEDA), was set up by the Government of Tamil Nadu in 1985 in order to diffuse useful knowledge in various fields of energy and thereby to deal with the problems caused on account of the rapid depletion of non-renewable resources and the increasing pollution caused by existing uses of energy. TEDA is actively engaged in promoting the use and propagation of new and renewable non-conventional energy sources in the State and acts as the Nodal Agency for the purpose of implementation of the projects thereof.

With increasing energy demand and the need for sustainable development, renewable energy has assumed greater importance in the State's energy sector. Promotion of renewable

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energy contributes towards energy security, environmental sustainability and reduction of carbon emissions.

As the State Nodal Agency of the Ministry of New and Renewable Energy (MNRE), Government of India, TEDA facilitates implementation of renewable energy programmes and availing of Central Financial Assistance for eligible projects. TEDA continues to promote renewable energy development in the State through policy support, project facilitation, awareness creation, capacity building and implementation of various renewable energy initiatives.

11.1 Renewable Energy Scenario in Tamil Nadu

Tamil Nadu is endowed with abundant renewable energy resources and offers considerable opportunities for development of renewable energy projects across various

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sectors. Renewable energy contributes significantly towards sustainable energy development, energy security and environmental sustainability in the State. In support of these objectives, TEDA has been actively implementing renewable energy programmes and projects in the State.

11.2 On-Going Projects

11.2.1 Installation of Rooftop Solar Power Plants under RESCO Mode

TEDA is implementing Rooftop Solar Power Plants in Government buildings under the RESCO mode and has entered into Power Purchase Agreements (PPAs) with beneficiary departments for a period of 25 years. Under the programme, Rooftop Solar Power Plants with a cumulative capacity of 938.8 kW have been installed in 33 Government buildings,

- **TEDA**'s **RESCO** rooftop solar programme, of which 22 buildings are commissioned.

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out of which projects in 22 buildings have been commissioned.



11.2.2 Solar Powered EV charging station

TEDA has established Solar Powered Electric Vehicle (EV) Charging Stations at the Secretariat Complex, Chennai and TANTRANSCO Headquarters, Chennai under the Tamil Nadu Innovation Initiatives (TANII) Scheme at a project cost of ₹ 150 lakh. The project has been implemented to promote

- Established by **TEDA** at the Secretariat Complex and **TANTRANSCO** Headquarters at **Rs.150 lakh** under the **TANII** scheme.

sustainable transportation and demonstrate integration of solar energy with EV charging infrastructure. The charging stations are expected to be made available for public use shortly. TEDA will also be actively involved along with all stakeholders to promote EV Sector.

11.3 New Initiatives

The Government, in order to promote adoption of renewable energy technologies and contribute towards sustainable energy development, has taken several initiatives. The following are important among them:

11.3.1 Integrated Digital Platform for Green Energy Products and Services

TEDA has initiated to establish an Integrated Digital Platform for Promotion of Green Energy Products and Services in the State. The platform will provide a

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unified digital interface connecting manufacturers, suppliers, service providers and consumers. It will facilitate easy access to green energy products and related services through a single platform. The policy and operational framework for implementation and management of the platform will be formulated by TEDA. The initiative will improve coordination among stakeholders, enhance transparency and promote wider adoption of green energy across Tamil Nadu.

11.3.2 Domestic Rooftop Solar Facilitation Programme

A comprehensive facilitation programme is being formulated to promote rooftop solar systems among domestic consumers across the State. The programme aims to facilitate adoption and installation of rooftop solar systems by domestic

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consumers by providing end-to-end facilitation support. The initiative is aimed to accelerate rooftop solar adoption, reduce household electricity expenditure and contribute to the State's clean energy transition.

11.3.3 Solarization of e-Court Complexes

Grid-Connected Rooftop Solar Power Plants and Grid-Connected Hybrid (Solar-Battery) Systems will be installed in 12 e-Court complexes identified by the Hon'ble Madras High Court. Feasibility assessment and implementation activities are underway. The initiative is expected to promote clean energy adoption, reduce electricity expenditure and improve energy reliability in the identified e-Court complexes.

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11.3.4 Renewable Energy Initiatives for Arulmigu Mariamman Temple, Samayapuram

TEDA has completed the pre-feasibility assessment for installation of renewable energy systems including rooftop solar power plants, solar street lights and biogas plants at Arulmigu Mariamman Temple, Samayapuram. In the first phase, a detailed project proposal for installation of a rooftop solar power plant has been furnished to the Temple Administration. Necessary follow up action will be taken for implementation of the project in consultation with the Temple Administration.

C.T.R. NIRMAL KUMAR
Minister for Energy Resources and Law

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Hon’ ble Chief Minister Signing the Free Electricity upto 200 units for Domestic consumers consuming upto 500 units bi-monthly



Energy Department Review by Hon’ ble Chief Minister on 18.05.2026

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